CATALOGUE

OF THE

COLEOPTEROUS INSECTS

OF

THE CANARIES

IN THE

COLLECTION

OF THE

BRITISH MUSEUM.

BY

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PREFACE.

THIS Catalogue contains the description of the Coleopterous Insects collected by Mr. Wollaston and some of his friends in the Canary Islands.

The Collection has been arranged by Mr. Wollaston, and has been purchased by the Trustees of the British Museum.

JOHN EDWARD GRAY.

Jan. 30, 1864.

INTRODUCTORY REMARKS.

THE material from which the following Catalogue has been compiled is mainly the result of an expedition to the Canaries undertaken by John Gray, Esq., and myself, in his yacht 'The Miranda,' at the commencement of 1858, in which we visited all the islands of the archipelago except Grand Canary. We reached Teneriffe on the 8th of January, and were immediately joined by the Rev. R. T. Lowe (who was passing the winter at Orotava), and set sail at once for Lanzarote. As it was part of Mr. Gray's programme to make a *détour* by the West Indies on his homeward route, he left us at the end of February; from which date, until the following July, Mr. Lowe and I continued incessantly at our respective vocations (which were, chiefly, Botany and Coleoptera)—at first in Teneriffe, but afterwards in Grand Canary and Palma, exploring many remote regions (more or less difficult of access) which abundantly repaid us for the many obstacles which were sure to beset the progress of English travellers in such little-frequented spots.

Encouraged by the success I met with during this first trip, I again left England at the end of the same year, and, joining the Rev. R. T. Lowe at Madeira, arrived once more (in company with him) at Teneriffe, on the 5th of February 1859; and, after a fortnight's delay at S^{ta} Cruz, a second time embarked for Lanzarote. Our researches, now, were continued principally in that island and Fuerteventura; though, after Mr. Lowe's departure for England on April the 19th,

I spent six weeks by myself in Teneriffe—principally in the higher districts towards the Peak, and ascending to the lower limits of the snow. It was during this short interval that some of my most valuable material was accumulated; and I look back to that brief sojourn in those wild upland tracts—amongst full-blown "Retamas" of delicious fragrance, far above the cloud-line, in what an entomologist might strictly call "an apiarian heaven"—as embodying reminiscences, of sight and sense, which none but those who have revelled in such scenes can truly appreciate.

In addition to my own material thus amassed (including, at least, some 20,000 specimens), and that obtained by Mr. Gray in January and February of 1858, I have had the advantage, while compiling this Catalogue, of several smaller collections which have been submitted to me. Of these, by far the most valuable and important was formed by Dr. Crotch during the spring of 1862; and to his accurate and indefatigable researches (to which I shall often have occasion to allude) nearly 50 additions to the fauna are entirely due. Much useful material has likewise been communicated, from time to time, by my excellent and worthy friend the Barão do Castello de Paiva of Lisbon, who has spared no pains to procure specimens, which he has on every occasion, with characteristic generosity, placed at my immediate disposal. From Professor Heer also, of Zurich, I have received many types of the species from which he prepared the list for M. Hartung's volume on Lanzarote and Fuerteventura; and, indeed, M. Hartung himself allowed me to select a certain number of them from his boxes, when I chanced to meet him in Madeira, on his return from his Canarian explorations. And I am happy to be able to add that the various novelties which have been brought to light from these different sources I have been permitted, through the liberality of their several possessors, to place in the National Collection.

Feeling the paramount importance, in a Catalogue like the present one, of the *most thorough accuracy* in the faunas of the separate parts of the Group, I should state that I have used the utmost caution in the insular distribution of the various species enumerated. In all cases where the existence of the latter in any particular island rested upon doubtful evidence, *I have preferred their non-admission into that island's fauna to the risk of a possible error* (even though that risk were, practically, almost *nil*). And I hope it will not be considered presumptuous if I record my conscientious belief that *no single mistake has occurred in the Topographical Index* of this volume. Indeed

by far the greater proportion of the species have been entered into its columns on the evidence supplied by my own actual experience; and I would call attention to the fact that I adopted a method of annotation of every specimen which I collected so as effectually to prevent even the *possibility* of after-confusion as to the exact island in which it was found. And since the same mode was carried out (I am satisfied, with equal care and honesty) by Dr. Crotch, whilst the captures of Mr. Gray were made whilst we were together, and were entered daily in a list prepared roughly at the time, there seems scarcely an opening for anything approaching to a serious topographical blunder. I lay such great stress upon the complete accuracy of the *habitats* because observation has convinced me how widely some parts of the Group differ in their Coleopterous population from others; and that consequently, if any sound deductions are to be ventured upon from the local distribution of the several forms, the very ground work on which they must be based will be worse than useless unless established *with the most perfect truthfulness and precision**.

Of the 930 species enumerated in this Catalogue, only 77 have escaped my own personal observation; and of these 77, no less than 44 are (as lately stated) due to the researches of Dr. Crotch. Of the remaining 33, four[1] were taken solely by Mr. Gray, one[2] by my late

* It would be a happy thing if this principle were more strictly adhered to by naturalists, as a rule; for many grievous geographical misstatements, which when once published can seldom be absolutely *disproved* (even though acknowledged afterwards as false on mere negative evidence), would have been thus avoided. I need not adduce instances of this, for our Catalogues teem with them: but, as a case which closely concerns us here, I may just add that I have myself received from the continent, as "*Teneriffan*," insects which I am quite satisfied were never found except in the two eastern islands of the archipelago—Lanzarote and Fuerteventura—in which the fauna, *as a whole*, is very peculiar, and has more of an African element in it than is the case in the other portions of the Group. Yet these species were pronounced unhesitatingly to be Teneriffan (and have perhaps been disseminated throughout Europe as such) simply because *they had been sent from Teneriffe*. And thus, in all probability, the present Catalogue, which defines their range in accordance with the plainest facts, will be at once regarded by the possessors of those insects as guilty of a very serious *error of omission*. Surely it would be far wiser, where specimens are received unaccompanied by any positive assertion of the exact localities in which they were taken, *not* to attempt to define the latter too rigidly. For, in the instance just alluded to, would it not have been better to have called them simply "Canarian" (which would have been strictly true) than "Teneriffan" (which happens to be entirely false)? I entreat entomologists to consider for themselves whether a slight omission of *precise habitat* (which is of no moment in a general collection) is not at all times preferable to a downright misstatement.

[1] *Symbiotes pygmæus*, Hampe; *Apion ceuthorhynchoides*, W.; *Helops rimosus*, W., and *Anthicus angustatus*, Curt.

[2] *Cleonus Armitagii*, W.

friend the Rev. W. J. Armitage, one[3] by M. Hartung, seven[4] have been communicated by the Barão do Castello de Paiva, one[5] by Mr. A. Fry of London, four[6] were captured by Mr. Gray and Dr. Crotch, one[7] by the Rev. R. T. Lowe and Dr. Crotch, one[8] by M. de la Perraudière and Dr. Crotch, two[9] have been inserted on the evidence of specimens received from Paris (from MM. Chevrolat and Deyrolle, respectively), and eleven[10] have been added from the meagre list of M. Brullé given in the 'Histoire Naturelle des Iles Canaries' of MM. Webb and Berthelot.

As regards this work, I may be permitted to advert to the poverty of the catalogue of the Canarian Coleoptera (numbering in all but 179 species!); to the inaccuracies, which I have been compelled to advert to *seriatim*; to the discrepancy of the *names* of many of the insects as given in the letter-press and on the Plates (the latter of which are not alluded to in the former); to the wrong identification of the majority of the already-known species; to the complete silence throughout respecting the various *habitats*; to the absence of any remark of local interest, and to the almost conclusive evidence which I possess of some few of even those 179 species *not being Canarian at all** (but having been brought from Madeira by Mr. Webb). When we consider that the insect-population, in the Canarian islands, at least trebles in extent the representatives of all the other departments of

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[3] *Arthrodes Hartungii.*

[4] *Lixus anguiculus*, Schön.; *Laparocerus morio*, Schön.; *Hesperophanes senex*, W.; *Zophosis 4-carinata*, Deyr.; *Carabus faustus*, Br.; *Buprestis Bertheloti*, Br., and *Cossyphus insularis*, Lap.,—the last three of which are also included in MM. Webb and Berthelot's work.

[5] *Silpha figurata*, Br. (likewise recorded by MM. Webb and Berthelot).

[6] *Oxyomus brevicollis*, W.; *Notiomimus holosericeus*, W.; *Arthrodes parcepunctatus*, W., and *Lithocharis debilicornis*, W.

[7] *Liparthrum Lowei*, W.

[8] *Hololepta Perraudieri*, de Mars.

[9] *Acalles Æonii* (Chev.), W., and *Pimelia ambigua*, W.

[10] The evidence for the admission of these eleven species will be found under each of them. But as M. Brullé does not indicate the *localities* of the insects included in his list, they are all, *except one* (the *habitat* of which I ascertained in Paris, from a note appended to MM. Webb and Berthelot's type), *unmarked* (as regards their respective *islands*) in my 'Topographical Catalogue,' though admitted into the general list. The "one" referred to is the *Pimelia canariensis*, Br.: and the remaining ten (concerning which further evidence is required) are as follows:—*Dytiscus circumflexus*, F.; *Berosus spinosus*, Ahr.; *Attagenus pellio*, L.; *Ootoma obscura*, Br.; *Hesperophanes roridus*, Br.; *Clytus Webbii*, Lap.; *Tentyria interrupta*, Lat.; *Pimelia fornicata*, Hbst; *Pimelia sparsa*, Br., and *Ischnomera melanura*, L.

* With respect to this last assertion, I must refer to my foot-note on p. 7; though, did space permit, I might add much more on the same subject.

organic nature*, it is impossible to avoid surprise that the Coleoptera should have been thus dealt with in so voluminous a History as that of MM. Webb and Berthelot. I would by no means, however, wish it to be assumed that I consider the present enumeration as even approaching to a complete one. On the contrary, indeed, I do not venture to suppose that I have gleaned more than the firstfruits; yet I hope that it will at least constitute a basis (sufficiently accurate, as far as it goes) for a more perfect treatise to be built upon. And although I feel that there is yet much, very much, to be done in every island of the cluster, I think nevertheless I may safely anticipate that the *general catalogue*, at all events, will be found to give a really true (though approximate) idea of the Canarian Coleoptera *as a whole*. With respect to the separate lists of each island, the great practical difficulty of filling them up should be borne in mind. Indeed to reach the remoter islands *at all*, and to *omit none* of them moreover in a widely scattered assemblage, the extremes of which are removed from each other by nearly 200 miles of stormy ocean, is no easy task†; therefore how much more to deal with each of them as a distinct country, and to begin afresh in every case (which necessarily involves a considerable amount of time) to collect its commonest productions! In the Canarian Group, where the islands are seven in number, the labour has been the same as in the exploration of seven *countries* (of similar extent); and it will consequently be seen that, whilst the species which I have recorded for the entire archipelago is 930, the asterisks (in the Topographical Index) for the islands collectively—which, so far as the *work of observation* is concerned, might have been indicative of so many separate *species*—amount to 2043. It may be interesting to notice the proportions thus arrived at for the species hitherto observed in the several islands:—

* There is, in the 'Histoire Naturelle des Iles Canaries' above cited, a Chapter, devoted to what are called "philosophical speculations," in which reasons are given why insects *cannot* be common at the Canaries. A great deal is there said about the trade-winds, moisture, the general state of the atmosphere, &c.; but I must profess myself quite incompetent to understand it. It would have been better to have gone out into the open country and *observed facts*. I can only say that I chose this plan, and *found insects in profusion*.

† MM. Webb and Berthelot appear never to have set foot on Hierro; and so dispose of it summarily by saying that it has no harbours, no rivers, no water of any kind—a mere barren rock, insignificant and devoid of interest. For my own part I found it (in proportion to its size) the most remarkable island of the seven; and the noble forests with which it is clothed on its western slopes are not to be equalled elsewhere throughout the archipelago. Indeed, apart from every other circumstance, its mere topographical position with respect to the remainder of the Group invests Hierro with a charm peculiarly its own.

Lanzarote	277
Fuerteventura	261
Grand Canary	325
Teneriffe	539
Gomera	222
Palma	254
Hierro	165
	2043

Although I have good reason for suspecting that a small number of even the 179 species recorded by MM. Webb and Berthelot were (as just stated) brought from Madeira, whilst others (as, for instance, the *Erodius europæus*, the *Akis acuminata*, and perhaps also the *Tentyria interrupta*) were accidental importations from the coast of Africa [on which subject *vide* my remarks at pages 438 and 469]; I have nevertheless alluded to them briefly in foot-notes (in their proper positions), though without further evidence I could not admit them into the body of this volume. There are three, however, which I believe I have passed over in *total* silence,—namely, the *Cicindela nilotica*, Dej., the *Mononyx variegatus*, Br., and the *Colaspis barbara*, Fab. It is certainly *possible* that a *Cicindela* may exist in some of the sandy regions of Lanzarote, Fuerteventura, or Grand Canary; yet the singular absence, *so far as my own observations are concerned*, of that widely spread genus both at the Madeiras and Canaries inclines me to look with unbounded suspicion on its supposed occurrence in these islands; and I shall at all events require stronger evidence than that supplied by MM. Webb and Berthelot, who give us no vestige of information about it, before I acknowledge it as Canarian. The *Mononyx variegatus* may perhaps be a small Curculionid from some portion of the Group; but I could get no sight of it in Paris; and as no genus has ever been enunciated (so far as I am aware) under the title of *Mononyx*, it is impossible even to guess at its affinities (so that no position *could* be assigned to it in this Catalogue). If, however, M. Brullé intended himself to establish the group, there and then, *without* a diagnosis (which is the only solution that occurs to me), he has at least chosen a most unfortunate name—for the insect figured has decidedly two claws. The *Colaspis barbara* is a north-African form; and although, in like manner, it too *may* be Canarian, I cannot possibly treat it as such—without a single published remark either as to its identification or *habitat*, and with the well-founded suspicion (above alluded to) that a certain proportion of MM. Webb and Berthelot's recorded species

were chance introductions (such as have occurred, to my own certain knowledge, in trading-vessels) from the opposite coast of Morocco.

Although many widely spread genera (such as *Carabus*, *Silpha*, *Tentyria*, and *Pimelia*) are represented at the Canaries which are absent from the Madeiras, nevertheless, on the whole, I think that the latter Group is, *in proportion to the aggregate superficies of its separate parts*, the more productive of the two. Probably, however, this is merely owing to the greater depauperation of the former through the destruction of the timber, and (as a necessary consequence) the gradual drying up of the pools and streams—which there is abundant evidence to show were once numerous. But, be this as it may, the fact itself seems plainly indicated by the relative extent of their Coleopterous faunas—that of the Madeiran archipelago numbering, up to the present date, 660 species, whilst that of the Canarian one (the product of *seven large* islands) includes hitherto but 930. We must undoubtedly bear in mind that the Madeiras have been more thoroughly examined than the Canaries; yet, even whilst making a liberal allowance for this consideration, I do not believe that the Canarian Coleoptera will ever prove to be so numerous in species, *in proportion to the area ranged over*, as the Madeiran. Nor have the two faunas quite so decided a resemblance as I should have *à priori* anticipated, seeing that 224 species is all that they have yet been demonstrated to possess in common. There are, however, a certain number of ordinary (perhaps naturalized) forms, *in both cases*, which we may feel quite sure will be shown, sooner or later, to be mutual; therefore we may safely imagine the above number as raised, at all events, to 250. Yet even that proportion is but a small one, in islands so manifestly belonging to the same geographical system, and with their many physical peculiarities nearly similar.

Adverting to the general statistics, it is interesting to observe that the great Sections (whatever their *relative* positions may be, in a system of classification) into which the Coleoptera are usually supposed, either by acknowledgment or tacit assumption, to be subdivided bear pretty nearly *the same numerical proportions amongst themselves* in the two Groups. Thus, in both instances, the *Rhynchophora* exceeds every other department in the number of its representatives; whilst the next in order is the *Brachelytra*: and the *Eucerata* and *Hydradephaga* occupy, either actually or almost, the lowest positions. The *Heteromera* at the Canaries follows third in numerical succession, and is more pronounced than at Madeira; whilst the

Geodephaga, on the contrary, is, in proportion to the area, rather less so. The following Table, as compared with the corresponding one in the Madeiran Catalogue, will show this more clearly :—

Rhynchophora	176
Brachelytra	141
Heteromera	125
Necrophaga	114
Geodephaga	113
Priocerata	89
Cordylocerata	51
Phytophaga	44
Hydradephaga	22
Philhydrida	21
Pseudotrimera	19
Eucerata	15
	930

Of the *genera*, as yet detected at the Canaries, the largest (and by far the most characteristic) is *Laparocerus*—of which no less than 35 exponents have already been brought to light (and there are probably many yet to be found)*. The next is *Homalota*; but as a considerable proportion of the minute Staphylinids which compose that immense group are eminently liable to accidental diffusion (through indirect human agencies) over the civilized world, I lay but little stress upon this fact. But the third in order, namely *Hegeter*, is quite as significant as the first—numbering no less than 19 species†. Then follow *Calathus* and *Attalus*—both of which are largely expressed, and have 17 representatives (manifestly quite indigenous). *Apion* has 15, but some of them may perhaps have been introduced. *Bembidium*, *Arthrodes*, and *Philonthus* have each 14; *Acalles* and *Longitarsus* 13 (the former being equally developed, or even more so, at Madeira): *Saprinus*, *Pimelia*, *Helops*, and *Anthicus* number, each of them, 12; *Aphanarthrum* 11 (all *ultra*-indigenous); *Hydroporus* 10; and *Tarphius* (likewise positively endemic, and of which more will doubtless yet be found) 9. Indeed *Tarphius*, as I have elsewhere shown, is almost *characteristic* of the intermediate sylvan districts of the whole of these Atlantic Islands; nevertheless it is decidedly more dominant at Madeira (where no less than 20 exponents have already been observed) than at the Canaries.

* I include with *Laparocerus* my genus *Atlantis*.

† I include *Thalpophila* and *Gnophota* (which are scarcely more than subgenera) with *Hegeter*.

But space will not permit me to enter into further details. Suffice it to add that the two eastern islands of the archipelago, Lanzarote and Fuerteventura, seem to possess more of an African element than the central and western ones—as is evinced by their very peculiar fauna, which has a good deal in common with that of the opposite coast of Morocco; and they appear to me to bear about the same relation to the remainder as, in the neighbouring Group, Porto Santo does to Madeira proper. The *entire* Canarian Catalogue, however, is not more indicative of a *southern* latitude than is the case with that of Madeira (at any rate not more so than would be naturally anticipated were the slight additional distance to the south measured over a continuous tract)—its general character being much what we should *à priori* expect to find on the southern Mediterranean limits; though at the same time there is, as in Madeira, so large an assortment of purely endemic forms as perhaps to be suggestive rather of a separate "Atlantic province."

Although only a portion of them have been described in this volume, I believe that about 30 genera and 540 species have been established by myself (partly in detached Papers, severally referred to) amongst the Canarian Coleoptera here enumerated. Whatever other forms there are (in addition to these) which it has fallen to my lot to be the first to enunciate are found at Madeira likewise, and were therefore published amongst the novelties of that Group.

Teignmouth, Jan. 25, 1864.

CATALOGUE

OF

CANARIAN COLEOPTERA.

Fam. 1. CARABIDÆ.

(Subfam. I. ELAPHRIDES.)

Genus 1. NOTIOPHILUS.

Duméril, *Consid. gén. sur les Ins.* 169 (1823).

1. Notiophilus geminatus.

Notiophilus geminatus, *Dej., Spec. des Col.* v. 589 (1831).
—— ——, *Brullé, in Webb et Berth.* (*Col.*) 58 (1838).
—— ——, *Woll., Ins. Mad.* 17 (1854).
—— ——, *Id., Cat. Mad. Col.* 9 (1857).

Habitat in Lanzarota, Fuerteventura, Canaria, Teneriffa, Gomera et Hierro, passim.

The *Notiophilus geminatus* (which I have detected in three, out of the five, Madeira islands, and which occurs throughout southern Europe and the north of Africa) is almost certainly *universal*, though nowhere very common, at the Canaries. I have taken it in Lanzarote, Fuerteventura, Grand Canary, Teneriffe, and Hierro (in which last island it was captured equally by Mr. Gray); and it was found by Dr. Crotch in Gomera. There can be but little doubt, I should imagine, that it must exist in Palma likewise. From Teneriffe it has also been communicated by the Barão do Castello de Paiva.

(Subfam. II. CARABIDES.)

Genus 2. LEISTUS.

Fröhlich, *Naturf.* xviii. 9 (1794).

2. Leistus nubivagus, n. sp.

L. oblongus, depressus, castaneo-ferrugineus, nitidus; prothorace brevi, transverso, ad latera (præsertim postice) explanato et sub-

æqualiter rotundato, per basin profunde sed parce punctato necnon etiam antice in medio punctis perpaucis minoribus notato, postice utrinque foveâ magnâ impresso; elytris depressis, profunde crenato-striatis, striâ tertiâ in singulo punctis quatuor auctâ; antennis, palpis pedibusque (femoribus plus minus obscurioribus exceptis) testaceis vel rufo-testaceis.—Long. corp. lin. $2\frac{2}{3}$–3.

Habitat Teneriffam, rarissimus; sub lapidibus humidis in montibus sylvaticis excelsis circa Agua Mansa tempore vernali captus.

This interesting little *Leistus*, remarkable *primâ facie* for its small size and flattened surface, appears to be of the greatest possible rarity, and confined (so far as I have observed hitherto) to the damp sylvan regions, of a high elevation, in Teneriffe. I first captured it, in May 1858, beneath moist stones at the Agua Mansa; and subsequently (during May of the following year) in the same locality and at the foot of the lofty Organo Rocks.

Genus 3. **NEBRIA.**

Latreille, *Gen. Crust. et Ins.* i. 225 (1806).

3. Nebria dilatata.

N. picea, latiuscula; prothorace subcordato, ad latera late explanato et valde reflexo, antice valde profunde emarginato, angulis anticis valde porrectis acutiusculis; elytris ellipticis, postice subacuminatis, alutaceis, subcrenato-striatis; palpis, antennis pedibusque clare ferrugineis.—Long. corp. lin. 6–$6\frac{1}{2}$.

Nebria dilatata, *Dej., Spec. Gén. des Col.* v. 580 (1831).
—— ——, *Brullé, in Webb et Berth.* (*Col.*) 58. pl. ii. f. 7 (1838).

Habitat sub lapidibus humidis in montibus excelsis Teneriffæ, rarissima, inter 4000′ et 6000′ s. m. præcipue degens.

The superb *Nebria* which I have redescribed above (and which was wrongly stated by Dejean, in his 'Species Gén. des Coléopt.,' to come from Madeira) appears to be peculiar to the lofty elevations of Teneriffe,—where it occurs principally at the base of wet rocks and near trickling streams from about 4000 to 6000 feet above the sea. It is, however, extremely rare; and, from its inhabiting ledges and spots often all but inaccessible, very difficult to find. I first obtained it, on the 30th of April 1859, in the ravines of the great Pinal which clothes the ascent to the Cumbre adjoining the Cañadas, above Ycod el Alto; and during the following month I met with it, more abundantly, on the damp mountain-ridges around the Agua Mansa and the Organo Rocks.

4. **Nebria currax**, n. sp.

N. nigra, angustula, nitida; prothorace subcordato, ad latera anguste explanato et paulo reflexo, antice sat profunde emarginato, angulis anticis sat porrectis; elytris ovalibus, striatis, striâ tertiâ in singulo punctis circa quatuor auctâ; palpis, antennis (articulis tertio quartoque obscurioribus exceptis) tarsisque ferrugineis, femoribus tibiisque piceis.—Long. corp. lin. $5\frac{1}{2}$.

Habitat Canariam Grandem; inter lapides juxta rivulum prope oppidum Teror mense Aprili A.D. 1858 duo specimina deprehendi.

The only two examples of this very rare and distinct *Nebria* which I have hitherto seen were captured by myself amongst the wet stones and rubbish of a small stream, in the island of Grand Canary, which joins the little river at Teror, within half a mile of the town—during my residence there, with the Rev. R. T. Lowe, in April 1858. It belongs to the same type as the *N. dilatata*; but its narrower outline, less elliptic, brighter elytra (the striæ of which are less perceptibly crenulated), rather smaller size and darker hue, in conjunction with its less widely margined and less deeply excavated prothorax, will (apart from other differences) at once separate it from that insect.

Genus 4. **CALOSOMA.**

Weber, *Observat. Entom.* 20 [script. *Callisoma*] (1801).

5. **Calosoma indagator.**

Carabus Maderæ, *Fab., Syst. Ent.* 237 (1775).
—— Indagator, *Fab., Mant. Ins.* i. 197 (1787).
Calosoma Indagator, *Dej., Spec. Gén. des Col.* ii. 205 (1826).
—— Maderæ, *Brullé, in Webb et Berth.* (*Col.*) 58 (1838).
—— ——, *Woll., Ins. Mad.* 15 (1854).
—— ——, *Id., Cat. Mad. Col.* 7 (1857).

Habitat in Canaria, Teneriffa et Palma, passim.

Although not the older of the two, I have preferred the name of *indagator* for the present *Calosoma* to that of *Maderæ*, since it is the one under which the insect is almost universally known, and since the *author* of them both is the *same*. In this particular instance it would seem better *not* to retain the specific title of *Maderæ*; for the insect is widely spread over Mediterranean latitudes (being by no means peculiar to Madeira), and is usually recognized as the *C. indagator*. It is out of deference to the opinion of my friend Dr. Schaum that I have thought it desirable to make this slight change; for it will be seen, on reference to my 'Ins. Mad.,' that I adhered in that volume strictly to priority, and quoted the species by the name (irrespective of its *appropriateness*) under which it was first published by

Fabricius—who afterwards redescribed it under a fresh title, which has nevertheless been generally adopted.

The *C. indagator*, which is rather common in the Madeiran Group (being found in Madeira proper, Porto Santo, and even on the Desertas), is decidedly scarce at the Canaries,—where nevertheless it is probably universal throughout the central and western portions of the archipelago; for, although hitherto I have observed it only in Grand Canary, Teneriffe, and Palma, there can be but little doubt that it must exist in Gomera and Hierro likewise. In the two eastern islands, however, of Lanzarote and Fuerteventura, it apparently does *not* occur,—its place being there supplied by the following species, which I have referred to the *C. azoricum* of Heer. In Teneriffe it was taken also by the Rev. R. T. Lowe, the Barão do Castello de Paiva, and Dr. Crotch.

6. Calosoma azoricum.

C. præcedenti simile, sed vix nitidius; prothorace subminore, postice paulo angustiore (quare ad latera in medio vix magis subangulato-ampliato), angulis posticis sensim acutioribus ac magis productis, foveâ magnâ profundiore utrinque impresso; elytris rugosius et vix densius imbricatis, ad humeros subrectioribus, et punctis in seriebus tribus paulo magis numerosis; tibiis sublongioribus gracilioribusque, omnibus in fœminâ (forsan in utroque sexu?) rectioribus.

Mas adhuc latet.—Long. corp. lin. 10–11.

Calosoma azoricum?, *Heer, Fossil. Calosom.* 5 (*note*).

Habitat in Lanzarota et Fuerteventura, rarissimum.

Two specimens of *Calosoma*, captured by myself in Lanzarote and Fuerteventura respectively, seem to be distinct from the *C. indagator*, so widely spread over the other islands of the archipelago, and to be better referred to the *azoricum* of Heer. At least, after a careful comparison of them, recently, by Dr. Schaum and myself, with types from the Azores, we could neither of us detect any differences of sufficient importance to be regarded as specific ones,—though in a few minor particulars they do not *exactly* agree with the latter; and, moreover, being unfortunately females, we were unable to say for certain whether the intermediate tibiæ of their male sex are in any degree curved as in the *indagator*. Be this however as it may, it seems pretty evident (on other accounts) that they cannot be identified with the *indagator*; whilst the characters of at all events the female sex differ so *very* slightly from the corresponding ones of the *azoricum* that there seems the greatest *probability*, even in the absence of the male to judge from, that *all* their features will be found to be so far identical with those

of that insect that it will not be possible to treat them, at the utmost, as indicative of more than a mere geographical variety (and that too an exceedingly trifling one) of the same species. But, whilst thus expressing my conviction that it will be found, when further material has been obtained, to be coincident with the *azoricum*, I do not wish to ignore the fact that, in the Canarian insect (judging from the examples now before me), the prothorax is not *quite* so straightened (obliquely) behind, and therefore not quite so preceptibly subangulated on either side in the middle; and that the elytra are somewhat less closely reticulated, a trifle more rectangular at their shoulders, and with the punctures of their triple series apparently rather more numerous. Perhaps also its intermediate (female) tibiæ are not *quite* so straight, though the difference (if any) is scarcely perceptible. If, when the male sex has been discovered, it should prove to be distinct from the *azoricum* (which, however, I think is very unlikely), I would propose for it the trivial name of *canariense*.

From the *C. indagator* the present *Calosoma* may be known by its prothorax being a little smaller and rather more narrowed behind (which causes it to be a trifle less obtusely rounded, or more *subangulated*, on either side in the middle), with its posterior angles perceptibly acuter, or more downwardly-produced, and with its basal foveæ larger and deeper; by its elytra being somewhat more roughly and closely imbricated, a little more *rectangular* at the shoulders, and with the metallic points of their three longitudinal series rather more numerous; and by all its tibiæ, at any rate in the female sex (for which I can alone speak), being straighter, and perhaps a trifle longer and slenderer.

Genus 5. **CARABUS.**

Linnæus, *Syst. Nat.* ii. 668 (1767).

7. Carabus coarctatus.

C. cupreo-æneus vel subænescenti- (interdum virescenti-) niger, nitidus; prothorace postice subito et valde coarctato, angulis ipsis posticis longe exstantibus; elytris ovalibus, limbo plus minus læte virescente, longitudinaliter triseriatim parce tuberculatis (tuberculis elongatis) necnon obsolete costatis; antennis longiusculis pedibusque obscurioribus.—Long. corp. lin. 9–10.

Carabus coarctatus, *Brullé, in Webb et Berth.* (*Col.*) 57. pl. ii. f. 2 (1838).

Habitat Canariam Grandem, sub lapidibus in locis plus minus editioribus, rarissime.

The *C. coarctatus* (so well distinguished *primâ facie* by its pro-

thorax being suddenly and greatly constricted behind, but with the posterior angles themselves exceedingly prominent) would appear, so far as I have observed hitherto, to be peculiar to the intermediate and higher elevations of Grand Canary,—where, during March and April of 1858, I took it sparingly beneath stones throughout the dry, cindery district of El Monte; as well as on the summit of the Bandama mountain, and on the ascent to the Roca del Soucilho, above San Mateo.

8. Carabus faustus.

C. cupreo-æneus vel subænescenti- (interdum virescenti-) niger, nitidus; prothorace elongato-subquadrato (postice paulo et æqualiter angustiore); elytris elongato-ovatis (versus basin ad latera oblique subrectis et pone medium paulo latioribus), limbo plus minus læte virescenti, longitudinaliter triseriatim tuberculatis necnon plus minus distincte costatis; antennis pedibusque elongatis, robustis, obscurioribus.—Long. corp. lin. 12–13.

Carabus faustus, *Brullé, in Webb et Berth.* (*Col.*) 57. pl. ii. f. 3 (1838).

Habitat Teneriffam sylvaticam, rarissimus.

I have not, myself, ever taken this *Carabus*; but I have received it from Dr. Heer of Zurich, captured by M. Hartung in Teneriffe, and it has also been communicated by the Barão do Castello de Paiva from (the Agua Garcia of) the same island. If therefore the few specimens which I have seen be typical of the species, I may add that it may be known from the *C. interruptus* by its considerably larger size and more shining surface, by its longer and robuster limbs, and by its prothorax and elytra being each of them more elongated,—the former being more (obliquely) straightened behind, and the latter more so in front. The posterior thoracic angles, also, are a little more backwardly-produced. It is evidently extremely rare, and is probably attached to a rather lower elevation within the sylvan districts than its ally.

9. Carabus interruptus.

C. cupreo-æneus vel subænescenti- (interdum virescenti-) niger, subnitidus; prothorace subquadrato (postice paulo et æqualiter angustiore); elytris ovatis, limbo plus minus læte virescente, longitudinaliter triseriatim tuberculatis necnon plus minus distincte costatis; antennis pedibusque obscurioribus.—Long. corp. lin. $8\frac{1}{2}$–vix 10.

Carabus interruptus (*Lat.*), *Dej., Spec. Gén. des Col.* v. 547 (1831).
—— abbreviatus, *Brullé, in Silb. Rev. Ent.* iii. 298 (1835).

Habitat in regionibus humidis excelsis Teneriffæ, usque ad 6000′ s. m. ascendens.

The smaller size, somewhat less shining surface (particularly of the female sex), and more rounded elytra of the *C. interruptus*, in conjunction with its more abbreviated prothorax and shorter limbs, will, apart from minor characters, at once separate it from the preceding species. It was erroneously stated by Dejean to be a native of Madeira,—being confined, apparently, to the intermediate and lofty elevations of Teneriffe; where I have taken it at the Agua Mansa, and on the damp and almost inaccessible slopes above the Organo Rocks, abutting on the Cumbre. It was also captured above Ycod el Alto by Dr. Crotch, and has likewise been communicated by the Barão do Castello de Paiva.

As regards the synonymy of this *Carabus*, it seems that M. Brullé changed the name of *interruptus*, under which it was described by Dejean, into that of *abbreviatus*,—on account of the former having been preoccupied by Say for a North American species. But since it would appear (from information which I have received from Dr. Schaum) that Say's insect is undoubtedly conspecific with the *vinctus* of Weber (and is so acknowledged by the modern American Coleopterists), it follows that Say's title (for the *vinctus*) has to be suppressed, and that M. Brullé had consequently no sufficient reason for altering the name which Dejean proposed for the Canarian species*.

(Subfam. III. SCARITIDES.)

Genus 6. **SCARITES**†.

Fabricius, *Syst. Ent.* 249 (1775).

10. **Scarites gigas.**

Scarites gigas, *Fab., Spec. Ins.* i. 314 (1781).
—— ——, *Oliv., Ent.* iii. 36. i. 1 (1795).
—— Pyracmon, *Bon., Obs. Ent.* ii. 33 (1813).
—— ——, *Dej., Spec. Gén. des Col.* i. 367 (1825).
—— ——, *Hartung, Geolog. Verhältn. Lanz. und Fuert.* 140.

Habitat in arenosis Lanzarotæ et Canariæ, rarissimus.

The *S. gigas* (which occurs in the south of Europe and the north of Africa, and which I have myself taken at Mogadore on the coast

* I should however add, in M. Brullé's defence, that he believed the *C. interruptus* of Say to be distinct from Weber's (and Dejean's) *vinctus*; but in this he was apparently mistaken.

† As I am determined not to include any species in this Catalogue which rests upon evidence altogether unsatisfactory, I do not apologize for refusing admission to a *Scarites* figured by M. Brullé (I cannot say "described," for the few words in which he alludes to it amount to no *description* at all) under the name of *S. dimidiatus*. Judging from the figure, which is really a very tolerable one, I have no hesitation whatever in identifying it with the Madeiran *S. abbreviatus*,

of Morocco) appears to be very rare at the Canaries,—where it was found by Mr. Gray and myself, during January 1858, near Arrecife in Lanzarote: and subsequently, by myself, in the little island of Graciosa, off the north of Lanzarote; as well as at the *extreme* southern, sandy point of Grand Canary, in the district of Maspalomas. It was likewise captured in Lanzarote by M. Hartung.

Genus 7. **DYSCHIRIUS.**

Bonelli, *Observat. Entom.* i. (1809).

11. **Dyschirius armatus,** n. sp.

D. æneo-piceus, clypeo tridentato; elytris ovato-oblongis, profunde punctato-striatis, punctis postice evanescentibus; antennis pedibusque rufo-ferrugineis; tibiis anticis extus longissime denticulatis.—Long. corp. lin. vix 2.

Habitat in arenosis maritimis Lanzarotæ, rarissimus; per litora lacus ejus salini "Januvio" dicti, sub ulvis ejectis, mense Martio A.D. 1859, tria specimina collegi.

The comparatively large size and more piceous hue of this fine *Dyschirius*, in conjunction with its tridentate clypeus and the greatly developed spines of its fore tibiæ, will at once distinguish it from the following two species. It has been examined by my friend Dr. Schaum, of Berlin, who has paid much attention to the genus, and who returned it with the observation: "It is probably allied to the *D. fulvipes*, Dej. (unknown to me); but in that insect the marginal

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and have but little doubt that it was brought from Madeira by Mr. Webb (along with the *Harpalus consentaneus* and *distinguendus*, and possibly also the *Lixus angustatus*), and mixed-up by him with his Canarian collection. I have the most positive assurance from a personal friend of Mr. Webb, that the latter collected in Madeira before he went to Teneriffe, and that he was exceedingly careless and inaccurate with respect to the material which he was in the habit of amassing:—a fact indeed which is proved to a demonstration through the circumstance of one of his Land-Shells (an *Achatina*) having been described by D'Orbigny (in MM. Webb and Berthelot's work) as a new Canarian species, but which *on reference to the type* may be seen to have in Mr. Webb's own handwriting a label attached to it bearing the words "Pico de Facho,"—which Pico de Facho (as the shell itself would in fact testify) is one of the mountains of Porto Santo (an island in which Mr. Webb sojourned during May of 1828)!! Now it so happens that the only character of any significance which M. Brullé alludes to in his (so-called) description of the *S. dimidiatus* is to the effect that its elytral striæ are punctured. In the *abbreviatus* the striæ are usually impunctate; nevertheless they have sometimes a tendency to be very faintly punctured even in Madeira proper and on the Desertas, but in Porto Santo they are nearly always very perceptibly punctate. So that I conclude, first, that M. Brullé's *S. dimidiatus* is founded upon an example (since lost—for it does not now exist in the collection at the Jardin des Plantes, in Paris) of the *abbreviatus* brought by Mr. Webb from Madeira; and secondly, that the specimen was, like the Land-Shell above referred to, a Porto-Santan one.

stria is said to be scarcely visible at the base." It is apparently very rare, the only three specimens which I have seen having been captured by myself, beneath cast-up sea-weed, on the sandy shores of the curious salt-water lake known as "Januvio," towards the south-western extremity of Lanzarote,—during my visit to that remarkable spot, in company with the Rev. R. T. Lowe, on the 26th of March 1859. I may add that, as has been so often observed in the *Dyschirii* of more northern latitudes, it was, even in that remote locality, associated with a *Bledius*,—a noble species somewhat akin to the European *bicornis*, and which I shall hope to describe under the name of *B. Januvianus*.

12. **Dyschirius subæneus**, n. sp.

D. æneo- (vel subpiceo-) niger, clypeo simplici; elytris ovato-oblongis, profunde punctato-striatis, punctis postice evanescentibus; antennis pedibusque rufo-piceis; tibiis anticis extus breviter denticulatis.—Long. corp. lin. $1\frac{1}{3}$–$1\frac{1}{2}$.

Habitat in Canaria Grandi, per litora paludis lutosæ (nec salinæ) ad Arguiniguin d. 14. Ap. A.D. 1858 deprehensus.

The present Dyschirius has very much the size and general aspect of the common European *D. æneus*, with which indeed before examination I had regarded it as coincident. A more careful inspection, however, has brought to light several small differential features, which it is the opinion of Dr. Schaum must separate it specifically from that insect. "It is distinct," says he, "from the *æneus* (to which it is closely allied) by the first and second striæ commencing in a deep point at the base, by the first stria being much deeper, and by the stronger teeth of its anterior tibiæ. It belongs to my Section B. 2. *β. aa.* (p. 201)." I captured thirteen examples of it by brushing the fine grass along the muddy edges of the freshwater lake at Arguiniguin, in the south of Grand Canary, during my visit there, with the Rev. R. T. Lowe, on the 14th of April 1858.

13. **Dyschirius pauxillus**, n. sp.

D. æneo-niger, clypeo simplici; elytris subovato-oblongis, profunde punctato-striatis, punctis postice evanescentibus; antennis pedibusque rufo-piceis; tibiis anticis extus vix denticulatis.—Long. corp. lin. $1\frac{1}{4}$.

Habitat Teneriffam; duo specimina (per aërem volitantia) prope "Puerto Orotava," mense Maio A.D. 1858, cepi.

The smaller size of this little *Dyschirius*, combined with its fore tibiæ being almost unarmed along their outer edge, will suffice to

distinguish it from the preceding ones. "It belongs," says Dr. Schaum, "to the same group as the *D. misellus* (p. 217 of my work); indeed it closely resembles the latter, but is distinct by the first stria beginning with a deeper impression at the base of the elytra." Two specimens only have as yet come under my observation,—captured (on the wing) immediately outside the Puerto Orotava, in Teneriffe, during May 1858.

(Subfam. IV. BRACHINIDES.)

Genus 8. **PHEROPSOPHUS.**

Solier, *Ann. de la Soc. Ent. de France*, ii. 461 (1833).

14. **Pheropsophus hispanicus.**

Brachinus hispanicus, *Dej., Spec. Gén. des Col.* i. 303 (1825).
—— —— (*Kollar*), *Dej., Icon.* ii. 104. tab. 8. fig. 5 (1830).
—— ——, *Brullé, in Webb et Berth.* (*Col.*) 55 (1838).

Habitat Canariam Grandem, per litora paludis ad Arguiniguin a meipso captus; necnon etiam ex Teneriffa exemplar antiquum nuper communicavit cl. Dom. Chevrolat.

This noble insect, which is found also in the south of Spain (and which is the only one of the larger *Brachinides* which has hitherto been recorded in Europe), occurs, though very rarely, at the Canaries. The only spot in which I have myself detected it is at the edges of the freshwater lake at Arguiniguin (the same locality in which I captured the *Dyschirius subæneus*), in the south of Grand Canary; but I could only obtain seven specimens. I have an old example lately forwarded by M. Chevrolat, of Paris, which is labelled "Teneriffe"; and as it is highly probable that it may exist in that island also, I think we may, without much risk, quote it accordingly.

(Subfam. V. DRYPTIDES.)

Genus 9. **POLYSTICHUS.**

Bonelli, *Observat. Entom.* tab. (1809).

15. **Polystichus brunneus.**

P. apterus, pallide rufo-brunneus, ubique pubescens; capite prothoraceque nitidis; hoc profunde sed parce punctato; illo confertius et paulo densius punctato, postice valde angustato, basi apiceque recte truncato, in medio profunde canaliculato necnon utrinque versus angulum posticum longitudinaliter impresso; elytris minus nitidis, depressis, profunde subcrenato-striatis, interstitiis sub-

convexis et minutissime punctulatis; antennis, palpis pedibusque rufo-testaceis.—Long. corp. lin. 4–4½.

Polistichus brunneus, *Dej., Spec. Gén. des Col.* v. 298 (1831).
—— unicolor, *Br., Hist. Nat. des Ins.* iv. 179. pl. 6. f. 2 (1834).

Habitat sub lapidibus in regionibus excelsis Teneriffæ, usque ad 9000′ s. m. ascendens.

Judging from the description, there can, I think, be but little doubt that the present *Polystichus* is identical with the *P. brunneus* of Dejean (whose *habitat* for it, of "Brazil," was consequently altogether erroneous): and such, I may add, is likewise the opinion both of the Baron Chaudoir and Dr. Schaum. Hence the name proposed for it, subsequently, by M. Brullé must of necessity be cancelled. It is one of the most beautiful of the Canarian Coleoptera, and is confined (so far as I have observed hitherto) to the higher elevations of Teneriffe. Indeed the only spot in which I have captured it (and even there but very sparingly) is the lofty Cumbre (on the ascent to the Peak) adjoining the Cañadas,—from about 8000 to 9000 feet above the sea; where, at the beginning of May 1859, I took it from under stones (occasionally within a short distance of the snow); in which locality it has subsequently been found by Dr. Crotch. A single example, however, from an old collection at S^ta^ Cruz, has lately been forwarded to me by the Barão do Castello de Paiva, purporting to have been taken in the "Barranco de San Domingo, near Laguna."

(Subfam. VI. LEBIADES.)

Genus 10. **DROMIUS.**

Bonelli, *Observat. Entom.* i. tab. syn. (1813).

16. **Dromius agilis.**

Carabus agilis, *Fab., Ent. Syst.* i. 139 (1792).
Lebia agilis, *Gyll., Ins. Suec.* ii. 186 (1810).
Dromius agilis, *Dej., Spec. Gén. des Col.* i. 240 (1825).
—— ——, *Schaum, Nat. der Ins. Deutsch.* i. 268 (1860).

Habitat in ins. Fuerteventura, Aprili ineunte A.D. 1859 semel captus.

A single specimen (somewhat immature) of what appears undoubtedly to be the common European *D. agilis* was captured by myself, beneath a stone, in a small, dry, rocky ravine immediately outside the little town of S^ta^ Maria Betancuria, of Fuerteventura, during my sojourn there, with the Rev. R. T. Lowe, at the beginning of April 1859.

17. **Dromius amœnus**, n. sp.

D. elongatus, nitidus; capite prothoraceque rufo-ferrugineis, illo magno elongato, hoc elongato, postice angustiore subrecto, in medio profunde canaliculato, limbo plus minus dilutiore; elytris elongato-ovatis, leviter striatis, testaceis, suturâ fasciâque pone medium dentatâ (necnon interdum limbo) nigro-fuscis; antennis palpisque testaceis; pedibus pallido-testaceis. — Long. corp. lin. 2–2¼.

Habitat in sylvaticis excelsioribus Teneriffæ, sub cortice arborum laxo latitans. In sylvâ Las Mercedes, necnon supra Taganana cepi.

This large and beautiful *Dromius* may be regarded as the Canarian representative of the Madeiran *D. insularis*,—to which, although exceedingly distinct from it specifically, it is closely allied. Apart, however, from the somewhat darker hue of its head and prothorax (the former of which is less strigulose in the *centre*, whilst the latter is more elongate and *straighter behind*), it differs from that insect in its brighter surface, and convexer and more rounded elytra—which have their striæ less impressed, and their postmedial fascia *broader* (extending in fact to the outer margin, which is itself also usually more or less blackened or infuscated). It is apparently very rare, or at any rate local, and confined (so far as I have observed hitherto) to the sylvan regions on the north-eastern mountains of Teneriffe, from the wood of Las Mercedes to Point Anaga. In the former I took it, not uncommonly, from beneath damp loosened bark, during June 1858; and, at the end of May of the following year, I met with it in similar spots in the laurel-district above Taganana.

18. **Dromius elliptipennis**, n. sp.

D. nitidus; capite piceo, latiusculo, oculis magnis, prominentibus; prothorace rufo-testaceo, subquadrato postice angustiore, ad angulos posticos late explanato; elytris ellipticis, ad latera rotundatis, testaceis, pone scutellum necnon per suturam obscure sed in fasciâ communi mediâ maximâ dentatâ distincte nigro-fuscis; antennis, palpis pedibusque testaceis; tarsis posticis longiusculis.—Long. corp. lin. 1½–1⅔.

Habitat in sylvaticis excelsis Teneriffæ, Gomeræ et Hierro, rarissimus.

Until lately I had regarded this *Dromius* as a "var. *β*" (peculiar to the sylvan regions) of the *D. sigma*; but the opinion (recently) of Dr. Schaum that it is certainly distinct has induced me to examine it with greater care, and I now believe with him that it cannot be referred to that species. It may be known readily from the *sigma*

by its rather wider head and prothorax (the former of which has the eyes a little more prominent, whilst the latter is more broadly margined towards the basal angles), by its rounder or more elliptical elytra (which have their zigzag fascia very much deeper or more developed, and an evident, though never very conspicuous, cloud immediately behind the scutellum), and by its posterior feet being a trifle longer.

The *D. elliptipennis* appears to be extremely rare, and confined (so far as observed hitherto) to the damp sylvan regions of Teneriffe, Gomera, and Hierro,—in the former of which I captured it in the laurel-woods above Taganana, and in the latter at El Golfo (on the western side of the island). Its detection in Gomera is due to the recent researches of Dr. Crotch, who obtained it on the mountains above Hermigua.

19. **Dromius sigma.**

D. angustulus, nitidiusculus; capite nigro-piceo vel piceo; prothorace elytrisque testaceis, his subparallelis, suturâ fasciâque mediâ dentatâ nigro-fuscis; antennis, palpis pedibusque pallido-testaceis.
Var. β. Capite prothoraceque (rufo-brunneo) angustioribus, illo oblongo oculis paulo minus prominentibus. [*In excelsioribus* Teneriffæ.]—Long. corp. lin. $1\frac{1}{2}$–vix $1\frac{2}{3}$.

Carabus sigma, *Rossi, Fna Etrus.* i. 226 (1790).
Dromius sigma, *Woll., Ins. Mad.* 5 (1854).
—— ——, *Id., Cat. Mad. Col.* 3 (1857).
—— ——, *Schaum, Nat. der Ins. Deutsch.* i. 273 (1860).

Habitat Canariam et Teneriffam, sub lapidibus, rarior; fere ad 9000′ s. m. ascendens.

The European *D. sigma*, which occurs sparingly in the Madeiran Group, is decidedly rare in these islands, where however it is widely spread at intermediate and lofty altitudes. I have taken it in the region of El Monte in Grand Canary; and on the exposed mountain-slopes above the plain of Laguna in Teneriffe, as well as on the elevated Cumbre adjoining the Cañadas (nearly 9000 feet above the sea)—where the specimens (var. β) have their head and prothorax, apparently, a little narrower, and their eyes somewhat less prominent. In Teneriffe it was found, also, by Dr. Crotch.

20. **Dromius incertus,** n. sp.

D. subnitidus; capite sat magno, nigro-piceo; prothorace piceo (vel rufo-piceo), subquadrato postice paulo angustiore, sat convexo, in medio profunde canaliculato; elytris substriatis, fusco-piceis, ver-

sus basin necnon ad apicem ipsum vix dilutioribus; antennis, palpis pedibusque subrobustis, testaceis.—Long. corp. lin. $1\frac{1}{2}$–$1\frac{2}{3}$.

Habitat Lanzarotam borealem, d. 9. Mart. A.D. 1859 duo specimina collegi.

The present *Dromius* is nearly allied to the European *D. nigriventris*, Thom. (*fasciatus*, Dej.), from which indeed Dr. Schaum, to whom I forwarded a single specimen for examination, professed himself scarcely able (except in colour) to detect a satisfactory difference. But, after a most careful comparison of two examples which I captured in the island of Lanzarote with an English series of the *D. nigriventris*, I am quite satisfied that they cannot be specifically identical with the latter. Thus, they are not only altogether a little larger, wider, and more robust than the *nigriventris*, but the head and prothorax are *very perceptibly* larger (the latter, also, being more convex), the legs are thicker, and the colour of the elytra is almost uniformly of a dark piceous-brown,—there being only the faintest possible trace of a more diluted portion towards the base and at the extreme hinder margin. My two examples were taken amongst dry earth and rubbish on some rocks at Yé, in the north of Lanzarote, whilst encamped there, with the Rev. R. T. Lowe, on the 9th of March 1859.

21. **Dromius pervenustus**, n. sp.

D. nitidus; capite nigro-piceo (vel piceo); prothorace rufo-testaceo, brevissimo; elytris leviter punctulato-striatis, testaceis, fasciâ mediâ maximâ transversâ (haud dentatâ) necnon interdum suturâ nigris; antennis palpisque testaceis, pedibus pallido-testaceis.—Long. corp. lin. 1–vix $1\frac{1}{3}$.

Habitat in Teneriffa, Gomera et Palma, rarissimus.

In general colouring this beautiful little *Dromius* is very similar to the *D. sigma*; nevertheless its comparatively minute size and exceedingly short prothorax, in conjunction with its more oblong and distinctly striated elytra, with their relatively larger, darker, and less dentate fascia, will at once separate it from that insect. It is apparently one of the rarest of the Canarian Coleoptera,—four out of the only five specimens which I have myself taken having been captured at the base of perpendicular rocks high up in the Barranco da Agua of Palma, and the remaining *one* in the dry cindery region immediately above the Puerto Orotava of Teneriffe. A single example was obtained also in Gomera, by Dr. Crotch.

Genus 11. BLECHRUS.

Motschulsky, *Bull. de Mosc.* iii. 219 (1847).

22. Blechrus glabratus.

Lebia glabrata (*Meg.*) *Dufts., Fna Austr.* ii. 248 (1812).
Dromius glabratus, *Brullé, in Webb et Berth.* (*Col.*) 55 (1838).
—— negrita, *Woll., Ins. Mad.* 9 (1854).
—— glabratus, *Id., Cat. Mad. Col.* 4 (1857).
Blechrus glabratus, *Schaum, Nat. der Ins. Deutsch.* i. 275 (1860).

Habitat Teneriffam, rarior; in sylvis ad Agua Garcia et Taganana captus.

Amongst the few specimens of the *B. maurus* which I have taken at the Canaries, I find one which must certainly be referred to the nearly allied species *glabratus*. It was captured in Teneriffe,—at the Agua Garcia.

23. Blechrus maurus.

Dromius maurus, *Sturm, Deutsch. Fna*, vii. 55. t. 171. f. D (1827).
—— glabratus, *Woll., Ins. Mad.* 9 (1854).
—— maurus, *Id., Cat. Mad. Col.* 5 (1857).
Blechrus maurus, *Schaum, Nat. der Ins. Deutsch.* i. 276 (1860).

Habitat in Canaria, Teneriffa et Palma, sub lapidibus, passim.

The common European *B. maurus*, although rather abundant at Madeira, appears to be somewhat rare, or at all events very local, in these islands. I have taken it in Grand Canary; at Laguna, the Agua Garcia, Souzal, and Orotava, in Teneriffe; and in Palma; and it was captured in Teneriffe by Dr. Crotch.

24. Blechrus plagiatus.

Lebia plagiata (*Meg.*), *Dufts., Fna Austr.* ii. 249 (1812).
Dromius plagiatus, *Sturm, Deutsch. Fna*, vii. 49. t. 170. f. D (1827).
—— ——, *Woll., Cat. Mad. Col.* 5 (1857).
Blechrus plagiatus, *Schaum, Nat. der Ins. Deutsch.* i. 277 (1860).

Habitat in Lanzarota, Fuerteventura, Canaria, Teneriffa et Gomera, hinc inde haud infrequens.

The *B. plagiatus* (which is of the greatest rarity in the Madeiran Group) would seem to be more common at the Canaries than the preceding species: nevertheless it is undoubtedly scarce, though very widely distributed over the archipelago. I have taken it in Lanzarote, Fuerteventura, (at San Mateo of) Grand Canary and (at Souzal and the Agua Garcia of) Teneriffe; and it was captured by Dr. Crotch, at Hermigua, in Gomera. All my specimens from Lanzarote (ten in number) belong to a dark variety of the insect in which the testaceous elytral dash is obsolete—or, at any rate, so completely suf-

fused as merely to impart a just perceptibly paler tint to the disk of the elytra: and at first sight, therefore, they might be taken for the *B. maurus*; nevertheless their slightly larger size and somewhat longer antennæ, in conjunction with their less shining surface and less blackened tibiæ and feet (the latter of which have their tarsal claws almost simple internally), prevent their being confounded with that species. I should add, however, that two examples which were taken in the same island (Lanzarote) by John Gray, Esq., have their discal patches well developed.

Genus 12. **METABLETUS.**

Schm.-Göbel, *Ent. Zeit. S.* 390 (1846).

25. **Metabletus patruelis.**

Dromius patruelis, *Chaud., Enum. des Carab. de Cauc.* 60 (1846).
—— exclamationis, *Ménétr., Ins. rec. p. Lehm.* i. 6. f. 4 (1849).
—— arenicolus, *Woll., Ins. Mad.* 6 (1854).
—— arenicola, *Id., Cat. Mad. Col.* 4 (1857).
—— obscuroguttatus, *Hart.* [nec *Dufts.*], *Geolog. Verhältn. Lanz. und Fuert.* 141.

Habitat Lanzarotam et Fuerteventuram, præsertim in arenosis, vulgaris.

The *M. patruelis* (which is common in Porto Santo, and which occurs, though very rarely, in Madeira likewise) abounds throughout Lanzarote and Fuerteventura—the two eastern islands of the Canarian archipelago; but I have not yet observed it in any other portions of the Group. It is found more especially in the driest regions, and delights in sandy and calcareous spots. It was taken, also, in Lanzarote by Mr. Gray, and in Fuerteventura by M. Hartung; the latter of whom wrongly identified it (as I can vouch from the possession of one of his specimens) with the *M. obscuroguttatus*, Dufts.

26. **Metabletus inæqualis.**

M. æneus, distincte alutaceus, sat nitidus; prothorace cordato; elytris plus minus inæqualibus, distincte striatis, singulo foveis duabus magnis notato; antennis femoribusque nigro-piceis, illis ad basin, tibiis tarsisque plus minus piceo-fuscis.—Long. corp. lin. $1\frac{1}{3}$–$1\frac{2}{3}$.

Metabletus inæqualis, *Woll., Ann. Nat. Hist.* (3rd series) xi. 214 (1863).

Habitat in Canaria, Teneriffa, Gomera et Palma, præsertim in sylvaticis, sat frequens.

The present species and the following one are very closely allied, but I believe that they are truly distinct; and such also was the opinion of Dr. Schaum, to whom I sent them for examination. They

belong to the same type as the European *M. foveola*; and are still more nearly akin to the *M. foveolatus*, Dej. (*cupreus*, Waltl), found in the south of Spain and at Tangiers, and which I have myself taken in the sandy district at Mogadore, on the west coast of Morocco. Nevertheless from the latter they may, both of them, be immediately known by their entirely wanting the paler humeral patch which is always more or less evident in that insect. Touching their differences *inter se*, Dr. Schaum remarks: "The species from Palma and Teneriffe [i. e. *inæqualis*] I consider certainly new; the one from Lanzarote [*lancerotensis*] seems to me to be a second species, and no local state of the other. The Palman specimens not only have more uneven, and more distinctly striated, elytra, but also larger foveæ both on the disk and in the *lateral* series; whilst the Lanzarotan ones are more shining and almost free from striæ. From *foveola* the Palman species is distinguished by its uneven elytra and large foveæ (both discal and at the sides): the Lanzarotan species, on the other hand, has the small foveæ of *foveola*, but its elytra are almost smooth and brilliant (whereas in *foveola* they are opake and finely striated)."

I have observed the *M. inæqualis* hitherto only in the islands of Grand Canary, Teneriffe, and Palma; but it has recently been captured by Dr. Crotch in Gomera also. The Palman examples have perhaps, on the whole, the distinctive characters of the species best expressed, their elytra being always exceedingly uneven and their discal impressions very large. Those from Teneriffe can scarcely be regarded as in reality less typical, though occasionally they may appear just perceptibly smoother. But the only three which I have as yet captured in Grand Canary (during my sojourn at El Monte, in March 1858), although quite as conspicuously striated as those from Teneriffe and Palma, have their foveæ less developed. It is eminently a sylvan insect, the few specimens which I have observed in comparatively open spots being probably the remains of a fauna which has more or less died-out since the timber has been destroyed. In Palma it abounds in most of the wooded ravines, such as the Barranco da Agua, the Barranco de Galga, &c.; whilst in Teneriffe I have captured it above Taganana, at Las Mercedes, La Esperanza, the Agua Garcia, Souzal, the Agua Mansa, Ycod el Alto, and even on the Cumbre adjoining the Cañadas (upwards of 8000 feet above the sea).

27. **Metabletus lancerotensis**, n. sp.

M. æneus, minute alutaceus, nitidus; prothorace subcordato; elytris subconvexis, obsolete substriatis, utrinque foveis duabus minoribus (sed sat magnis) notatis; antennis femoribusque nigro-piceis, illis

ad basin, tibiis tarsisque plus minus piceo-fuscis.—Long. corp. lin. $1\frac{1}{3}$–$1\frac{2}{3}$.

Habitat Lanzarotam (præsertim borealem), sub lapidibus, passim.

As already implied, the somewhat more shining, and rather less coarsely alutaceous, surface of the present *Metabletus*, in conjunction with its slightly more convex, less uneven, and more obsoletely striated elytra (which have the foveæ, both of their disk and sides, distinctly smaller), will serve to separate it from the *M. inæqualis*. In habits, too, it is different from that species, being confined (so far as I have observed hitherto) to the dry and barren island of Lanzarote,—where, during January of 1858 and March of the following year, I took it, not uncommonly, from beneath stones, in various localities; and where it was likewise captured by Mr. Gray.

28. **Metabletus brevipennis**, n. sp.

M. inæquali similis sed vix minor, pallidior (*i. e.* magis fuscescens), opacior (*i. e.* paulo grossius alutaceus); fronte inter oculos magis depressâ; prothorace sensim quadratiore (*i. e.* postice vix minus angustato); elytris magis æqualibus, densius et multo levius (sc. levissime) striatis punctisque duobus discalibus multo minoribus notatis, brevioribus (apice magis truncatis); antennis pedibusque pallidioribus (rufo-brunneis).—Long. corp. lin. $1\frac{1}{2}$.

Habitat Teneriffam, a W. D. Crotch tempore vernali A.D. 1862 deprehensus.

The specimen from which the above diagnosis has been compiled was captured by Dr. Crotch, during the spring of 1862, in Teneriffe; and although unwilling to erect a species on the evidence afforded by a single individual, yet its distinctive characters appear to be so well defined that I cannot but venture in the present instance to do so. Judging therefore from the unique example now before me, the *M. brevipennis* is slightly smaller, paler (or of a more brownish-piceous tint), and less shining (or more coarsely alutaceous) than the *inæqualis*; its forehead is rather flatter between the eyes; its prothorax is just perceptibly squarer (or less narrowed posteriorly); its elytra are much more *even*, more closely and very much more lightly striated, considerably shorter (or more truncated behind), and with the two discal punctures on each smaller; and its limbs are paler, being of a rufo-piceous or reddish-brown hue.

Genus 13. **TARUS.**

Clairville, *Ent. Helv.* ii. 94 (1806)

29. Tarus discoideus.

Cymindis discoidea, *Dej., Icon.* i. 78. t. 8. f. 5 (1829).
—— ——, *Id., Spec. Gén. des Col.* v. 307 (1831).
—— discordea, *Brullé, in Webb et Berth.* (*Col.*) 55 (1838).
—— ——, *Hart., Geolog. Verhältn. Lanz. und Fuert.* 140 et 141.

Habitat in Lanzarota et Fuerteventura, sub lapidibus, præsertim in arenosis, tempore hiberno et vernali vulgaris.

I refer without hesitation the present superb *Tarus* to Dejean's *discoideus* (described from a single specimen, of uncertain *habitat*, which he obtained from the collection of Latreille), because it is the opinion of my friend Dr. Schaum that such should certainly be the case, and because Dejean's diagnosis seems to tally sufficiently well with the long array of examples now before me. Almost the only particular, indeed, in which it does not quite accord with the Canarian insect is, that it speaks of the black patch at the base of the elytra as "presque triangulaire"; whereas it is *invariably* (in 48 specimens which I have just examined) transverse-quadrate.

The *T. discoideus* abounds, beneath stones, during the winter and spring, in Lanzarote and Fuerteventura,—where it was taken by Mr. Gray and myself in January 1858; and subsequently, by myself, during February, March and April of the following year: it has been likewise recorded in both of those islands by M. Hartung. Hitherto I have not observed it in any other portion of the Group; nevertheless a pair has lately been communicated by the Barão do Castello de Paiva, professedly captured in Teneriffe; but as I feel that there may be some mistake about the *habitat*, I have thought it safer not to enter it as a Teneriffan species. It is far from unlikely, however, that it will be found to occur in the sandy region between Las Palmas and the Isleta, of Grand Canary.

30. Tarus suturalis.

Cymindis suturalis, *Dej., Spec. Gén. des Col.* i. 206 (1825).
Tarus suturalis, *Woll., Ins. Mad.* 3 (1854).
—— ——, *Id., Cat. Mad. Col.* 2 (1857).
Cymindis suturalis, *Hart., Geolog. Verhältn. Lanz. und Fuert.* 140.

Habitat in Lanzarota, Fuerteventura et Canaria, sub lapidibus in arenosis una cum specie præcedente degens.

The *T. suturalis* (which occurs in three out of the five Madeiran islands, and which has lately been communicated by the Barão do Castello de Paiva even from the rocks of the Salvages) occurs, beneath stones (particularly in low sandy spots), in company with the last species, throughout Lanzarote and Fuerteventura; and I have like-

wise taken it between Las Palmas and Puerto da Luz, in Grand Canary. It is in Lanzarote, however, that it more especially abounds; where it was also captured by John Gray, Esq., and M. Hartung.

31. Tarus marginellus.

T. elongatus, nitidus, piceus, calvus; capite distincte sed parce punctulato; prothorace vix rufescentiore et (in disco saltem) vix punctulato, cordato, angulis ipsis posticis acute exstantibus; elytris oblongis, subdepressis, crenato-striatis, interstitiis minutissime et parce punctulatis, limbo anguste rufo-testaceo; antennis, palpis pedibusque rufo-testaceis.—Long. corp. lin. $3\frac{1}{2}$–4.

Cymindis marginella, *Brullé, in Webb et Berth.* (*Col.*) 55 (1838).

Habitat Lanzarotam borealem, sub lapidibus prope Salinas haud infrequens.

The comparatively elongate outline and shining, unpubescent surface of the present *Tarus*, in conjunction with its almost unpunctured prothorax (which has its extreme hinder angles acutely prominent), and its rather depressed and finely crenate-striated elytra (the margin of which is narrowly rufo-testaceous, whilst the punctules of the interstices are most minute and remote), will at once distinguish it from the three following species. Hitherto I have observed it only in the north of the island of Lanzarote, where in January 1858 it was taken by Mr. Gray and myself (and subsequently, by myself, during March of the following year), from beneath stones, between the Salinas and the ascent of the lofty cliffs (known as the "Risco") which rise almost immediately behind them. I have compared it with Brullé's types, in the Paris collection, and can vouch therefore for its being correctly identified with his *C. marginella*.

32. Tarus cinctus.

T. nitidus, piceus, pilis mollibus erectis longiusculis parce vestitus; capite prothoraceque profunde sed parce punctatis, hôc cordato, angulis ipsis posticis vix exstantibus; elytris ovalibus, subconvexis, levissime striatis, interstitiis profunde punctatis, limbo anguste rufo-testaceo; antennis palpisque rufo-testaceis, pedibus testaceis. —Long. corp. lin. 3–$3\frac{1}{2}$.

Cymindis cincta, *Brullé, in Webb et Berth.* (*Col.*) 55 (1838).

Habitat in montibus Canariæ Grandis, sub lapidibus, rarissimus.

A remarkable *Tarus*, at once known by its curious sculpture,—the entire upper surface being impressed with large and deep punctures, whilst the elytral striæ are so light as to be almost obsolete. In common with the two following species, it is beset with very fine and

erect pile; nevertheless in the *T. cinctus* the hairs are both longer and fewer than is the case in either the *amictus* or *zargoides*. And it is further distinguished by its elytra (which are narrowly edged with rufo-testaceous, as in the *T. marginellus*) being somewhat convex, and by its extreme hinder prothoracic angles being almost rounded-off. It is apparently very rare, the only spot in which I have hitherto observed it being, beneath the fir-trees, in the lofty Pinal above San Bartolomé (in the district of Tarajana) of Grand Canary, during April 1858,—where, moreover, I obtained but eight examples. I can answer for its identity with Brullé's *C. cincta*, having compared it with the types in Paris.

33. **Tarus amictus**, n. sp.

T. subopacus, fusco-piceus, pilis mollibus erectis breviusculis dense vestitus; capite prothoraceque dense punctulatis, hôc latiusculo, cordato, angulis ipsis posticis paulo exstantibus; elytris subquadrato-ovalibus, striatis, interstitiis dense punctulatis, limbo vix fuscescentiore; antennis palpisque rufo-testaceis, pedibus testaceis. —Long. corp. lin. 3.

Habitat in montibus Canariæ Grandis, ad Osorio (supra oppidum Teror) d. 23. Ap. A.D. 1858, sub lapidibus, deprehensus.

The comparatively opake and very densely (though not deeply) punctulated surface of this distinct *Tarus*, combined with its rather broad prothorax and more quadrate elytra (the edges of which are but obscurely diluted, or of a more fuscescent hue, whilst their striæ are rather deep but simple), will at at once serve to characterize it. Its clothing, also, is somewhat peculiar,—the hairs, although quite as fine and as erect, being both shorter and more dense than those of the *T. cinctus*. The only two specimens which I have seen were captured by myself, beneath stones, at Osorio, in Grand Canary, on the 23rd of April 1858.

34. **Tarus zargoides.**

T. subnitidus, fusco-piceus, pilis mollibus erectis brevissimis sat dense vestitus; capite prothoraceque dense et profunde scabroso-punctatis, hôc cordato, angulis ipsis posticis paulo exstantibus; elytris ovalibus, subconvexis et undulato-inæqualibus, profunde (sed subirregulariter) punctato-striatis, interstitiis minute punctulatis, limbo vix rufescentiore; antennis palpisque testaceis, pedibus pallido-testaceis.—Long. corp. lin. $2\frac{1}{3}$–$2\frac{2}{3}$.

Tarus zargoides, *Woll., Ann. Nat. Hist.* (3rd series) xi. 214 (1863).

Habitat in sylvaticis montosis Teneriffæ, sub lapidibus, rarissimus.

The somewhat dull and remarkably uneven surface of this curious

little *Tarus* (the elytral portion of which appears almost *undulated*), in conjunction with its densely and subrugosely sculptured head and prothorax, and the rather evident punctures of its (often interrupted) striæ, will readily distinguish it. Its legs are of a slightly paler hue than those of the three preceding species; the fine, erect pubescence with which it is clothed is *very* short; and its elytra are but obscurely diluted, or *subrufescent*, towards the edges and base. It is certainly rare, and appears to be peculiar to the sylvan regions of Teneriffe, at intermediate and rather lofty elevations. I have taken it in the woods above Taganana and at Las Mercedes, as also at the Agua Garcia and the Agua Mansa. Its general outline and uneven surface are strongly suggestive of a minute *Zargus*; from which fact I have borrowed its trivial name; and, according to Dr. Schaum, it is nearer, in affinity, to the *T. cordatus*, Rambur, than to any other species hitherto described.

Genus 14. **MASOREUS.**

(Ziegler) Dej., *Spec. Gén. des Col.* iii. 538 (1828).

35. **Masoreus nobilis**, n. sp.

M. magnus, piceus; capite prothoraceque nitidissimis, vix (etiam oculo valde armato) alutaceis, hôc leviter canaliculato; elytris alutaceis, sat profunde crenato-striatis, fere concoloribus (ad humeros vix rufescentioribus); antennis, palpis pedibusque rufo-piceis; unguiculis fere simplicibus.—Long. corp. lin. $2\frac{2}{3}$–$3\frac{1}{3}$.

Habitat in Fuerteventura, ad Olivam d. 31. Mart. A.D. 1859 captus.

The comparatively large size of this gigantic *Masoreus*, in conjunction with its almost uniformly piceous (or rufo-piceous) hue, the unalutaceous surface of its head and prothorax, its somewhat deeply crenate-striated elytra, and its nearly simple claws, will at once characterize it. The only three specimens which I have seen were captured by myself, from beneath stones, in the flat ground immediately to the south of Oliva, in Fuerteventura, on the 31st of March 1859.

36. **Masoreus arenicola.**

M. nigro-piceus, distincte (oculo armato) alutaceus; prothorace transverso, subconvexo, postice in medio plus minus conspicue transversim impresso sed vix rugato, canaliculâ centrali haud profundâ necnon antice et postice plus minus subobsoletâ; elytris leviter subcrenato-striatis, ad basin plus minus distincte rufescentioribus; antennis, palpis pedibusque piceo-testaceis; unguiculis leviter denticulatis.—Long. corp. lin. 2–$2\frac{1}{3}$.

Masoreus arenicola, *Woll., Ann. Nat. Hist.* (3rd series) xi. 214 (1863).

Habitat in arenosis maritimis (plus minus salinis) Lanzarotæ et Fuerteventuræ, tempore hiberno et vernali hinc inde vulgaris.

The present *Masoreus* and the following one are closely akin to the European *M. Wetterhalii*; but, apart from other characters shortly to be noticed, they *both* differ from that species in having their surface (when viewed beneath the microscope) distinctly alutaceous and their scutellum unchanneled posteriorly (or if at all, *most obsoletely so*). In general colouring, as well as in its maritime habits, the *M. arenicola* approaches more nearly to its European ally than the *alticola* does; nevertheless (on account of its minutely alutaceous sculpture) it is less highly polished than that insect, its prothorax is rather more transverse, more impressed in the centre behind, convexer on the disk and with its channel lighter, its elytra (which have their striæ considerably finer) are more narrowly and less brightly rufescent at their base, whilst its claws (when seen under a high magnifying power) are much less strongly denticulated.

From the following species the *M. arenicola* differs in its rather more alutaceous surface; in its prothorax being a trifle wider and more transverse, convexer on the disk but more impressed in the centre behind, and with its channel lighter and more or less obsolete at the base and apex; in its elytra being just perceptibly straighter at the sides, usually more brightly rufescent at the base, and with their striæ perhaps even still more faintly crenulated; and in its legs being a shade darker, with their two hinder femora perhaps just perceptibly longer. Its claws also are less coarsely denticulated; though, the teeth being in every species of course extremely small, this is a character not very easy of observation, and one, I am well aware, in which it is possible to be deceived. In habits, however, the two insects are abundantly distinct; for whilst the *arenicola* frequents the low sandy shores of Lanzarote and Fuerteventura, occurring in more or less saline places and even beneath Algæ, the *alticola*, on the other hand, is found at a great elevation within the damp wooded districts of Teneriffe, where it ascends to more than 8000 feet above the sea.

The *M. arenicola* is likewise very nearly allied to the *ægyptiacus* (a type of which, for comparison, has been furnished by Dr. Schaum); but in that insect the striæ are quite uncrenulated, and the claws are almost simple. Its prothorax too is not exactly the same.

I have taken the present *Masoreus* abundantly in Lanzarote and Fuerteventura (in the latter of which islands it was captured also by Mr. Gray), during the winter and spring. It occurs beneath stones and marine *rejectamenta* in sandy spots, usually at a short distance behind the sea-beach, though sometimes actually upon it,—in both

of which situations I have observed it plentifully at the Salinas in the extreme north of Lanzarote, as also around Arrecife, and at Berrugo in the extreme south; whilst, in Fuerteventura, it is common in sandy places near Puerto de Cabras.

37. **Masoreus alticola**, n. sp.

M. nigro-piceus, sat distincte (oculo armato) alutaceus; prothorace paulo minus transverso, postice in medio distinctius longitudinaliter striguloso sed haud impresso, canaliculâ centrali profundâ integrâ; elytris subrotundatis, leviter crenato-striatis, ad basin plus minus indistincte rufescentioribus; antennis, palpis pedibusque testaceis; femoribus posticis breviusculis; unguiculis conspicue denticulatis. —Long. corp. lin. 2–2¼.

Habitat in elevatis humidis Teneriffæ, præsertim sylvaticis, usque ad 8000′ s. m. ascendens.

Were it not for its completely opposite habits, I should certainly have confounded the present *Masoreus* with the last one; nevertheless, warned by the very decided differences in their modes of life, I have lately overhauled the two insects most carefully, and feel perfectly satisfied that, however near they may approach each other at first sight, they are in reality distinct*. The *M. alticola* is, on the average, perhaps a trifle smaller and less alutaceous than its ally; its prothorax is rather narrower, or less transverse, not so convex on its disk, less impressed in the centre behind (where moreover the longitudinal *rugæ* are much more conspicuous), and also more deeply channeled (the channel extending from the extreme base to the apex); its elytra are just perceptibly rounder at the sides, with their striæ perhaps more evidently crenulated, and usually a little less rufescent towards their base; its hinder femora are somewhat shorter; its legs paler; and its claws, unless I am mistaken, are rather more powerfully denticulated. In this last respect, indeed, it is coincident with the European *M. Wetterhalii*; but, apart from other differences, its alutaceous and less shining surface, in conjunction with its obscurer colour, unchanneled scutellum, and totally opposite habits, will at once separate it from that insect.

The *M. alticola* appears to be peculiar to the lofty districts of Teneriffe, where it occurs in damp sylvan spots in the vicinity of small streams and wet rocks. I have taken it sparingly on the mountains above the Agua Mansa, as also in the ravines of the Pinal

* I am glad also to be able to state that, after examining them (recently) with great care, such was likewise the ultimate opinion of Dr. Schaum,—though (as in my own case) he was not able at first sight to appreciate their differences.

above Ycod el Alto, and even from amongst the thickets of the Retamas on the Cumbre adjoining the Cañadas—more than 8000 feet above the sea.

(Subfam. VII. CHLÆNIIDES.)

Genus 15. **CHLÆNIUS.**

Bonelli, *Observat. Entom.* i. tab. syn. (1813).

38. **Chlænius spoliatus.**

Carabus spoliatus, *Rossi, Mant. Ins.* i. 79 (1792).
—— ——, *Fab., Syst. Eleu.* i. 183 (1801).
Chlænius spoliatus, *Dej., Spec. Gén. des Col.* ii. 312 (1826).
—— ——, *Schaum, Deutsch. Fna,* i. 329 (1860).

Habitat Canariam, Teneriffam et Gomeram, per margines aquarum in locis inferioribus, rarissimus.

The European *C. spoliatus* appears to be very rare at the Canaries, the only two spots in which I have myself observed it being near S^ta^ Cruz of Teneriffe (beneath stones at the edges of the small stream in the Barranco Santo), and along the margins of the little pools in the sandy waste at Maspalomas, in the extreme south of Grand Canary. A single specimen, however, was taken by Dr. Crotch in Gomera.

39. **Chlænius canariensis.**

Chlænius canariensis (*Klug*), *Dej., Spec. Gén. des Col.* v. 657 (1831).
—— ——, *Brullé, in Webb et Berth.* (*Col.*) 57. pl. ii. f. 5 (1838).

Habitat Canariam et Teneriffam, in iisdem locis ac præcedens sed multo magis frequens.

The beautiful *C. canariensis* I have taken hitherto only in the two same localities as the last species (than which it is far more abundant). It has, however, been communicated by the Barão do Castello de Paiva from the Barranco de San Domingo, near Laguna.

(Subfam. VIII. LICINIDES.)

Genus 16. **LICINUS.**

Latreille, *Gén. Crust. et Ins.* i. 199 (1806).

40. **Licinus Manriquianus.**

L. ater, nitidus; capite leviter punctato; prothorace transverse subquadrato (ad latera subrecto), in disco leviter et parce sed versus latera et basin dense et profunde punctato; elytris profunde punctato-striatis, interstitiis convexis, parce et profunde punctatis nec-

non punctulis minutissimis interspersis; antennis ferrugineis, ad basin, palpis tarsisque rufo-piceis.—Long. corp. lin. $5\frac{1}{2}$–$6\frac{1}{2}$.

Licinus spec. (agricolæ affinis), *Hartung, Geolog. Verhältn. Lanz. und Fuert.* 140 et 141.

—— Manriquianus, *Woll., Ann. Nat. Hist.* (3rd series) ix. 438 (1862).

Habitat Lanzarotam et Fuerteventuram, sub lapidibus, tempore hiberno et vernali haud infrequens. Species valde distincta, indigena, et in honorem clariss. Dom. *Pedro Manrique de Lara y Cabrera*, ob gratias plurimas nobis in ins. Fuerteventura amicissime oblatas, dicata.

The present *Licinus* (which has nothing in common with the European *L. agricola*, as implied in M. Hartung's list) is about the size of the *L. brevicollis*, Dejean—from the north of Africa, Sicily, Malta, &c. It may, however, be known by its shining, unalutaceous surface, its subquadrate prothorax (which is less rounded at the sides than in the generality of the *Licini*), by its deeply punctate-striate elytra, the insterstices of which are convex and studded with a double series of large and small punctures, and by its antennæ being brightly rufo-ferruginous towards their apex. It is tolerably common, beneath stones, in Lanzarote and Fuerteventura, during the winter and spring; in both of which islands it was taken by Mr. Gray, myself, and M. Hartung. In the latter I observed it more particularly at Oliva, whilst visiting that comparatively fertile spot, in company with the Rev. R. T. Lowe, at the end of March 1859; and I have great pleasure in dedicating it to our worthy host, Don Pedro Manrique de Lara y Cabrera, whose unbounded kindness and hospitality, during our entire sojourn in his island, I am glad to have an opportunity of recording.

(Subfam. IX. BROSCIDES.)

Genus 17. BROSCUS.

Panzer, *Index Ent.* i. 62 (1813).

41. Broscus glaber.

B. ater; capite prothoraceque nitidis, hôc cordato, ad basin leviter et parce punctato, ad latera ipsissima anguste marginato subcyanescente; elytris subnitidis, obsoletissime subpunctulato-striatis, ad latera ipsissima anguste marginatis subcyanescentibus; antennis fusco-piceis, articulo primo flavo-testaceo; pedibus elongatis, piceis. —Long. corp. lin. $8\frac{1}{2}$–9.

Feronia (Percus) glabra, *Brullé, in Webb et Berth.* (*Col.*) 57. pl. ii. f. 4 (1838).

Habitat in Canaria Grandi, sub lapidibus in collibus aridis supra urbem Las Palmas, tempore vernali haud infrequens.

The present insect, which is undoubtedly the *Feronia glabra* of Brullé (as I have satisfied myself by an examination of his original types, in Paris), appears, so far as I have observed hitherto, to be peculiar to Grand Canary; where, at the end of March 1858, I took it, not uncommonly, beneath stones, on the calcareous hills above Las Palmas, along the road to El Monte.

42. **Broscus rutilans.**

B. ater; capite prothoraceque nitidissimis, hôc angusto, cordato, ad basin profundius et densius punctato, ad latera ipsissima angustissime marginato subconcolore; elytris nitidis, obsoletissime subpunctulato-striatis, ad latera ipsissima angustissime marginatis subconcoloribus; antennis fusco-piceis, articulo primo testaceo-piceo; pedibus piceis.—Long. corp. lin. 7–8.

Broscus rutilans, *Woll., Ann. Nat. Hist.* (3rd series) ix. 438 (1862).

Habitat in montibus excelsis Teneriffæ, usque ad 7000′ s. m. ascendens.

The rather smaller size, narrower outline, and more shining surface of this very distinct *Broscus*, in conjunction with the more punctured base of its prothorax, and its altogether narrower and less cyaneous margin, will at once distinguish it from the last species. Its limbs, too, are somewhat shorter, and the basal joint of its antennæ is less pale. In its habits it is very different from the *B. glaber*,—residing in the higher regions of Teneriffe, above the upper limits of the sylvan districts. In such situations I obtained it, rather abundantly, during May of 1859, on the mountain-ridges above the Agua Mansa, adjoining the Cumbre,—upwards of 7000 feet above the sea.

(Subfam. X. PTEROSTICHIDES.)

Genus 18. **POGONUS.**

(Ziegler) Dej., *Spec. Gén. des Col.* iii. 6 (1828).

43. **Pogonus salsipotens,** n. sp.

P. æneo-viridis; prothorace subquadrato, antice rotundato-ampliato, postice leviter contracto, ad basin profunde punctato; elytris oblongis, profunde punctato-striatis, striis externis obsoletis.

α. Paulo major, obscurior, antennis rufo-piceis, pedibus rufo-testaceis.

β. Paulo minor, viridior, antennis rufo-testaceis, pedibus testaceis.—Long. corp. lin. 2–2¾.

Habitat in locis salinis Lanzarotæ, hinc inde sat vulgaris.

About the size of (or perhaps a trifle larger than) the common

European *P. chalceus*, but with its prothorax a little broader anteriorly and more coarsely punctured at the base, and with its elytra rather more parallel at the sides and much more deeply punctate-striate. Its limbs, too, are just perceptibly longer and more robust. I have hitherto observed it only in salt places in Lanzarote,—namely, at the Salinas (or salt-pans) in the extreme north (where it was also captured by Mr. Gray), and along the edges of the curious sea-water lake known as "Januvio," towards the south-west of the island. In the former of these localities the specimens are, on the average, rather larger and of a less metallic green than those from the latter, and with their limbs of a slightly duller hue; but they present no other differences, that I can detect.

44. Pogonus Grayii.

P. angustus, pallidus; capite prothoraceque rufo-testaceis, hôc elongato postice paulo angustiore, ad basin punctato; elytris testaceis, parallelo-oblongis, subpunctato-striatis; antennis rufo-testaceis; pedibus testaceis.—Long. corp. lin. $1\frac{2}{3}$–2.

Pogonus Grayii, *Woll., Ann. Nat. Hist.* (3rd series) ix. 438 (1862).

Habitat Lanzarotam, in iisdem locis ac præcedens sed multo rarior.

Species a Dom°. Gray ad "Salinas," mense Januario A.D. 1858, primo detecta, cujus in honorem nomen triviale proposui.

The small size, extremely narrow outline, and pallid hue of this interesting little *Pogonus*, in conjunction with its elongate prothorax and very parallel elytra, will (apart from less important characters) at once distinguish it. It is much the colour of the *P. testaceus* of Mediterranean latitudes, though in shape more resembling the *filiformis* from Sardinia. It was first detected by John Gray, Esq., who captured a single specimen at the Salinas, in the extreme north of Lanzarote, during our visit there in January 1858; aud it was not until the following year that I succeeded (on the 26th of March) in finding it myself,—when I obtained a considerable number along the edges of the salt lake of Januvio, towards the south-west of the island. I have great pleasure in naming it after its discoverer, to whose extensive material and accurate observations I am indebted for so much valuable assistance in compiling the present volume.

Genus 19. SPHODRUS.

Clairville, *Ent. Helv.* ii. 86 (1806).

45. Sphodrus leucophthalmus.

Carabus leucophthalmus, *Linn., Fna Suec.* 784 (1761).
Sphodrus planus, *Clairv., Ent. Helv.* ii. 86 (1806).
—— ——, *Dej., Spec. Gén. des Col.* iii. 88 (1828).
—— leucophthalmus, *Schaum, Nat. der Ins. Deutsch.* i. 381 (1860).

Habitat Lanzarotam, rariss., forsan ex Europâ introductus.

The common European *S. leucophthalmus* occurs in Lanzarote, though very sparingly; where it was captured by Mr. Gray and myself, in the vicinity of Arrecife, during January 1858.

Genus 20. PRISTONYCHUS.

Dejean, *Spec. Gén. des Col.* iii. 43 (1828).

46. Pristonychus alternans.

Pristonychus alternans, *Dej., Spec. Gén. des Col.* iii. 61 (1828).
Sphodrus alternans, *Brullé, in Webb et Berth.* (*Col.*) pl. ii. f. 8 (1838).

Habitat Teneriffam, præsertim in montibus, sed haud frequens.

The large and distinct *P. alternans*, so remarkable for its flattened, opake, alutaceous elytra (which are acuminated at their apex, and have their alternate interstices more or less impressed with large and deep punctures), is widely scattered, though sparingly, throughout the intermediate and higher elevations of Teneriffe. I have taken it on the ascent of the mountains immediately behind S^{ta} Cruz, at an elevation of scarcely more than about 600 or 700 feet; as also on the lofty Cumbre adjoining the Cañadas, at an altitude of at least 7000 feet above the sea. It has also been sent to me from Teneriffe by the Barão do Castello de Paiva.

47. Pristonychus complanatus.

Pristonychus complanatus, *Dej., Spec. Gén. des Col.* iii. 58 (1828).
Sphodrus complanatus, *Brullé, in Webb et Berth.* (*Col.*) 56 (1838).
Pristonychus alatus, *Woll., Ins. Mad.* 27 (1854).
—— ——, *Id., Cat. Mad. Col.* 11 (1857).

Habitat in Lanzarota, Teneriffa et Palma, hinc inde sub lapidibus necnon in cavernis tufæ latitans.

Although nowhere abundant, the *P. complanatus* of Mediterranean latitudes is widely distributed over the Canarian archipelago, and will probably be found to be universal. At present, however, I have only observed it in Lanzarote, Teneriffe, and Palma (in the second of which it was also taken by Dr. Crotch and the Barão do Castello de Paiva). It occurs in Madeira and Porto Santo, and is recorded by M. Morelet at the Azores; and it was found by Mr. Bewicke even at St. Helena: so that it would appear to be very general throughout the Atlantic islands.

48. **Pristonychus picescens,** n. sp.

P. angustulus, piceus, depressus; capite prothoraceque nitidis, hôc elongato-subquadrato postice paulo angustiore, ad latera late reflexo, basi (præsertim versus angulos posticos) sat profunde punctato; elytris complanatis, alutaceis, subopacis, punctatulo-striatis; antennis pedibusque elongatis, læte rufo-piceis; tibiis (certe in fœminâ, forsan in utroque sexu) rectis; unguiculis fere simplicibus. —Long. corp. lin. 6.

Habitat in ins. Hierro; mense Februario A.D. 1858 specimen unicum (sc. fœmineum) inveni.

The only example which I have seen of this fine *Pristonychus* was captured by myself, beneath a stone, in the district of El Golfo, on the western side of Hierro, during our visit to that island in February 1858. It is narrower, flatter, and more piceous than the *P. complanatus*; its prothorax is relatively longer and more narrowed behind, more margined and recurved at the sides, and more punctured at the base; its elytra are more coarsely alutaceous and depressed; and its limbs are considerably paler and longer. Its claws, also, are nearly simple (appearing indeed quite so when viewed from above), —there being only the faintest trace possible of basal crenulations when seen from beneath.

Genus 21. **CALATHUS.**

Bonelli, *Observat. Ent.* i. tab. syn. (1809).

Having taken some pains, in 1862, to monograph the *Calathi* of these islands, I must refer to my paper (which was published in the 'Ann. of Nat. Hist.' for May of that year) for the diagnoses of the several species; but since the diagnostic *observations* which it will be desirable here to add can scarcely be compressed into a smaller space than that which I there devoted to them, I think perhaps that I shall hardly do better than extract them almost *verbatim*. One addition, however, (the *C. cognatus*) has subsequently been made,—the result of Dr. Crotch's indefatigable researches, during the spring of 1862, in Gomera.

§ I. *Tibiæ in utroque sexu (omnino vel fere) simplices.*

a. *Corpus magnum, prothorace postice plus minus angustiore, punctis elytrorum discalibus obsoletis.*

49. **Calathus sphodroides.**

Calathus sphodroides, *Woll., loc. cit.* 342 (1862).

Habitat in sylvaticis editioribus Teneriffæ, rarissimus.

The present species and the following one are remarkable amongst

the Canarian *Calathi* for their immense size (the *C. ciliatus*, of the second Section, being the only one which equals them in bulk), for their prothoraces being narrower behind than in front (a structure of rare occurrence in this genus), and for the discal punctures of their elytra being obsolete. *Inter se* they may be known by the *C. sphodroides* being darker than its ally, by the different shape of its (more basally-punctured) prothorax, and by its elytra being somewhat less flattened, rounder posteriorly, and not so acuminated at their apex. It is extremely rare, and confined to the sylvan regions of Teneriffe, at intermediate and rather lofty elevations,—the only specimens (seven in number) which I have seen having been captured by myself, from beneath loose rotting bark, at the Agua Garcia and in the woods above Taganana.

50. Calathus acuminatus.

Calathus acuminatus, *Woll., loc. cit.* 342 (1862).

Habitat Teneriffam sylvaticam, in iisdem locis ac præcedens.

The *C. acuminatus* may be known from the last species by its more piceous or rufescent hue; by its prothorax being less conspicuously narrowed behind, with the sides more elevated and more *regularly* rounded in the middle (instead of *before* the middle, as in that insect), less punctured towards the base, and with its anterior angles more porrected and acute; by its elytra being flatter, and more acuminated at their apex; and by its limbs being of a uniformly paler tint. It occurs in precisely the same spots as the *C. sphodroides*, being peculiar (so far as I have observed hitherto) to the wooded districts of Teneriffe. Although rare, it is not quite so scarce as its ally. I have taken it in the forest-region of the Agua Mansa, above Ycod el Alto, and at the sides of the Vueltas leading down from the Cumbre to Taganana.

b. *Corpus minoris magnitudinis, prothorace postice* (*ut in* Calathis *typicis*) *plus minus latiore, punctis elytrorum discalibus plus minus distinctis.*

51. Calathus rufo-castaneus.

Calathus rufo-castaneus, *Woll., loc. cit.* 343 (1862).

Habitat in elevatis humidis sylvaticis Teneriffæ, rarissimus.

The pale rufo-castaneous hue of this distinct and rather large *Calathus*, in conjunction with its highly polished head and prothorax (the latter of which is a good deal recurved, and somewhat pellucid, towards the edges), the minute size of the discal punctures of its

elytra, and its testaceous limbs, will at once separate it from the other species here enumerated. Only nine examples have come hitherto beneath my notice; and it may be considered, therefore, as decidedly rare. They were all taken in the wooded region above the Agua Mansa of Teneriffe; so that the species is probably peculiar to the upper portion of the sylvan districts.

52. Calathus carinatus.

Calathus carinatus ?, *Brullé, in Webb et Berth.* (*Col.*) 55 (1838).
—— ——, *Woll., loc. cit.* 343 (1862).

Habitat Teneriffam, in locis similibus ac præcedens, sed parum vulgaris.

A most remarkable species, at once known by its narrow, elongate-quadrate prothorax and by its extremely depressed, opake and elliptical elytra, which have the basal line of each (from either shoulder to the scutellum) very deeply curved, and their discal punctures (of which there are usually from five to nine on the third, from about two to four on the fifth, and *occasionally* one or two on even the seventh interstice) exceedingly distinct. I have but little doubt that it is the *C. carinatus* of M. Brullé; for although I was not able, whilst in Paris, to obtain a sight of his *Calathi*, yet I think there is just sufficient in the description (so called) to render it probable that this is the insect to which he referred,—though his total silence on all the salient peculiarities of the four Canarian species which he wished to indicate (one of which is no *Calathus* at all, but an *Argutor*) renders his diagnoses utterly worthless.

The *C. carinatus* is rather common throughout the sylvan regions of Teneriffe. I have taken it abundantly at the Agua Garcia, as also in the woods above Taganana and at Las Mercedes; in the last of which localities it was also found by the Barão do Castello de Paiva.

53. Calathus advena.

Calathus advena, *Woll., loc. cit.* 344 (1862).

Habitat Canariam Grandem, tempore vernali A.D. 1858 specimen unicum (sc. masculum) inveni.

The present *Calathus* is the only one of which I had not an extensive series to compile my diagnosis from, the single specimen which I have seen being one which I captured in Grand Canary (I believe in the region of El Monte) during the spring of 1858. Fortunately, however, it happens to be a male, so that I can have no hesitation (from its simple unfimbriated tibiæ) as to which of my Sections

it belongs to. It is remarkable for its basally wide (though *altogether* not very broad) prothorax, for its subopake ovate elytra (which are a good deal expanded behind the middle, and have, apparently, but two punctures developed on their disk), for its fusco-piceous hue, and for its rather elongate, slender limbs. There is certainly no species here enumerated to which it could be referred.

54. Calathus abacoides.

Calathus abaxoides ?, *Brullé, in Webb et Berth. (Col.)* 56 (1838).
—— ——, *Woll., loc. cit.* 345 (1862).

Habitat in sylvaticis humidis Teneriffæ, sat frequens.

I refer this insect to M. Brullé's *C. abaxoides* from the mere fact of the latter's specific *name*, there being no other Canarian *Calathus* which could be compared in outline to an *Abax*; but since he says that the *abaxoides* is much of the same form as his following species, the *C. angularis* (which is an *Argutor*, and no *Calathus* at all), and since he speaks of it as "cinq lignes de longueur," whilst it is only *four*, I cannot but feel doubtful, in the absence of even a single distinctive character in his diagnosis, whether it be correctly identified. It may readily be known by its small size, elliptical outline, and the almost *equally* shining surface of its prothorax and elytra; the former of which is broad posteriorly and almost unrecurved at the sides (except slightly so towards the basal angles); whilst the latter are gradually somewhat narrowed behind, with their interstices slightly convex, and with their discal punctures (from three to five on the third interstice) pretty evident.

The *C. abacoides* is rather abundant throughout the sylvan regions of Teneriffe, occurring in exactly the same places as the last species. I have observed it more particularly at the Agua Garcia, above Taganana, and at Las Mercedes. It has also been communicated by the Barão do Castello de Paiva and Professor Heer of Zurich, the latter of whom obtained it from M. Hartung.

55. Calathus ascendens.

Calathus ascendens, *Woll., loc. cit.* 345 (1862).

Habitat sub lapidibus in montibus Teneriffæ, usque ad 8000′ s. m. ascendens.

The present *Calathus* (which I have observed only in Teneriffe) is essentially an inhabitant of the loftiest elevations, attaining its maximum at about 8000 feet above the sea, and but rarely descending into the sylvan districts. It may be known by its only slightly

shining surface, fusco-piceous hue, and rather large size; by its prothorax (which is a little rufescent at the edges, and not much recurved) being about equally narrowed before and behind; and by the discal punctures of its elytra being well developed and distinct. I took it in profusion, during May of 1859, from beneath stones on the Cumbre adjoining the Cañadas, above Ycod el Alto (where it has subsequently been captured by Dr. Crotch), as also on the opposite Cumbre above the Agua Mansa. In both instances, however, I observed a few stray specimens at a rather lower altitude,—namely, *almost* at the Agua Mansa and Ycod el Alto themselves; but as even those spots could not be less than some 5000 feet in elevation, there can be no doubt that the *C. ascendens* must be regarded as an alpine species.

56. Calathus cognatus, n. sp.

C. subconvexus; capite prothoraceque nitidissimis, rufo-piceis, hôc subconico (postice multo latiore), ad latera subpallidiore et paulo recurvo; elytris piceis, vix (certe in sexu masculo) obscurioribus, lineâ basali in utroque rectissimâ, profunde striatis, interstitiis convexis, tertio punctis 2 distinctis notato; antennis pedibusque rufo-testaceis.—Long. corp. lin. 5.

Habitat Gomeram; duo specimina in montibus supra Hermigua deprehendit W. D. Crotch.

The only two examples (both of them males) which I have seen of the present *Calathus* were taken by Dr. Crotch on the mountains above Hermigua, in Gomera, during the spring of 1862. In their general aspect and colouring, as well as in the excessive *straightness* of the basal rim of their elytra (extending from either shoulder to the scutellum), and the fact of their male tibiæ *not* being fringed internally with more hairs than is usual in the ordinary *Calathi*, they are certainly more nearly related to the Teneriffan *C. rectus* than to any other of the species here enumerated. They are, however, larger and less depressed than that insect; their prothorax is much more conical (being relatively broader behind and narrower in front, and with its sides consequently more oblique, causing the basal angles to be less strictly right angles); their elytra are more shining (or less alutaceous), much more deeply striated, and with the interstices (down the third of which there appear to be but *two* impressed points) more convex; and their limbs are altogether more robust.

57. Calathus rectus.

Calathus fulvipes?, *Brullé* [nec *Lat.*], *in Webb et Berth.* (*Col.*) 56 (1838).
—— rectus, *Woll.*, *loc. cit.* 346 (1862).

Habitat in locis inferioribus et intermediis Teneriffæ, passim.

In their very shining head and prothorax, and duller (though scarcely opake) and lightly striated elytra, as well as in their general hue and comparatively smaller size, the present *Calathus* and the following one have much in common. Nevertheless the *C. rectus* is the larger and flatter of the two, and has its limbs considerably longer; its head and prothorax also (the latter of which is a trifle more elongate and wider behind, and has its edges more evidently recurved) are more rufescent; and the basal line of its elytra (extending from either shoulder to the scutellum) is less arcuate,—being, in fact, almost perfectly straight. Whilst the following species occurs only (so far as observed hitherto) in Lanzarote, the *C. rectus* is scattered sparingly over the low and intermediate elevations of Teneriffe. I have taken it near S^ta^ Cruz and Orotava (at the latter of which it was found likewise by Mr. Gray), as also on the mountains above Taganana; and it has been communicated by the Barão do Castello de Paiva from Las Mercedes.

I have but little doubt, from its size and superficial aspect, that it is the insect referred by M. Brullé to the European *C. fulvipes*,—with which, however, it has nothing, in reality, except its generic characters, in common.

58. Calathus simplicicollis.

Calathus simplicicollis, *Woll., loc. cit.* 347 (1862).

Habitat Lanzarotam borealem, tempore hiberno et vernali sat frequens.

As may be gathered from what has already been said, the present *Calathus* (which seems to be peculiar to Lanzarote) differs from the last one in being a little smaller, narrower, and more convex, of a slightly darker hue, and with its limbs considerably shorter. Its prothorax, also, is somewhat less conical, with the sides more narrowly rufescent and less recurved; and the basal line of its elytra (joining either shoulder with the scutellum) is more arcuate. It is about the size and general outline of the common European *C. melanocephalus*; nevertheless it differs from all the specimens and all the varieties of the latter which I have yet seen (including the *peltatus*, Kolen., the *ochropterus*, Dufts., and the *alpinus*, Dej., for types of which I am indebted to Dr. Schaum) in having its prothorax *totally free* from the slightest trace of the two basal foveæ which are always *more or less* expressed in that insect, as also a trifle wider posteriorly, and *perfectly unmargined* behind the hinder angles—which are, themselves, a little more sharply defined (or more strictly *right* an-

gles); its head, too, is altogether *thicker* and more developed, with the eyes less prominent, with the incrassated edge of the clypeus (immediately behind the insertion of the antennæ) more rounded, and with the forehead more convex; and its colour (on which, however, I lay but little stress) is different, its head being somewhat redder (or less black), whilst its prothorax is not *so* red (or more infuscated). Its elytra, also, are perhaps a little more shining and less depressed. The only locality in which I have taken, hitherto, the *C. simplicicollis* is the extreme north of Lanzarote, where it is not uncommon in the rocky ground between the Salinas and the Risco.

§ II. *Tibiæ posteriores maris intus plus minus dense fimbriatæ.*

59. Calathus ciliatus.

Calathus ciliatus, *Woll., loc. cit.* 348 (1862).

Habitat in montibus excelsis plus minus sylvaticis Teneriffæ, hinc inde sed parum rarus.

The large size of the present *Calathus** and the following one will easily separate them from the other species of my second Section. *Inter se* they are at first sight a good deal allied; and before examining them closely, I had imagined they were but phases of one insect. A more accurate inspection, however, of *the sexes of both* has convinced me that they are probably distinct. The *C. ciliatus* is somewhat the more bulky of the two, being always broader than its ally, and on the average a little longer. And it may, additionally, be known by its prothorax being more especially wider and less conical; by the basal line of its elytra being much less deeply arcuate, causing the shoulders to be less porrected; by the punctures of its third and fifth interstices being usually less numerous; by its elytra (which are a trifle brighter and with their intervals less flattened in the *male* sex) being more oblong; and by the four hinder tibiæ in the male being fimbriated along a rather greater portion of their inner edge. It appears to occur principally in the upper part of the sylvan regions of Teneriffe; and, indeed, I have not yet observed it below an altitude of about 5000 feet. On the damp ledges and rocks above the Agua Mansa, to within a short distance of the Cumbre, I obtained it sparingly during May 1859.

* In the National Collection at Paris I observed specimens of this insect under the name of "*C. complanatus*, Dej." That species, however, is confined to Madeira, and is totally distinct from the present one, which has more in common *primâ facie* with the Madeiran *C. vividus*, Fab. In real fact, however, *both* of the Madeiran species belong to a different type from these two Canarian ones,—having the hinder tibiæ of their males simple.

60. Calathus auctus.

Calathus auctus, *Woll., loc. cit.* 349 (1862).

Habitat Teneriffam humidam excelsam, in locis similibus ac præcedens.

As already implied, the rather smaller size and less widened outline of the present *Calathus* (the prothorax of which is especially narrower and more conical), in conjunction with its more elliptic elytra (which have their basal line more curved, and their shoulders consequently acuter or more porrect) and its more numerous discal punctures, will at once separate it from the last species. It differs also in its males having the elytra somewhat more opake (with the interstices flatter), and the four hinder tibiæ fimbriated along a rather shorter portion of their inner edge. At the same time, I would add that I am not perfectly satisfied that it may not be an extreme state of that insect. The *C. auctus* is found in precisely similar spots as the *ciliatus*, occurring in damp localities at a high elevation on the mountains of Teneriffe. I took it, in company with that species, during May of 1859; and it has been communicated by Professor Heer of Zurich, as also by the Barão do Castello de Paiva.

61. Calathus angustulus.

Calathus angustulus, *Woll., loc. cit.* 349 (1862).

Habitat Teneriffam excelsam humidam, sub lapidibus corticeque arborum laxo putrido, rarior.

The comparatively narrow outline and pale reddish-brown hue of this *Calathus*, combined with the shape of its prothorax (which is a trifle narrower behind than before) and the exceedingly numerous punctures down the alternate interstices of its *elliptic* elytra, will at once characterize it. It is the only Canarian species in which I have observed punctures on the *first* elytral interval, where there are usually two or three at the extreme base. Its smaller size and less margined, differently shaped prothorax, added to its more rounded, less flattened elytra and more numerous impressions, will, apart from other differences, readily separate it from the last species. Indeed, in general contour it has perhaps more in common with the *C. carinatus* than with any other member of the genus here described; but its paler colour, and narrower and somewhat less depressed elytra (with their more numerous punctures and less arcuated basal line), in combination with its posteriorly narrower prothorax and the fimbriated hinder tibiæ of its male sex, will immediately distinguish it from that insect.

The *C. angustulus* occurs sparingly throughout the sylvan regions of Teneriffe, especially towards their upper limits,—where it may be found under damp stones, and beneath the loose rotting bark of trees. In such positions I have taken it on the ascent from Ycod el Alto to the Cumbre, at the Agua Mansa, and in the laurel-woods above Point Anaga and Taganana. It has also been communicated by the Barão do Castello de Paiva.

62. Calathus depressus.

Calathus depressus ?, *Brullé, in Webb et Berth. (Col.)* 55. pl. 2. f. 1 (1838).
—— ——, *Woll., loc. cit.* 350 (1862).

Habitat in sylvaticis Teneriffæ, sub lapidibus vulgaris.

The dark hue and broad outline of this *Calathus* (the prothorax of which is considerably wider behind than in front, and is but slightly recurved at the edges), added to its rather deeply striated elytra (which are subopake in both sexes, and have their discal punctures as follows:—from about 6 to 10 on the third interval, from about 5 to 7 on the fifth, and from about 1 to 3 on the seventh), will sufficiently characterize it. The hinder tibiæ of the male are almost (if not indeed entirely) simple; and even the intermediate ones are but very shortly and obscurely fimbriated towards their inner apex: nevertheless the latter are quite sufficiently so, I think, to warrant its admission into my second Section. Although M. Brullé's very brief and meagre description applies almost equally to about two-thirds of the Canarian *Calathi*, yet, with the assistance of his figure, and of the *size* there given of it (which, however, does *not* tally *with what he states*), I believe that this is the insect to which he intended to apply the name of *C. depressus*.

It is universal within the sylvan districts of Teneriffe, and is perhaps the most common of the Canarian *Calathi*. I have taken it at and above Ycod el Alto, at the Agua Mansa, and at the Agua Garcia, as also at Las Mercedes and in the woods towards Taganana and Point Anaga. It has likewise been communicated by Professor Heer of Zurich and by the Barão do Castello de Paiva.

63. Calathus appendiculatus.

Calathus appendiculatus, *Woll., loc. cit.* 351 (1862).

Habitat Canariam Grandem: in montibus sylvaticis inter Galdar et Teror d. 21. Ap. A.D. 1858 pauca exemplaria deprehendi.

Apart from all other characters, the peculiar sexual differences of this fine *Calathus* (the males of which are entirely bright, whilst the

females have their *prothorax* and elytra opake) will at once separate it from all the others here enumerated. In their elytral impressions, the present insect and the two following ones are on the ordinary type,—the number being reduced to 3 or 4 on the third interval; from which it would appear, that those species which have them more or less increased are (according to the data hitherto accumulated) confined to Teneriffe. The *C. appendiculatus* seems to be peculiar to the sylvan regions of Grand Canary,—where, on the 21st of April 1858, I captured a few specimens of it, from beneath moist rotting bark, in the remains of the ancient forest of El Dorames, on the mountain-road between Galdar and Teror.

64. **Calathus barbatus.**

Calathus barbatus, *Woll., loc. cit.* 352 (1862).

Habitat Canariam Grandem, in regionibus El Monte et Tarajana lectus.

Like the last species, the *C. barbatus* would appear to be peculiar to Grand Canary,—descending, however, into *sub*sylvan spots of a rather lower elevation than those tenanted by that insect. It may be known from it by its very much smaller size and by its sexes being almost equally shining,—its prothorax being in them *both* (as indeed is the case with all the Canarian *Calathi* except the *appendiculatus*) equally polished. In minor characters, its elytra are a trifle more convex than those of the *appendiculatus*, and have their basal line rather more curved; and the four hinder tibiæ of its males are fimbriated along a rather shorter portion of their inner edge. I took it, not uncommonly, in the region of El Monte, as also on the mountains of Tarajana, during the spring of 1858.

65. **Calathus spretus.**

Calathus spretus, *Woll., loc. cit.* 352 (1862).

Habitat in Hierro, mense Februario A.D. 1858 repertus.

In general aspect the present *Calathus* comes so near to the *C. barbatus*, that, were it not for the essential differences displayed by the male-tibiæ of the two species, I should not have hesitated to consider them as identical; but since the former has the four hinder tibiæ of its males *almost* simple internally, and the posterior pair straight, whilst the latter has them powerfully fimbriated, with the posterior ones slightly curved, I cannot but regard them as dissimilar, and so lay greater stress on the *other* minute differences which they display *inter se* than I should ordinarily have done. In-

dependently, therefore, of this primary distinction (which of itself would be sufficient to separate them), I may just add that the *C. spretus* may be known from its ally by (on the average) its slightly larger bulk and rather darker hue; by its prothorax being perhaps a little less rounded at the sides, and its elytra a little *more* so; and by the latter being just perceptibly more convex and opake, with their basal line somewhat straighter.

Whilst the *C. barbatus* is apparently confined to Grand Canary, the present species has been observed only in Hierro,—where several examples of it were captured by Mr. Gray and myself, during our visit to that island, in February 1858.

Genus 22. **ANCHOMENUS.**

Bonelli, *Observ. Ent.* i. tab. syn. (1809).

66. **Anchomenus Nicholsii,** n. sp.

A. capite prothoraceque nigro-piceis, nitidis, hôc angusto, valde cordato, ad latera haud explanato, postice leviter punctato; elytris ovalibus, obscurioribus sed in limbo brunneis, subopacis, leviter striatis, interstitio tertio punctulis 2 (rarius 3) notato, punctis in serie marginali maximis, lineâ basali (inter humeros et scutellum) elevatâ, curvatâ; palpis, antennis pedibusque elongatis, rufo-testaceis.—Long. corp. lin. 4.

Habitat in elevatis Teneriffæ et Gomeræ, tempore vernali A.D. 1862 a DD. Crotch et Nicholls repertus, cujus in honorem nomen triviale proposui.

The opake and rather apically-shortened elytra of the present insect and the following one give them such a totally different appearance from any *Anchomenus* with which I am acquainted that I had at first thought they must be generically distinct; nevertheless the details of their mouth show no modifications of sufficient importance to warrant their separation, their simple claws and the entire tooth of their mentum assigning them to that group. Their palpi, as well as their paraglossæ, are certainly longer than is the case in the ordinary *Anchomeni*, and their wings are obsolete; but such characters cannot be of more than specific signification, being merely of degree and not of kind. They have something in common with *Dyscolus*, of Dejean, the slightly bilobed penultimate articulation of all their tarsi so far *approaching* the structure which obtains (more or less) in that genus that Dr. Schaum is of opinion that it will have to be remerged ultimately into *Anchomenus*.

The detection of the *A. Nicholsii* is due to the researches of Dr.

Crotch and S. T. Nicholls, Esq., who, during an expedition to these islands in the spring of 1862, obtained a few examples of it, at a high elevation, both in Teneriffe and Gomera,—namely, above Ycod el Alto of the former, and "on the slope below the laurel-region above Hermigua" of the latter. It is one of the most interesting and important of their discoveries; and I have much pleasure in dedicating the species to S. T. Nicholls, Esq., as an acknowledgment of his services in the cause of entomology, in conjunction with those of his indefatigable companion Dr. Crotch.

67. **Anchomenus debilis**, n. sp.

A. præcedenti similis sed vix minor, obscurior; prothorace paulo breviore, utrinque versus angulos posticos sensim minus recto, basi fere impunctato; elytris magis ovatis (nec ovalibus), *i. e.* utrinque in medio parum subito ampliatis, vix opacioribus et levius (sc. levissime) striatis, in limbo subconcoloribus, lineâ basali minus curvatâ et minus elevatâ; antennis pedibusque sensim brevioribus, obscurioribus, illarum articulis basalibus (sed præsertim subbasalibus) conspicue obscurioribus. — Long. corp. lin. $3\frac{1}{3}$–$3\frac{2}{3}$.

Habitat Canariam Grandem, inter lapillos per marginem cujusdam rivuli juxta oppidum Teror mense Aprili A.D. 1858 parce captus.

It is barely possible that the present *Anchomenus* may be an insular modification of the preceding one; but I do not think that such is the case, and certainly it would be very unsafe to treat it as such,—seeing that the *A. Nichollsii* occurs in *two* different islands, without any appreciable variation. The *A. debilis* is a trifle smaller than its ally, and has its limbs a little obscurer and more abbreviated, —the antennæ moreover having their basal (though more especially their subbasal) joints conspicuously darkened; its prothorax is somewhat shorter, having its sides less rectangular (or more oblique) posteriorly, and is nearly impunctate at the base; and its elytra are more ovate (or less regularly *oval*), being rather suddenly rounded about the middle, just perceptibly opaker, still more lightly striated, with their margin scarcely paler than the rest of the surface, and with their basal *rim* (between either shoulder and the scutellum) both less elevated and less curved.

The *A. debilis* appears to be of the greatest rarity,—the only specimens which I have seen (twelve in number) having been captured by myself from under small stones at the edges of a little stream immediately outside the town of Teror, in Grand Canary, during April 1858.

68. **Anchomenus albipes.**

Carabus albipes, *Illig., Mag. für Ins.* i. 54 (1801).
Anchomenus pallipes, *Woll., Ins. Mad.* 33 (1854).
—— ——, *Id., Cat. Mad. Col.* 12 (1857).
—— albipes, *Schaum, Nat. der Ins. Deutsch.* i. 408 (1860).

Habitat per margines rivulorum Fuerteventuræ, hinc inde vulgaris.

The *A. albipes*, which abounds throughout the greater portion of Europe, and is universal in damp spots at Madeira, and which I have received also from the Azores, appears (so far as observed hitherto) to be confined at the Canaries to Fuerteventura, where it is common at the edges of the few small streams which that barren island produces. It was first found by Mr. Gray and myself at La Antigua (on our way from Agua Bueyes to Port Cabras), on the 28th of January 1858; and during April of the following year I took it abundantly in the Rio Palmas.

69. **Anchomenus marginatus.**

Carabus marginatus, *Linn., Fna Suec.* 222 (1761).
Platynus marginatus, *Brullé, in Webb et Berth. (Col.)* 56 (1838).
Anchomenus marginatus, *Woll., Ins. Mad.* 33 (1854).
—— ——, *Id., Cat. Mad. Col.* 12 (1857).
—— ——, *Schaum, Nat. der Ins. Deutsch.* i. 412 (1860).

Habitat Canariam, Teneriffam et Gomeram, hinc inde haud infrequens.

The common European *A. marginatus* (which occurs, though rarely, in Madeira, and which is recorded by M. Morelet at the Azores) is tolerably abundant in certain localities at the Canaries, though at present I have myself observed it only in the islands of Grand Canary and Teneriffe. In the former I took it at Arguiniguin (along the edges of the small pool, or lake, close to the sea); and in the latter (from whence it has also been communicated by the Barão do Castello de Paiva) in moist spots near S^ta^ Cruz and at Ycod el Alto. It has however been met with, more recently, by Dr. Crotch, in Gomera.

Genus 23. **OLISTHOPUS.**

Dejean, *Spec. Gén. des Col.* iii. 176 (1828).

70. **Olisthopus palmensis,** n. sp.

O. æneo-fuscus, latiusculus, subdepressus, nitidus; prothorace fere impunctato; elytris oblongis, ad humeros subobtusis, leviter striatis, interstitiis subtilissime alutaceis et (nisi oculo fortissime armato) fere impunctatis, tertio punctis tribus notato, limbo plus minus obscure pallidiore; antennis, palpis pedibusque pallido-testaceis, illis versus apicem paulo obscurioribus.—Long. corp. lin. $2\frac{2}{3}$–$3\frac{2}{3}$.

Habitat Palmam, in locis intermediis, passim.

It is somewhat remarkable that, whilst the *O. glabratus* is universal throughout Grand Canary, Teneriffe, and Hierro, it is represented in Palma by the present species, which occurs, in like manner, at nearly all intermediate elevations. The *O. palmensis* may be known from its ally by its larger size and broader outline, by its rather browner, less shining and flatter surface, and by its elytra being less acute at the shoulders, more finely striated, and with their interstices (when viewed beneath the microscope) not only *minutely alutaceous* but with the additional punctules so small as to be scarcely perceptible. I have taken it, amongst leaves and rubbish, at the base of the perpendicular rocks which form the sides of the Barranco de S^{ta} Cruz, as also on the ascent of the Cumbre above Buenavista, and in the Barranco de Galga (towards the north-east of the island); and it was likewise captured, during the spring of 1862, by Dr. Crotch.

71. Olisthopus glabratus.

O. æneo-niger, angustulus, subconvexus, nitidissimus; prothorace fere impunctato; elytris oblongis, ad humeros acutis, profunde striatis, interstitiis sat distincte punctulatis, tertio punctis tribus notato, limbo plus minus distincte pallidiore; antennis, palpis pedibusque pallido-testaceis, illis versus apicem obscurioribus.—Long. corp. lin. 2–3.

Olistopus glabratus, *Brullé, in Webb et Berth. (Col.)* 56 (1838).

Habitat in Canaria, Teneriffa, Gomera et Hierro, in locis inferioribus et intermediis, hinc inde haud infrequens.

As may be gathered from what has been said, the smaller size, narrower outline, darker hue, and more convex and shining surface of the present *Olisthopus*, in conjunction with its more deeply striated elytra (which are acuter at the shoulders, more brightly testaceous at the sides, and have their interstices more distinctly punctulated and *un*alutaceous), will at once separate it from the last species. It is universal throughout Grand Canary, Teneriffe, Gomera, and Hierro (in the last of which it was likewise captured by Mr. Gray, and in Gomera by Dr. Crotch),—occurring beneath stones, though not very commonly, at low and intermediate elevations; but it has not yet been observed in either of the eastern islands of the Group*.

* Amongst five examples of *Olisthopus* communicated to me in 1856 by Dr. Heer of Zurich, and taken at the Canaries by M. Hartung, are four of the *O. elongatus*, Woll., and one of the *glabratus*, Br. The whole were sent under the latter name, and were stated to have come from Lanzarote; but as M. Hartung collected also in Teneriffe, I have not the slightest doubt that the specimen of the *glabratus* was from that island, and had become accidentally mixed up, afterwards, with those from Fuerteventura and Lanzarote. Nevertheless as I

The *O. glabratus* is very closely allied to the *O. maderensis*, which abounds on the mountains of Madeira; but I believe, nevertheless, that it is truly distinct. It differs in being a little more shining; in having its prothorax a trifle larger, rather more produced in the centre behind (in front of the scutellum), and with the sides and base comparatively unpunctured; and in its elytra being rather more oblong (or straighter at the edges and a little acuter at the shoulders), just perceptibly less convex, more deeply striated, with their interstices more evidently punctulated and *un*alutaceous (even beneath the microscope), and with their suture (except *occasionally* the hinder portion) not paler than the disk.

72. Olisthopus elongatus.

Olisthopus elongatus, *Woll., Ins. Mad.* 38 (1854).
—— ——, *Id., Cat. Mad. Col.* 14 (1857).
—— glabratus, *Hartung* [*nec Brullé*], *Geolog. Verhältn. Lanz. und Fuert.* 140 et 141.

Habitat in Lanzarota et Fuerteventura, ubique sat vulgaris.

The *O. elongatus* (which occurs in Madeira and Porto Santo) is rather common throughout Lanzarote and Fuerteventura,—where it was captured by Mr. Gray and myself in January 1858, and subsequently (by myself) during the spring of the following year; and where it would seem to take the place of the *O. glabratus*, which is *all but* universal in the remaining islands of the Canarian archipelago. I have not the slightest hesitation in regarding it as the *Olisthopus* referred in M. Hartung's catalogue to the *glabratus* of Brullé,—first, because the latter does not appear to exist in either Lanzarote or Fuerteventura (in *both* of which islands he implies his species to have been found); and, secondly, because, of the five specimens communicated to me by Dr. Heer under the name of "*glabratus*," as Lanzarotan examples and collected by M. Hartung, no less than *four* were the *elongatus*. That the solitary *O. glabratus*, included amongst them, was from Teneriffe, and accidentally mixed up (afterwards) with the others, I have already recorded my conviction in the foot-note on the preceding page.

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had not myself visited the Canaries when I published my Madeiran Catalogue, in 1857, I was of course unaware that the *O. glabratus* does not occur in the two eastern islands of the Canarian group, and I consequently mentioned in a foot-note (*vide* p. 12) that I had received a Lanzarotan example of that insect from Professor Heer. I would wish, therefore, now to correct this error (for I am perfectly satisfied that such it is); since it is an important fact, topographically, that a species so general as the *O. glabratus* is in the central and western portions of the archipelago should be replaced in Lanzarote and Fuerteventura by the Madeiran *elongatus* (which has not yet been observed elsewhere at the Canaries).

Genus 24. **PLATYDERUS.**

Stephens, *Ill. Brit. Ent.* i. 101 (1828).

73. **Platyderus alticola,** n. sp.

P. angustulus, rufo-piceus, depressus; capite prothoraceque nitidis, hôc elongato-subquadrato postice vix angustiore, angulis posticis subrectis, per basin ipsissimam paulo sinuato; elytris elongato-oblongis, subopacis, grosse alutaceis, ad humeros valde acutis, subcrenato-striatis, interstitio tertio punctis tribus notato; antennis, palpis pedibusque pallidioribus.

Var. β [an species distincta?]. Paulo minor, pallidior; prothorace ad basin paulo magis recto (vix sinuato), angulis posticis rectioribus; elytris vix ovatioribus nitidioribus, paulo minus alutaceis.—Long. corp. lin. 4–4$\frac{1}{3}$ (var. β, 3$\frac{1}{3}$).

Habitat sub lapidibus in montibus excelsioribus Teneriffæ, usque ad 8000′ s. m. ascendens. *Varietatis* β exemplar unicum, in montibus inferioribus maritimis juxta Sanctam Crucem captum, solum vidi; forsan ad speciem secundam pertineat.

This large and distinct *Platyderus* appears to be of the greatest rarity, and to be confined to exceedingly elevated spots on the mountains of Teneriffe,—where in May of 1859 I captured six specimens of it, from beneath stones, on the lofty Cumbre, adjoining the Cañadas, above Ycod el Alto. It is partly in fact this peculiarity of its habits which makes me look with suspicion on a single specimen taken near S^{ta} Cruz (on the flanks of the low, maritime range which forms the northern boundary of the Barranco do Passo Alto), and which I have described above as a variety of the *alticola*. It may possibly be the exponent of a closely allied species; nevertheless, until further material has been obtained, I think it scarcely safe to regard it as such. It is a little smaller and paler than the examples from the Cumbre; its prothorax is rather straighter (or less sinuated) along the extreme base, and with the posterior angles less obtuse; and its elytra are a trifle more ovate (or expanded behind the middle), and just perceptibly more shining (or less coarsely alutaceous).

74. **Platyderus tenuistriatus,** n. sp.

P. capite prothoraceque nitidis, illo nigro-piceo, hôc (una cum elytris) rufo-piceo, subquadrato postice angustiore, angulis posticis obtusiusculis, per basin ipsissimam vix sinuato, in disco antico subconvexo; elytris oblongis, subopacis, subtilissime alutaceis, ad humeros acutiusculis, tenuiter striatis, interstitio tertio punctis tribus parvis notato; antennis, palpis pedibusque pallidioribus.—Long. corp. lin. 3.

Habitat Teneriffam, a W. D. Crotch semel tantum lectus.

The single example from which the above description is drawn-out was captured in Teneriffe by Dr. Crotch, during the spring of 1862; but he has, unfortunately, no note as to the precise locality. It may at once be recognized from the *P. alticola* by its very much smaller size and less elongate outline; by its head being darker, whilst the rest of the surface is, on the contrary, still paler or more rufescent; by its prothorax being more quadrate, though rather rounder at the sides and more narrowed behind (and therefore with the posterior angles more obtuse), as well as convexer on the fore disk and less sinuated along the basal edge; and by its elytra being much more finely alutaceous, more delicately striated, less acutely porrected at the shoulders, and with the raised line between either humeral angle and the scutellum both less elevated and less curved.

Genus 25. **PTEROSTICHUS**, *Auct.*

(Subgenus **Pœcilus**, *Bon.*)

75. **Pterostichus crenatus.**

Carabus crenatus, *Hoffm., in litt.*
Feronia crenata, *Dej., Spec. Gén. des Col.* iii. 226 (1828).
—— ——, *Brullé, in Webb et Berth.* (*Col.*) 56 (1838).

Habitat Lanzarotam et Fuerteventuram, in locis intermediis, rarior.

The *P. crenatus*, which is recorded in Portugal and Sicily (indeed I possess it from the former), is found, though somewhat rarely, in Lanzarote and Fuerteventura,—in both of which islands it was taken by Mr. Gray and myself, during January 1858. It seems to make its appearance after the winter-rains, and to occur at intermediate elevations. My Lanzarotan specimens were all collected from beneath stones, in the open, cultivated fields on the mountains immediately to the south of Haria.

(Subgenus **Lagarus**, *Chaud.*)

76. **Pterostichus figuratus**, n. sp.

P. piceo-niger, nitidus, depressus; capite impunctato; prothorace elongato-subquadrato postice paulo angustiore, basi profunde et sat crebre punctato necnon utrinque foveâ lineaformi subrectâ impresso; elytris oblongis, profunde crenato-striatis; antennis, palpis pedibusque læte rufo-piceis.—Long. corp. lin. $2\frac{3}{4}$.

Habitat in Teneriffa, ab oculatissimo W. D. Crotch nuper deprehensus.

A single example only of this well-marked *Pterostichus* has come

hitherto beneath my notice. It was captured by Dr. Crotch, during the spring of 1862, in Teneriffe, but he cannot now recall the precise locality. It may at once be known by its flattened surface; by its piceous-black hue and brightly rufescent limbs; by its elongate-quadrate prothorax being a little narrowed, and rather deeply and thickly punctured, behind; and by its coarsely crenate-striated elytra having their short scutellary stria completely confluent with the sutural one, and the outwardly-directed basal portion of the latter, apparently, obsolete. In its somewhat parallel-oblong outline, depressed surface, and deeply crenate-striated elytra, the *P. figuratus* is a little suggestive, at first sight, of an excessively diminutive *P. crenatus*; nevertheless when closely inspected it will be seen to be totally distinct from that insect in all its characters; and moreover I believe that its main features will associate it rather with the members of the *Lagarus*-group than with those of *Pœcilus*.

(Subgenus **Orthomus**, *Chaud.*)

77. Pterostichus longulus.

P. ater (vel piceo-ater), oblongus, nitidissimus; prothorace subquadrato, ad latera subæqualiter rotundato, impunctato sed ad basin utrinque foveis duabus (internâ sc. lineaformi subarcuatâ profundâ, sed externâ breviore subrotundatâ plus minus indistinctâ) impresso, per marginem basalem ipsissimum angustissime marginato; elytris subparallelis, profunde crenato-striatis, interstitiis paulo convexis, tertio punctis duobus impresso; antennis, palpis pedibusque piceis.

Var. β. discors [an species?]. Prothorax ad latera magis rotundatus, angulis posticis paulo obtusioribus, foveâ basali externâ subobsoletâ, elytrorum striis simplicibus nec crenulatis. [*Teneriffa*: a Dom. Schaum communicatus.]—Long. corp. lin. 3–4½.

Feronia barbara, *Brullé* [*nec Dej.*], *in Webb et Berth.* (*Col.*) 56 (1838).
—— longula, berytensis et prælonga, *Reiche, Ann. de la Soc. Ent. de France* (3ième série), iii. 616, 618, 619 (1855).
—— elongata (*Klug*), *Chaud., Stett. Ent. Zeit.* 116 (1859).
—— canariensis, *Hartung* [*nec Brullé*], *Geolog. Verhältn. Lanz. und Fuert.* 140, 141.

Habitat in Lanzarota et Fuerteventura, vulgaris; in Canaria, minus frequens; necnon in Teneriffa, rarus.

The present *Orthomus* appears to be identical with the *Feronia longula* of Reiche and Saulcy, for types of which, from Egypt and Syria, I am indebted to Dr. Schaum. The Canarian specimens have their elytral striæ rather more decidedly crenulated than seems to be the case in the Egyptian and Syrian ones; and their prothorax is quite impunctate, whereas in the example from Egypt there are

some scattered punctures at the base. These differences, however, are very trifling; and indeed the *Syrian* type now before me has its pronotum, as in the state peculiar to the Canaries, totally unpunctured. The species occurs also in Greece; so that it would seem to be widely spread over Mediterranean latitudes. It is allied to the *P. barbarus*, Dej. (to which indeed it was referred by M. Brullé), and still more so to the *P. hispanicus*, from which I am by no means certain that it is really distinct*. Judging from three specimens of the latter at present in my possession (one of which has been forwarded by Dr. Schaum, whilst the other two were captured by the Rev. Hamlet Clark at Granada), the Canarian insect differs almost solely in having its prothorax invariably unpunctured behind, and the striæ of its elytra a little deeper and more perceptibly crenulated.

The *P. longulus* abounds in Lanzarote and Fuerteventura (in both of which it was taken by M. Hartung, Mr. Gray, and myself), and is likewise found, though more sparingly, in Grand Canary and Teneriffe. In the two former it is universal, occurring at all elevations; and indeed, on the 11th of March 1859, I met with it even in the little island of Graciosa, off the extreme north of Lanzarote: but in Grand Canary it is apparently more local, being nearly confined (so far as observed hitherto) to sandy spots about Las Palmas and the Puerto da Luz. In Teneriffe I have not myself noticed it; but it has been communicated from thence by the Barão do Castello de Paiva; and I have also received a specimen from Dr. Schaum, which he obtained from Professor Heer and which is stated to be Teneriffan. It was collected by M. Hartung, and differs from the ordinary examples in having its prothorax more rounded at the sides, with the hinder angles consequently more obtuse, and with the *outer* basal fovea almost obsolete, and in its elytral striæ being uncrenulated. I can scarcely believe, however, that it is more than an accidental aberration, or at the utmost a local variety.

That this insect is the one referred to in M. Hartung's catalogue

* There would seem, however, to be a small cluster of nearly allied species, or forms, of this immediate type, peculiar to these latitudes. My *P. haligena*, from the Salvages, is another of them, and is closely related to the Canarian one: nevertheless it is rather smaller; its prothorax is shorter and narrower, with the outer basal impression less distinct, and the dorsal channel more abruptly terminated both before and behind; and the elytra of its *female* sex are more alutaceous and opake, with their striæ finer, and their interstices more depressed. In my description of it [*vide* 'Journ. of Ent.' i. 87] I contrasted it (as now) with its Canarian ally, but alluded to the latter as the "*P. canariensis*, Brullé." On a more careful inspection, however, I perceive that so far as the *name* is concerned I was mistaken,—M. Brullé's *Feronia canariensis* being apparently a totally different insect.

as the *Feronia canariensis*, Brullé, I am enabled to state for certain, —having received several of his specimens, thus identified, from Dr. Heer.

(Subgenus **Haptoderus**, *Chaud.*)

78. **Pterostichus angularis.**

P. piceus; prothorace subquadrato, antice rotundato-ampliato postice angustiore, angulis ipsissimis posticis subacutis, margine laterali incrassato, postice subsinuato, fortiter canaliculato et basi utrinque lineâ valde profundâ impresso; elytris ellipticis, striatis, interstitio tertio punctis duobus magnis notato, ad apicem ipsum (in utroque sexu) plus minus vel conjunctim truncatis vel singulatim emarginatis; antennis, palpis pedibusque rufo-piceis.

Mas major, latior, nigro-piceus, nitidus, convexus; elytris profunde striatis, interstitiis convexis; pedibus robustis.

Fœm. paulo minor, angustior, rufo-piceus, (capite nitido excepto) opacus, subdepressus; elytris minus profunde striatis, interstitiis depressis, per suturam (præsertim postice) elevatis; pedibus minus robustis.—Long. corp. lin. 4–5½.

♀. Calathus angularis, *Brullé, in Webb et Berth.* (*Col.*) 56 (1838).
♂. Feronia canariensis?, *Brullé, in Webb et Berth.* (*Col.*) 56 (1838).

Habitat sub lapidibus in sylvaticis Teneriffæ, hinc inde sat vulgaris.

Were it not for the relative dilatation of the tarsi and, still more, for the fact that I have repeatedly taken them *in coitu*, the extraordinary dissimilarity of the sexes of this curious *Pterostichus* might almost have led to the idea that they were specifically distinct. And as such indeed, judging from his very meagre and unsatisfactory diagnosis, I believe that M. Brullé did absolutely regard them,—describing (unless I am much mistaken) the female under the name of *Calathus angularis*, and the male under that of *Feronia canariensis*! At least, after a careful consideration of his "diagnoses" (if such they may be called), I can come to no other conclusion; and, in partial accordance with this hypothesis, I have lately received from M. Chevrolat a supposed "type" of the *C. angularis*, which is undoubtedly the present insect. It is certain therefore, if M. Chevrolat's type can (as I have every reason to believe) be relied upon, that the species now under consideration is, at all events, M. Brullé's *C. angularis*; and the only question that remains is, whether it be not his *Feronia canariensis* likewise. Before critically examining it, I had considered the *preceding* species (the *P. longulus*) as the *F. canariensis* of Brullé; but this was simply through the fact of my having received it (a few years ago) *thus identified* from Prof. Heer. On looking closely however into M. Brullé's list of Canarian Coleoptera, it is quite evident

to me that the insect which he referred to the *F. barbara* of Dejean must have been the nearly allied (though scarcely coincident) *P. longulus*; and that consequently his *F. canariensis* (which immediately follows it) was of necessity something different. Now, his comparison of the latter with the Pyrenæan *Argutor abaxoides*, and the differential characters which he draws between the two, utterly preclude the idea that his *F. canariensis* could possibly have been the species which I have just described as the *longulus* of Reiche; whilst the very few points to which he calls attention are all in favour of its tallying with the *male* (for he expressly mentions it as "luisante") of the present *Pterostichus*. Indeed (the *P. longulus* disposed of) there is no Canarian insect to which his "description" *could* apply except the present one; and I think therefore that I am fully justified in treating his *C. angularis* and *F. canariensis* as identical*. Assuming them therefore to be coincident, I have preferred the former specific name to the latter, as the more appropriate of the two,—the insect being found, apparently, in but *one* of the seven islands of the Group.

The *P. angularis* is universal throughout the sylvan regions of Teneriffe. During March of 1858 I took it abundantly, *in coitu*, at the Agua Garcia; and it is also common at Las Mercedes, and in the forest above Taganana. It has likewise been communicated by the Barão do Castello de Paiva; as also by Dr. Heer (from the collection of M. Hartung).

79. **Pterostichus harpaloides**, n. sp.

P. piceus, nitidus; prothorace convexo, transversim leviter undulato, subquadrato postice vix angustiore, angulis posticis rectis, margine laterali paulo incrassato, postico recto, leviter canaliculato et basi utrinque vix impresso, emarginatione anticâ subsinuatâ; elytris breviter ovato-oblongis, convexis, leviter striatis, interstitiis subdepressis, tertio punctis duobus (vel tribus) parvis notato, ad apicem (in utroque sexu) integris; antennis, palpis pedibusque rufo-piceis; pedibus posticis brevibus.—Long. corp. lin. $3\frac{2}{3}$–4.

Habitat ins. Hierro, in locis editioribus regionis sylvaticæ "El Golfo" dictæ mense Februario A.D. 1858 parce repertus.

* It is much to be regretted that M. Brullé should not have been a little more accurate in his descriptions. Apart from all other characters, if he had looked at the claws of his *C. angularis* he would have immediately perceived that it was no *Calathus* at all; and at least *one* of his diagnoses (all equally unintelligible) would have been thus removed into its *proper place*,—enabling after-observers *at all events to guess* what the insect really was to which he referred. His total silence too as to the exact *islands* in which the several species occur (though all the types which I examined in Paris, of MM. Webb and Berthelot, had their islands indicated by a separate label) deprives us of *the only possible clue* which we might have otherwise had for deciphering his insects.

The only specimens which I have seen of this singular insect are five which were captured by myself, from beneath stones, in the upper part of the wooded region of El Golfo, on the west of Hierro, during our visit to that island in February 1858. It offers so many peculiarities, that I need only refer to the diagnosis; but its comparatively convex prothorax and elytra (the former of which is almost free from impressions at its base and has its posterior angles right angles, whilst the latter are very lightly striated, with their discal punctures indistinct and sometimes obsolete), in conjunction with its exceedingly short hind legs (for a *Pterostichus*), may be especially noticed. Its sexes, too (barring, of course, the dilatation of its male-tarsi), are *similar*, both in outline and surface.

Genus 26. **AMARA.**

Bonelli, *Observat. Ent.* i. (1809).

(Subgenus **Leiocnemis,** *Zimm.*)

80. **Amara versuta.**

A. breviter ovata, nigro-picea, æneo-micans, convexa; prothorace brevi, transverso, ad latera marginato et æqualiter rotundato, basi vix punctato (interdum impunctato) sed utrinque foveis duabus (internâ sc. majore longiore, sed externâ parvâ, minus profundâ, subrotundatâ) notato, postice in medio transversim impresso; elytris paulo dilutioribus (fusco-piceis), crenato-striatis; antennis, palpis pedibusque testaceis.—Long. corp. lin. 2–2½.

Amara versuta, *Woll., Ann. Nat. Hist.* (3rd series) xi. 215 (1863).
—— bifrons, *Hartung* [nec *Gyll.*], *Geolog. Verhältn. Lanz. und Fuert.* 141.

Habitat in Lanzarota et Fuerteventura, sub lapidibus, passim.

The present very distinct little *Amara* (which I am informed by Dr. Schaum should be referred to the section *Leiocnemis*) is the only one of the genus which has hitherto been observed at the Canaries,—even the common European *A. trivialis*, which abounds at Madeira and the Azores, being apparently absent from the islands of that archipelago. The *A. versuta*, moreover, would seem to be confined to Lanzarote and Fuerteventura,—where it is decidedly rare, and occurs at intermediate elevations. It was found by Mr. Gray and myself in the former,—principally from under stones on the grassy plain immediately above the village of Los Valles (de S^ta^ Catalina), on the road to Haria; and by M. Hartung and myself in the latter. My Fuerteventuran examples were taken, beneath corn-stack refuse, at Oliva, on the 31st of March 1859. Having received it from Dr. Heer under the name of "*A. bifrons*, Gyll.," I am enabled to state for certain

that it is the insect referred by him, in M. Hartung's list, to that species. It belongs, however, in reality, to a different *group*.

Genus 27. ZABRUS.

Clairville, *Ent. Helv.* ii. 80 (1806).

81. Zabrus crassus.

Zabrus crassus, *Dej., Spec. Gén. des Col.* iii. 451 (1828).
—— ——, *Zimm., Mon. der Carab.* 42 (1831).
—— ——, *Brullé, in Webb et Berth.* (*Col.*) 57 (1838).

Habitat Teneriffam, præsertim in locis subelevatis, rarior.

The two Canarian *Zabri* (both of them peculiar to Teneriffe) are very closely related *inter se*, but I believe truly distinct. The present one is a little more robust and ovate than its ally (being, on the average, a trifle more expanded posteriorly), and rather less shining (or a little more evidently alutaceous); its prothorax is just perceptibly broader, somewhat more strongly impressed behind, and *more widely depressed* at the sides; its elytra are very much more deeply striated, and its limbs are usually a shade darker. It is certainly the rarer of the two, and found for the most part at a rather higher altitude,—though I have taken it occasionally on the hills behind S^{ta} Cruz at only a slight elevation above the sea. On the mountains, however, above Taganana, and at Las Mercedes, it appears more within its normal range.

82. Zabrus lævigatus.

Zabrus lævigatus, *Zimm., Mon. der Carab.* 43 (1831).

Habitat Teneriffam, præcipue in locis subinferioribus, hinc inde vulgaris.

This appears to be the commoner of the two Teneriffan *Zabri*, though at the same time somewhat local. I have taken it rather abundantly in the dry cindery region between the Puerto Orotava and the Villa, where it occurs beneath stones during the spring; and it has also been captured by Dr. Crotch. It may be known from its ally by being, on the average, a little smaller and more oblong (or less dilated behind); by its prothorax being *more narrowly* depressed at the sides (particularly towards the posterior angles), altogether not quite so broad, and with its basal impressions perhaps somewhat lighter; and by its elytral striæ being much less deep, its limbs generally of a paler hue, and its entire surface just perceptibly more shining (or less distinctly alutaceous). I have received it from Dr. Heer (collected by M. Hartung) under the name of "*crassus*, Dej.";

but it seems to be the true *lævigatus* of Zimmermann, Dejean's *crassus* being the preceding (and rarer) species. Both of these *Zabri* have also been communicated by the Barão do Castello de Paiva.

(Subfam. XI. DITOMIDES.)

Genus 28. **ARISTUS.**

(Ziegler) Latr., *Règne Anim.* (éd. 2) iv. 387 (1829).

83. **Aristus subopacus**, n. sp.

A. niger, subcylindrico-oblongus, calvus, subopacus, minutissime alutaceus; capite prothoraceque parce (illo profundius) punctatis, illo valde convexo integro (*i. e.* fronte vix impressâ), hôc brevi, ad basin subito et valde constricto, ad latera grosse marginato (angulis ipsis posticis rectis marginatis); elytris subparallelis, leviter punctato-striatis, interstitiis depressis fere impunctatis; antennis ad apicem, palpis tarsisque rufo-piceis.—Long. corp. lin. 5.

Ditomus clypeatus?, *Brullé* [nec *Rossi*], *in Webb et Berth.* (*Col.*) 57 (1838).

Habitat in montibus Fuerteventuræ, a meipso Aprili ineunte A.D. 1859 sub lapide in summo monte "La Atalaya" dicto semel lectus.

The only specimen which I have seen of this very distinct *Aristus* was captured, on the 4th of April 1859, from beneath a stone, on the summit of La Atalaya (above Betancuria),—the loftiest mountain of Fuerteventura. Whether it be the insect referred by M. Brullé to the *Ditomus clypeatus* of Rossi, I am unable to say for certain, the greater number of his types (supposed to be in Paris) being either lost or inaccessible; but, judging from the very few words which he says about it, I think that it most probably *is*. It differs, however from the *clypeatus* in being rather larger, more parallel (or cylindric), and broader; in its entire sculpture being *very* much finer; in its head being more convex, and free from foveæ; in its prothorax being more strongly margined at the sides (even to the basal angles themselves), and with the anterior angles less porrect; and in its surface (which is totally free from pile) being more alutaceous and less shining. *Primâ facie* it has somewhat in common with the *Ditomus opacus*, from the south of Algeria.

(Subfam. XII. HARPALIDES.)

Genus 29. **CRATOGNATHUS.**

Dejean, *Spec. Gén. des Col.* iv. 46 (1829).

The four species described below, I am informed by Dr. Schaum, are referable to the genus *Cratognathus* of Dejean; and although the

first of them (the Lanzarotan and Fuerteventuran *C. solitarius*) has certainly much the facies of a small *Acinopus*, nevertheless its perfectly toothless mentum and the well-defined hinder angles of its prothorax would seem to assign it to *Cratognathus* rather than to that group. Indeed *Cratognathus* (of which the "*Harpalus vividus*," from Madeira, and the "*H. pelagicus* *," from the Salvages, are also undoubted members) appears to be universal throughout these Atlantic islands, and it is probable therefore that there are members of it yet to be detected. It differs mainly from *Harpalus* proper (into which, however, it almost merges) in the *tendency* of its head, particularly in the male sex, to be greatly enlarged, in the emargination of its mentum being deep and quite *simple* (even the rudiments of the tooth which is seldom, if indeed ever, altogether untraceable in the true *Harpali* being apparently absent), in its mandibles being perhaps slightly obtuser, in its wings being obsolete, and in the more developed spurs of its anterior tibiæ. The *Cratognathi* are usually smaller and less cylindric than the *Acinopi*, but *on the average* perhaps a trifle larger than the ordinary *Harpali*; and in colour they are almost invariably of a more or less dark piceous (seldom completely black), and quite free from any metallic tinge.

84. Cratognathus solitarius.

C. ater, subcylindrico-oblongus; capite magno; prothorace subquadrato postice vix angustiore, basi utrinque foveâ sat profundâ punctatâ impresso; elytris oblongis, profunde crenato-striatis, interstitio septimo ad apicem ipsissimum punctulis circa 2–4 (interdum indistinctis confusis) notato; antennis, palpis tarsisque rufo-ferrugineis, femoribus tibiisque piceis.—Long. corp. lin. $4\frac{1}{2}$–5.

Cratognathus solitarius, *Woll., Ann. Nat. Hist.* (3rd ser.) xi. 215 (1863).
Harpalus consentaneus, *Hartung* [nec *Dej.*], *Geolog. Verhältn. Lanz. und Fuert.* 140 et 141.

Habitat Lanzarotam et Fuerteventuram, sub lapidibus in locis intermediis et elevatioribus sat vulgaris.

The more cylindric outline and blacker hue of this insect, combined with its deeply crenate-striated elytra and general aspect, give it more the character, *primâ facie*, of a small *Acinopus* than of a *Cratognathus*;

* This insect, which I described in a paper on certain Coleoptera from the Salvages, published in the 'Journal of Entomology,' vol. i. p. 88, differs from all the species here characterized in being *relatively* broader, and with its prothorax (which is but very obscurely impressed behind) much more rounded (and *subequally* so) at the sides,—causing the angles to be more obtuse. Its elytra (which are subopake in the females) are only lightly striated in both sexes, and their seventh interstice has a few small punctules (as in the *C. solitarius*) at its extreme apex,—which last is less produced than is the case in its allies here enumerated. Perhaps it has more affinity with the *C. fortunatus*, from Grand Canary, than with any of the others.

nevertheless the structural features already alluded to would seem to refer it to the latter. In its habits the *C. solitarius* is a little peculiar, since it is less gregarious than either the *Cratognathi* or *Harpali* usually are,—only one specimen being found, for the most part, beneath a single stone, and that one within a small hole (or *burrow*). It is universal throughout the intermediate and higher elevations of Lanzarote and Fuerteventura, in both of which islands it has been taken abundantly by M. Hartung and myself. I have received several examples of it from Dr. Heer (collected by the former) under the name of "*Harpalus consentaneus**, Dej." (with which, however, it has nothing whatever in common); so that I can state for certain that it is the insect thus referred to in the catalogue which was prepared by him for M. Hartung's volume. Fuerteventuran specimens have also been communicated by the Barão do Castello de Paiva.

85. **Cratognathus fortunatus.**

C. piceus, oblongus; capite magno; prothorace subquadrato postice subrecte angustiore, basi utrinque vix punctulato vix impresso; elytris subovato-oblongis, striatis, interstitio septimo ad apicem punctis circa 2–4 notato; labro rufo-piceo; antennis, palpis pedibusque rufo-ferrugineis.

Mas nitidus, interstitiis subconvexis.

Fœm. subopacus, interstitiis subdepressis.—Long. corp. lin. 5–5⅔.

Cratognathus fortunatus, *Woll., Ann. Nat. Hist.* (3rd ser.) xi. 215 (1863).

Habitat montes Canariæ Grandis, in pineto quodam regionis "Tarajana" dictæ mense Aprili A.D. 1858 sat copiose repertus.

The (comparatively) rather larger size of this species (which is the largest, *on the average*, of the Canarian *Cratognathi*), combined with the subopake surface of its female sex, its very lightly impressed prothorax, and the series of small punctures at the apex of its seventh

* It is rather remarkable that the common European *H. consentaneus*, Dej. (=*attenuatus*, Steph.), which is universal in the Madeiran Group, has not yet (so far as I am aware) been detected at the Canaries. It is certainly quoted by M. Brullé; but such a vast proportion of his insects are incorrectly identified [some few of them, moreover, having been, *I have the most conclusive reasons for believing*, even brought by Mr. Webb from Madeira!], that I cannot—with some 20,000 Canarian specimens now in my possession amongst which it does *not* occur—admit it, without further evidence, into the catalogue. The two nearly allied species *H. tenebrosus* and *Schaumii* are not uncommon at Teneriffe; and it is far from improbable, therefore, that the *latter* of them (for the former is mentioned by M. Brullé) may have been mistaken for the *consentaneus*. In like manner I cannot include the *H. rubripes*, Creutz.,—which is similarly recorded by M. Brullé, without the slightest reference to its *habitat*, or with so much as a single observation accompanying it. So far as my own experience goes, I am satisfied that the *H. rubripes* does not occur in *any* of these Atlantic islands; and I shall require better evidence than that afforded by M. Brullé's list before I believe that it does. I have not the slightest doubt that the insect he really re-

elytral interstice, must serve to characterize it. So far as I have observed hitherto, it appears to be confined to the mountains of Grand Canary,—where, during April 1858, I took it, in tolerable abundance, in one of the lofty Pinals of the district of Tarajana, above the village of San Bartolomè.

86. Cratognathus micans.

C. præcedenti similis, sed paulo minor, in utroque sexu fere æqualiter nitidus, prothorace ad latera paulo magis sinuato, elytris antice paulo magis truncatis (ergo vix brevioribus), interstitii septimi punctis obsoletis, pedibus paulo pallidioribus.

Var. β. *Sanctæ-crucis* [an species distincta?]. Minus politus, capite paulo minore, prothorace basi paulo minus subito angustiore (ergo angulis vix minus rectis), utrinque profundius foveolato, elytris profundius striatis, ad apicem ipsum plerumque paulo magis acuminatis.—Long. corp. lin. $4\frac{1}{2}$–5.

Cratognathus micans, *Woll., Ann. Nat. Hist.* (3rd ser.) xi. 215 (1863). Harpalus vividus, *Hartung* [nec *Dej.*, nec *Fab.*], *Geolog. Verhältn. Lanz. und Fuert.* 140.

Habitat in ins. Gomera, prope San Sebastian vulgaris; sed *var.* β ad Teneriffam solam pertinet, circa urbem Sanctæ Crucis prædominans.

The rather smaller size and almost equally polished surface of the two sexes of this species, in conjunction with the absence* of the punctures at the apex of the seventh interval of its elytra, will suffice to separate it from the *C. fortunatus*, to which it is nearly allied. It is possible that the form which I have regarded as the *var.* β may be specifically distinct; nevertheless its differential characters (although constant) are so minute that I think it safer to treat it as an insular modification peculiar to Teneriffe. As may be gathered from

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ferred to was the *H. distinguendus*, Dufts., which abounds at Madeira but which has not yet been observed at the Canaries; and that it was probably entered on the strength of an example brought by Mr. Webb (along with the *Scarites abbreviatus* and perhaps also the *Harpalus consentaneus*) from Funchal.

* Perhaps they should rather be called obsolete (as indeed I have done in the diagnosis) than *absent*; for out of 53 specimens of the typical *micans* which I have just examined, I find these subapical punctules present in *six*; nevertheless in 64 of the Teneriffan "*var.* β" there is (as in the *C. æmulus*) no appearance of them whatsoever. In the *fortunatus*, on the other hand, in which I have mentioned them as a diagnostic feature, they are well developed in *all* (32 in number) which I have yet seen: so that the six in which they exist out of the 117 *micans* may be regarded as exceptional, or even accidental. It is scarcely necessary to allude to the *A. solitarius* (which has so many characters of its own that it could not be confounded with either of these more nearly allied forms); but in 12 examples of it which I have carefully overhauled, the punctules are always visible,—only smaller than those of the *fortunatus*, still more apical, and often somewhat indistinct or confused.

the diagnosis, it may be known from what I have considered as the type (and which is confined to the island of Gomera) by being a little less polished, by having its elytra more deeply striated and perhaps somewhat more acuminated at their extreme apex, and by its being (on the average) just perceptibly smaller, and with its head not *quite* so largely developed. Its prothorax, too, has its foveæ rather more apparent, and its sides usually a trifle less sinuated behind, causing the angles to be (if anything) more obtuse.

The typical state abounds in Gomera, where it was taken by Mr. Gray and myself, around San Sebastian and on the hills above it, during our visit to that island in February 1858; and I have received it from the Barão do Castello de Paiva, collected near Hermigua. The "*var.* β," on the contrary, seems to be the state which obtains in Teneriffe, where it is common in certain spots in the vicinity of S^ta^ Cruz. My own specimens are principally from the rocky slopes about the Barranco do Passo Alto.

Several examples of the *var.* β (which were found by M. Hartung) have been communicated to me by Dr. Heer under the name of "*Harpalus vividus*, Dej."; so that I can vouch for its being the insect referred to in his catalogue of Lanzarotan* Coleoptera; it has however nothing in common, except its generic characters, with that species.

87. **Cratognathus æmulus**, n. sp.

C. var. β *C. micantis* similis, sed colore obscuriore (minus piceo), in utroque sexu minus nitidus (fœminâ etiam fere opacâ), capite paulo minore, prothorace basi paulo magis angustato (angulis ipsis posticis subacute prominulis), utrinque profundius impresso; elytris in sexu masculo valde profunde striatis, interstitiis convexis, in fœmineo leviter striatis, interstitiis depressis.—Long. corp. lin. $4\frac{2}{3}$.

Habitat Teneriffam sylvaticam, in montibus supra Tagananam captus.

* It is unfortunate that M. Hartung should not have been more careful in preserving the *localities* of his various species. I have no hesitation in saying that the *C. micans* does *not* occur in either Lanzarote or Fuerteventura,—which are so distinctive in their fauna as to be almost separated topographically from the other islands of the archipelago. It has not as yet been detected even in Grand Canary; and there seems every reason to believe that the *var.* β is confined to Teneriffe, and that what I have regarded as the type is peculiar to Gomera. From the specimens which have been forwarded to me by Dr. Heer, I have not a shadow of doubt but that they are Teneriffan, and were most probably collected in the neighbourhood of S^ta^ Cruz; and that, like the single example already alluded to of the *Oisthopus glabratus*, they were mixed up inadvertently (perhaps afterwards) with Lanzarotan species. Thus, what between a wrong *habitat* and a wrong *identification* (it being referred to an insect, the Madeiran *C. vividus*, from which it is totally distinct), *a twofold error*, of no slight importance in a geographical point of view, *is on record*.

In its external contour this insect approaches so near to the ordinary *Harpali* that, were it not for its slightly enlarged head and anterior tibial spurs, and (still more) for the difficulty (indeed almost the impossibility) of placing it in a different group from the preceding species, it could scarcely have been regarded as a *Cratognathus*: nevertheless I am satisfied that to detach it from its allies on account of its *primâ facie* aspect would be most unnatural; and it must therefore remain as a small, and not very typical, member of the present genus. It is at once characterized by its darker (or less piceous) hue, by the more acute (in fact almost minutely-prominent) hinder angles of its prothorax, and by the very opposite appearance of its sexes,—the males being shining (though less so than in any of the foregoing species), with their elytra very deeply striated and the interstices convex; whilst the females are nearly opake, with their striæ light, and their interstices depressed. The only two examples which I have seen were taken in the sylvan region above Taganana, of Teneriffe, during May 1859.

Genus 30. **HARPALUS.**

Latreille, *Gen. Crust. et Ins.* i. 201 (1806).

88. **Harpalus tenebrosus.**

H. niger, obscurissime subcyaneus; prothorace subquadrato, ad latera subæqualiter rotundato, angulis posticis obtusis, basi utrinque dense punctato; elytris striatis (striis fere simplicibus); antennis, palpis tarsisque rufo-ferrugineis, illis ante basin fusco-maculatis. *Mas* nitidus; *fœm.* subopacus.—Long. corp. lin. $3\frac{1}{2}$–$4\frac{1}{2}$.

Harpalus tenebrosus, *Dej., Spec. Gén. des Col.* iv. 378 (1829).
—— ——, *Brullé, in Webb et Berth. (Col.)* 57 (1838).
—— Wollastoni, *Daws., Geod. Brit.* 144 (1854).
—— litigiosus, *Woll.* [nec *Dej.*], *Ins. Mad.* 52 (1854).
—— ——, *Id., Cat. Mad. Col.* 16 (1857).
—— tenebrosus, *Schaum, Nat. der Ins. Deutsch.* i. 598 (1860).

Habitat in Lanzarota, Fuerteventura et Palma, sat rarus.

The European *H. tenebrosus* (which occurs also in Madeira and Porto Santo) is found sparingly throughout Lanzarote and Fuerteventura; and I have also taken it in the Banda, on the west of Palma. Although a well-known insect, I have given a diagnosis of it in order to point out its distinctions from the following species.

89. **Harpalus Schaumii,** n. sp.

H. niger; prothorace brevi, transverse subquadrato, ad latera postice subrecto, angulis posticis subrectis, basi utrinque parce sed profunde punctato; elytris profunde crenato-striatis, interstitio sep-

timo ad apicem punctis circa 3–7 notato; antennis, palpis pedibusque rufo-ferrugineis.

Mas nitidissimus; *fœm.* subopacus.

Var. β. Teneriffæ [an species?] prothorace elytrisque paulo convexioribus, illo angulis posticis vix magis obtusis, his ad apicem paulo brevioribus necnon in sexu fœmineo vix minus opacis.—Long. corp. lin. $4\frac{1}{2}$.

Habitat in Teneriffa, Palma et Hierro, passim: *var. β*, in montibus supra Ycod el Alto capta, ad Teneriffam pertinet.

In general outline and size the present *Harpalus* is closely related to the *tenebrosus*; but, in addition to its wanting the obscurely subcyaneous tint which is scarcely ever entirely absent from that species, it may be known by its prothorax being shorter and more transverse, straighter at the sides (causing the posterior angles to be less obtuse), and more coarsely and sparingly punctured at the base, by its elytra being more deeply striated, with their striæ most *conspicuously crenate*, and with their seventh interstice furnished with a series of small punctures (varying from about two to six) behind, and by its femora and tibiæ being (instead of dark-piceous) bright rufo-ferruginous—like the antennæ and tarsi. Its subbasal antennal joints, too, are *not* infuscated, as is the tendency in that insect; and the surface of its male sex is more highly polished. I had thought at first, from its evident affinity with the *H. tenebrosus*, and from the presence of the small series of punctures towards the apex of its eighth elytral interstice, that it might perhaps be identical with the European *litigiosus*; but a type of that insect which has lately been communicated by Dr. Schaum has convinced me that it certainly is *not* conspecific with it; and indeed Dr. Schaum himself adds, "I consider it quite distinct, on account mainly of its strongly punctured striæ; I know, in fact, of scarcely any *Harpalus* which has them so coarsely sculptured."

I have taken it sparingly, from beneath stones, in Teneriffe (particularly around S^ta^ Cruz and Orotava), in Palma (immediately above Buenavista, before the ascent to the Cumbre), and in the region of El Golfo, on the west of Hierro. Whilst at Ycod el Alto, in Teneriffe, during May of 1859, I obtained seven specimens (in the ravines of the lofty Pinal between that spot and the Cumbre) which do not *entirely* accord with those which I have found elsewhere; nevertheless their difference is so slight that I think they cannot be regarded as more than a variety of the *litigiosus*. Their prothorax and elytra are, both of them, a trifle more convex than is ordinarily the case; and the former has its basal angles just perceptibly more obtuse,

whilst the latter are a little more shortened behind,—leaving the pygidium still more exposed. The surface of their female sex, too, is perhaps, *if anything*, somewhat more shining.

Genus 31. **DICHIROTRICHUS.**

Jacq. Duval, *Gen. des Col.* i. 35 (1857).

90. **Dichirotrichus levistriatus,** n. sp.

D. oblongus, rufo-ferrugineus, subnitidus, fere calvus; capite prothoraceque leviter punctatis, hôc subquadrato-cordato, angulis ipsis posticis fere rectis, basi utrinque late et profunde impresso; elytris parallelis, leviter striatis, interstitiis punctatis; pedibus testaceis. —Long. corp. lin. 3.

Habitat Lanzarotam borealem, ad Salinas semel captus.

The only specimen which I have seen of this insect was taken by myself at the Salinas (or salt-works), in the extreme north of Lanzarote, during March 1859. It is closely allied to the European *D. obsoletus*; but, judging from the single example now before me, it is rather more robust and oblong (the elytra being more parallel); its head and prothorax are more closely and less deeply punctured, and the latter has its extreme hinder angles a trifle more acutely prominent; its elytra are immaculate, with their sculpture lighter; its shoulders are a little more obtuse; and its entire surface is of a redder tint, and apparently almost free from pubescence.

Genus 32. **STENOLOPHUS.**

(Megerle) Steph., *Ill. Brit. Ent.* i. 165 (1828).

91. **Stenolophus vaporariorum.**

Carabus vaporariorum, *Fab.* [nec *Linn.* 1761], *Syst. Ent.* 247 (1775).
—— teutonus, *Schrank, Enum. Ins. Austr.* 214 (1781).
Stenolophus vaporariorum, *Brullé, in Webb et Berth.* (*Col.*) 57 (1838).
—— teutonus, *Woll., Ins. Mad.* 59 (1854).
—— ——, *Id., Cat. Mad. Col.* 17 (1857).
—— ——, *Schaum, Nat. der Ins. Deutsch.* i. 613 (1860).

Habitat in Fuerteventura, Canaria, Teneriffa, Gomera et Palma, in humidis, frequens.

The European *S. vaporariorum* (which is common at Madeira, and which I possess from the Azores) is widely spread over the Canarian archipelago,—where in all probability it is universal. At present, however, I have taken it in but five* out of the seven islands of the

* It is indeed recorded in M. Hartung's list of the Coleoptera of Lanzarote; but so many errors seem to have arisen through the mixing up (however unintentionally) of the insects of his different localities, that I think it hardly safe to admit it into my catalogue as Lanzarotan without further evidence.

Group,—namely, in Fuerteventura, Grand Canary, Teneriffe, Gomera, and Palma. In Teneriffe I have observed it principally, in moist spots, around Sta Cruz, at Las Mercedes, the Agua Mansa, and at Ycod el Alto; and in Gomera at the edges of the small stream at San Sebastian. In Teneriffe and Gomera it was found likewise by Dr. Crotch.

92. Stenolophus marginatus.

Stenolophus marginatus, *Dej., Spec. Gén. des Col.* iv. 427 (1829).
—— ——, *Brullé, in Webb et Berth. (Col.)* 57 (1838).
—— ——, *Leon Fairm., Faun. Ent. Franç.* i. 145 (1854).
—— ——, *Woll., Ann. Nat. Hist.* (3rd series) ii. 407 (1858).

Habitat in humidis Canariæ et Teneriffæ, rarissimus.

The *S. marginatus* of Mediterranean latitudes (which has been recorded in Spain, the south of France, Corfu, Greece and Egypt, and which is exceedingly rare in Madeira) occurs very sparingly at the Canaries. I have myself only taken it in the island of Grand Canary (by the edges of a small stream on the ascent to the Roca del Soucilho, from San Mateo); but a Teneriffan specimen has lately been communicated by the Barão do Castello de Paiva.

93. Stenolophus dorsalis.

Carabus dorsalis, *Fab., Ent. Syst.* i. 165 (1792).
Acupalpus dorsalis, *Brullé, in Webb et Berth. (Col.)* 57 (1838).
Stenolophus dorsalis, *Woll., Ins. Mad.* 60 (1854).
—— ——, *Id., Cat. Mad. Col.* 17 (1857).
—— ——, *Schaum, Nat. der Ins. Deutsch.* i. 619 (1860).

Habitat in humidis Canariæ, Teneriffæ et Gomeræ, hinc inde vulgaris.

The European *S. dorsalis* (likewise found, though sparingly, in Madeira) is tolerably common in certain spots at the Canaries. Up to the present date, however, I have myself observed it only in Grand Canary and Teneriffe,—namely (abundantly) near San Mateo and Teror, of the former; and around Sta Cruz, at Las Mercedes and the Agua Garcia, of the latter. It was however taken by Dr. Crotch above Hermigua in Gomera, as well as in Teneriffe (from which latter island it has also been communicated by the Barão do Castello de Paiva).

Genus 33. BRADYCELLUS.

Erichson, *Käf. der Mark Brand.* i. 64 (1837).

94. Bradycellus ventricosus, n. sp.

B. ovatus, nigro-piceus, nitidus; prothorace subquadrato-cordato, basi utrinque profunde punctato; elytris convexis, ventricosis,

subcrenato-striatis, suturâ distincte necnon limbo ipsissimo obscurius angustiusque rufescentioribus; antennis fusco-testaceis, ad basin, palpis pedibusque pallido-testaceis, tibiis ad apicem tarsisque ad basin obscurioribus.—Long. corp. lin. $1\frac{1}{3}$–$1\frac{1}{2}$.

Habitat Teneriffam sylvaticam, sub foliis dejectis in humidis degens.

The present beautiful and truly indigenous *Bradycellus* is closely allied to the Madeiran *B. excultus*, but is more ovate than that species (its elytra particularly being more rounded, convex, and ventricose); its eyes are larger; its prothorax is wider in front, narrower behind, and very much more deeply punctured on either side at the base; and its elytra are obtuser at their shoulders, and with their striæ evidently crenulated. I have observed it only in the sylvan districts of Teneriffe,—having taken it sparingly, beneath stones and dead leaves, in the woods above Taganana, at Las Mercedes, the Agua Garcia, and at La Esperanza.

(Subfam. XIII. TRECHIDES.)

Genus 34. **TRECHUS.**

Clairville, *Ent. Helv.* ii. 23 (1806).

95. **Trechus detersus**, n. sp.

T. capite prothoraceque nitidissimis, nigro-piceis (hôc ad latera et postice interdum paulo rufescentiore), hôc subquadrato, angulis posticis subrectis (ipsissimis acute prominulis); elytris ovalibus, rufo-ferrugineis, in disco plus minus paulo obscurioribus, leviter striatis, striis versus latera obsoletis; antennis infuscato-testaceis, ad basin, palpis pedibusque testaceis.—Long. corp. lin. $1\frac{1}{2}$–vix 2.

Habitat in Lanzarota et Fuerteventura, sub lapidibus, passim.

This *Trechus* (which appears to be confined to Lanzarote and Fuerteventura) is very nearly related to the common European *T. minutus*; of which, however, it certainly cannot be regarded as a geographical modification. Apart from its rather larger size, it may be known from that species by its darker head and prothorax, the latter of which is altogether more developed and very much squarer (being about as broad behind as before, and with its posterior angles nearly right angles), and has no impressions at the base; and by its shoulders being a trifle more porrected and acute. It occurs more particularly in Lanzarote, where it was taken both by Mr. Gray and myself; but during the spring of 1859 I captured it also in Fuerteventura.

96. **Trechus flavolimbatus.**

T. niger, nitidus; prothorace transverse subquadrato postice paulo angustiore, angulis ipsissimis posticis minutissime prominulis, basi utrinque leviter foveolato; elytris oblongo-ovalibus, subdepressis, limbo plus minus flavo-testaceo, striatis (striis vix subcrenatis, exterioribus obsoletis); antennis nigro-fuscescentibus, ad basin rufo-testaceis; pedibus pallido-testaceis, tibiis plus minus obscurioribus.—Long. corp. lin. $1\frac{1}{3}$–$1\frac{3}{4}$.

Trechus flavolimbatus, *Schaum, in litt.*
—— ——, *Woll., Ann. Nat. Hist.* (3rd series) xi. 216 (1863).

Habitat in Canaria, Teneriffa, Gomera, Palma et Hierro, vulgaris.

Very closely related to the Madeiran *T. flavomarginatus*, of which indeed I had regarded it as a mere geographical state until Dr. Schaum drew my attention, lately, to one or two small characters which I had overlooked. This induced me to examine the insect more critically; and I now agree with him that, however nearly allied to it, it undoubtedly cannot be referred to that species. It may at once be known from the *flavomarginatus* by its larger and more prominent eyes; by its prothorax being a trifle convexer, with much shallower foveæ on either side at the base, and with its hinder angles just perceptibly more obtuse; and by its elytra being flatter, a little less rounded at the sides (or more oblong), with their extreme humeral angles considerably less acute, and with their striæ (the outer ones of which are subobsolete) altogether more lightly impressed.

The *T. flavolimbatus* is universal in all the islands of the archipelago, except Lanzarote and Fuerteventura,—in which I have not observed it, and where I believe it does not exist; but in Grand Canary, Teneriffe, Gomera, Palma, and Hierro I have taken it, in greater or less profusion. In Teneriffe, Gomera, and Palma it was also met with by Dr. Crotch. Though more abundant within the sylvan regions than elsewhere, it is found at nearly all elevations, and wherever there are dead leaves, or other vegetable refuse, for it to secrete itself beneath; nevertheless there is good reason for suspecting that many of the open districts in which it is common were once densely wooded, and that in such spots it may be but the exponent of a fauna which has mainly disappeared. In Teneriffe it was also captured by the Barão do Castello de Paiva.

97. **Trechus felix,** n. sp.

T. nitidus, rufo-piceus (rarius piceus); sulcis frontalibus valde curvatis, profundis; prothorace subquadrato-cordato, angulis posticis ipsissimis acute prominulis; elytris obovatis, depressis, limbo (præsertim ad apicem) necnon suturâ postice obscure pallidioribus, pro-

fundo subcrenato-striatis; antennis nigro-fuscescentibus, ad basin, palpis pedibusque testaceis.—Long. corp. lin. $1\frac{1}{2}$–$1\frac{3}{4}$.

Habitat in Teneriffa sylvatica excelsa, sub ligno corticeque putrido in montibus humidis supra Taganana mense Maio A.D. 1859 captus.

Closely allied to the Madeiran *T. custos*, but unquestionably distinct. It may be known from that species by its frontal sulci being deeper and much more curved; by its prothorax being more cordate (or narrower behind), with the *extreme* angles however much more prominent; by its elytra being flatter, more coarsely subcrenate-striated, more thickly margined at the sides, and *ob*ovate (their widest portion being towards the base); and by its antennæ being rather longer and darker. Like that insect it is apparently confined to the sylvan districts of a high elevation, but is excessively rare,—the only locality in which I have taken it being in the forest above Taganana, of Teneriffe, immediately below the Cumbre. Like the *T. custos* of Madeira, it is found in the dampest spots,—beneath rotting wood and leaves, and under the moist decaying bark of trees.

Genus 35. THALASSOPHILUS *.

Woll., *Ins. Mad.* 71 (1854).

98. Thalassophilus Whitæi.

Trechus littoralis?, *Brullé* [nec *Dej.*], *in Webb et Berth.* (*Col.*) 58 (1838).
Thalassophilus Whitei, *Woll.*, *Ins. Mad.* 71. tab. ii. f. 5 (1854).
—— ——, *Id.*, *Cat. Mad. Col.* 21 (1857).

Habitat ad rupes aquosas et per margines rivulorum in Canaria, Teneriffa, Gomera et Palma, rarissimus.

The *T. Whitæi*, which is of the greatest rarity in Madeira and Porto Santo, seems to be widely spread over the islands of the Canarian Group,—where, however, it is exceedingly scarce. I have captured it in Grand Canary (amongst wet stones and rocks at the edges of a small trickling stream on the southern side of, and within, the great crater of the Bandama); in Teneriffe (near S^{ta} Cruz and at Las Mercedes); as also in Palma; and it was likewise taken by Dr. Crotch at Yeod el Alto in Teneriffe, as well as in Gomera. Although usually quite as pale as the Porto-Santan type from which I origi-

* Having established it in the 'Insecta Maderensia,' I retain this genus here; nevertheless it seems doubtful whether it can be strictly upheld as more than a Division of *Trechus*. "Your *Thalassophilus*," writes Dr. Schaum, "is only a Section of *Trechus*, to which the *T. longicornis* belongs. The true distinction of the Section *Thalassophilus* is, that the recurved first stria, of the elytra, empties itself into the *third* one; whereas in *Trechus proper* it empties itself into the fifth."

nally characterized the species, I have taken it occasionally (both in Teneriffe and Palma) very much darker,—its subapical fascia being, as it were, suffused over the entire surface of the elytra. I have but little doubt that it is the insect referred by M. Brullé to the *Trechus littoralis* of Dejean (*i. e.* the *T. longicornis* of Sturm).

Genus 36. **PERILEPTUS.**

Schaum, *Nat. der Ins. Deutsch.* i. 663 (1860).

99. **Perileptus nigritulus.**

P. omnino *P. areolato* similis, sed vix major et minus nitidus (oculo fortissime armato grossius, præsertim in elytris, alutaceus), paulo magis pubescens, capite postice dilute rufescentiore; elytris (limbo postico pallido excepto) totis nigris, paulo magis parallelis, interstitiis vix minus convexis; antennis paulo longioribus, robustioribus.—Long. corp. lin. 1–1$\frac{1}{3}$.

Perileptus nigritulus, *Woll., Ann. Nat. Hist.* (3rd series) xi. 216 (1863).

Habitat Teneriffam, inter lapillos per marginem paludis cujusdam parvæ prope urbem Sanctæ Crucis sitæ copiose captus.

Had I possessed but a few specimens to judge from, I should scarcely have ventured to regard the present *Perileptus* as more than a dark variety of the European *areolatus*; but since I have no less than 93 from which to compile my diagnosis, in the whole of which its small differential characters remain perfectly constant, I am induced to believe that it is truly distinct from (however nearly allied to) that insect. It may be known from it by being (on the average) a trifle larger and more pubescent, just perceptibly less shining, and (under a high magnifying power) more coarsely alutaceous; by its elytra (except their extreme apical margin) being always *entirely dark*, a little more parallel at the sides, and with their interstices somewhat less convex; by its head being rufescent behind; and by its antennæ being perhaps rather longer and more robust. It is possible indeed that it may be but a geographical modification of the *areolatus*; nevertheless, with the above-mentioned small differences constant in 93 examples, I think it would scarcely be safe to treat it as such. The only spot in which I have taken it, is by the edges of a very small pool at the head of the Barranco Santo, close to S^{ta} Cruz of Teneriffe,—where, in June 1858, I obtained it in the greatest profusion, from beneath stones and shingle.

(Subfam. XIV. BEMBIDIADES.)

Genus 37. **TACHYS.**

(Ziegler) Steph., *Ill. Brit. Ent.* ii. 4 (1829).

Following Schaum and others, I have retained *Tachys* as distinct from *Bembidium*, since it appears to possess characters which render its isolation therefrom more desirable than is the case with the various other groups which are now usually treated as component parts of the *Bembidia*. Thus, apart from minor distinctions of proportions and outline, whilst in *Bembidium* and its subdivisions the short scutellary stria of the elytra is more or less traceable and the sutural one is simple, in *Tachys*, on the contrary, the scutellary stria is absent and the sutural one is recurved at its apex. The anterior tibiæ, also, in the latter are slightly more dilated, and are lopped-off obliquely towards their outer extremity,—a structure which gives them the appearance of being somewhat curved *.

100. **Tachys bistriatus.**

Elaphrus bistriatus (*Meg.*), *Dufts.*, *Fna Austr.* ii. 205 (1812).
Bembidium bistriatum, *Woll.*, *Ins. Mad.* 73 (1854).
—— ——, *Id.*, *Cat. Mad. Col.* 22 (1857).
Tachys bistriatus, *Schaum*, *Nat. der Ins. Deutsch.* i. 746 (1860).

Habitat Gomeram, a cl. W. D. Crotch nuperrime detectus.

Two specimens which I cannot separate from the European *T. bistriatus* (though at the same time, instead of being piceous-brown, they are testaceous with the head alone dark—thus agreeing, apparently, with the *pale variety* recorded by M. Duval and by Schaum) were taken by Dr. Crotch, during the spring of 1862, in Gomera. One of these he has presented to the collection at the British Museum. The species (though in its normal state, as regards colour) occurs also in the intermediate elevations of Madeira.

101. **Tachys scutellaris.**

Trechus scutellaris, *Germ.*, *Thon*, *Ent. Archiv*, ii. fasc. i. 11 (1829).
Tachys scutellaris, *Steph.*, *Ill. Brit. Ent.* ii. 5 (1829).
Bembidium scutellare, *Dej.*, *Spec. Gén. des Col.* v. 39 (1831).
Tachys scutellaris, *Schaum*, *Nat. der Ins. Deutsch.* i. 745 (1860).

Habitat in salinis Lanzarotæ, vulgaris.

The European *T. scutellaris* appears to be common in one or two salt spots in Lanzarote. On the muddy surface of the Salinas, or

* In my 'Ins. Mad.' I had noticed this in a particular species and regarded it as a *specific* character (calling the insect by the trivial name of *curvimanus*); but in reality it is a generic one.

brine-pits, in the extreme north of the island, it is abundant,—where it may be seen darting in and out of the crevices formed by the heat of the sun. In such positions it was taken by Mr. Gray and myself, during January 1858; and in the spring of the following year I again met with it in the same locality.

102. **Tachys centromaculatus**, n. sp.

T. niger; elytris pallide testaceis, in disco communi postico maculâ magnâ nigrescente (ad utrumque latus abbreviatâ sed antice per suturam plus minus anguste productâ) ornatis, versus suturam sat distincte striatis; oculis valde prominentibus; prothorace transverso, latiusculo, postice paulo angustiore, ad angulos posticos late subrecurvo; antennis, palpis pedibusque pallide testaceis.—Long. corp. lin. 1–1¼.

Habitat in salinis Lanzarotæ, per margines lacus ejus salini "Januvio" dicti a meipso deprehensus.

For some time I had regarded this *Tachys* as a large and peculiar state of the *T. scutellaris*; but having been informed by my friend Dr. Schaum that he believes it to be truly distinct, I have re-examined it more critically and have arrived at the same conclusion. It differs from the *scutellaris* in its rather larger size and somewhat broader outline; in its eyes being both larger and very much more prominent; in its prothorax being not only wider but also more *broadly* and *evidently* recurved at the basal angles; in its (pale-testaceous) elytra being *almost* free from a triangular scutellary cloud, and with the suffused postmedial fascia which characterizes its ally abbreviated on either side and reduced to a large well-defined patch, rounded behind and truncated in front (where, however, it is narrowly produced along the anterior portion of the suture); and by its antennæ, palpi, and legs being a trifle longer and of a uniformly pallid hue.

Like the *T. scutellaris*, the present species occurs in brackish places in Lanzarote; but whilst that insect has been observed hitherto only at the Salinas in the extreme north of that island, the *centromaculatus* I have not yet met with except along the edges of the curious salt lake of Januvio, adjoining the south-western coast,—where, on the 26th of March 1859, I detected it, not uncommonly, during a visit, in company with the Rev. R. T. Lowe, to that remote spot.

103. **Tachys curvimanus.**

Bembidium curvimanum, *Woll., Ins. Mad.* 74. tab. ii. f. 6 (1854).
—— ——, *Id., Cat. Mad. Col.* 22 (1857).

Habitat insulas Canarienses, in Hierro solâ adhuc haud detectus;

species late diffusa, sub lapidibus per margines rivulorum necnon in aquosis, ab orâ maritimâ usque ad 8000′ s. m. ascendens.

The *T. curvimanus*, which occurs sparingly in Madeira and Porto Santo, and which is so closely allied to the *T. 4-signatus* of Mediterranean latitudes that Dr. Schaum thinks it may *possibly* be but a small state of that species, is widely spread over the Canarian archipelago,—where in all probability it is universal; for although it has not yet been observed in Hierro, there can be but little doubt that it must exist there likewise. In Lanzarote (where it was also captured by Mr. Gray), Fuerteventura, Grand Canary, Teneriffe, and Palma I have taken it, more or less abundantly; and in Gomera (as well as in Teneriffe) it was found by Dr. Crotch. It occurs at nearly all elevations—in Teneriffe, for instance, from the immediate vicinity of S^{ta} Cruz to the Agua Mansa, and even to the Cumbre (adjoining the Cañadas) above Ycod el Alto, more than 8000 feet above the sea. My Fuerteventuran specimens are from the Rio Palmas, and the Grand-Canarian ones from the region of El Monte.

104. Tachys hæmorrhoidalis.

T. niger, nitidus; prothorace subcordato, convexo, ad basin utrinque vix impresso; elytris ovalibus, striis duabus versus suturam (externâ antice et postice abbreviatâ) utrinque impressis necnon maculis duabus (unâ sc. obliquâ humerali et alterâ transversâ subapicali) rufo-testaceis (plus minus obscuris suffusis confluentibus) ornatis; antennis nigro-fuscis, ad basin pedibusque pallide testaceis.—Long. corp. lin. $\frac{3}{4}$–1.

Bembidium hæmorrhoidale, *Dej., Spec. Gén. des Col.* v. 58 (1831).
—— ——, *Duv., Ann. de la Soc. Ent. de France*, (2ième série) x. 193 (1852).
Tachys hæmorrhoidalis, *Schaum, Nat. der Ins. Deutsch.* i. 750 (1860).

Habitat in aquosis Canariæ, Teneriffæ et Gomeræ, sat rarus.

Closely allied to the *T. Lucasii* (of Spain, northern Africa, Madeira, &c.), but smaller, with its prothorax a little narrower and more cordate, and almost free from impressions behind; and with its elytra more rounded at the sides, impressed with only two (instead of three) striæ towards the suture on each, with the two discal punctures less conspicuous, and ornamented with a *humeral* (as well as a subapical) blotch. The elytral patches, however, are often obscurely defined,—being usually more or less suffused, or even subconfluent. With the exception of the indistinct reddish blotch towards the shoulders (and which is sometimes exceedingly faint), it seems to me to agree precisely with the *T. hæmorrhoidalis* of southern Europe, and Dr. Schaum informs me that he can detect no other difference. Moreover in a

type (from Greece) which he has sent me, I can perceive a very evident rufescent tinge in that region of the elytra; and I have therefore no hesitation in regarding the Canarian species as identical with the European one. I have taken it in Grand Canary, and also immediately outside the Puerto Orotava of Teneriffe,—in the latter of which islands, as well as in Gomera, it was captured by Dr. Crotch.

Genus 38. **BEMBIDIUM.**

Latreille, *Gen. Crust. et Ins.* i. 183 (1806).

(Subgenus **Philochthus,** *Steph.*)

105. **Bembidium biguttatum.**

Carabus biguttatus, *Fab., Mant. Ins.* i. 205 (1787).
Bembidium vulneratum, *Dej., Spec. Gén. des Col.* v. 182 (1831).
—— biguttatum, *Schaum, Nat. der Ins. Deutsch.* i. 737 (1860).

Habitat in Canaria Grandi, prope oppidum Teror semel lectum.

The only specimen of this common European insect which I have as yet seen from *any* of the Atlantic islands was taken by myself in Grand Canary (at the edge of a small stream close to the town of Teror), during April 1858. I can detect nothing to separate it from the ordinary northern type, except that its prothorax is a little less strongly margined at the sides,—a difference which can scarcely be regarded (even if permanent) as indicative of more than a slight geographical modification.

106. **Bembidium vicinum.**

Bembidium vicinum, *Lucas, Col. de l'Algérie,* 86. pl. 10. f. 9 (1849).
—— ——, *Duval, Ann. de la Soc. Ent. de France,* (2ième série) x. 178 (1852).

Habitat in Lanzarota et Fuerteventura, per margines rivulorum, rarior.

I refer this insect to the *B. vicinum* (from the south of Europe and the north of Africa) on the authority of Dr. Schaum, who has also kindly sent me an Italian type for comparison. The Canarian specimens are altogether a little larger, broader, and more depressed than the example which he has communicated, and have their limbs perhaps somewhat longer and paler; but they do not differ sufficiently to warrant the supposition that they are specifically distinct. In habits and general aspect it is closely related to the European *B. æneum,* but has its prothorax rather less rounded at the sides (the posterior angles being a little more prominent and defined), its surface a trifle more alutaceous and less shining, its striæ lighter, and

its elytra and limbs (which last are perceptibly slenderer) a shade paler in hue. It has been observed hitherto only in Lanzarote and Fuerteventura, in the latter of which it was taken by Mr. Gray and myself (by the edges of the little stream at La Antigua) in January 1858; whilst, during the spring of the following year, I again found it in (the Rio Palmas of) the same island, as also near Haria in the north of Lanzarote.

(Subgenus **Peryphus**, *Meg.*)

107. Bembidium atlanticum.

Bembidium decorum, *Brullé* [nec *Dej.*], *in Webb et Berth.* (*Col.*) 58 (1838).
—— atlanticum, *Woll., Ins. Mad.* 77 (1854).
—— ——, *Id., Cat. Mad. Col.* 23 (1857).

Habitat insulas Canarienses; in Hierro solâ adhuc haud detectum.

The *B. atlanticum*, which is so common in Madeira and Porto Santo, is equally abundant at the Canaries, where there can be no doubt that it is universal. Nevertheless I did not happen to take it in Hierro, during our visit to that island in the winter of 1858; though in the other six islands of the Group it occurs almost wherever there is a stream, or pool of water, and independently of elevation. In Lanzarote and Gomera it was found likewise by Mr. Gray; and in Teneriffe, Gomera, and Palma by Dr. Crotch. It goes through the same extraordinary changes of colouring as it does at the Madeiras,—being generally more or less dark in comparatively moist or shady spots (when the elytral patches are often entirely obsolete), but for the most part brightly maculated in drier and more barren districts; and we accordingly find that the examples from Lanzarote and Fuerteventura are, on the average, very much paler than those from the rest of the archipelago. This is precisely analogous to the Porto-Santan specimens, as compared with those from Madeira. It was referred by M. Brullé to the European *B. decorum*, —from which, however, in all its states, it is perfectly distinct.

(Subgenus **Lopha**, *Meg.*)

108. Bembidium concolor.

B. nigro-cyaneum, capite prothoraceque obscure viridi-micantibus, hôc cordato, angulis posticis rectis, basi punctato; elytris immaculatis, antice striato-punctatis (seriebus sublateralibus profundioribus), pone basin transversim impressis, punctis duobus discalibus valde distinctis utrinque notatis; antennis fusco-nigris,

ad basin ipsissimam pedibusque rufo-piceis. — Long. corp. lin. 2–2$\frac{1}{3}$.

Bembidium concolor, *Brullé, in Webb et Berth.* (*Col.*) 58 (1838).

Habitat (ut credo) insulas omnes Canarienses, certe in Lanzarota, Canaria, Teneriffa, Gomera, Palma et Hierro,—sub lapidibus per margines aquarum (vel stagnantium vel fluentium) necnon ad rupes aquosas, haud infrequens.

This interesting *Bembidium*, so remarkable *as a Lopha* for its immaculate elytra*, is in all probability universal throughout the archipelago; for although it has not hitherto been observed in Fuerteventura, there can be no doubt that it must exist in that island likewise. I have captured it in Lanzarote, Grand Canary, Teneriffe, Palma, and Hierro (in the first of which it was taken also by Mr. Gray); and it was met with by Dr. Crotch at Hermigua, in Gomera.

109. **Bembidium subcallosum**, n. sp.

B. atrum (vix subcyanescens); prothorace cordato, angulis posticis subrectis, basi grosse punctato; elytris subparallelo-oblongis, grosse marginatis, maculis duabus testaceis utrinque ornatis, antice striato-punctatis, pone basin profunde transversim impressis; antennis ad basin ipsissimam pedibusque piceis, tibiis interdum paulo dilutioribus.—Long. corp. lin. 1$\frac{1}{2}$–2.

Bembidium 4-guttatum, *Brullé* [nec *Fab.*], *in Webb et Berth.* (*Col.*) 58 (1838).

Habitat insulas omnes Canarienses, Lanzarota et Fuerteventura (nisi fallor) solis exceptis, in humidis necnon per margines rivulorum vulgare.

Closely allied to the European *B. callosum*; from which however it differs in its larger size, altogether broader outline, and darker (almost unmetallic) surface; in its prothorax being rather more densely and coarsely punctured along the base; in its elytra being a trifle more oblong (or less oblong-*ovate*), with the patch on the anterior disk of each both shorter and less marginal (and therefore very much more widely separated from the anterior one); and in its legs

* M. Brullé, in his short notice (I cannot call it "description") of this insect, remarks that it is "distinct du 4-*guttatum* par l'absence de taches sur les élytres et *par la présence de deux points enfoncés sur chacun de ces deux organes.*" The two discal impressions to which he refers exist *in all* the allied species (4-*guttatum, callosum, subcallosum, Schmidtii*, &c.), only they happen, from its superior size, to be a little more evident in the *B. concolor*. He then speaks of the *femora only* as rufescent ("avec les cuisses d'un roux fauve"); whereas the entire legs are invariably of that colour. It is most unfortunate that in such a well-defined, and indeed almost anomalous, species he could not call attention to so few as even *four* of its numerous characteristics without being absolutely incorrect in two of them.

being considerably more piceous. It is perhaps still nearer to the Madeiran *B. Schmidtii*, and is in many respects intermediate between that insect and the *callosum*,—agreeing better with the former in its size, outline and colour, and with the latter in its sculpture; nevertheless its still blacker and less ænescent (or obscurely subcyaneous) hue, in conjunction with the *finer* and *shorter* striæ, and the smaller anterior patch, of its (more deeply transversely-impressed) elytra, will, I think, sufficiently distinguish it even from the *B. Schmidtii**.

The *B. subcallosum* is a most abundant insect, in wet spots, throughout the Canarian archipelago—except in the eastern portion of it, where it has not yet been observed. I have myself taken it in all the islands of the Group except Lanzarote and Fuerteventura. In Gomera it was captured likewise by Mr. Gray, in Teneriffe by the Barão do Castello de Paiva, and in *both* of those islands by Dr. Crotch.

110. **Bembidium inconspicuum**, n. sp.

B. subvirescenti-nigrum; prothorace cordato, angulis ipsissimis posticis subrectis, per basin parcissime punctato; elytris subparallelo-oblongis, tenuiter marginatis, maculis duabus testaceis utrinque ornatis, profunde striato-punctatis, striis postice evanescentibus; antennis pedibusque testaceis, illis versus apicem femoribusque fuscescentioribus.—Long. corp. lin. $1\frac{1}{3}$.

Habitat Teneriffam, a Dom. W. D. Crotch nuper repertum.

A single example of this little *Bembidium* was captured in Teneriffe, during the spring of 1862, by Dr. Crotch,—who has kindly presented it to the collection at the British Museum. It is somewhat allied to the common European *B. 4-maculatum*, but is smaller, with its extreme hinder prothoracic angles rather less evidently denticulated, with its elytra *much* more deeply striate-punctate, and with its limbs shorter—the antennal joints especially being more abbreviated.

(Subgenus **Leja**, *Meg.*)

111. **Bembidium lætum.**

B. capite prothoraceque ænescenti-cupreis, latera versus interdum virescentibus, illo utrinque punctato et longitudinaliter striguloso,

* The Madeiran *B. Schmidtii* differs from the European *callosum* in being rather larger, and *altogether* broader and darker; in having the puncture between the base of each of its frontal sulci (which are themselves a little different) and the eye coarser; in its prothorax being somewhat more thickly and roughly punctured behind, with a more evident tendency to be obsoletely punctured in the centre in front, and with its basal foveæ a trifle less sharply defined; in its elytral striæ being very much deeper, more coarsely punctured, and continued to a greater distance posteriorly; and in its legs being more robust, with the claws longer.

hôc subcordato, antice et postice parce punctulato; elytris læte viridibus, ad apicem pallidis, per suturam latissime cupreo-micantibus, utrinque fasciis duabus transversis cupreo-micantibus ornatis necnon punctis duobus maximis notatis, leviter punctulato-striatis; antennis nigro-piceis, pedibus testaceis.—Long. corp. lin. $1\frac{1}{2}$–2.

Bembidium lætum, *Brullé, in Webb et Berth.* (*Col.*) 58. pl. ii. f. 9 (1838).
—— ——, *Hartung, Geolog. Verhältn. Lanz. und Fuert.* 141.

Habitat in Lanzarota, Fuerteventura et Teneriffa, per margines rivulorum, rarissimum.

This beautiful *Bembidium* (the most elegant of all the Canarian Coleoptera) is apparently extremely rare, though widely spread over the archipelago. I have taken it by the edges of the little stream at Haria, in the north of Lanzarote; in a similar position at La Antigua, in Fuerteventura; and close to Ycod de los Vinhos, of Teneriffe; in which last island it was likewise captured by Mr. Gray (in the Barranco Santo, near S^ta^ Cruz), and more abundantly by Dr. Crotch (above Ycod el Alto). It was also found by M. Hartung in Fuerteventura. And I am informed by Dr. Schaum that it was taken by Kiesenwetter at Nauplia, in Greece; but I have not had the opportunity of comparing a Grecian type with the Canarian ones.

(Subgenus **Bembidium** *Auct.*)

112. **Bembidium Crotchii**, n. sp.

B. capite prothoraceque submetallice fusco-piceis, subopacis, illo parce punctato, hôc cordato fere impunctato sed ad basin transversim constricto subrugoso; elytris nitidioribus, testaceis, circa scutellum triangulariter submaculatis necnon in disco postico obsoletissime (vix perspicue) dentato-subfasciatis, punctato-striatis, striis postice evanescentibus; antennis (breviusculis), palpis pedibusque rufo-testaceis.—Long. corp. lin. 2–$2\frac{1}{3}$.

Habitat Palmam, rarissime, mihi non obvium; a Dom. W. D. Crotch, Medic. Doct., in humidis supra Sanctam Crucem nuper repertum. Species valde distincta formosa indigena, necnon in honorem captatoris indefessi oculatissimi a meipso citata.

This most interesting *Bembidium*, the discovery of which (in the island of Palma) is due to the indefatigable researches of Dr. Crotch, is clearly the representative at the Canaries of the European *B. pallidipenne*,—though at the same time most abundantly distinct from it specifically. It may at once be known from it by its *almost opake, brownish-piceous* head and prothorax (which are but faintly metallic, and both of which, though particularly the latter, are less evidently punctured), and by its (pale rufo-testaceous) elytra having their scutellary blotch and dentate postmedial fascia nearly obsolete. The

only three examples which I have seen, Dr. Crotch informs me that he captured in a wet and nearly inaccessible spot at the edges of a Levada on the mountain-slopes above S^ta^ Cruz, of Palma, during the spring of 1862.

(Subgenus **Notaphus**, *Meg.*)

113. Bembidium marginicolle, n. sp.

B. inter *flammulatum* Clairv. et *varium* Oliv. aliquo modo situm, cum illo colore et facie generali sed cum hôc staturâ et sculpturâ melius congruens, fortasse hujus varietas geographica; capite prothoraceque lætius metallicis, hôc (præsertim postice) grossius marginato, angulis ipsissimis basalibus paulo magis prominulis; elytris (testaceo-pictis) pedibusque sensim pallidioribus.—Long. corp. lin. $2\frac{1}{3}$.

Habitat Teneriffam, specimina duo nuper detexit cl. W. D. Crotch.

Whether the two examples from which the above diagnosis has been compiled are indicative of more than a geographical phasis of the common European *B. varium* I will not undertake, in the absence of further material, to pronounce for certain. They would seem in some respects indeed to be intermediate between that species and the *flammulatum*—being nearer perhaps to the latter in their paler hue, but to the former in their general sculpture and somewhat smaller size. Their head and prothorax however are rather more brightly metallic than is usually the case with the *B. varium*; and the latter is more strongly margined at the edges and has its extreme posterior angles a trifle more acutely prominent. They were both of them captured in Teneriffe (I believe above Ycod el Alto), during the spring of 1862, by Dr. Crotch,—to whose careful researches we are indebted for several recent additions to the Canarian fauna.

Fam. 2. DYTISCIDÆ.

Genus 39. HALIPLUS.

Latreille, *Gen. Crust. et Ins.* i. 234 (1806).

114. Haliplus suffusus.

H. oblongus; capite nigro-piceo, latiusculo, punctato; prothorace testaceo, antice, postice in medio, necnon in disco nigrescente, basi lato (elytrorum basin paulo superante), ad latera oblique subrecto, in medio profunde punctato, postice utrinque lineâ curvatâ abbreviatâ notato; coleopteris testaceis, (præsertim pone discum) nigro-suffusis, antice subparallelis, punctato-striatis, interstitiis parce punctatis; antennis pedibusque testaceis.—Long. corp. lin. $1\frac{1}{3}$–$1\frac{1}{2}$.

Haliplus suffusus, *Woll., Ann. Nat. Hist.* (3rd series) xi. 216 (1863).

Habitat in aquis Canariæ et Gomeræ, hinc inde parum vulgaris.

Before closely examining this *Haliplus* I had regarded it as identical with the common European *H. lineatocollis*, to which in general colouring and aspect it is very nearly allied. Considering, however, the smallness of the characters which constitute specific ones in the Hydradephaga, I am satisfied that it cannot be referred to that insect; and such is likewise the opinion of Dr. Schaum. It is not only slightly larger, wider, and more oblong (the head, thorax, and elytra being *each* of them relatively broader, and the entire outline somewhat more parallel), but the blacker portions of its surface are more developed and suffused, and the punctures of its striæ are smaller and more numerous,—whilst (on the contrary) those of its prothorax are perhaps coarser. This last, also, is of a slightly different shape,—being less narrowed anteriorly, rather less obliquely-straightened at the sides, and perceptibly wider behind (where it exceeds in breadth the *extreme* base of the elytra), and with its two curved foveæ deeper. The only islands in which I have observed it hitherto are Grand Canary and Gomera; in the latter of which it was taken abundantly by Mr. Gray and myself, in the valley of San Sebastian, during February 1858, and subsequently by Dr. Crotch near Hermigua; whilst, in March and April of the same year, I found it in the district of El Monte of the former.

Genus 40. **HYDROPORUS.**

Clairville, *Ent. Helv.* ii. 183 (1806).

115. **Hydroporus musicus.**

Hydroporus musicus, *Klug, Symb. Phys.* pl. 33. f. 12 (1829).
—— ——, *Aubé, Hydrocanth.* 475 (1838).

Habitat in aquis Canariæ Grandis, rarissimus.

The only island in which I have hitherto observed this *Hydroporus* is Grand Canary; where, however, it appears to be scarce. I possess examples taken by Dr. Schaum in Egypt; but the Canarian ones are a trifle rounder and more convex, as also of a somewhat less pallid hue.

116. **Hydroporus confluens.**

Dytiscus confluens, *Fab., Ent. Syst.* i. 198 (1792).
Hydroporus confluens, *Aubé, Hydrocanth.* 557 (1838).
—— ——, *Woll., Ins. Mad.* 87 (1854).
—— ——, *Id., Cat. Mad. Col.* 27 (1857).

Habitat in Fuerteventura et Gomera, minus frequens.

This insect, which occurs throughout Europe and the north of Africa, and which is universal at the Madeiras, appears to be some-

what scarce in these islands,—the only district in which I have myself captured it being the Rio Palmas of Fuerteventura. It has however, more recently, been taken, by Dr. Crotch, near Hermigua, in Gomera.

117. **Hydroporus geminus.**

Dytiscus geminus, *Fab., Ent. Syst.* i. 199 (1792).
Hydroporus geminus, *Steph., Ill. Brit. Ent.* ii. 57 (1829).
—— ——, *Aubé, Hydrocanth.* 491 (1838).

Habitat Fuerteventuram, in cisternâ quadam ad Rio Palmas captus.

The Canarian specimens of this common European *Hydroporus* are a trifle smaller and less pubescent than the ordinary ones of more northern latitudes, and their elytra are paler,—the dark portion which usually occupies almost the entire surface being so reduced in dimensions as to take the form of a large, postmedial, dentate fascia: but there is no character, that I can detect, to warrant its separation from the *H. geminus*. And I may further add that it was regarded as conspecific with that insect by Dr. Schaum. It appears to be very rare in these islands, the only spot in which I have hitherto observed it being the Rio Palmas of Fuerteventura,—where, during April 1859, I captured eight specimens from out of an old water-tank.

118. **Hydroporus minutissimus.**

Hydroporus minutissimus, *Germ., Ins. Spec. Nov.* 31 (1824).
—— ——, *Aubé, Hydrocanth.* 493 (1838).
—— trifasciatus, *Woll., Ann. Nat. Hist.* xviii. 453. pl. 9. f. 3 (1846).

Habitat in aquis Canariæ, Teneriffæ, Gomeræ et Palmæ, minus frequens.

The *H. minutissimus* of central and (more particularly) southern Europe appears to occur sparingly in these islands. I have taken it in the district of El Monte in Grand Canary, in the Barranco Santo (near S^{ta} Cruz) of Teneriffe, and in the Barranco de San Juan (near the Souces) of Palma; and it was captured by Dr. Crotch near Hermigua, in Gomera.

119. **Hydroporus delectus,** n. sp.

H. oblongus, minute punctulatus, tenuiter pubescens, niger; prothorace ad latera dilute testaceo et oblique subrecto; elytris utrinque lineis tribus latis interruptis testaceis postice valde abbreviatis ornatis; antennis ad basin pedibusque piceo-testaceis.—Long. corp. lin. 1–1$\frac{1}{8}$.

Habitat in Teneriffæ aquis, rarissimus.

Very closely allied to the European *H. flavipes*, but I think nevertheless really distinct. It is a little smaller, narrower, and more ob-

long (being a trifle wider *relatively* in front) than that insect; its prothorax is less rounded at the sides; its elytra have their paler lines much shorter (or less developed), with their margin concolorous; and its antennæ are somewhat longer. I have taken it only in Teneriffe,—namely, in the Barranco Santo (near S^ta^ Cruz) and at Las Mercedes; and it was also met with by Dr. Crotch in the same island.

120. Hydroporus xanthopus.

Hydroporus xanthopus, *Steph., Ill. Brit. Ent.* v. 393 (1832).
—— lituratus, *Aubé, Hydrocanth.* 589 (1838).

Habitat in aquis Teneriffæ, usque ad 8000′ s. m. ascendens.

The present *Hydroporus* differs a little from its representatives of more northern latitudes,—being a trifle larger, darker, and more oblong than the ordinary European *H. xanthopus*; but it agrees with it so nearly in all other respects that I cannot believe that it should be regarded as more than a geographical state of that insect: and such (from the examination, however, of but a single specimen), I may add, was the opinion of Dr. Schaum. It is rather common in Teneriffe (where it was likewise captured by Dr. Crotch) at intermediate and lofty elevations. I have taken it at Las Mercedes, the Agua Garcia, Ycod el Alto, and by a small spring on the Cumbre adjoining the Cañadas—upwards of 8000 feet above the sea.

121. Hydroporus planus.

Dytiscus planus, *Fab., Ent. Syst.* i. 195 (1792).
Hydroporus holosericeus, *Steph., Ill. Brit. Ent.* ii. 61 (1829).
—— planus, *Aubé, Hydrocanth.* 583 (1838).

Habitat in Teneriffæ aquis, in rivulo ad Agua Garcia vulgaris.

As in the *H. xanthopus*, the Canarian examples of this common European insect are, on the average, a trifle larger, blacker, and more convex, as also rather less pubescent, than the ordinary ones of more northern latitudes; but there is nothing about them, that I can perceive, to justify the idea that they are specifically distinct from the *H. planus*. I have taken it abundantly at the Agua Garcia, in Teneriffe; but have not yet observed it in any of the other islands. It was likewise captured in Teneriffe by Dr. Crotch.

122. Hydroporus Clarkii.

Hydroporus Clarkii, *Woll., Ann. Nat. Hist.* (3rd series) ix. 438 [June] (1862).
—— Andalusiæ, *Clark, Journ. of Ent.* i. 469 [September] (1862).

Habitat in aquis Fuerteventuræ, vulgaris.

In its general aspect and colouring, as well as in the minute spine

towards the apex of each of its elytra, the present *Hydroporus*, although abundantly distinct therefrom, is somewhat allied to the European *H. assimilis*, Payk. (=*frater*, Aubé). It is however rather larger, paler, and less ovate than that insect; its prothorax is relatively narrower, proportionally a little shorter, more *equally* rounded at the sides, rather more produced in the centre behind, and with its basal patches more transverse and but seldom suffused into the blackened posterior margin; and its elytra are less convex, more straightened laterally, and with their darker lines very much more broken and anteriorly abbreviated. It appears to be closely related to the *H. affinis*, Aubé, from Sardinia; nevertheless I am assured by Dr. Schaum that he considers it truly distinct from that species (of which he has lately examined "several authenticated specimens"). It was taken abundantly by Mr. Gray and myself at La Antigua in Fuerteventura, during January 1858; and during April of the following year I met with it, in still greater profusion, in the Rio Palmas of the same island. It occurs also in the south of Spain, having been captured at Malaga, by Messrs. Gray and Clark, in May of 1856. The Spanish examples are a trifle smaller than the Canarian ones.

123. Hydroporus Ceresyi.

H. oblongus, subconvexus, supra testaceus, subtiliter pubescens; prothorace æquali, ad latera oblique subrecto, postice in medio producto necnon utrinque maculâ parvâ indistinctâ suffusâ ornato; elytris subparallelis, pallide testaceis, lineis nigris plus minus integris ornatis.—Long. corp. lin. $1\frac{3}{4}$–2.

Hydroporus Ceresyi, *Aubé, Hydrocanth.* 543 (1838).

Habitat Lanzarotam, in lacu illo salino "Januvio" dicto captus.

I do not hesitate to refer this *Hydroporus* to the *H. Ceresyi* of southern Europe, even though the Canarian examples now before me do not *perfectly* accord with types in my collection from Crete and the south of France; for their discrepancies *inter se* are so slight as to be but just appreciable; and moreover it is the opinion of Dr. Schaum that they cannot be treated as distinct. Nevertheless it appears to me that the prothorax of the Lanzarotan individuals is *a trifle* wider (being *quite* as broad behind as the base of the elytra) and perhaps a little more rounded at the edges, and also that their elytra (the testaceous portions of which are usually of a darker or more rufescent hue) are somewhat straighter at the sides—causing the entire insect to seem, if anything, rather more oblong: however, I do not believe that they can be regarded, at the utmost, as more

than a geographical state of the *Ceresyi*. If however they should prove eventually to be different, I would then (having already given a *diagnosis*) propose for them the specific name of *persimilis*. The only examples of it which I have yet seen from these islands were captured by myself in the brackish lake of Januvio, towards the south-west of Lanzarote, during my visit to that remote spot, in company with the Rev. R. T. Lowe, in March 1859.

124. **Hydroporus tessellatus.**

Hydroporus tessellatus (*Dej.*), *Aubé, Hydrocanth.* 516 (1838).

Habitat in rivulis Canariæ, Teneriffæ, Gomeræ et Palmæ, vulgaris.

I have but little doubt that the present *Hydroporus* is the *tessellatus* of Aubé, described from a single example in Dejean's collection. Nevertheless there are at least two important characters omitted in Dr. Aubé's diagnosis,—which however, since they are both of them somewhat variable, is not surprising; considering, too, that he had but a solitary individual to judge from. I refer to its minutely *pubescent* surface, and its slight tendency to be very obscurely subdenticulated (more or less expressed in different specimens) towards the apex of its elytra. It is nearly allied, in general contour and affinity, to the Madeiran *H. vigilans*; but differs from it in being on the average a little larger and more oblong, in its surface being delicately pubescent, in its head and prothorax being darker (with the latter much less rounded at the sides and having the posterior angles less obtuse), and in its elytral lines (which are sometimes almost obsolete) being less developed. The *H. tessellatus* is an abundant insect in nearly all the streams of Grand Canary, Teneriffe, Gomera, and Palma, occurring independently of elevation. In Gomera it was likewise taken by Mr. Gray and Dr. Crotch (the latter of whom met with it also in Teneriffe and Palma).

Genus 41. **LACCOPHILUS.**

Leach, *Zool. Miscell.* iii. 69 (1817).

125. **Laccophilus inflatus,** n. sp.

L. lato-ellipticus, convexus; capite prothoraceque dilute rufo-testaceis, illo latiusculo, hôc postice in medio breviter producto; elytris subolivaceo-fuscis, per limbum plus minus pellucidis, maculis irregularibus indistinctis obliquis ad marginem pallido-ornatis; antennis palpisque pallido-testaceis, pedibus picco-testaceis.—Long. corp. lin. 2–2¼.

Habitat in aquis Canariæ, Teneriffæ et Gomeræ, hinc inde haud infrequens.

The present *Laccophilus* differs both from the *minutus* and *hyalinus* of more northern latitudes in its larger size, as well as in its wider, more elliptic, and convexer body. As regards its colouring, the head and prothorax (the latter of which is but slightly produced in the centre behind) are of a more or less diluted rufo-testaceous hue; whilst the elytra are of a dark olivaceous brown, with the ordinary oblique patches arising out of the subpellucid margin but faintly expressed. It was taken by Mr. Gray and myself in the valley of San Sebastian of Gomera, during February 1858; and by myself, during the following April, at El Monte, Teror, and Arguiniguin, in Grand Canary. I have also received it from Dr. Heer, taken by M. Hartung in Teneriffe.

Genus 42. **COLYMBETES.**

Clairville, *Ent. Helv.* ii. 198 (1806).

126. **Colymbetes coriaceus.**

Dytiscus coriaceus, *Hoffm. in litt.*
Meladema coriacea, *Laporte, Etud. Ent.* 98 (1834).
Colymbetes coriaceus, *Aubé, Hydrocanth.* 220 (1838).
Dyticus coriaceus, *Brullé, in Webb et Berth.* (*Col.*) 58 (1838).

Habitat in aquis quietis Canariæ et Teneriffæ, sat frequens.

The *C. coriaceus*, found in the south of Europe and the north of Africa (and which is represented at Madeira by the *C. lanio*), occurs sparingly at the Canaries. I once however took it in tolerable abundance at the head of the Barranco Santo, near S^{ta} Cruz, of Teneriffe; as also in the large pools at El Charco,—the sandy region adjoining Maspalomas, in the extreme south of Grand Canary. From Teneriffe it has likewise been communicated by the Barão do Castello de Paiva; in which island it was also captured by M. Hartung and Dr. Crotch.

Genus 43. **AGABUS.**

Leach, *Zool. Miscell.* iii. 69, 72 (1817).

127. **Agabus nebulosus.**

Dytiscus nebulosus, *Forst., Nov. Spec. Ins.* 56 (1771).
—— bipunctatus, *Fab., Mant. Ins.* 190 (1787).
Agabus nebulosus, *Aubé, Hydrocanth.* 328 (1838).
Colymbetes bipunctatus, *Brullé, in Webb et Berth.* (*Col.*) 58 (1838).
Agabus nebulosus, *Woll., Ins. Mad.* 84 (1854).
—— ——, *Id., Cat. Mad. Col.* 25 (1857).

Habitat Canariam et Teneriffam, in aquis, passim.

The common European *A. nebulosus* appears to be local in these islands, the only spots in which I have hitherto observed it being near Tafira in Grand Canary and at Las Mercedes in Teneriffe,—in

the latter of which it was also met with by Dr. Crotch (near Realejo). The same state which is typical at Madeira, but which is usually aberrant in more northern latitudes, namely that in which the prothorax is immaculate, obtains equally at the Canaries; for out of 17 examples which I have just examined, *four only* have any indications of the two darker patches on the disc.

128. **Agabus biguttatus.**

A. ovalis, convexus, niger, subtilissime alutaceus; capite postice obscure bimaculato; prothorace brevi, ad latera oblique subrecto, in disco canaliculâ valde abbreviatâ foveæformi notato, postice subsinuato; elytrorum utroque maculâ indistinctâ paulo ultra medium ad latera ornato [alterâ ad apicem obsoletâ] necnon seriebus punctorum tribus impresso; palpis pedibusque piceis, illis ad apicem, antennis, tarsis genibusque læte ferrugineis.

Mas nitidissimus, tarsis anterioribus ad basin leviter dilatatis.

Fœm. nitidus.—Long. corp. lin. $3\frac{2}{3}$–4.

Dytiscus biguttatus, *Oliv.*, *Ent.* iii. 40. 26. pl. 4. f. 36 (1795).
Agabus biguttatus, *Aubé*, *Hydrocanth.* 341 (1838).
Colymbetes biguttatus ?, *Brullé*, *in Webb et Berth.* (*Col.*) 58 (1838).

Habitat Canariam Grandem, in regione El Monte captus.

Judging from Dr. Aubé's excellent description, I have but little doubt that this *Agabus* is the *biguttatus* of Olivier (from Italy, Sicily, Spain, the south of France, &c.),—its dark, convex, oval and shining body, no less than its *almost* unalutaceous surface, and the ferruginous hue of its *knees* and feet, being points to which he particularly calls attention; whilst the fact that the *biguttatus* is recorded by M. Brullé, in his short list of Canarian Coleoptera, would render this supposition the more probable. At the same time I must admit that it is far more *likely* that the following species (which abounds in Teneriffe) was the one included in MM. Webb and Berthelot's very meagre collection; in which case the "*Colymbetes biguttatus*" of Brullé's catalogue would refer to that insect rather than to the present one. Be this however as it may, I believe that the *Agabus* now under consideration is strictly identical with the *biguttatus* of Aubé's Monograph. It appears to be rare at the Canaries, the only three specimens which I have seen having been captured by myself in the region of El Monte in Grand Canary during the spring of 1858.

129. **Agabus consanguineus,** n. sp.

A. præcedenti affinis, sed paulo oblongior (*i. e.* ad latera vix minus rotundatus), minus convexus, minus nitidus (in sexu fœmineo etiam subopacus), prothoracis angulis posticis vix magis rectis, scutello vix minore et magis triangulari (ad apicem subacutiore), antennis

pedibusque paulo obscurioribus, genibus fere concoloribus, tarsis anterioribus masculis ad basin paulo magis dilatatis necnon tibiis anticis paulo angustioribus.

Var. β [an species?]. Paulo minor, vix picescentior ovatior depressior, in sexu fœmineo subopacior; antennis pedibusque plerumque rufescentioribus.—Long. corp. lin. $3\frac{1}{2}$–vix 4.

Habitat in aquis Teneriffæ et Palmæ, sat vulgaris.

Had it not been that Dr. Aubé regards the *A. dilatatus* (described in his Monograph) as a probable variety of the common European *guttatus*, I should have been inclined to refer the present *Agabus* to that species. But being satisfied that it cannot be considered as any form, or state, of the *guttatus*, I am induced to lay greater stress than I should otherwise have done on the few points of dissimilarity which would appear to separate it from the one indicated in his diagnosis. Thus, there is no appearance of the *piceous* hue, on which he lays particular stress; and the reticulations of its surface (even in the male sex) seem to be more coarse. Whether it be the *dilatatus*, however, or not, I may add that it differs from the *guttatus* in its rather larger size and anteriorly broader outline, in its more finely alutaceous (or "reticulated") surface, in its prothorax being wider in front, a little more rounded at the sides and with the hinder angles more obtuse, in its three series of discal punctures being larger (with the minute sutural ones evanescent), in its limbs being duller (or more piceous), and in its whole body (particularly of the females) being somewhat less shining. From the *A. biguttatus* (just described) its rather more oblong (or less rounded) outline, less convex body and less polished surface, in conjunction with its rather smaller and more triangular scutellum, its rather darker and subconcolorous limbs, its rather narrower fore tibiæ and not quite so broadly dilated anterior male-feet, will at once remove it.

The "var. β" may possibly be distinct; nevertheless as I cannot detect a character in it of sufficient importance to warrant its separation, I have thought it safer not to treat it as such. It is on the average a little smaller and more ovate than the type, just perceptibly more picescent, and perhaps if anything a trifle less convex. Its limbs also are a shade paler, and its female sex somewhat more opake.

The *A. consanguineus* (which has likewise been communicated by Dr. Crotch and the Barão do Castello de Paiva) is a common insect throughout the intermediate elevations of Teneriffe, being chiefly abundant in the streams and pools of the sylvan districts,—such as at the Agua Garcia, Las Mercedes, &c.; and I have also taken it,

sparingly, in Palma. The "var. β" I have only observed at a somewhat higher elevation,—having obtained eleven examples of it in the ravines of the lofty Pinal above Ycod el Alto, during May 1859.

Genus 44. CYBISTER.

Curtis, *Brit. Ent.* iv. 151 (1827).

130. Cybister africanus.

Cybister africanus, *Laporte, Etud. Ent.* 99 (1834).
Trochalus meridionalis, *Gené, De quib. Ins. Sard.* i. 10 (1836).
Cybister africanus, *Aubé, Hydrocanth.* 71 (1838).

Habitat Canariam Grandem, in aquis quietis ad Arguiniguin mense Aprili A.D. 1858 deprehensus.

The *C. africanus*, of southern Europe and northern Africa, appears to be both local and scarce in these islands,—the only spot in which I have observed it hitherto being at Arguiniguin, in the south of Grand Canary; where, on the 14th of April 1858, I captured several specimens of it in the pools, or small freshwater lakes, close to the sea.

Genus 45. DYTISCUS.

Linnæus, *Syst. Nat.* ii. 664 (1767).

131. Dytiscus circumflexus.

Dytiscus circumflexus, *Fab., Syst. Eleu.* i. 258 (1801).
—— ——, *Aubé, Hydrocanth.* 113 (1838).
Dyticus circumflexus, *Brullé, in Webb et Berth.* (*Col.*) 58 (1838).

Habitat?

The European *D. circumflexus* (which is recorded also from Algeria and Barbary) is admitted as Canarian by M. Brullé, on the evidence of examples assumed to have been captured by Messrs. Webb and Berthelot. I have not myself met with it in these islands; but since there is no reason why it should not occur there, and since I have examined the specimens of Messrs. Webb and Berthelot, in Paris, which appeared to be correctly identified, I think perhaps that the insect should be included in our present fauna. Nevertheless I cannot but feel a slight hesitation in admitting it, seeing that *several* of the very few species supposed to have been collected by Messrs. Webb and Berthelot leave a doubt on my mind as to whether or not they were really obtained at the Canaries at all. As to the precise island in which the specimens were professedly found, M. Brullé, of course, gives us no information.

Genus 46. EUNECTES.

Erichson, *Gen. Dytic.* 23 (1832).

132. Eunectes subdiaphanus.

Eunectes subdiaphanus, *Woll., Ann. Nat. Hist.*, 3rd series, viii. 100 (1861).

Habitat Canariam Grandem, in aquis quietis ad El Charco repertus.

This fine *Eunectes*, the distinctive characters of which are fully pointed out in my diagnosis above referred to, was taken by myself in the pools at El Charco, in the extreme south of Grand Canary, during my visit to that remote spot, with the Rev. R. T. Lowe, on the 13th of April 1858.

Fam. 3. GYRINIDÆ.

Genus 47. GYRINUS.

Geoffroy, *Hist. Abr. des Ins.* i. 193 (1762).

133. Gyrinus striatus.

Gyrinus striatus, *Fab., Ent. Syst.* i. 203 (1792).
—— strigosus, *Aubé, Hydrocanth.* 719 (1838).
—— striatus, *Brullé, in Webb et Berth.* (*Col.*) 58 (1838).

Habitat in aquis Canariæ et Teneriffæ, haud infrequens.

The *G. striatus* (remarkable, *inter alia*, for the deep and pale striæ of its elytra, greatly raised outer interstices, distinctly punctulated surface, and yellow margin) is tolerably common at the Canaries, though somewhat local. I have taken it in profusion, however, in the pools at El Charco, in the south of Grand Canary; as also at the Agua Mansa, &c., of Teneriffe. From the latter island it has likewise been communicated (together with the following two species) by the Barão do Castello de Paiva. It occurs throughout central and southern Europe and the north of Africa; and has been recorded even from Madagascar, the Isle of France, and New Holland.

134. Gyrinus urinator.

Gyrinus urinator, *Illig., Mag. für Ins.* vi. 299 (1807).
—— lineatus, *Steph., Ill. Brit. Ent.* ii. 97. pl. xiii. f. 2 (1829).
—— urinator, *Aubé, Hydrocanth.* 704 (1838).
—— ——, *Brullé, in Webb et Berth.* (*Col.*) 58 (1838).

Habitat in aquis Canariæ, Teneriffæ et Gomeræ, sat vulgaris.

The rather broad and somewhat obovate outline of this *Gyrinus*, in conjunction with its very highly polished and dark (though obscurely subcyaneous and laterally æneseent) surface, its dull whitish-

metallic elytral striæ (the subsutural ones of which are scarcely perceptibly impressed), and the ferruginous hue of its body beneath, will readily distinguish it. I have taken it in Grand Canary; near S^ta^ Cruz and Orotava, in Teneriffe; and, during February 1858, it was captured by Mr. Gray and myself in the valley above San Sebastian, of Gomera,—from which locality it was subsequently obtained by Dr. Crotch. I have also received it from Professor Heer (collected by M. Hartung in Teneriffe) under the name of "*G. natator*," from which however it is totally distinct.

135. **Gyrinus Dejeanii.**

Gyrinus Dejeanii, *Brullé, Exp. scient. en Morée*, iii. (1^re^ part.) 128.
—— æneus, *Aubé* [nec *Steph.*], *Hydrocanth.* 690 (1838).

Habitat in Canaria et Teneriffa, hinc inde vulgaris.

The rather smaller size and narrower outline of the present *Gyrinus*, combined with its more deeply punctured striæ (which are concolorous with the rest of the surface), its more straightly truncated elytra, and the darker hue of its body beneath, will, apart from minor differences, at once separate it from the last species. It closely resembles the common *G. natator*, but is a trifle more oblong, with its striæ more coarsely punctured, with its elytra more straightly truncated at their apex, and with its reflexed margin dark-æneous (instead of ferruginous). It is common throughout central and southern Europe, and appears to be likewise common in these islands. I have taken it abundantly at Arguiniguin, in the south of Grand Canary; as also near S^ta^ Cruz, Souzal, and Orotava, in Teneriffe.

Fam. 4. PARNIDÆ.

Genus 48. **PARNUS.**

Fabricius, *Ent. Syst.* i. 245 (1792).

136. **Parnus prolifericornis.**

Parnus prolifericornis, *Fab., Ent. Syst.* i. 245 (1792).
—— ——, *Gyll., Ins. Suec.* i. 139 (1808).
—— ——, *Woll., Ins. Mad.* 90 (1854).
—— ——, *Id., Cat. Mad. Col.* 28 (1857).

Habitat in aquosis Canariæ, Teneriffæ, Gomeræ et Palmæ, sat vulgaris.

The common European *P. prolifericornis*, which is universal at Madeira and which is recorded by M. Morelet at the Azores, occurs rather abundantly in wet spots at the Canaries. Hitherto, however,

I have myself observed it only in Grand Canary, Teneriffe, and Palma; but it was captured by Dr. Crotch near Hermigua, in Gomera.

Fam. 5. HELOPHORIDÆ.

Genus 49. HELOPHORUS.

Fabricius, *Syst. Eleu.* i. 277 (1801).

137. Helophorus longitarsis, n. sp.

H. elongato-ovatus, antice attenuatus; capite prothoraceque cupreis, minutissime et parce punctulatis, hôc 5-sulcato, sulcis lateralibus internis flexuosis; oculis magnis, prominentibus; elytris testaceis, inæqualiter griseo-nebulosis, punctato-striatis, striis angustis, interstitiis latiusculis subdepressis distincte uniseriatim punctulatis; antennis, palpis pedibusque pallide testaceis, his (præsertim tarsis) elongatis.—Long. corp. lin. vix $1\frac{1}{2}$.

Habitat Fuerteventuram, in cisternâ quadam ad Rio Palmas semel captus.

This very distinct *Helophorus* may be at once known from all the European species with which I am acquainted by its anteriorly attenuated outline, narrow striæ, and the comparatively great length of its very pallid limbs,—especially however of the feet. Its head and prothorax are of a reddish-coppery hue; its eyes are large and prominent; and its elytra are testaceous, obscurely clouded in parts, and with their interstices (which have a very evident row of small punctures down each) rather wide and subdepressed. The only specimen of it which I have seen was captured by myself out of a tank in the Rio Palmas of Fuerteventura, during April 1859.

Genus 50. OCHTHEBIUS.

Leach, *Zool. Miscell.* iii. 91 (1817).

138. Ochthebius 4-foveolatus.

Ochthebius 4-foveolatus, *Woll., Ins. Mad.* 91 (1854).
—— ——, *Id., Cat. Mad. Col.* 28 (1857).

Habitat in Fuerteventura, Canaria, Teneriffa, Gomera et Palma, haud infrequens.

The present *Ochthebius*, which is common in Madeira and Porto Santo, is widely spread over the Canarian archipelago. I have taken it in (the Rio Palmas and at La Antigua of) Fuerteventura, (in the region of El Monte of) Grand Canary, (at S^{ta} Cruz, the Agua Garcia, &c., of) Teneriffe, and (in the Barranco de San Juan of)

Palma. It was also captured in Gomera (near San Sebastian) by Mr. Gray and (at Hermigua) by Dr. Crotch.

139. **Ochthebius pygmæus.**

Elophorus pygmæus, *Fab., Ent. Syst.* i. 205 (1792).
Ochthebius pygmæus, *Steph., Ill. Brit. Ent.* ii. 115 (1829).
—— riparius, *Sturm, Deutsch. Fna,* x. 59. tab. 222. f. a. A (1836).
—— pygmæus, *Erich., Käf. der Mark Brand.* i. 199 (1837).

Habitat in Fuerteventura, Teneriffa et Palma, hinc inde vulgaris.

The common European *O. pygmæus* is locally abundant at the Canaries. I have taken it in (the Rio Palmas of) Fuerteventura, (near S^ta^ Cruz and Orotava, and at the Agua Garcia of) Teneriffe, and (in the Barranco de San Juan of) Palma.

140. **Ochthebius lapidicola,** n. sp.

O. elongato-ovatus, brunneo-piceus, vix metallescens, subopacus; capite prothoraceque dense punctatis et valde rugulosis, illo triangulari, utrinque late et profunde impresso, hôc canaliculato necnon utrinque juxta canaliculam longitudinaliter bifoveolato; elytris minutissime et parce pubescentibus, profunde et rugose punctato-striatis; pedibus brevibus, robustis, ferrugineis.—Long. corp. lin. 1–1¼.

Habitat Teneriffam et Palmam, rarissimus.

A very remarkable *Ochthebius,* and well distinguished at first sight by its brownish-piceous, nearly opake and almost unmetallic surface, by its exceedingly rugose and deeply foveolated head and prothorax (the former of which is triangular, being more *regularly* widened behind than is the case with the *Ochthebii* generally), by its rough and coarsely punctate-striated elytra, and by its short and robust legs. It is somewhat allied to the *O. rugulosus* from Porto Santo, but totally distinct from it specifically. Of the only three specimens which I have seen, two were captured by myself from under small stones at the edges of the little stream (near its junction with the sea) in the Barranco de San Juan, towards the north-west of Palma, on the 28th of May 1858; and the remaining one by Dr. Crotch (at Ycod el Alto) in Teneriffe.

Genus 51. **HYDRÆNA.**

Kugelann, *in Schneid. Mag.* i. 578 (1794).

141. **Hydræna sinuaticollis,** n. sp.

H. serricolli similis, sed paulo major, (oculo fortissime armato) subtilissime et parcissime pubescens; capite antice distinctius longiore, rostrato, ad apicem sensim latiore, oculis magis prominentibus; prothorace (haud solum punctato, sed) alutaceo, ad latera minus

serrato sed utrinque magis angulato-sinuato; elytris oblongioribus (minus ovatis), punctato-striatis (nec striato-punctatis), punctis paulo minoribus necnon interstitiis sensim costato-elevatioribus; palpis sublongioribus.—Long. corp. lin. 1.

Habitat Teneriffam, a Dom. W. D. Crotch semel tantum lecta.

Of the present *Hydræna* I have seen hitherto but a single example, which has been taken recently by Dr. Crotch in Teneriffe,—he *believes*, at Ycod el Alto. It is well distinguished by its (alutaceous, though strongly punctured) prothorax being much sinuated on either side, so as to form almost an angle about the middle; and by its elytral interstices being perceptibly raised, or costate. Its surface, under a high magnifying power, will be seen to be sparingly besprinkled with an extremely minute and scarcely traceable pubescence. In size and outline it is perhaps nearer than even the *H. serricollis* to the European *H. bicolor*; nevertheless its totally different (laterally-sinuated, alutaceous) prothorax, rather smaller elytral punctures, and more elevated interstices will, apart from minor characters, readily separate it from that insect.

From the *H. serricollis* its distinctions have been fully pointed out in the diagnosis; nevertheless I may just mention that its rather larger size and more elongate outline, in conjunction with its somewhat more produced (though apically-broader) head, more prominent eyes, more laterally-sinuated, alutaceous prothorax, less coarsely punctured elytral striæ, more costate interstices, and rather longer palpi, will prevent its being confounded with that species.

142. **Hydræna serricollis**, n. sp.

H. elongato-ovata, piceo-brunnea, subnitida; capite prothoraceque profunde et rugose punctatis, illo nigrescente, hôc inæquali, in medio dilatato, postice sat constricto, ad latera (oculo armato) distincte serrato; elytris ovatis, profunde striato-punctatis (punctis maximis); antennis ad basin, palpis pedibusque rufo-testaceis.—Long. corp. lin. vix 1.

Habitat Teneriffam, per marginem rivuli ad Agua Garcia capta.

Known from the following species by its larger size, broader and more ovate outline, darker hue, and very much more deeply sculptured surface; by its prothorax being rounded (and more coarsely crenulated) at the sides, and constricted posteriorly; and by its limbs being robuster and more rufescent. At first sight it is somewhat allied to the common European *H. testacea*; but it is relatively a little wider and more ovate than that insect, its prothorax is a good deal rounder laterally and narrower behind, more uneven on the disc,

and with the crenulations more distinct, its colour is of a deeper brown, and its limbs are a trifle shorter and more robust. Hitherto I have only observed it beneath stones in the little stream which flows through the wood of the Agua Garcia, of Teneriffe,—where, however, it is tolerably abundant.

143. **Hydræna quadricollis,** n. sp.

H. elongato-ovata, angustula, subtestaceo-fusca, subnitida; capite prothoraceque punctatis, illo nigrescente, hôc in disco paulo obscuriore, subquadrato, postice vix angustiore, ad latera (oculo fortissime armato) vix serratulo; elytris subovalibus, leviter sed crebre striato-punctatis (punctis parvis); antennis ad basin, palpis pedibusque gracilibus, testaceis.—Long. corp. lin. vix $\frac{3}{4}$.

Habitat Teneriffam, prope urbem Sanctam Crucem reperta.

As has been already implied, the present *Hydræna* may be at once recognized from the last species by its smaller size, narrower outline, paler and much less deeply sculptured surface, by its prothorax being *subquadrate* (or but very slightly narrowed behind) and with the lateral serrations excessively minute, and by its limbs being slenderer and of a more pallid hue. The only spot in which I have observed it is near S^{ta} Cruz of Teneriffe,—where I have several times taken it, though very sparingly, amongst weeds in the small pools of the Barranco Santo.

Fam. 6. HYDROPHILIDÆ.

Genus 52. **LIMNEBIUS.**

Leach, *Zool. Miscell.* iii. 93 (1817).

144. **Limnebius gracilipes,** n. sp.

L. ovalis (antice et postice subæqualiter rotundatus), ater, subconvexus, subtiliter et parce pubescens; prothorace (oculo fortiter armato) minute punctulato, versus angulos posticos obscure dilutiore; elytris fere impunctatis, ad apicem fere concoloribus; antennis, palpis pedibusque gracilibus, piceo-ferrugineis.—Long. corp. lin. $\frac{2}{3}$–$\frac{3}{4}$.

Habitat in rivulis Canariæ, Teneriffæ, Gomeræ et Palmæ, hinc inde haud infrequens.

Easily recognized from the following species by its oval outline (being almost equally rounded before and behind), considerably blacker, less convex, less pubescent and very much more lightly punctured surface, and by its slenderer limbs. I have taken it in the stream at Mogan, in the south-west of Grand Canary; in the vicinity

of S^ta^ Cruz, and at Las Mercedes, of Teneriffe; and in the Barranco de San Juan (near the Souces) of Palma; and it was captured by Dr. Crotch in Gomera.

145. **Limnebius punctatus**, n. sp.

L. obovatus (antice latus rotundatus, postice gradatim acutior), piceo-niger, obsolete subænescens, convexus, grosse et sat parce pubescens; prothorace profunde punctato, ad latera ferrugineo; elytris vix levius punctatis, versus apicem paulo dilutioribus; antennis, palpis pedibusque robustis, piceo-ferrugineis.—Long. corp. lin. $\frac{2}{3}$.

Habitat Teneriffam, in rivulis (præsertim quodam parvo per sylvam Aguæ Garciæ fluente) degens.

The obovate outline of this *Limnebius* (it being wide and rounded in front, but gradually acuminated behind), in conjunction with its more piceous and obscurely submetallic hue (the sides, moreover, of the prothorax, and the apex of the elytra, being rather brightly ferruginous), its convexer, deeply punctured and more coarsely pubescent surface, and its comparatively robust limbs, will at once separate it from the preceding species. Both of these *Limnebii*, I may add, are perfectly distinct from the Madeiran *L. grandicollis*—which is remarkable, *inter alia*, for its more elliptic outline (being widened about the *middle*) and alutaceous sculpture, as well as for the almost *equally* impressed and remote punctures of its entire upper surface, those of the elytra being perhaps, if anything, somewhat the deepest. The only locality in which I have myself observed the *L. punctatus* is the little stream which flows through the Agua Garcia of Teneriffe, where it is tolerably common; it has, however, been taken at Ycod el Alto, in the same island, by Dr. Crotch.

Genus 53. **LACCOBIUS.**

Erichson, *Käf. der Mark Brand.* i. 202 (1837).

146. **Laccobius minutus.**

Chrysomela minuta, *Linn., Fna Suec.* 166 (1761).
Laccobius minutus, *Erich., Käf. der Mark Brand.* i. 203 (1837).
—— ——, *Woll., Ins. Mad.* 95 (1854).
—— ——, *Id., Cat. Mad. Col.* 31 (1857).

Habitat insulas Canarienses, in Hierro solâ adhuc haud detectus.

The common European *L. minutus* (which is found also in Madeira and Porto Santo) appears to be universal at the Canaries, Hierro being the only island, out of the seven, in which I do not happen to have observed it. There can, however, I should imagine, be little doubt that it must exist there also; though the absence of streams in that island, and the consequent scarcity of water, would certainly

imply that, if present at all, it must at any rate be scarce. In Lanzarote, Fuerteventura, and Gomera it was likewise captured by Mr. Gray; in Teneriffe by M. Hartung; and in Teneriffe and Gomera by Dr. Crotch. It seems to have a larger and a smaller state, between which I have not as yet observed transitional links; nevertheless there is no differential character, that I can perceive, to warrant the suspicion that they are specifically distinct. The examples from the eastern islands of the archipelago are, on the average, of a paler hue than those from the central and western ones,—which is precisely analogous to the Porto-Santan specimens, as compared with those from Madeira proper.

Genus 54. PHILHYDRUS.

Solier, *Ann. de la Soc. Ent. de France*, iii. 315 (1834).

147. Philhydrus melanocephalus.

Hydrophilus melanocephalus, *Oliv.*, *Ent.* iii. 39. 14 (1795).
—— ——, *Brullé, in Webb et Berth.* (*Col.*) 58 (1838).
Philhydrus melanocephalus, *Woll.*, *Ins. Mad.* 98 (1854).
—— ——, *Id.*, *Cat. Mad. Col.* 32 (1857).

Habitat in aquis Lanzarotæ, Fuerteventuræ, Canariæ, Teneriffæ et Gomeræ, sat vulgaris.

As in the case of the last insect, the common European *P. melanocephalus* is all but universal (probably indeed quite so) in these islands. Hitherto, however, I have captured it only in Lanzarote, Fuerteventura, Grand Canary, Teneriffe, and Gomera,—in the first two and last of which it was likewise found by Mr. Gray, and in the last by Dr. Crotch. It abounds in the streams of Porto Santo; and the same two states (a paler and a darker one) which occur there exist equally at the Canaries.

Genus 55. BEROSUS.

Leach, *Zool. Miscell.* iii. 92 (1817).

148. Berosus spinosus.

Hydrophilus spinosus (*Stev.*), *Schön.*, *Syn. Ins.* ii. 8 (1808).
Berosus spinosus, *Ahr.*, *Fna Ins. Europ.* iii. f. 5 (1816).
—— ——, *Steph.*, *Ill. Brit. Ent.* v. 400 (1832).
—— ——, *Brullé, in Webb et Berth.* (*Col.*) 59 (1838).

Habitat? [testibus DD. Webb et Berth., in ins. Canariensibus: mihi non obvius].

I have not myself observed this European *Berosus* at the Canaries; and I may add that, had it been found in Madeira, I certainly should

not have admitted it into the present Catalogue,—having but too good reason for suspecting that several of the insects recorded by M. Brullé, from the very scanty collection of MM. Webb and Berthelot, were brought by Mr. Webb from Funchal, and were afterwards mixed up (whether inadvertently or by design I cannot tell) with his material from these islands *. But since the *B. spinosus* has not hitherto been detected in the Madeiran Group, and since I have no grounds for concluding that the specimens from any *other* country were amalgamated by Mr. Webb with his Canarian ones, and since moreover I have inspected his examples which still exist in Paris, I am inclined to admit the species into this list. At the same time I must state that I do so somewhat reluctantly, since the entire absence of a single word from M. Brullé as to which of the seven islands it was found in (if indeed in any of them) renders me totally unable to record its "habitat." It is far from improbable, however, that it may occur in the brackish streams and Salinas of Lanzarote or Fuerteventura.

Genus 56. **HYDROBIUS.**

Leach, *Zool. Miscell.* iii. 93 (1817).

149. **Hydrobius hæmorrhous,** n. sp.

H. ovalis, fusco-niger, nitidus, distincte (præsertim in elytris) et sat crebre punctatus; capite utrinque ante oculos, prothoracis limbo plus minus conspicue necnon elytrorum limbo plus minus obscure dilutioribus; elytris striâ suturali profundâ (antice evanescente) impressis; antennis ad basin palpisque (apice ipsissimo nigro excepto) testaceis; pedibus rufo-piceis.—Long. corp. lin. $1\frac{1}{8}$–$1\frac{1}{3}$.

Habitat in aquosis Canariæ Grandis, rarissimus.

The present *Hydrobius* is about the size of the Madeiran *H. Marchantiæ*, but perfectly distinct from it,—as will be at once seen by a reference to the diagnosis given (in 1857) in my Madeiran Catalogue. It is apparently very scarce, Grand Canary being the only island in which I have hitherto detected it; where, during the spring of 1858, I captured it sparingly at Teror, and about wet rocks in the mountains of the interior, towards Tarajana.

Genus 57. **CHÆTARTHRIA.**

(Waterhouse) Steph., *Ill. Brit. Ent.* v. 401 (1832).

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* That such was the case with the *Scarites abbreviatus* (=*dimidiatus*, Br.), the *Harpalus distinguendus* and *consentaneus*, and perhaps one or two others, I have already recorded my conviction.

150. **Chætarthria similis,** n. sp.

C. valde affinis *C. seminulo,* sed vix (nisi fallor) mera varietas geographica: sensim major et (oculo fortiter armato) argutius punctata, prothorace ad latera ipsissima vix grossius marginato et ibidem (ut in elytrorum apice) clarius dilutiore, antennis, palpis pedibusque paulo pallidioribus.—Long. corp. lin. 1.

Habitat in humidis et aquosis Canariæ, Teneriffæ, Gomeræ et Palmæ, rarissimus.

Although very closely allied to the common European *C. seminulum,* I think that the present *Chætarthria* can scarcely be referred actually to that species. It is, on the average, perceptibly larger, and when viewed beneath a high magnifying power will be seen to be much more sharply and distinctly punctured. The sides of its prothorax, as well as the apex of its elytra, are more diluted in hue; and the former is perhaps a trifle more coarsely margined at its extreme lateral edges. Its limbs, too, are altogether a shade paler. It appears to be decidedly rare, though widely spread over the archipelago. I have taken it in moist spots in the region of El Monte, of Grand Canary, as well as in Palma; and it was found by Dr. Crotch in Teneriffe and Gomera.

Fam. 7. SPHÆRIDIADÆ.

Genus 58. **CYCLONOTUM.**

(Dejean) Erich., *Käf. der Mark Brand.* i. 212 (1837)

151. **Cyclonotum orbiculare.**

Hydrophilus orbicularis, *Fab., Ent. Syst.* i. 184 (1792).
Hydrobius orbicularis, *Steph., Ill. Brit. Ent.* ii. 132 (1829).
Cyclonotum orbiculare, *Erich., Käf. der Mark Brand.* i. 214 (1837).
Cœlostoma orbiculare, *Brullé, in Webb et Berth.* (*Col.*) 58 (1838).

Habitat in aquosis Fuerteventuræ, Canariæ, Teneriffæ, Gomeræ et Palmæ, vulgaris.

This insect, so abundant throughout the whole of Europe, is probably universal at the Canaries,—though I do not happen to have observed it in either Lanzarote or Hierro (the extreme eastern and the extreme western islands of the archipelago); but in Fuerteventura, Grand Canary, Teneriffe, Gomera, and Palma I have taken it, more or less abundantly. In Fuerteventura and Gomera it was likewise found by Mr. Gray; in Teneriffe by M. Hartung; and in Teneriffe and Gomera by Dr. Crotch.

Genus 59. **DACTYLOSTERNUM.**

Woll., *Ins. Mad.* 99. tab. iii. f. 1 (1854).

152. **Dactylosternum abdominale.**

Sphæridium abdominale, *Fab., Ent. Syst.* i. 79 (1792).
Cœlostoma abdominale, *Brullé, in Webb et Berth.* (*Col.*) 58 (1838).
Dactylosternum Roussetii, *Woll., Ins. Mad.* 100. tab. iii. f. 1 (1854).
—— ——, *Id., Cat. Mad. Col.* 32 (1857).

Habitat Canariam, Teneriffam et Gomeram, foliis putridis *Opuntiæ Tunæ* præsertim gaudens.

The *D. abdominale* of southern Europe and northern Africa, and which occurs also at Madeira, is found sparingly in these islands. I have taken it at Teror in Grand Canary, near S^ta^ Cruz in Teneriffe, and at San Sebastian in Gomera,—in the last two of which islands it was also captured by Dr. Crotch, and in the last by Mr. Gray. It is particularly fond of the putrid leaves of the Prickly Pear (*Opuntia Tuna*, Mill.), which have been thrown away as refuse and allowed to rot; and were such to be well searched it would probably be found to be more *local* than scarce.

Genus 60. **CERCYON.**

Leach, *Zool. Miscell.* iii. 95 (1817).

153. **Cercyon inquinitum.**

Cercyon inquinitum, *Woll., Ins. Mad.* 103 (1854).
—— ——, *Id., Cat. Mad. Col.* 34 (1857).

Habitat Teneriffam, prope Portum Orotavæ semel captum.

The only Canarian example that has come under my observation of this insect (which is not uncommon on the level of the sea-shore, in certain spots, at Madeira) was captured by myself, on the wing, immediately outside the Puerto Orotava of Teneriffe, during the spring of 1858.

154. **Cercyon lepidum,** n. sp.

C. ovale postice subacutum, convexum, nitidum, supra ubique punctulatum; capite prothoraceque nigris (hôc ad latera concolore); elytris testaceo-rufis, circa scutellum interdum obsolete obscurioribus, sat profunde punctato-striatis; antennis ad basin, palpis pedibusque piceo-testaceis.—Long. corp. lin. $\frac{3}{4}$–vix 1.

Habitat Fuerteventuram et Gomeram, in illâ sub stercore camelino ad Rio Palmas mense Aprili ineunte A.D. 1859 deprehensum; in hac nuper cepit Dom. Crotch.

In general outline and colouring the present somewhat insigni-

ficant *Cercyon* is a good deal allied to the common European *C. melanocephalum*. It is, however, considerably smaller than that insect, its punctuation is finer and less dense, and its elytra and limbs are a shade paler (or more testaceous),—the former, moreover, having only a slight tendency to be occasionally obscured about their scutellary region, and with their striæ somewhat deeper. Perhaps it is nearer still to the *C. terminatum*, Mshm (= *plagiatum*, Er.). The only specimens which I have myself captured (twelve in number) were taken from beneath camels' dung, in the Rio Palmas of Fuerteventura, at the beginning of April 1859: I have, however, examined others, taken by Dr. Crotch in Gomera.

155. Cercyon nigriceps.

Dermestes nigriceps, *Mshm, Ent. Brit.* 72 (1802).
Sphæridium centrimaculatum, *Sturm, Deutsch. Fna*, ii. 23 (1807).
Cercyon centrimaculatum, *Muls., Palpic. de France*, 169 (1844).
—— ——, *Woll., Ins. Mad.* 104 (1854).
—— ——, *Id., Cat. Mad. Col.* 34 (1857).

Habitat Lanzarotam, Canariam, Teneriffam, Gomeram et Palmam, in stercore bovino et equino haud infrequens.

This common European *Cercyon* (which is universal in Madeira and Porto Santo) occurs rather sparingly in these islands. I have taken it in Lanzarote, Grand Canary, Teneriffe, and Palma,—in the last of which it was likewise found by Mr. Gray, and in Teneriffe and Gomera by Dr. Crotch.

156. Cercyon quisquilium.

Scarabæus quisquilius, *Linn., Fna Suec.* 138 (1761).
Cercyon quisquilium, *Muls., Palpic. de France*, 166 (1844).
—— ——, *Woll., Ins. Mad.* 105 (1854).
—— ——, *Id., Cat. Mad. Col.* 34 (1857).

Habitat Lanzarotam, Fuerteventuram, Teneriffam, Gomeram et Palmam, in stercore bovino, equino, camelino sat vulgare.

Like the last species, the present *Cercyon* (which abounds throughout the greater portion of Europe, and which occurs in Madeira and Porto Santo) is widely spread over the Canarian Group,—where it is probably universal. Hitherto, however, I have only observed it in Lanzarote, Fuerteventura, Teneriffe, and Palma; in the first and last of which islands it was also captured by Mr. Gray, and in Teneriffe and Gomera by Dr. Crotch.

Fam. 8. SILPHIDÆ.

Genus 61. CATOPS.

Paykull, *Fna Suec.* i. 342 (1798).

157. Catops putridus, n. sp.

C. ovalis, fuscus, minute pubescens; prothorace convexo, ad latera subæqualiter rotundato (*i. e.* antice et postice æqualiter angustiore), basi truncato, angulis posticis vix productis; elytris obsoletissime substriatis necnon striâ suturali profundâ in utroque impressis; antennis ad basin pedibusque fusco-testaceis, illis ad apicem obscurioribus sat clavatis.—Long. corp. lin. 1¼.

Habitat Palmam, sub cortice laxo putrido in Barranco de Galga Maio exeunte A.D. 1858 semel tantum lectus.

The only specimen which I have seen of this distinct *Catops* was captured by myself from beneath the rotting bark of a tree towards the head of the Barranco de Galga, in the north-west of Palma, on the 31st of May 1858. It has somewhat the appearance, at first sight, of the European *C. velox*; but is rather smaller and more oval than that insect (being nearly *equally* narrowed at either extremity), with its prothorax (which is *regularly* rounded at the sides, truncated at the base, and has the hinder angles scarcely at all produced) less developed, with its elytra obscurely substriated, with its posterior legs shorter, and with its antennæ more clavate at their apex.

Genus 62. SILPHA.

Linnæus, *Syst. Nat.* ii. 569 (1767).

(Subgenus **Heterotemna**, *Woll.*)

The Teneriffan *Silphæ* are moulded on a rather peculiar type, and might indeed be almost regarded as generically distinct from the more northern members of the group. They are remarkable, *inter alia*, for their rather large size, apterous bodies, and exceedingly elongated limbs, for their antennæ being slender*, hardly at all

* This great length and slenderness of the antennæ applies to *both* of the Canarian *Silphæ*, though perhaps a trifle more so to the *simplicicornis* than to the *figurata*. Nevertheless M. Brullé makes it to be distinctive of the former only; for, speaking of the *simplicicornis*, he adds: "le caractère le plus saillant de cet insecte consiste dans la forme de ses antennes, qui sont plus longues et plus grêles que dans aucune autre espèce." If however we turn to his Plate, we there find that the antennæ of the *figurata* are merely *dotted* in,—thus indicating that he drew out his diagnosis of that insect from a single example in which the antennæ were broken off.

thickened at the extremity, and with their eighth joint (or the fourth from the apex) *greatly elongated* and triangular, for their prothorax being much developed, rounded and broadly compressed at the sides, very uneven on the disc and more or less scooped-out in front, and for their elytra being very widely margined, especially behind. I have not, however, dissected them, to ascertain whether they possess any differential characters in their oral organs, to correspond with these external (but nevertheless purely structural) ones.

158. Silpha simplicicornis.

S. oblonga, nigra, subnitida; prothorace in disco vix sed versus latera leviter punctulato, apice sat profunde emarginato, ad latera valde explanato-rotundato, postice in disco obsoletissime et obtuse longitudinaliter 4-subcostato; elytris leviter subasperato-punctulatis, utroque 3-costato; antennis valde elongatis, fuscescentibus. *Fœm.* vix opacior, elytrorum costâ exteriore (præsertim ante apicem) magis elevatâ.—Long. corp. lin. 7–9.

Silpha simplicicornis, *Brullé, in Webb et Berth.* (*Col.*) 59. pl. ii. f. 10 [script. *tenuicornis**] (1838).

Habitat in sylvaticis Teneriffæ, hinc inde haud infrequens.

The larger size of this noble *Silpha*, in conjunction with its more shining and much more lightly punctured surface, its more uneven and laterally developed prothorax (on which the longitudinal costæ are very obtuse and almost obsolete), the much less elevated ridges of its elytra, and its rather longer limbs, will readily separate it from the following species. It appears to be the commoner of the two,—though, at the same time, exceedingly local and confined to certain spots within the sylvan districts of Teneriffe. I have taken it in the laurel-woods on the mountains above Taganana, as also at Las Mercedes and (more particularly) at the Agua Garcia. It has likewise been communicated by the Barão do Castello de Paiva; and I possess specimens, given me by Dr. Heer, which were collected by M. Hartung.

159. Silpha figurata.

S. oblonga, nigra, subopaca; prothorace profunde punctato, apice

* It is much to be regretted that M. Brullé should not have made up his mind as to the names of his species before his Plates were engraved; for, as it is, these two Teneriffan Silphas stand in his work under no less than four separate titles! The present species is called *simplicicornis* in his letter-press, and *tenuicornis* on his Plate; whilst the following one is *described* as the *figurata*, but is *figured* under the title of *costata*! Indeed, from the excessive badness of his figures, and the fact that they are not *even referred to at all in the text* (as is the case with the whole 29 species which he has illustrated!), it really becomes difficult to tell, from this non-agreement of the names in the letter-press and Plate, which figure and which diagnosis are intended to correspond.

leviter emarginato, ad latera explanato-rotundato, postice in disco leviter longitudinaliter 4-costato (costis internis distinctioribus); elytris profunde asperato-punctatis, utroque alte et argute 4-costato; antennis elongatis, fuscescentibus.
Fœm. solam adhuc vidi.—Long. corp. lin. 6½.

Silpha figurata, *Brullé, in Webb et Berth.* (*Col.*) 59. pl. ii. f. 11 [script. *costata*] (1838).

Habitat Teneriffam, mihi non obvia: specimen unicum a Dom. Fry, Londini, communicatum solum vidi.

I have not, myself, ever taken this insect; and indeed the only specimen (a female) which has come under my observation has been communicated by Alexander Fry, Esq., who received it from a friend by whom it was captured in Teneriffe. Whether therefore it be peculiar to the higher elevations (as I am inclined to suspect) it is not in my power to decide; but, so far as it is possible to judge from the loose and imperfect diagnosis of M. Brullé, I have no doubt whatsoever that it is the species which he intended to designate, under the title of *S. figurata*. Judging therefore from this single example, its rather smaller size, more opake and very much more deeply punctured surface (the punctures of the elytra being also *roughened*, so as to present a sculpture having somewhat the appearance of a file), combined with its less developed, not quite so uneven, more distinctly costate and more anteriorly-emarginated prothorax, the much more elevated ridges of its elytra, and its slightly less elongated limbs, will, apart from minor differences, at once separate the species from the *S. simplicicornis*.

Fam. 9. ANISOTOMIDÆ.

Genus 63. ANISOTOMA.

(Knoch) Illig., *Käf. Preuss.* 69 (1798).

160. Anisotoma canariensis.

A. ovalis, convexa, nitida, nigro- vel fusco-picea; capite prothoraceque sat distincte punctatis; elytris versus basin paulo rufescentioribus, sat profunde punctato-striatis, interstitiis punctulatis; antennis ad basin pedibusque piceo-ferrugineis, femoribus muticis.
Var. β [forsan mere immatura] corpore pallido.
Mas, tibiis posterioribus distinctius arcuatis.—Long. corp. lin. 1.

Anisotoma canariensis, *Woll., Ann. Nat. Hist.* (3rd series) xi. 216 (1863).

Habitat in ins. Hierro, rarissima; varietatis β, in Canaria Grandi captum exemplar unicum adhuc vidi.

Apparently of the greatest rarity. I captured four specimens of it in the sylvan district of El Golfo, on the western side of Hierro, during February 1859; and another (which although of a pallid hue I believe to be conspecific with the rest, and merely immature) in the region of El Monte, in Grand Canary, later in the spring of the same year.

161. **Anisotoma oceanica,** n. sp.

A. breviter ovalis postice subacuta, valde convexa, nitidissima, nigro-picea; capite prothoraceque leviter punctulatis, illo rufescente; elytris apice acutiusculis et ibidem paulo pallidioribus, versus basin obsolete rufescentioribus, levissime punctato-striatis, interstitiis minute punctulatis; antennis ad basin pedibusque rufo-ferrugineis. *Mas* adhuc latet; specimen unicum (sc. fœmineum) solum detexi.—Long. corp. lin. vix 1.

Habitat in montibus sylvaticis Teneriffæ, sub foliis dejectis ad Las Mercedes capta.

Like the last species, the present one would appear to be excessively scarce,—being, in fact, hitherto unique. It was taken by myself, during June 1858, from beneath dead leaves, under the old trees in the highest part of the forest of Las Mercedes, in Teneriffe. It may be known from the *A. canariensis* by being more *shortly* ovate, and posteriorly subacute, by its convexer, more minutely punctulated and more highly polished surface, by its finer and more delicately punctured striæ, and by the apex of its elytra being gradually somewhat more pellucid,—causing that portion to appear slightly paler than the rest of the surface.

Genus 64. AGATHIDIUM.

Illiger, *Käf. Preuss.* 81 (1798).

162. **Agathidium globulum,** n. sp.

A. nigrum, prothoracis limbo obscure rufescentiore; capite prothoraceque (oculo fortissime armato) subtilissime alutaceis, illo minute hôc minutissime (vix perspicue) punctulatis; elytris (præsertim circa medium) sat distincte sed minute punctulatis, ad humeros oblique truncatis, apice subacutis, striâ suturali nullâ impressis; antennis pedibusque piceo-ferrugineis.

Var. β. Minus distincte punctulatum, capite prothoraceque vix alutaceis.—Long. corp. lin. $\frac{3}{4}$–1.

Habitat in sylvaticis Canariæ et Teneriffæ, sat rarum.

The present *Agathidium* is about the size of, or perhaps a little larger than, the European *A. mandibulare.* It is, however, remarkable for its evidently, though minutely, punctulated surface (the

punctures being more especially conspicuous about the middle of the elytra), for its delicately alutaceous head and prothorax, and for its entire freedom from a sutural stria. From the *A. marginatum* of more northern latitudes, with which it has a good deal in common, it chiefly differs in being (on the average) rather smaller and darker, less globose (or a little more acute at its hinder apex), in the minutely alutaceous sculpture of its head and prothorax, and in its antennæ being longer and slenderer,—the subclaval joints being moniliform, instead of broad and transverse. It is decidedly rare, or at any rate very local. I have taken it sparingly in the region of El Monte in Grand Canary; as also at the Agua Garcia, and (more especially) in the woods above Taganana, of Teneriffe. In the last of these localities I once found it rather commonly—adhering to rotten sticks in the dampest and thickest part of the forest. The specimens from Grand Canary are a trifle less evidently punctulated than those from Teneriffe, and their head and prothorax are (when viewed beneath the microscope) scarcely perceptibly alutaceous; but there is no other difference in them, that I can detect.

163. **Agathidium integricolle**, n. sp.

A. præcedenti fere simile, sed vix major; prothorace latiore, integro (*i. e.* antice, pro capitis receptione, haud excavato), nitidiore (nec alutaceo), in limbo distinctius pallidiore; scutello majore; elytris sensim rotundatioribus, apicem versus minus acutis sed ibidem rufescentioribus, ad humeros magis oblique defalcantibus, necnon striâ suturali (antice evanescente) in utroque conspicue impressis. —Long. corp. lin. 1¼.

Habitat Teneriffam, a cl. W. D. Crotch nuper repertum.

Were not its characters so well expressed, I should not have ventured to define a new *Agathidium* from the *single, imperfect* example from which the above diagnosis has been compiled. But since the structure of its prothorax and more oblique shoulders, as well as the presence of a sutural stria on each elytron, remove it into a different *Section* of the genus from that which contains the *A. globulum*, I cannot omit it from the present Catalogue. It was taken by Dr. Crotch, during the spring of 1862, in Teneriffe (though he has no recollection of the precise locality), and is, unfortunately, destitute both of its head and limbs. Nevertheless there is no possibility of confounding it with the *A. globulum*, from which it may immediately be known by its prothorax being wider, *un*alutaceous (and therefore more shining), more distinctly pallid at its margins, and *entire in front* (or completely unscooped-out for the reception of the head); by its

scutellum being larger; and by its elytra being perceptibly rounder, or less acute, (and more rufescent) behind, more obliquely lopped-off at their humeral angles, and furnished with an evident (though anteriorly evanescent) sutural stria on each. Apparently, too, it is a trifle larger than the *globulum*. In its anteriorly unemarginated prothorax it would seem almost to merit *generic* separation; nevertheless its external features are so precisely those of an *Agathidium* that, until further material has been obtained, and its limbs and mouth have been carefully examined, I am unable to pass any opinion on its purely structural details.

Fam. 10. CLAMBIDÆ.

Genus 65. CLAMBUS.

Fischer, *Entomog.* i. 52 (1820).

164. Clambus complicans, n. sp.

C. breviter ovalis, nitidissimus, impunctatus, fere glaber (pilis brevissimis perpaucis valde remotis parce obsitus); capite prothoraceque piceo-ferrugineis, hôc in limbo clariore; oculis parvis, a capitis margine remotis; elytris nigris vel piceo-nigris, apice acutiusculis; antennis pedibusque pallide testaceis, illarum clavâ obscuriore.—Long. corp. lin. vix $\frac{3}{4}$.

Habitat in Canaria, Teneriffa et Gomera, sat rarus.

The present *Clambus* is larger than any of the few European species which have hitherto been detected; and it is further remarkable for its more or less rufescent head and prothorax (the latter of which has its edges broadly paler and subpellucid), for the excessively short, minute, and remote pile with which it is sparingly beset, for its eyes being small and considerably removed from the margin of the head (the lateral angle of which is not *quite* so acute as in the ordinary *Clambi*), and for its very pallid limbs. It appears to be rare,—the only spots in which I have myself observed it being in the region of El Monte in Grand Canary, and at Las Mercedes and the Agua Garcia of Teneriffe. Specimens, however, have been taken by Dr. Crotch both in the latter island and in Gomera. It is scarcely possible, I think, that it can be a geographical modification of any of the more northern members of the genus.

Genus 66. CALYPTOMERUS.

Redtenbacher, *Fna Austr.* 159 (1849).

165. Calyptomerus dubius.

Scaphidium dubium, *Mshm, Ent. Brit.* i. 234 (1802).
Clambus enshamensis (*Westw.*), *Steph., Ill. Brit. Ent.* ii. 184 (1829).
Comazus enshamensis, *Fairm. et Lab., Faun. Franç.* 328 (1854).
Calyptomerus dubius, *Woll., Cat. Mad. Col.* 147 (1857).

Habitat Teneriffam, rarissime; ad Agua Mansa lectus.

The *C. dubius*, which is widely spread over Europe and which occurs also at Madeira, is apparently very rare in these islands,—the only two Canarian specimens which I have seen having been taken by myself at the Agua Mansa of Teneriffe.

Fam. 11. PTILIADÆ.

Genus 67. ACROTRICHIS.

Motschulsky, *Bull. de Moscou*, xxi. 569 [script. *Acratrichis*] (1848).

166. Acrotrichis fucicola.

Trichopteryx fucicola, *Allibert, Rev. Zool.* 52 (1844).
—— ——, *Fairm. et Lab., Faun. Franç.* 332 (1854).
—— mollis, *Haliday, Nat. Hist. Rev.* ii. (*Proc.*) 123 (1855).

Habitat sub fucis, per oras maritimas Lanzarotæ, Fuerteventuræ et Teneriffæ.

The comparatively flattened body and oblong outline of the *A. fucicola*, in conjunction with its very pubescent surface (which, on account of the whitish decumbent pile with which it is clothed, has a somewhat silvery appearance), the diluted apex of its elytra and hinder prothoracic angles (the former of which are separately rounded off at their inner or sutural angle), the distinctly margined base of its pronotum, and its rather elongated antennæ (the club of which is excessively lax), will at once characterize it. Through the kindness of M. Allard, of Paris, I have received for comparison a specimen of the true *A. fucicola* from La Teste, which agrees precisely with the Canarian ones. It is identical with the *A. mollis* of Haliday; of which I also possess examples, taken on the sea-shore near Dublin. It is a tolerably common insect, just above high-water mark, on the sandy beaches of Lanzarote and Fuerteventura,—occurring beneath Algæ and other marine *rejectamenta*. In the latter of those islands it was also found (near Puerto de Cabras) by Mr. Gray: and two specimens are now before me which were taken by Dr. Crotch in Teneriffe.

167. **Acrotrichis Matthewsii**, n. sp.

A. breviter obovata, valde convexa, pubescens; capite prothoraceque nigris, hôc lato, angulis posticis longe productis; elytris fuscescentioribus, apice dilutis truncatis; antennis pedibusque testaceis.—Long. corp. lin. vix ½.

Habitat Palmam, per regiones sylvaticas sub foliis dejectis vulgaris.

The short, wide, and convex body of this *Acrotrichis*, combined with its obovate outline (it being broader in front than posteriorly), the greatly produced hinder angles of its prothorax, and its fuscescent and apically paler elytra, will sufficiently distinguish it from the other species here enumerated. I may add that it has been examined by the Rev. A. Matthews, who considers it undoubtedly new; and I have much pleasure, therefore, in naming it after him. It appears (so far as I have observed hitherto) to be peculiar to the island of Palma, throughout the sylvan districts of which it is universal. I have taken it on the ascent to the Cumbre above Buenavista, in the Barranco de Agua, the Barranco de Galga, and in several other localities.

168. **Acrotrichis fascicularis.**

Latridius fascicularis, *Hbst, Käf.* v. 8. t. 44. f. 7 (1793).
Trichopteryx fascicularis, *Erich., Nat. der Ins. Deutsch.* iii. 19 (1848).
Acratrichis fascicularis, *Woll., Ins. Mad.* 108 (1854).
—— ——, *Id., Cat. Mad. Col.* 35 (1857).

Habitat in Canaria, Teneriffa, Gomera et Hierro, præsertim per regiones sylvaticas, vulgaris.

This *Acrotrichis* (which occurs at Madeira) appears to be very abundant throughout Grand Canary, Teneriffe, Gomera, and Hierro, —particularly, however, in the sylvan districts of intermediate elevations. My Teneriffan examples are principally from beneath dead leaves at Las Mercedes, La Esperanza, the Agua Garcia, Ycod el Alto, &c.; and the Hierro ones from the region of El Golfo. It has also been captured, abundantly, in Gomera, by Dr. Crotch. It is regarded by Mr. Matthews as identical with the common European *A. fascicularis*. It may be known *primâ facie* from the last species by its more oblong outline, comparatively longer and flatter body and less developed prothorax, and by its elytra (except the extreme hinder margin) being almost as black as the rest of the surface; whilst from the following one its larger size and more produced thoracic angles, in conjunction with its more finely punctured surface and paler antennæ, will equally remove it.

169. Acrotrichis sericans.

Trichopteryx sericans, *Heer, Fna Helv.* i. 374 (1841).
—— ——, *Erich., Nat. der Ins. Deutsch.* iii. 23 (1848).
—— depressa, *Redt., Fna Austr.* 149 (1849).

Habitat in Canaria, Teneriffa, Gomera et Hierro, sat rara.

At once known from the preceding three species by its smaller size and more deeply punctured surface, by its outline being usually (if anything) rather wider behind than in front, by the much less produced posterior angles of its prothorax, and by its darker antennæ. It is considered by Mr. Matthews to be identical with the European *A. sericans**. So far as I have observed hitherto, it appears to be somewhat rare in these islands. I have taken it sparingly near Teror in Grand Canary, as also in Teneriffe and Hierro; but it has been captured more abundantly in Gomera, by Dr. Crotch.

Genus 68. NEPHANES.

Thomson, *Skandin. Coleopt.* i. 62 (1859).

170. Nephanes abbreviatella.

Trichopteryx abbreviatellus, *Heer, Fna Helv.* i. 375 (1841).
—— curta, *Gillm., in Sturm, Deutsch. Fna,* xvii. (1845).
—— abbreviatellus, *Erich., Nat. der Ins. Deutsch.* iii. 23 (1848).
Titan abbreviatellus, *Matth., in Zool.* xvi. 6110 (1858).
Elachys abbreviatellus, *Woll., Ann. Nat. Hist.* (3rd series) v. 221 (1860).

Habitat Teneriffam et Gomeram, a cl. W. D. Crotch deprehensa.

This very minute insect (which is rather common beneath decaying vegetable refuse around Funchal, in Madeira) altogether escaped my own observations at the Canaries. Several undoubted examples of it have, however, lately been communicated to me by Dr. Crotch, who captured them in Teneriffe and Gomera during the spring of 1862. Those from the former island were found at Ycod el Alto, and those from the latter above Hermigua.

Genus 69. PTENIDIUM.

Erichson, *Nat. der Ins. Deutsch.* iii. 34 (1848).

171. Ptenidium lævigatum.

Trichopteryx lævigata, *Gillm., in litt.*
Ptenidium lævigatum, *Erich., Nat. der Ins. Deutsch.* iii. 36 (1848).
—— ——, *Fairm. et Lab., Faun. Franç.* 340 (1854).

Habitat in Canaria, Teneriffa, Gomera, Palma et Hierro, rarior.

* I should perhaps state, however, that, on a subsequent examination of two of my specimens, Mr. Matthews felt a little doubtful whether they should not rather be referred to the (European) *T. brevipennis.*

The rather large size and *glabrous* surface of this *Ptenidium* (which even beneath a high magnifying power is only just perceptibly punctured, though minutely alutaceous) will at once distinguish it from the two following species. It is apparently very local in, though widely spread over, these islands. I have taken it sparingly in Grand Canary; at the Agua Garcia, in Teneriffe; in Palma; and (more abundantly), at a low elevation, in the district of El Golfo, on the western side of Hierro,—where, during February 1858, I captured several specimens of it from beneath vegetable refuse in a sandy lane. A single example is also now before me, which was found by Dr. Crotch, during the spring of 1862, in Gomera.

172. Ptenidium apicale.

Ptilium apicale, *Sturm, in litt.*
Trichopteryx apicalis, *Gillm., in Sturm, Deutsch. Fna,* xvii. 85 (1845).
Ptenidium apicale, *Erich., Nat. der Ins. Deutsch.* iii. 36 (1848).
—— ——, *Woll., Ins. Mad.* 110 (1854).
—— ——, *Id., Cat. Mad. Col.* 37 (1857).

Habitat in Fuerteventura, Canaria, Teneriffa et Gomera, vulgaris.

This common European insect (which abounds at Madeira) is probably universal in these islands, though hitherto I happen to have myself observed it in only three of them,—namely, Fuerteventura, Grand Canary, and Teneriffe. It has, however, been taken abundantly in Gomera by Dr. Crotch. My Fuerteventuran specimens are principally from the Rio Palmas, the Canarian ones from Teror, and the Teneriffan ones from the vicinity of S^{ta} Cruz, the Agua Garcia, La Esperanza, &c. It may be known from the last species by its rather smaller size and by its pubescent and distinctly punctured surface.

173. Ptenidium punctatum.

Scaphidium punctatum, *Gyll., Ins. Suec.* iv. 293 (1827).
Ptenidium punctatum, *Fairm. et Lab., Faun. Franç.* 341 (1854).

Habitat per oram maritimam Lanzarotæ, sub fucis captum.

The comparatively minute size, less convex and more oblong body of this common European *Ptenidium*, combined with its coarser pubescence and very much deeper punctuation (more particularly of the prothorax), will readily distinguish it from both of the foregoing species. It appears to be decidedly rare at the Canaries,—the only two specimens which I have seen having been captured by myself, from beneath marine *rejectamenta*, on the sandy sea-shore of Lanzarote, immediately to the south of Arrecife.

Genus 70. **PTINELLA.**

(Motschulsky) Matthews, *Zool.* xvi. 6106 (1858).

174. **Ptinella angustula.**

Ptilium angustulum, *Gillm., in Sturm, Deutsch. Fna,* xvii. 66. pl. 324. f. 6 (1845).

Habitat Palmam, rarissime; sub cortice laxo *Pini canariensis* Junio ineunte A.D. 1858 deprehensa.

Apparently of the greatest rarity in these islands. The only three Canarian specimens which I have seen were captured by myself in Palma, at the beginning of June 1858. They were found beneath the bark of old pine-trees,—one of them high up in the Barranco above S^ta^ Cruz, and the other two in the Pinal of the Banda, near the edges of the great Caldeira. They have been examined carefully by the Rev. A. Matthews, who believes them to be identical with the European *P. angustula* of Gillmeister.

Fam. 12. PHALACRIDÆ.

Genus 71. **PHALACRUS.**

Paykull, *Fna Suec.* iii. 438 (1800).

175. **Phalacrus coruscus.**

Phalacrus coruscus, *Payk., Fna Suec.* iii. 438 (1800).
—— ——, *Steph., Ill. Brit. Ent.* ii. 161 (1829).
—— corruscus, *Erich., Nat. der Ins. Deutsch.* iii. 110 (1848).

Habitat insulas omnes Canarienses, passim.

The common European *P. coruscus* is *universal* at the Canaries. Palma is the only island out of the seven in which I have not taken it; but it was captured there (as also in Lanzarote) by Mr. Gray. In Teneriffe it was found likewise by Dr. Crotch.

Genus 72. **OLIBRUS.**

Erichson, *Nat. der Ins. Deutsch.* iii. 113 (1848).

176. **Olibrus florum,** n. sp.

O. obovatus, ante medium latiusculus, nitidissimus, testaceus; capite, prothoracis disco elytrorumque suturâ plus minus fuscescentibus; elytris levissime punctulato-striatis.—Long. corp. lin. 1–1$\frac{1}{3}$.

Habitat in Canaria, Teneriffa, Palma et Hierro, super flores (præsertim *Cinerariæ*) hinc inde vulgaris: in Hierro prædominat.

Closely allied to the common European *O. corticalis*; from which

however it may be known by being, on the average, slightly larger, relatively broader in outline (it being very distinctly wider at the junction of its prothorax and elytra), by the disc of its pronotum being darker (the edges alone being testaceous), by its suture also being conspicuously darkened, and by its striæ being more evident. I have taken it in Grand Canary, Teneriffe, Palma, and Hierro; and there can be little doubt that it must occur in Gomera also: but in Lanzarote and Fuerteventura I believe that it does not exist. Indeed it becomes gradually more abundant as we approach the western portion of the archipelago, being (so far as I have observed hitherto) rare in Grand Canary, sparingly distributed in Teneriffe (where it was found likewise by Dr. Crotch), tolerably common in Palma, and absolutely teeming in Hierro,—where, during February 1858, I captured it on various flowers (particularly those of a large and pale *Cineraria*) in several parts of the island, though especially around Valverde. In this last locality it was found likewise by Mr. Gray.

177. **Olibrus congener**, n. sp.

O. ovalis, subænescenti-piceo-niger, nitidissimus; elytris fere simplicibus (postice versus suturam striis obsoletissimis vix impressis); antennis pedibusque longiusculis, testaceis.—Long. corp. lin. $\frac{3}{4}$–1.

Habitat Lanzarotam, circa oppidum Haria ad flores haud infrequens.

The present *Olibrus* may be known from the following one by its rather larger size, less shortened outline, just perceptibly subpicescent hue, by its elytra being (if possible) even still more obsoletely striated, and by its limbs being longer and paler. It has a good deal the appearance, at first sight, of the *O. liquidus* of Erichson, which abounds in Madeira; but is less acuminated and almost concolorous (instead of being rufescent) posteriorly, its outline is relatively somewhat broader, its elytral striæ are still more faint (being scarcely traceable), and its entire surface is a little more brassy. Hitherto I have observed it only in Lanzarote, towards the north of which island, however, it is far from uncommon; where, moreover, it was likewise taken by Mr. Gray and M. Hartung.

178. **Olibrus subæreus**, n. sp.

O. breviter ovalis, ænescenti-niger, nitidissimus; elytris obsolete substriatis; antennis pedibusque breviusculis, plus minus clare piceo-testaceis.—Long. corp. lin. $\frac{2}{3}$–vix $\frac{3}{4}$.

Habitat in Canaria et Hierro, super flores varios, rarior.

The small size and short-oval outline of this *Olibrus*, combined

with its uniformly brassy-black surface, its very obsoletely striated elytra, and its rather abbreviated, picco-testaceous (sometimes nearly piceous) limbs, will suffice to separate it from the preceding species. It is apparently rare, Grand Canary and Hierro being the only islands in which I have hitherto observed it.

179. Olibrus consimilis.

Dermestes consimilis, *Mshm, Ent. Brit.* i. 75 (1802).
Phalacrus geminus, *Illig., in Panz., Krit. Rev.* i. 27 (1805).
Olibrus geminus, *Erich., Nat. der Ins. Deutsch.* iii. 120 (1848).
—— consimilis, *Woll., Ins. Mad.* 115 (1854).
—— ——, *Id., Cat. Mad. Col.* 37 (1857).

Habitat in Canaria, Teneriffa et Gomera, ad flores, rarus.

This common European insect (which occurs sparingly at Madeira) is decidedly rare in these islands. I have taken it at Maspalomas in the extreme south of Grand Canary, as also at Souzal and the Agua Garcia in Teneriffe; in the last of which, as well as in Gomera, it was found likewise by Dr. Crotch.

Fam. 13. NITIDULIDÆ.

Genus 73. HETEROBRACHIUM (nov. gen.).

Corpus, antennæ et *instrumenta cibaria* fere ut in *Brachyptero*, sed *prothorace* magis quadrato (in utroque sexu diverso), *abdomine* nisi fallor simplici (segmento terminali ut mihi videtur haud aucto, ut in *Cerco*), *palporum maxillarium articulo ultimo* longiore subaciculari ad apicem truncato, *paraglossis* vix distinctis. *Pedes* graciliores quam in *Brachyptero*, necnon in sexu masculo multo longiores; *antici* longiores quam posteriores, in maribus longissimi: *femoribus* (præsertim masculis) ad apicem internum angulato-dentatis: *tibiis* gracilioribus quam in *Brachyptero* necnon ad apicem externum minus angulatis, *anticis* ibidem etiam oblique truncatis et spinâ internâ magnâ robustâ curvatâ auctis [calcaribus in posterioribus minoribus æqualibus], *anticis* in maribus valde curvatis, in fœminis subrectis, *intermediis* in maribus subcurvatis, in fœminis rectis, *posticis* in utroque sexu rectis: *tarsis* et *unguiculis* ut in *Brachyptero*, sed articulo basilari paulo angustiore.

Ab ἕτερος, varius, et βραχίων, brachium.

As will be seen from the above structural comparative diagnosis, the insect for which I have proposed the present genus has much in common with *Brachypterus*. In its external facies indeed, antennæ, and oral organs it is so nearly identical with the members of that group that it might thus far at least have been almost associated with them; though at the same time I must confess that I cannot

satisfy myself of its possessing the additional apical abdominal segment which is characteristic of the male *Brachypteri*; whilst, moreover, the sexual differences of its prothorax, the longer and more aciculated joint of its maxillary palpi, and its scarcely prominent paraglossæ are other (though not very important) points in which it recedes from the *Brachypteri* proper. But, apart from these considerations, the peculiarities of its legs (which, together with the antennæ, are considerably elongated in the male sex) are so decided that I cannot but believe that it ought to be separated from that genus. Thus, they are not merely longer than those of the *Brachypteri*, but their femora are constricted beneath before the extremity so as to shape out a conspicuous anguliform tooth, their tibiæ are slenderer, being less dilated at the apex (where also the front pair have their inner terminal spur* strong, large, and flexuose) and *greatly curved* in the male sex, and the basal joint of their tarsi is considerably less widened than the following two. The tibiæ (and even the femora), when viewed beneath a high microscopic power, are minutely serrated along their inner edge; and in the front pair of the males the outer angle is obliquely lopped-off, or truncated, giving that part of the leg a very singular appearance. These curious sexual modifications of the legs are quite unnoticed in all the generic and subgeneric diagnoses both of *Brachypterus* and *Cercus* to which I have had access; but in the unproduced hinder angles of its prothorax, and the globose, immensely developed ultimate joint of its labial palpi, *Heterobrachium* has more in common with the normal *Brachypteri* than with M. Duval's *Heterostomus*.

180. **Heterobrachium longimanum**, n. sp.

H. oblongo-ovatum, testaceum vel fusco-testaceum, subnitidum, pubescens, dense punctatum; prothorace ad latera rotundato, postice truncato; elytris vix pallidioribus, per suturam (præsertim antice) plus minus suffuse et anguste fuscescentibus; antennarum clavâ vix obscuriore; tarsis ad apicem ipsissimum nigris.

Mas paulo major, prothorace latiore, magis rotundato, convexo, antennis pedibusque longioribus, tibiis anticis curvatis.

Fœm. paulo minor, prothorace minore, minus convexo, antennis pedibusque brevioribus, tibiis subrectis.—Long. corp. lin. $\frac{7}{8}$–1.

Habitat in excelsioribus sylvaticis Teneriffæ et Palmæ, rarissimum.

Apparently extremely rare,—the only spots in which I have taken it being on the summit of the sylvan range above Taganana and Las Mercedes of Teneriffe, and in Palma.

* The calcaria in the four hinder feet are *both* of them small, and subequal.

Genus 74. BRACHYPTERUS.

Kugelann, *in Schneid. Mag.* 506 (1794).

181. Brachypterus velatus.

B. oblongo-ovatus, subconvexus, viridescenti-niger, nitidus, grosse flavescenti-cinereo-pubescens, dense punctatus; prothorace ad latera subæqualiter rotundato, angulis posticis obtusis; scutello obtuse triangulari; antennis pedibusque rufo-testaceis, illarum clavâ tarsorumque apicibus ipsissimis nigrescentibus.

Var. β [an species ?]. Prothorace vix breviore, antennarum clavâ pallidâ, articulis ante clavam vix latioribus.

Var. γ. Subcyanescenti-niger, minus pubescens.—Long. corp. lin. $\frac{3}{4}$–1.

Brachypterus velatus, *Woll., Ann. Nat. Hist.* (3rd series) xi. 217 (1863).

Habitat in Canaria, Teneriffa et Hierro, super folia *Urticæ urentis*, L., sat vulgaris: *var.* β ad Canariam pertinet, sed *varietatis* γ specimen unicum in Lanzarota captum solum vidi.

The more or less greenish-black hue of this *Brachypterus*, combined with its long and coarse cinereous pile (which has generally a somewhat yellowish tinge) and its bright rufo-testaceous limbs, will (apart from minor differences) sufficiently characterize it. It is rather common, on Nettles (particularly the *Urtica urens*), in Grand Canary, Teneriffe, and Hierro,—in the first of which I have taken it abundantly at El Monte, in the second above the Puerto of Orotava, and in the third to the south-west of Valverde; in the last two of which localities it was also captured by Mr. Gray. In Teneriffe it was likewise found by Dr. Crotch. The *var.* β I have observed hitherto only in Grand Canary; and of the *var.* γ I obtained a single specimen in Lanzarote. It is just possible that the latter may be the exponent of another, though closely allied, species; nevertheless I think it would be hardly safe, in the absence of further material, to regard it as such. The example before me seems to differ in having its antennæ pale throughout, and with their subclaval joints perhaps somewhat broader,—causing the club to appear a little less abrupt.

182. Brachypterus curtulus, n. sp.

B. ovatus, curtulus, convexus, subænescenti-niger, nitidus, minute et parce cinereo-pubescens, dense punctatus; prothorace ad latera æqualiter rotundato, angulis posticis rotundatis; scutello subsemicirculari; antennis pedibusque rufo-testaceis, illarum clavâ tarsorumque apice ipsissimo nigrescentibus.—Long. corp. lin. $\frac{2}{3}$–$\frac{3}{4}$.

Habitat in Lanzarota et Fuerteventura, hinc inde parce captus.

The smaller size, more compact, convexer and more ovate form of

this rather insignificant *Brachypterus*, in conjunction with its slightly brassy and less pubescent surface, and the more rounded hinder angles of its prothorax, will serve to distinguish it from the last species. Hitherto I have observed it only in Lanzarote and Fuerteventura,—in both of which islands it occurs sparingly on flowers.

Genus 75. **CARPOPHILUS.**

(Leach) Steph., *Ill. Brit. Ent.* iii. 50 (1830).

183. **Carpophilus hemipterus.**

Dermestes hemipterus, *Linn., Syst. Nat.* ii. 567 (1767).
Carpophilus hemipterus, *Steph., Ill. Brit. Ent.* iii. 50 (1830).
—— ——, *Woll., Ins. Mad.* 117 (1854).
—— ——, *Id., Cat. Mad. Col.* 38 (1857).

Habitat Teneriffam, in ipsâ urbe Sanctæ Crucis frequens, certe introductus.

I have taken this almost cosmopolitan insect abundantly, at times, in the houses at S^ta^ Cruz in Teneriffe; in which position it was found also by M. Hartung. As in Madeira, it is doubtless an imported species through the medium of commerce.

184. **Carpophilus auropilosus.**

Carpophilus auropilosus, *Woll., Ins. Mad.* 117 (1854).
—— ——, *Id., Cat. Mad. Col.* 38 (1857).

Habitat Fuerteventuram, Canariam et Teneriffam; ad Rio Palmas Fuerteventuræ plurima specimina sub stercore camelino Aprili ineunte A.D. 1859 collegi.

This insect would seem to be more strictly indigenous in these islands than it is in Madeira. In the latter it occurs principally about houses and amongst stores (such as dried fruits, sugar, arrow-root, &c.), and has all the appearance of being an imported species; but at the Canaries I have found it *in aperto*, and quite removed from localities of that kind. I have taken it in Grand Canary, and on one occasion (in considerable abundance) from beneath camels' dung in the Rio Palmas of Fuerteventura; and it was captured by Dr. Crotch, during the spring of 1862, at Ycod el Alto, in Teneriffe.

Genus 76. **NITIDULA.**

Fabricius, *Syst. Ent.* 77 (1775).

185. **Nitidula flexuosa.**

Nitidula flexuosa, *Oliv., Ent.* ii. 12. 7 (1790).
—— ——, *Erich., Nat. der Ins. Deutsch.* iii. 159 (1848).

Nitidula flexuosa, *Woll., Ins. Mad.* 119 (1854).
—— ——, *Id., Cat. Mad. Col.* 39 (1857).

Habitat Fuerteventuram, ad Agua Bueyes d. 28. Jan. A.D. 1859 deprehensa.

This European *Nitidula* (which occurs also in Porto Santo) was taken by Mr. Gray and myself, from out of bones, at Agua Bueyes in Fuerteventura, on the 28th of January 1858; which is the only instance that I am aware of, of its having been found at the Canaries.

Genus 77. **PRIA.**

(Kirby) Steph., *Ill. Brit. Ent.* iii. 49 (1830).

186. **Pria dulcamaræ.**

Laria dulcamaræ, *Scop., Ent. Carn.* 22 (1763).
Pria truncatella et Meligethes dulcamaræ, *Steph., Ill. Brit. Ent.* iii. 45 et 50 (1830).
—— dulcamaræ, *Woll., Ins. Mad.* 122 (1854).
—— ——, *Id., Cat. Mad. Col.* 40 (1857).

Habitat Teneriffam et Palmam, in herbidis, rarissime.

The only island of the Group in which I have myself observed this European insect is Palma; where, during May of 1858, I captured several specimens of it by brushing various plants on the damp perpendicular rocks high up in the Barranco da Agua. It was however taken sparingly, during the spring of 1862, by Dr. Crotch, in Teneriffe. It occurs likewise at Madeira.

Genus 78. **MELIGETHES.**

(Kirby) Steph., *Ill. Brit. Ent.* iii. 45 (1830).

187. **Meligethes varicollis.**

Meligethes varicollis, *Woll., Ins. Mad.* 126 (1854).
—— ——, *Id., Cat. Mad. Col.* 41 (1857).
—— erythropa, *Hartung* [nec *Mshm*], *Geolog. Verhältn. Lanz. und Fuert.* 140.

Habitat Lanzarotam, Fuerteventuram et Teneriffam, hinc inde in floribus haud infrequens.

This large and distinct *Meligethes* (which occurs rarely in the sylvan districts of Madeira) is *locally* far from uncommon at the Canaries; nevertheless it is chiefly in Lanzarote and Fuerteventura that I have hitherto observed it. In the former of those islands it was taken by Mr. Gray and myself, near Haria, during January 1858; and during the following spring I captured it again in the same region, as also in the Rio Palmas of Fuerteventura. And I subsequently obtained four examples of it at Taganana, in the north of Teneriffe. In Lan-

zarote it was likewise found by M. Hartung, two of whose specimens have been communicated to me by Dr. Heer; but it is wrongly identified in his catalogue with the *Nitidula erythropa* of Marsham,—from which it is totally distinct. All the individuals which I have examined (47 in number) have their prothorax entirely concolorous with the rest of their surface; so that the state which is found occasionally in Madeira with the edges of the pronotum testaceous would appear to be quite aberrant, and one which perhaps does not exist at the Canaries.

188. **Meligethes virescens**, n. sp.

M. angustulo-oblongus, convexus, æneo-viridis, minutissime cinereo-pubescens, profunde sed vix dense punctatus; antennis pedibusque piceo-ferrugineis, tibiis anticis leviter dilatatis, extus subtiliter denticulatis (denticulis mox ante apicem longioribus).

Var. β capite prothoraceque rufescentibus.—Long. corp. lin. $\frac{2}{3}$–vix 1.

Habitat Teneriffam et Gomeram, floribus *Messerschmidtiæ fruticosæ* præcipue gaudens.

The present *Meligethes* is somewhat allied, in colour and outline, to the common European *M. æneus*; nevertheless it is smaller and rather narrower than that insect, its surface is much more coarsely (and not quite so densely) punctured, its antennæ are relatively shorter, and the denticulations of its front tibiæ are more distinct. It possesses a curious tendency to have its prothorax occasionally somewhat diluted in hue; and in a specimen which was captured by Mr. Gray in Gomera (during our visit to that island in February 1858) both the head and pronotum are bright rufous; nevertheless it is certainly nothing more than an extreme variety of the species now under consideration. I have taken the *M. virescens* rather commonly between the Puerto and Villa of Orotava in Teneriffe, where it is particularly attached to the fragrant blossoms of the *Messerschmidtia fruticosa*.

189. **Meligethes tristis.**

Nitidula tristis, *Schupp., in litt.*
Meligethes tristis, *Sturm, Deutsch. Fna*, xvi. 40. t. 309. f. *a*, A, *b* (1845).
—— ——, *Woll., Ins. Mad.* 124 (1854).
—— ——, *Id., Cat. Mad. Col.* 41 (1857).
—— ——, *Hartung, Geolog. Verhältn. Lanz. und Fuert.* 141.

Habitat in Canaria, Teneriffa, Gomera, Palma et Hierro, in locis intermediis, passim.

The European *M. tristis* (which is universal at Madeira) is sparingly distributed over these islands, where it occurs principally in sylvan spots of intermediate and rather lofty elevations. I have taken it in

Grand Canary, in Teneriffe (namely at Taganana, on the mountains above S^ta^ Cruz, at Las Mercedes, the Agua Garcia, &c.), in Palma (namely in the eastern ravines, at the Banda, &c.), and in Hierro; and it was captured by Mr. Gray near San Sebastian of Gomera. It was also met with by Dr. Crotch in Teneriffe, Gomera, and Palma. It varies a little in the colour of its pubescence, which is either of a cinereous white or with a more or less yellowish tinge,—being occasionally of an almost golden hue. It is entered in M. Hartung's list of Fuerteventuran Coleoptera; and although there is no reason why it should not exist in that island, yet considering the many errors which I have already alluded to as having been most undoubtedly committed in M. Hartung's *habitats*, and since I am determined to quote no localities in this Catalogue except those concerning which I have the most positive evidence, I think it safer *not* to record the species as a Fuerteventuran one—more particularly as it appears probable, from my own observations, that the insect does not occur in the two eastern islands of the archipelago.

Genus 79. **XENOSTRONGYLUS.**

Wollaston, *Ins. Mad.* 127. tab. ii. f. 8 (1854).

190. **Xenostrongylus histrio.**

Xenostrongylus histrio et canariensis, *Woll.*, *Ins. Mad.* 127, 128. tab. ii. f. 8 (1854).
—— ——, *Id.*, *Cat. Mad. Col.* 41 (1857).
—— arcuatus, *Kiesw.*, *Berl. Zeit.* 57 (1859).

Habitat insulas omnes Canarienses, præsertim in locis sylvaticis, vulgaris.

The *X. histrio*, which is universal in the Madeiran Group (being found in Madeira proper, Porto Santo, and on the Desertas), and which has also been detected (since the publication of my 'Insecta Maderensia') in Sicily and the south of Spain, is equally universal at the Canaries,—in the *whole seven* islands of which I have myself taken it, more or less abundantly. In Lanzarote, Palma, and Hierro it was found likewise by Mr. Gray, and in Teneriffe and Gomera by Dr. Crotch. It is more common, however, within the sylvan regions of the central and western portions of the archipelago than elsewhere, in certain parts of which it absolutely teems. Thus, at the Agua Garcia of Teneriffe and in the district of El Golfo on the western side of Hierro I have brushed it in immense numbers from out of the rank fern and vegetation in shady spots.

It is excessively variable in the colour of its scales, and in the

development and exact arrangement of its fasciæ and markings,—being usually paler, and also a trifle larger, in exposed barren localities (such as those of Lanzarote and Fuerteventura) than it is in the moister and more wooded ones. In the latter indeed its blacker scales often preponderate to such an extent as almost to cover the entire surface,—under which circumstances a single example (if taken alone) might well be mistaken for the exponent of another species. But, judging from the immense series which I have collected in all the islands, I am quite satisfied that no second *Xenostrongylus* has as yet been brought to light,—since I am able to connect completely the various states, and shades of colouring, which obtain in different districts. *On the average*, perhaps, the Canarian specimens are a trifle smaller and more darkly coloured than the Madeiran ones; and the latter than those from the Mediterranean regions*: and it was to a solitary and rather blackened individual collected in Teneriffe that I gave (*vide* 'Ins. Mad.' 127), in 1854, the trivial name of *canariensis*: nevertheless I now perceive, from more extensive material, that it is conspecific with the *X. histrio*; and I have accordingly suppressed it.

Genus 80. **CYBOCEPHALUS.**

Erichson, *in Germ. Zeitsch.* v. 441 (1844).

The little genus *Cybocephalus* of Erichson is undoubtedly coincident with my *Stagonomorpha* ('Ins. Mad.' 484), which I regarded, in 1854, as a new group of the *Anisotomidæ*. And so closely indeed do the species which compose it resemble diminutive *Agathidia*, that it is difficult to believe that their affinities should be rather with *Cyllodes*, *Xenostrongylus*, and *Cychramus* than with *Amphicyllis* and *Agathidium*. Still, for the reasons which have been already announced by Erichson, and subscribed to by others, I would not wish to dispute the relationship which is usually conceded to them. Their analogy, however, with the *Agathidia* is carried out in all their external (and many of their structural) details; for not only have they the power of rolling their bright glabrous bodies into a ball, but even the genus itself is capable of being subdivided in a precisely similar manner, dependent (as I have shown below) on the greater or less oblique-truncation of the humeral angles of the elytra. Indeed this *lopping-off* of the shoulders would be sufficient of itself to distinguish

* Having received from Dr. Schaum a type of the *X. arcuatus* of Kiesenwetter, for comparison, I may add that I am quite satisfied it is not specifically distinct from the *histrio*. It is merely a trifle larger, and, from its limbs being tucked under it (so as to raise up the body), has the appearance at first sight of being a little more convex.

the second of the *Cybocephali* here enunciated from the first; but (apart from its purely specific characters alluded to in the diagnosis) the less truncated apical joint, also, of its antennæ will still further remove that species from the *C. sphærula* (which is, in all respects, a normal representative of its group). Nevertheless in everything essential the *C. lævis* is an undoubted *Cybocephalus*, and cannot possibly be treated as anything but congeneric with the other.

As I was of course unaware when I published my *Stagonomorpha* that it was identical with *Cybocephalus*, it never occurred to me to refer at all to the diagnosis of the latter; and it is therefore worth observing that I should unintentionally have fully corroborated the after-remark of M. Jacq. Duval, that the tarsi of this genus are strictly tetramerous, and that consequently Erichson was mistaken in supposing that there existed a minute fourth joint concealed between the lobes of the deeply cordate third one. I examined the feet of *Stagonomorpha*, at the time, with great care, and completely satisfied myself that there was no such additional articulation; and I am convinced therefore that M. Duval is perfectly correct in his statement on this point.

§ I. *Elytra ad humeros rotundata: antennarum articulus ultimus brevissimus, valde truncatus.*

191. **Cybocephalus sphærula.**

C. breviter ovalis, ater (vel subænescenti-ater), nitidus, dense alutaceus; prothorace (oculo fortiter armato) minutissime et parce punctulato, ad latera obscure dilutiore; elytris (præsertim postice) sat distincte punctulatis; antennis pedibusque breviusculis, fusco-testaceis.

Variat capite prothoraceque dilute testaceis.—Long. corp. lin. vix $\frac{1}{2}$–vix $\frac{2}{3}$.

Stagonomorpha sphærula et unicolor, *Woll., Ins. Mad.* 484, 485. tab. x. f. 8 (1854).

—— —— —— ——, *Id., Cat. Mad. Col.* 148 (1857).

Habitat Lanzarotam, Canariam, Teneriffam, Gomeram et Palmam, præsertim in hortis super folia *Myrtorum*, hinc inde vulgaris.

The present *Cybocephalus*, which appears to be identical with the species which I described from Madeira in 1854, differs, *inter alia*, from the European *exiguus* in being smaller, in having the hinder margin of its prothorax more sinuated or concave (causing the posterior angles to appear less rounded off), and in its surface, when viewed beneath the microscope, being much more coarsely alutaceous and with the (very remote) punctures relatively more evident. It

is widely spread over these islands, where in all probability it is universal. Hitherto, however, I have observed it only in Lanzarote, Grand Canary, Teneriffe, and Palma; though I have examined two specimens which were taken by Dr. Crotch in Gomera. In Lanzarote it is decidedly rare. In Grand Canary it abounds in certain districts: thus, in the region of El Monte and at San Mateo I have taken it in the greatest profusion, in gardens, by beating the foliage of the common narrow-leaved Myrtle. In Teneriffe it appears to be scarce, where however I have met with it sparingly immediately above the Puerto Orotava, and elsewhere; whilst in Palma it is rather more common,—most of my specimens being from the upper part of the Barranco above S^{ta} Cruz.

§ II. *Elytra ad humeros oblique truncata: antennarum articulus ultimus breviusculus, paulo truncatus.*

192. **Cybocephalus lævis**, n. sp.

C. breviter ovalis, ater, nitidissimus, haud alutaceus; prothorace latiusculo, impunctato, concolore, ad angulos posticos rotundato; elytris (præsertim postice) sat distincte punctulatis; antennis pedibusque fusco-testaceis.—Long. corp. lin. vix $\frac{1}{2}$.

Habitat in Lanzarota, rarissimus.

Amongst 83 specimens of Canarian *Cybocephali* which I have examined closely beneath the microscope, I find four which differ entirely from the rest, and I have consequently described them as above. The diminutive size of these insects necessarily renders their distinctive characters *microscopic* ones; but, in this instance at all events, they are certainly not the less real because (of necessity) thus difficult of observation. Apart from the structural features indicated in my *Sectional* diagnosis (of more obliquely truncated shoulders and the less abbreviated terminal joint of its club) which separate the present species from the last one, the *C. lævis* may be further recognized by its more intensely black hue and apparently quite concolorous prothorax (which is more rounded off at the posterior angles), by its rather longer antennæ, and by its surface being more highly polished, and totally free (when viewed under the microscope) from the *alutaceous* sculpture which is never absent from its ally. Its pronotum, too, is apparently quite impunctate, there being no indication whatever of the minute (but distant) punctules which are always visible in that species. My four examples of the *C. lævis* were all taken in Lanzarote, and, I believe (so far as I can recollect), on the sandy sea-shore near Arrecife.

Genus 81. **RHIZOPHAGUS.**

Herbst, *Käf.* v. 18. tab. i. f. 7–9 (1793).

193. **Rhizophagus pinetorum**, n. sp.

R. subconvexus, rufo-ferrugineus, nitidus; capite sat dense punctulato; prothorace elongato-oblongo, ad latera subrecto, postice vix angustiore, angulis anticis subporrectis, profunde sed parce oblonge punctato; elytris fusiformi-parallelis, sat profunde punctato-striatis.—Long. corp. lin. vix $1\frac{2}{3}$–2.

Habitat in pinetis Teneriffæ et Palmæ, lignum antiquum *Pini canariensis* destruens.

The present *Rhizophagus* is probably widely spread over the old Pinals of these islands; for, having taken it in several positions both in Teneriffe and Palma, I have but little doubt that it must occur in the ancient pine-forests of Grand Canary also. At the Agua Mansa, and in the lofty Pinal above Ycod el Alto, of Teneriffe it is occasionally abundant, in the rotten wood of the *Pinus canariensis*; as also, in similar places, in the Banda, and in the Barranco above S^ta^ Cruz, of Palma. It may be known from the following species by being a little larger, more convex, and shining (there being no appearance of the *alutaceous* sculpture which characterizes that insect); by its prothorax being relatively somewhat longer, straighter at the sides, more coarsely and sparingly punctured, less evidently (if indeed at all) narrowed behind, and with the anterior angles more porrect; and by its elytra being more deeply punctate-striated.

It is very closely allied to the European *R. ferrugineus* and *perforatus*, partaking of the characters of them both without agreeing exactly with either; so that if it is to be regarded as a geographical modification of some northern form, it might be referred with almost equal propriety to either of those species. On this account I think it better to retain it as distinct, more particularly since the remoteness of its *habitat* and its exclusive attachment to the *Pinus canariensis* would alike imply that such, in all probability, is really the case. From the *ferrugineus* it differs in being a little more depressed and less cylindric (its elytra being rather more fusiform, or less straightened at the sides), in its prothorax being more narrowly margined and (together with the head) not *quite* so coarsely punctured, in its humeral angles being somewhat more porrect, and in the punctures and striæ of its elytra being less deep. From the *perforatus*, on the other hand, it may be known by being on the average considerably larger, by its prothorax being just perceptibly convexer, less remotely

punctured and more laterally compressed in front, and by its elytra being less acute behind, with their striæ rather deeper.

194. Rhizophagus subopacus, n. sp.

R. subdepressus, rufo-ferrugineus, subopacus, minute alutaceus; capite convexo, dense punctulato; prothorace oblongo, ad latera vix subrotundato, postice sensim angustiore, angulis anticis rotundatis, obtusis, leviter et sat dense punctulato, in disco depresso; elytris fusiformi-parallelis, leviter punctato-striatis, per suturam obsolete obscurioribus; antennis breviusculis.—Long. corp. lin. $1\frac{1}{2}$–$1\frac{3}{4}$.

Habitat Palmam, in locis similibus ac præcedens, sed rarior.

The rather flatter and less shining surface of this species (which, under a high magnifying power, is minutely and densely alutaceous), its slightly smaller size, its more finely and more closely punctulated prothorax, which is relatively somewhat shorter, more depressed on the disc, more perceptibly narrowed behind and rounded in front (causing the sides to be less straight), and with its anterior angles more obtuse, combined with its more lightly striated elytra, rather darkened suture, and perhaps somewhat shorter antennæ, will suffice to separate it from the *R. pinetorum*. It is very much rarer than that insect; for out of 89 specimens of Canarian *Rhizophagi* which I have just examined, four only belong to it. They were captured by myself in Palma, during the spring of 1858,—from beneath the rotten bark of a *Pinus canariensis* high up in the Barranco above S^ta^ Cruz. That they are no local modification peculiar to that island is evident from the fact that I took them in company with the last species.

Fam. 14. TROGOSITIDÆ.

Genus 82. TEMNOCHILA.

Westwood, *Zool. Journ.* v. 231 [script. *Temnoscheila*] (1835).

195. Temnochila pini.

T. subcylindrico-parallela, cyanea, nitida; capite parce punctulato, antice carinâ mediâ angustâ impresso; prothorace trapeziformi, postice rotundato, angulis posticis obtusis, angulis anticis subporrectis, versus latera profunde et dense sed in disco leviter et parce punctato; elytris punctato-striatis, interstitiis transversim plicatis necnon uniseriatim punctulatis; antennis ad apicem tarsisque nigro-piceis.—Long. corp. lin. 9.

Trogosita pini, *Brullé, in Webb et Berth.* (*Col.*) 70 (1838).

Habitat in pinetis Canariæ et Palmæ, truncos vetustos *Pini canariensis* perforans.

The only perfect example of this superb *Temnochila* which I have myself taken was captured, in the rotten wood of an old *Pinus canariensis*, in Grand Canary (on the ascent to the Pinal from San Bartolomé, of Tarajana) during April 1858. I have, however, found the remains of it, in similar positions, at the Banda (towards the edges of the great Caldeira) of Palma; and in all probability it occurs in Teneriffe likewise, and indeed wherever the remains of the ancient Pinals still exist. It is somewhat allied to the European *T. cærulea*, but (judging from my single specimen) is considerably larger, cyaneous or blue (instead of bluish-green), and not quite so shining; its head is rather more finely punctured and less deeply channeled in front; its prothorax is relatively both a little longer and a little wider, more sinuated at the apex and more rounded behind, with the anterior angles more porrected and the posterior ones more obtuse; and its elytra are more *straightly* truncated at their base, and rather less rugulose.

Genus 83. **LIPASPIS.**

Wollaston, *Trans. Ent. Soc. Lond.* 140 [script. *Leipaspis*] (1862).

196. **Lipaspis lauricola.**

Leipaspis lauricola, *Woll., loc. cit.* 142 (1862).

Habitat in lauretis Teneriffæ et Palmæ, sub cortice arborum laxo, rarissima.

For the generic characters of *Lipaspis*, and the distinctions between the three species here enumerated, I must refer to my paper on the "*Euphorbia*-infesting Coleoptera of the Canaries" lately published in the 'Transactions of the Entomological Society of London.' Although not belonging to the Euphorbian fauna, this insect and the following one were described (as will be seen on reference) in a foot-note to the memoir alluded to. The *L. lauricola* seems to be confined to the laurel-woods of intermediate elevations, and is apparently extremely rare. In such positions I have taken it, from beneath the loosened bark of the old trees, at Las Mercedes and towards Point Anaga of Teneriffe; as also high up in the Barranco da Agua, and the Barranco de Galga, of Palma.

197. **Lipaspis pinicola.**

Leipaspis pinicola, *Woll., loc. cit.* 143 (1862).

Habitat in pinetis Teneriffæ et Palmæ, rarissima.

As in the case of the last species, I have hitherto observed the present *Lipaspis* only in Teneriffe and Palma,—where it appears to be

confined to the *Pinus canariensis* of the old Pinals, in the same manner as that insect is attached to the various laurels. It would seem to be even scarcer than its ally; though from the difficulty of reaching many of the elevated regions and precipitous mountain-slopes in which the fir-trees occur, it may perhaps in reality be rather *local* than absolutely rare. I have taken it sparingly in Teneriffe (from under the loose bark of a felled pine-tree at the Agua Mansa), and in the region of the Banda of Palma.

198. Lipaspis caulicola.

Leipaspis caulicola, *Woll., loc. cit.* 142. pl. vii. f. 1 (1862).

Habitat Teneriffam, intra caulem putridum *Euphorbiæ canariensis* in montibus supra Sanctam Crucem capta.

The only specimen which I have seen hitherto of this insect was captured by myself, within the putrid stems of a *Euphorbia canariensis*, on the mountains above S^ta^ Cruz of Teneriffe,—in the direction of Las Mercedes.

Genus 84. TROGOSITA.

Olivier, *Ent.* ii. 19 [script. *Trogossita*] (1790).

§ I. *Prothorax subcordatus: antennæ apicem versus gradatim incrassatæ.*

199. Trogosita mauritanica.

Tenebrio mauritanicus, *Linn., Syst. Nat.* ii. 674 (1767).
Trogossita mauritanica, *Oliv., Ent.* ii. 19. 6 (1790).
Trogosita caraboides, *Brullé, in Webb et Berth. (Col.)* 71 (1838).
—— mauritanica, *Woll., Ins. Mad.* 154 (1854).
—— ——, *Id., Cat. Mad. Col.* (1857).
—— caraboides, *Hartung, Geolog. Verhältn. Lanz. und Fuert.* 140 & 141.

Habitat Lanzarotam, Fuerteventuram, Canariam et Teneriffam, in domibus et præsertim sub recremento farris circa basin acervorum tritici sparso, hinc inde vulgaris.

The almost cosmopolitan *T. mauritanica* is doubtless an introduced insect in these islands,—no less than it is at Madeira. It has, however, completely established itself in various places, where it is often excessively common. It is beneath the refuse which strews the ground around the base of corn-stacks where it more particularly abounds; and in such situations I have observed it plentifully in Lanzarote and Fuerteventura,—in company with the *Silvanus surinamensis*, *Aglenus brunneus*, *Tenebrio obscurus*, *Cryptophagus dentatus*, *Corticaria serrata*, and certain other species. And I have taken it in houses (in the neighbourhood of grain, and other farinaceous sub-

stances) both in Grand Canary and Teneriffe, in the latter of which it has also been captured by the Barão do Castello de Paiva. In Lanzarote and Fuerteventura it was likewise met with by M. Hartung. There can be little doubt that it is universal throughout the archipelago.

§ II. *Prothorax subquadratus: antennæ ad apicem subito clavatæ (articulis* 9no, 10mo *et* 11mo *clavam distinctam intus serratam efficientibus).*

200. Trogosita recta.

T. elongata, subdepressa, piceo-fusca, subopaca; capite prothoraceque profunde sed haud dense oblonge punctatis, hôc ad latera oblique recto, angulis anticis porrectis, angulis ipsissimis posticis exstantibus; elytris fusiformi-parallelis, profunde crenato-striatis.—Long. corp. lin. 3.

Trogosita recta, *Woll., Trans. Ent. Soc. Lond.* (3rd series) i. 144 (1862).

Habitat Lanzarotam borealem, in trunco quodam *Euphorbiæ* putrido semel capta.

Though certainly distinct from it, the present *Trogosita* is very closely related to the Madeiran *T. serrata*. It is, however, a little darker and less parallel than that insect (its prothorax being a little wider in front, and the elytra a little more evidently dilated behind the middle); its prothorax is not *quite* so densely punctured, more coarsely margined, and straighter (though oblique) at the sides,—with its anterior angles more porrect, and its *extreme* basal ones more prominent; its whole body is a trifle less cylindric; and its tibiæ are less evidently pubescent along their inner edge. In its habits, too, it would appear to recede from that species,—the unique example which has come under my notice having been taken from out of a dead *Euphorbia*-stem at Yè, in the north of Lanzarote, during our encampment there in March 1859; whereas the *T. serrata* has hitherto been detected only about the houses of Funchal and amongst various articles of commerce,—leading to the supposition that it has probably been accidentally introduced into the island.

In its mode of life indeed the *T. recta* seems to be coincident with the *latens*; nevertheless it may be immediately known from that insect by its much smaller size, less parallel outline, and reddish-brown hue (the *latens* being black), by its less depressed upper surface, by the straighter sides and more porrected anterior angles of its prothorax, by its less deeply striated elytra, and by its rather shorter and less clavated antennæ,—the ultimate joint particularly being considerably less developed.

201. Trogosita latens.

Trogosita latens, *Woll., Trans. Ent. Soc. Lond.* (3rd series) i. 143 (1862).

Habitat in Lanzarota, Teneriffa et Hierro, sub cortice *Euphorbiarum* laxo putrido latens.

This very distinct *Trogosita* (the characters of which are fully pointed out in my paper alluded to under *Leipaspis lauricola*) appears to be both scarce and local, and confined (so far as observed hitherto) to the rotten Euphorbias, beneath the damp bark of which it lies concealed,—generally towards the *base* of the stems, and even underground near the roots. In such places it was found by Mr. Gray and myself on the Risco overlooking the Salinas, in the extreme north of Lanzarote, during January 1858; and I subsequently captured it, in similar spots, at Taganana of Teneriffe and in the district of El Golfo, on the western side of Hierro.

Fam. 15. COLYDIADÆ.

Genus 85. MONOTOMA.

Herbst, *Natursyst.* v. (1793).

202. Monotoma spinicollis.

Monotoma spinicollis, *Aubé, Ann. de la Soc. Ent. de France*, vi. 463. pl. 17. f. 6 (1837).
—— spinifera, *Woll., Cat. Mad. Col.* 67 (1857).

Habitat Teneriffam et Gomeram, sub quisquiliis degens.

A single specimen of this European *Monotoma* (which occurs also in Madeira) was taken by Mr. Gray from beneath vegetable refuse, in a garden near S^ta^ Cruz of Teneriffe, during the winter of 1858; and six others have lately been communicated by Dr. Crotch,—five of which he captured in Teneriffe, and the remaining one at Hermigua in Gomera.

203. Monotoma picipes.

Monotoma picipes, *Hbst, Käf.* v. 24 (1793).
—— ——, *Aubé, Ann. de la Soc. Ent. de France*, vi. 458. pl. 17. f. 3 (1837).
—— ——, *Redt., Fna Austr.* 203 (1849).
—— congener, *Woll., Cat. Mad. Col.* 68 (1857).

Habitat Teneriffam, a Dom. W. D. Crotch reperta.

I have not myself observed this common European insect at the Canaries; but four examples of it have been submitted to me by Dr. Crotch, who captured them, during the spring of 1862, in Teneriffe. In all probability it will be found to be pretty general, if searched for beneath decaying vegetable refuse,—in which position it likewise

occurs at Madeira, from whence I described it, in 1857, under the name of *M. congener*.

204. Monotoma quadricollis.

Monotoma quadricollis, *Aubé, Ann. de la Soc. Ent. de France*, vi. 465. pl. 17. f. 7 (1837).
—— ——, *Redt., Fna Austr.* 203 (1849).
—— ——, *Woll., Ann. Nat. Hist.* (3rd series) v. 263 (1860).

Habitat Lanzarotam, Fuerteventuram et Teneriffam, sub quisquiliis, passim.

The European *M. quadricollis* (which occurs also at Madeira) is rather common in certain positions at the Canaries. I have taken it abundantly, beneath vegetable *rejectamenta*, around Haria in the north of Lanzarote, from under camels' dung in the Rio Palmas of Fuerteventura, and near Orotava of Teneriffe; in the first of which islands it was found likewise by Mr. Gray and Dr. Crotch.

205. Monotoma 4-foveolata.

Monotoma 4-foveolata, *Aubé, Ann. de la Soc. Ent. de France*, vi. 468. pl. 17. f. 9 (1837).
—— ——, *Redt., Fna Austr.* 203 (1849).
—— ——, *Woll., Ann. Nat. Hist.* (3rd series) v. 264 (1860).

Habitat Lanzarotam et Teneriffam, rarissima.

The present *Monotoma* (which, like the last one, is a well-known European species, and which is found also at Madeira) would appear to be rare in these islands. Indeed hitherto I have myself taken but a single Canarian example,—namely near Haria, in the north of Lanzarote. Two more, however, have come beneath my observation, captured by Dr. Crotch in Teneriffe.

Genus 86. TARPHIUS.

(Germar) Erich., *Nat. der Ins. Deutsch.* iii. 256 (1848).

206. Tarphius simplex.

Tarphius simplex, *Woll., Journ. of Ent.* i. 382. pl. 19. f. 1 (1862).

Habitat Teneriffam, in lauretis editioribus, truncis ramulisque arborum prolapsis adhærens.

For the specific characters of the nine *Tarphii* here enumerated, and their various diagnostic features, I must refer to my paper (above alluded to) which has lately been published in the 'Journal of Entomology.' The *T. simplex* is not uncommon within the laurel-districts of Teneriffe,—where (like the other species) it may be found adhering to the undersides of pieces of wood, the fallen trunks of trees, stones,

&c., in the thickest and dampest parts of the forest. I have taken it at the Agua Mansa, Ycod el Alto, the Agua Garcia, Las Mercedes, and on the sylvan slopes above Taganana and Point Anaga.

207. Tarphius camelus.

Tarphius camelus, *Woll., loc. cit.* 383. pl. 19. f. 2 (1862).

Habitat ins. Hierro, in sylvaticis occidentalibus regionis "El Golfo" dictæ, mense Februario A.D. 1858, repertus.

The only two specimens which I have seen of this fine *Tarphius* were captured by myself, during February 1858, in the island of Hierro—in the dense sylvan region which forms the upper part of the district of El Golfo.

208. Tarphius canariensis.

Tarphius canariensis, *Woll., loc. cit.* 383. pl. 19. f. 3 (1862).

Habitat Canariam, Teneriffam et Palmam, in sylvaticis sat vulgaris.

The present *Tarphius* is apparently more widely spread over the archipelago than any of the other species here enumerated. In the wooded districts of Teneriffe it is universal—occurring, in similar spots as its allies, at the Agua Mansa, the Agua Garcia, Ycod el Alto, Las Mercedes, Taganana, &c.; and I have likewise taken it, though sparingly, at Osorio in Grand Canary, and (more abundantly) in the various sylvan regions of Palma. The examples from the latter island are just perceptibly narrower and less flattened than those from Teneriffe, and have their setæ a trifle longer, darker, and less thickened, their prothorax a little more scooped-out behind, their elytral nodules but seldom diluted in hue, and their antennæ perhaps (if anything) somewhat shorter; but I do not believe that they can be regarded as specifically distinct. I have, however, in my paper already alluded to, recorded them as a "var. β" of the *T. canariensis*.

209. Tarphius erosus.

Tarphius erosus, *Woll., loc. cit.* 384. pl. 19. f. 4 (1862).

Habitat in sylvaticis Teneriffæ, una cum specie præcedente degens.

It is just possible that this *Tarphius* may be but an extreme state of the *T. canariensis*, in which the prothorax is much more suddenly and deeply scooped-out behind than is the case in the ordinary type; nevertheless, since I have not been able to connect it with that insect, I think it would scarcely be safe to treat it as such,—more particularly since it possesses other minute distinctions of its own (which are fully pointed out in my "Notes on the *Tarphii*" already

referred to). Hitherto I have observed the *T. erosus* only in the laurel-woods towards the north-eastern portion of Teneriffe,—where, at Las Mercedes, as also above Taganana and Point Anaga, it occurs, not uncommonly, in company with the last species.

210. Tarphius quadratus.

Tarphius quadratus, *Woll., loc. cit.* 384. pl. 19. f. 5 (1862).

Habitat in lauretis editioribus Palmæ, rarissimus.

This broad and comparatively square *Tarphius* is apparently of the greatest rarity, and confined (so far as I have observed hitherto) to the laurel-regions of Palma,—where, during May and June of 1858, I captured it from beneath sticks and small pieces of wood on the ascent to the Cumbre above Buenavista, and towards the upper part of the Barranco de Galga.

211. Tarphius congestus.

Tarphius congestus, *Woll., loc. cit.* 385. pl. 19. f. 6 (1862).

Habitat in lauretis et pinetis Teneriffæ, rarissimus.

Likewise extremely rare, the only region in which I have hitherto captured it being that of the Agua Mansa of Teneriffe,—where I took it sparingly during May of both 1858 and 1859, not merely in the laurel-woods, but also amongst the *fir*-plantations on the ascent to the Cumbre.

212. Tarphius gigas.

Tarphius gigas, *Woll., loc. cit.* 386. pl. 19. f. 7 (1862).

Habitat Teneriffam, in sylvaticis rarissimus.

Two specimens only of this comparatively gigantic *Tarphius* have as yet come beneath my notice. They were both of them captured in the laurel-woods on the mountains between Taganana and Point Anaga, during May of 1859.

213. Tarphius caudatus.

Tarphius caudatus, *Woll., loc. cit.* 386. pl. 19. f. 8 (1862).

Habitat in lauretis excelsioribus Teneriffæ, hinc inde haud infrequens.

This curious species, so remarkable for its thick squarish body and flattened surface, and for the apical ridges of its elytra being lengthened out into a hinder process, or a kind of obtuse *tail*, is extremely local, but not very uncommon in the laurel-woods towards the north-eastern extremity of Teneriffe. In the highest (sylvan) part of the Las Mercedes' range, as also in the dense forest above Taganana, I took it, in tolerable abundance, during May 1859.

214. Tarphius deformis.

Tarphius deformis, *Woll., loc. cit.* 387. pl. 19. f. 9 (1862).

Habitat Teneriffam sylvaticam, late sed parce diffusus.

Widely spread over the sylvan regions of Teneriffe, though apparently everywhere scarce. I have taken it, very sparingly, at the Agua Mansa, the Agua Garcia, and by the edges of the Vueltas on the wooded mountains above Taganana.

Genus 87. COSSYPHODES.

Westwood, *Trans. Ent. Soc. Lond.* (new series) i. 168 (1851).

215. Cossyphodes Wollastonii.

Cossyphodes Wollastonii, *Westw., Trans. Ent. Soc. Lond.* i. 170 (1851).
—— ——, *Woll., Ins. Mad.* 146. tab. iii. f. 3 (1854).
—— ——, *Id., Cat. Mad. Col.* 49 (1857).

Habitat in formicarum nidis Teneriffæ et Gomeræ, rarissimus.

This very remarkable and interesting little insect, which occurs in ants'-nests in Madeira, is found also, in similar positions, at the Canaries. So far as I have observed hitherto, however, it appears to be exceedingly rare,—the only spots in which I have taken it being immediately outside the Puerto Orotava of Teneriffe and in the Barranco above San Sebastian of Gomera.

Genus 88. AULONIUM.

Erichson, *Nat. der Ins. Deutsch.* iii. 275 (1848).

216. Aulonium sulcicolle, n. sp.

A. elongatum, cylindricum, nitidum, piceo-nigrum, elytris, antennis pedibusque rufo-ferrugineis; capite prothoraceque minute punctulatis, illo antice picescentiore, postice bituberculato, hôc 4-sulcato, sulcis intermediis antice evanescentibus, postice divergentibus; elytris minutissime (sed vix subseriatim) punctulatis.—Long. corp. lin. 2–2$\frac{1}{3}$.

Habitat Teneriffam et Palmam rarissimum, sub cortice *Pini canariensis* emortuo erodens.

The present *Aulonium* seems, in some respects, to be intermediate between the European *A. sulcatum* and *bicolor*; though in its general colour and bituberculated head, as well as in the excessively fine punctules of its elytra, and the elevated, or costate, edge of the anterior portion of its outer prothoracic sulci, it has certainly more in common with the latter than with the former. It is, however, larger, and relatively broader, than the *A. bicolor*; its elytra are entirely rufo-ferruginous (instead of with the posterior portion black), and

are even still less evidently striate-punctate (the minute punctules being scarcely at all longitudinally disposed); its frontal tubercles are perhaps somewhat more developed; and its prothorax (which has a less perceptible tendency to be narrowed behind) has its two inner sulci less parallel, or more divergent on the posterior disc.

The *A. sulcicolle* seems to be exceedingly rare, and confined to the rotten bark of old pine-trees in the Pinals of intermediate and rather lofty elevations; under which circumstances I have taken it at the Agua Mansa in Teneriffe, and in the Barranco above S^ta^ Cruz in Palma.

Genus 89. **AGLENUS.**

Erichson, *Nat. der Ins. Deutsch.* iii. 285 (1848).

217. **Aglenus brunneus.**

Hypophlœus? brunneus, *Gyll., Ins. Suec.* iii. 711 (1813).
Cerylon obsoletum, *Steph., Ill. Brit. Ent.* iii. 98 (1830).
Aglenus brunneus, *Erich., Nat. der Ins. Deutsch.* iii. 285 (1848).
—— ——, *Woll., Ann. Nat. Hist:* (3rd series) v. 254 (1860).

Habitat in Lanzarota, Fuerteventura, Teneriffa, Gomera, Palma et Hierro, præsertim sub recremento farris circa basin acervorum tritici sparso, sat vulgaris.

The European *A. brunneus* (which occurs, in certain spots, around Funchal, in Madeira) is unquestionably universal in these islands,—though hitherto it does not happen to have been observed in Grand Canary. But in Lanzarote, Fuerteventura, (at the Banda of) Palma, and (to the westward of Valverde in) Hierro, I have met with it more or less abundantly, and it was found by Dr. Crotch in Teneriffe and Gomera. In the first two of those islands it occasionally teems beneath the refuse at the base of corn-stacks (in company with the *Trogosita mauritanica, Silvanus surinamensis, Cryptophagus dentatus* and *obesulus, Corticaria serrata, Tenebrio obscurus, Anthicus floralis*, &c.), where it has all the appearance of being an introduced insect.

Genus 90. **EUROPS.**

Wollaston, *Ins. Mad.* 149. tab. iii. f. 2 (1854).

218. **Europs impressicollis.**

Europs impressicollis, *Woll., Ins. Mad.* 150. tab. iii. f. 2 (1854).
—— ——, *Id., Cat. Mad. Col.* 50 (1857).
—— ——, *Id., Trans. Ent. Soc. Lond.* (3rd series) i. 145 (1862).

Habitat Euphorbias emortuas insularum omnium Canariensium, vulgaris.

The Madeiran *E. impressicollis* is *universal* at the Canaries; in the

whole seven islands of which I have myself taken it, except in Gomera,—where however it was captured, during the spring of 1862, by Dr. Crotch. In Lanzarote and Hierro it was found also by Mr. Gray; and, on the 11th of March 1859, I met with it even on the little island of Graciosa, off the extreme north of the former. It is confined exclusively to the rotten *Euphorbia*-stems, on which it subsists (in company with the *Aphanarthra*, and the various other insects peculiar to those plants), and where it frequently abounds.

219. Europs duplicatus.

Europs duplicatus, *Woll., Trans. Ent. Soc. Lond.* (3rd series) i. 146 (1862).

Habitat Gomeram, in plantis putridis *Euphorbiæ canariensis* in collibus supra San Sebastian repertus.

It is somewhat remarkable that whilst failing to take the last species in Gomera, I should have captured the present one in its stead. As already stated, however, I have no doubt that the *E. impressicollis* is found in Gomera no less than in the other portions of the Group, and that consequently my meeting with the present *Europs* during our short stay in that island was merely accidental. Be this however as it may, I should state that the *E. duplicatus* (which, apart from all other differences, may be immediately recognized from its ally by having its prothorax free from a longitudinal impression, the place of which is occupied by two parallel rows of punctures) was taken abundantly from out of the putrid stalks of *Euphorbia canariensis* on the summit of a hill immediately to the south of San Sebastian, during February 1858.

Fam. 16. CUCUJIDÆ.

Genus 91. CAULONOMUS.

Wollaston, *Trans. Ent. Soc. Lond.* 147 (1862).

220. Caulonomus rhizophagoides.

Caulonomus rhyzophagoides, *Woll., Trans. Ent. Soc. Lond.* (3rd series) i. 149. pl. 7. f. 2 (1862).

Habitat in Lanzarota, Teneriffa et Hierro, in truncis *Euphorbiarum* emortuis unà cum genere *Europs* degens, sed multo rarior.

This interesting beetle (which I have described carefully in my Memoir on the "*Euphorbia*-infesting Coleoptera of the Canaries") is confined exclusively to the rotten Euphorbias, within the decayed stems and branches of which it resides,—in company with *Europs*,

Aphanarthrum, and the numerous other insects of like habits. It is, however, exceedingly rare. It was taken sparingly by Mr. Gray and myself in the extreme north of Lanzarote, during January 1858, as also (a few weeks later) in Hierro. And I subsequently captured several specimens of it on the mountains above S^ta^ Cruz, in Teneriffe. Its near resemblance *primâ facie* to the *Europs impressicollis* renders it liable to be overlooked amongst the hosts of that insect with which it usually lives in society; nevertheless its longer elytra and different antennæ will, on a closer inspection (apart from all the other distinctions fully pointed out in my paper above referred to), readily characterize it.

Genus 92. LÆMOPHLŒUS.

(Dejean) Erich., *Nat. der Ins. Deutsch.* iii. 315 (1848).

221. Læmophlœus granulatus.

Læmophlœus granulatus, *Woll., Ins. Mad.* 160 (1854).
—— ——, *Id., Cat. Mad. Col.* 52 (1857).

Habitat Canariam, Teneriffam et Palmam, sub cortice arborum præsertim in regionibus sylvaticis, hinc inde haud infrequens.

The *L. granulatus*, which occurs in the wooded regions of Madeira, is found in similar localities in these islands,—rarely descending below the forest-districts. I have taken it in Grand Canary, Teneriffe, and Palma; in the last of which it was also found by Mr. Gray. My Teneriffan specimens are from beneath bark on the densely clad mountains above Taganana (where the species is comparatively common), the Agua Garcia, and the Agua Mansa.

222. Læmophlœus clavicollis.

Læmophlœus clavicollis et vermiculatus, *Woll., Ins. Mad.* 161 et 163 (1854).
—— —— et ——, *Id., Cat. Mad. Col.* 52 et 53 (1857).
—— ——, *Woll., Trans. Ent. Soc. Lond.* (3rd series) i. 150 (1862).

Habitat insulas omnes Canarienses, sub cortice arborum et plantarum (præsertim *Euphorbiarum*) latens.

The present insect appears to be identical with the Madeiran *L. clavicollis* and *vermiculatus*,—the latter of which cannot, I believe, be kept distinct from the former, and must consequently be suppressed. It is *universal* throughout the Canarian archipelago; for although I did not happen to observe it in Gomera, I have examined a specimen which was found in that island, during the spring of 1862, by Dr. Crotch. In the other six islands of the Group I have myself captured it, in various situations and altitudes; and it was met with in Hierro

by Mr. Gray. It occurs principally under the loose outer fibre of the Euphorbias; though it may be taken from beneath the bark of trees likewise. My Fuerteventuran specimens are from the Rio Palmas and the little island of Lobos in the Bocayna Strait; the Teneriffan ones from Orotava, the Agua Mansa, the Agua Garcia, Taganana, and the mountains above S^{ta} Cruz; and the Palman ones from the Barranco de Galga.

223. Læmophlœus pusillus.

Cucujus pusillus, *Schön., Syn. Ins.* iii. 55 (1817).
Læmophlœus pusillus, *Erich., Nat. der Ins. Deutsch.* iii. 321 (1848).
—— ——, *Woll., Ins. Mad.* 162 (1854).
—— ——, *Id., Cat. Mad. Col.* 52 (1857).

Habitat in oppidis Canariæ et Teneriffæ, forsan cum frumentariis in insulas introductus.

This little *Læmophlœus*—at once distinguished from the last species (apart from all other characters) by its *subquadrate* prothorax—is doubtless an importation into these islands, in like manner as it is at Madeira. I have taken it (in a house) at Las Palmas of Grand Canary, and also at S^{ta} Cruz of Teneriffe.

Genus 93. PEDIACUS.

Shuckard, *Elem. of Brit. Ent.* i. 185 (1839).

224. Pediacus tabellatus, n. sp.

P. parallelus, planus, rufo-ferrugineus, subnitidus, minute pubescens; capite prothoraceque distincte sed vix dense punctulatis, illo triangulari antice bisulcato oculis magnis prominentibus, hôc subquadrato ad latera 4-angulato-denticulato in disco longitudinaliter bisulcato; elytris vix clarioribus, leviter et dense punctulatis, margine sublaterali paulo elevato; antennis brevibus, crassis, obscurioribus. —Long. corp. lin. vix 2.

Habitat Teneriffam sylvaticam, sub cortice ad Agua Mansa semel lectus.

I am far from satisfied that this insect is more than a geographical state of the European *P. depressus*. Nevertheless, judging from a German example of that species now before me, which has been communicated from Berlin by Dr. Schaum, the Teneriffan one appears to be a trifle larger and broader, with its head just perceptibly more convex, and with its prothorax (which has the two wide but shallow depressions down its disc *continuous*, instead of being obscurely broken up into four impressions) a little more developed, with the lateral edges less conspicuously thickened, with the anterior angles somewhat more obtusely rounded off, and with the four denticles smaller

or more obsolete. Its scutellum, also, is perhaps a little less transverse; and the last three joints of its antennæ are, if anything, a trifle less incrassated. It is apparently very rare, the only specimen which has come beneath my notice having been captured by myself from under the bark of a felled Spanish chestnut-tree at the Agua Mansa in Teneriffe.

Genus 94. **XENOSCELIS***.

Wollaston, *Trans. Ent. Soc. Lond.* (3rd series) i. 151 (1862).

225. Xenoscelis deplanata.

Pristoscelis deplanatus, *Woll., loc. cit.* 152. pl. 7. f. 3 (1862).

Habitat in Teneriffa, Palma et Hierro, sub cortice *Euphorbiarum* laxo arido præsertim latitans.

This curious insect, so remarkable for the serrations along the inner edge of its hinder male-tibiæ, seems to be almost peculiar (so far as observed hitherto) to the dead *Euphorbia*-stems,—beneath the loose outer fibre of which it resides. In such positions it was taken by Mr. Gray, on the ascent to Valverde, on the eastern side of Hierro, and by myself (more abundantly) in the lower part of the district of El Golfo, on the western side of the same island. Subsequently I found a single specimen (beneath the bark of a pine-tree) on the mountains above S^ta^ Cruz, in Palma; and another below Taganana, in Teneriffe.

Genus 95. **SILVANUS.**

Latreille, *Gen. Crust. et Ins.* iii. 19 (1807).

226. Silvanus dentatus.

Corticaria dentata, *Mshm, Ent. Brit.* i. 108 (1802).
Silvanus dentatus, *Steph., Ill. Brit. Ent.* iii. 104 (1830).
—— ——, *Woll., Ins. Mad.* 167 (1854).
—— ——, *Id., Cat. Mad. Col.* 54 (1857).

Habitat in domibus Lanzarotæ, Teneriffæ et Gomeræ, certe introductus.

Only four Canarian specimens of this insect (which is undoubtedly an importation into these islands, no less than it is at Madeira) have as yet come beneath my notice. Two of them were taken by myself,—one (dead) in a house in Lanzarote, and the other (likewise dead) in a similar position at Ycod el Alto of Teneriffe; and the remaining two by Dr. Crotch in Gomera.

* I have changed the title of this genus, from *Pristoscelis*, to *Xenoscelis*, inasmuch as I have lately been informed by Mr. Pascoe that the former name was preoccupied by Dr. Leconte.

227. Silvanus surinamensis.

Dermestes surinamensis, *Linn., Syst. Nat.* i. 2. 565 (1767).
Anobium frumentarium, *Fab., Mant. Ins.* i. 39 (1787).
Dermestes 6-dentatus, *Fab., Ent. Syst.* i. 232 (1792).
Silvanus surinamensis, *Steph., Ill. Brit. Ent.* iii. 104 (1830).
—— ——, *Woll., Ins. Mad.* 167 (1854).
—— ——, *Id., Cat. Mad. Col.* 54 (1857).

Habitat in Lanzarota, Fuerteventura, Canaria, Palma et Hierro, in domibus, granariis et sub recremento farris circa basin acervorum tritici sparso, certe introductus.

This almost cosmopolitan insect has clearly been naturalized in these islands through the medium of commerce, in like manner as it has at Madeira. There can be no doubt that it is universal throughout the archipelago; nevertheless I happen hitherto to have observed it only in Lanzarote, Fuerteventura, Grand Canary, Palma, and Hierro (in the last of which it was also found by Mr. Gray). It is often common about houses and granaries, but abounds more particularly beneath the refuse around the base of corn-stacks; in which situation I have captured it in profusion at Haria, in the north of Lanzarote.

228. Silvanus nubigena.

S. angusto-elongatus, subconvexus, fusco-niger, dense flavescenti-cinereo-pubescens; capite prothoraceque rugose punctatis, hôc æquali, angusto, subcylindrico, postice vix angustiore, ad latera subrecto et distincte crenulato, angulis ipsis posticis obtusis sed argute determinatis, penicillatis; elytris rugose et dense seriatim punctatis, versus humeros interdum paulo fuscescentioribus; femoribus piceis, antennis, tibiis tarsisque piceo-ferrugineis.—Long. corp. lin. 1–1⅓.

Silvanus nubigena, *Woll., Ann. Nat. Hist.* (3rd series) xi. 217 (1863).

Habitat in editioribus aridis Teneriffæ, inter lapillos ramulosque emortuos sub arbusculis *Spartii nubigenæ* humi jacentibus, velocissime currens, necnon fere ad 9000′ s. m. ascendens.

In its general *facies*, colour, clothing, and outline, no less than in its unfoveolated prothorax and almost unclavated antennæ, the present very interesting and truly indigenous *Silvanus* has much in common with the European *S. elongatus*; nevertheless when closely inspected it will be seen to differ in many respects from that insect. Thus, apart from all other characters, it may immediately be known from it by its much slenderer tarsi, the antepenultimate joint of which is scarcely at all dilated or bilobed. In minor respects it is altogether a little smaller and narrower than the *S. elongatus*, its colour (especially of the limbs) is considerably browner (its shoulders

being often still more diluted, or subrufescent), its pubescence has a more conspicuously golden tinge, its prothorax more particularly is narrower, straighter at the sides, and (together with the head) more closely and roughly punctured, its legs are shorter and less robust, and its antennæ are less incrassated towards their extremity. In its habits it is very peculiar, being confined apparently to the dry elevated cindery districts of Teneriffe which are characterized by the presence of the "Retama" (or *Spartium nubigena*)—from about 6000 to perhaps 9000 feet above the sea,—where it occurs amongst the small stones and rotten sticks which accumulate around the roots of that remarkable Broom, running with the greatest velocity. In such situations I took it, not uncommonly, during May of 1859, both on the lofty Cumbre (adjoining the Cañadas) above Ycod el Alto and on the opposite range (likewise clothed with Retamas) above the Agua Mansa.

Fam. 17. TELMATOPHILIDÆ.

Genus 96. DIPHYLLUS.

Stephens, *Ill. Brit. Ent.* iii. 87 [script. *Biphyllus*] (1830).

229. Diphyllus lunatus.

Dermestes lunatus, *Fab., Ent. Syst.* i. 232 (1792).
Biphyllus lunatus, *Steph., Ill. Brit. Ent.* iii. 78 (1830).
Diphyllus lunatus, *Redt., Fna Austr.* 188 (1849).
—— ——, *Woll., Ins. Mad.* 172 (1854).
Biphyllus lunatus, *Id., Cat. Mad. Col.* 51 (1857).

Habitat Palmam sylvaticam, ad truncum arboris vetustum in Barranco da Agua, Maio exeunte A.D. 1858, sat copiose lectus.

This European insect (which occurs rarely at Madeira) appears to be very scarce, or at all events local, in the Canaries. The only island in which I have hitherto observed it is Palma; where, at the end of May 1858, I captured several specimens from off the trunk of an old laurel high up in the Barranco da Agua.

Genus 97. THALLESTUS.

Wollaston, *Trans. Ent. Soc. Lond.* (3rd series) i. 153 (1862).

230. Thallestus subellipticus.

Thallestus subellipticus, *Woll., loc. cit.* 155. pl. 7. f. 4 (1862).

Habitat Teneriffam, e plantis putridis *Euphorbiæ canariensis* in montibus supra Sanctam Crucem parce captus.

For the peculiarities of *Thallestus*, and the distinctions between

the present species and the following one, I must refer to my Paper on the "*Euphorbia*-infesting Coleoptera of the Canaries" which has been lately published in the 'Transactions of the Entomological Society of London.' The *T. subellipticus* seems to be decidedly rare, though possibly it might occur in considerable abundance were the rotten stalks of the *Euphorbia canariensis* to be well searched. The only specimens which I have seen were captured by myself, in the putrid stems of the above-mentioned plant, on the mountains above S^ta^ Cruz of Teneriffe, in the direction of Las Mercedes.

231. Thallestus typhæoides.

Thallestus typhæoides, *Woll., loc. cit.* 155. pl. 7. f. 6 (1862).

Habitat Gomeram, e plantis *Euphorbiæ canariensis* putridis in montibus supra San Sebastian mense Februario A.D. 1858 lectus.

The present *Thallestus* has precisely the same habits as the last one; but was found in Gomera instead of Teneriffe, and in considerable abundance. I captured it, early in February 1858, from out of the putrid stems of *Euphorbia canariensis* on a hill-top to the north of San Sebastian.

Fam. 18. CRYPTOPHAGIDÆ.

Genus 98. CRYPTOPHAGUS.

Herbst, *Käf.* iv. 172 [script. *Kryptophagus*] (1792).

232. Cryptophagus dentatus.

Kateretes dentatus, *Hbst, Käf.* v. 15. tab. 45. f. 6 (1793).
Cryptophagus dentatus, *Erich., Nat. der Ins. Deutsch.* iii. 364 (1848).
—— ——, *Woll., Cat. Mad. Col.* 56 (1857).

Habitat Lanzarotam, Fuerteventuram, Teneriffam et Palmam, passim.

The European *C. dentatus* appears to have established itself completely at the Canaries, in like manner as it has at Madeira,—being found not only about houses and granaries, but also in positions far removed from the towns. I have taken it under the refuse at the base of corn-stacks in Lanzarote, from beneath camels' dung in the Rio Palmas of Fuerteventura, from under the bark of trees at the Agua Garcia and the Agua Mansa of Teneriffe, and in similar positions in Palma. It is a variable insect, both in size and colour—assuming sometimes, particularly in sylvan spots, a dark-brownish hue; but its rather elongate outline and the shape of its prothorax will always serve to identify it.

233. Cryptophagus affinis.

Cryptophagus affinis, *Sturm, Deutsch. Fna,* xvi. 79. t. 314. f. C (1845).
—— ——, *Erich., Nat. der Ins. Deutsch.* iii. 360 (1848).
—— ——, *Woll., Ins. Mad.* 170 (1854).
—— ——, *Id., Cat. Mad. Col.* 57 (1857).

Habitat in domibus Teneriffæ et Hierro, minus frequens sed certe introductus.

For the exact distinctions between the present species and the last one I must refer to my Madeiran Catalogue (cited above). The *C. affinis*, so far as I have observed hitherto, occurs (as in Madeira) exclusively about houses—being clearly an imported insect into these islands. In such positions I have taken it at S^ta^ Cruz and Orotava in Teneriffe, and at Valverde in Hierro,—in the former of which islands it was also captured by Mr. Gray and Dr. Crotch.

234. Cryptophagus obesulus, n. sp.

C. breviter oblongus, fusco-ferrugineus, pube sat elongatâ vix depressâ dense vestitus; prothorace subopaco, valde profunde et dense punctato, ad latera subrotundato, denticulo medio acuto; elytris paulo clarioribus, oblongis, dense punctatis.—Long. corp. lin. $\frac{3}{4}$–1.

Habitat Lanzarotam et Fuerteventuram; in illâ sub recremento farris circa basin acervorum tritici sparso, sed in hac etiam sub stercore camelino ad Rio Palmas captus.

From the *C. affinis* the present *Cryptophagus* may be known by its rather smaller size, relatively more deeply and closely punctured surface, and by its (subopake) prothorax having the anterior ridge and central denticle less prominent or defined. The space, moreover, between the latter and the hinder angle is more coarsely crenulated. Small examples of it might sometimes be almost confounded, at first sight, with the following species; nevertheless it is certainly distinct from that insect. It may be known from it by being on the average rather larger, broader, and more parallel; by its pubescence being a little longer, denser, and less depressed; by its punctation being altogether somewhat deeper, and closer; by its prothorax being *proportionally* a trifle wider, shorter, and less straightened at the sides; and by its wings being fully developed. I may add that it was examined by Dr. Kraatz, who regarded it as new. I have taken it rather commonly from beneath the refuse around the base of corn-stacks at Haria, in the north of Lanzarote, and from under camels' dung in the Rio Palmas of Fuerteventura,—to which two islands it would seem (so far at least as has been observed hitherto) to be peculiar. In Lanzarote it was likewise found by Mr. Gray.

235. Cryptophagus fusiformis.

C. oblongo-fusiformis, angustulus, fusco-ferrugineus, pube minus elongatâ subdepressâ vestitus; prothorace profunde et dense punctato, ad latera subrecto, denticulo medio acuto; elytris subfusiformibus (*i. e.* antice et postice subattenuatis, vel ibidem utrinque oblique subtruncatis), sat dense punctatis; alis obsoletis.—Long. corp. lin. vix $\frac{3}{4}$.

Cryptophagus fusiformis, *Woll., Trans. Ent. Soc. Lond.* (3rd series) i. 156 (1862).

Habitat Teneriffam, præcipue sub cortice *Euphorbiarum* in montibus supra Sanctam Crucem crescentium deprehensus.

As already stated, the present *Cryptophagus* has something in common, at first sight, with the last one; nevertheless its rather smaller size and relatively narrower and more fusiform outline (the elytra particularly being less parallel, or subattenuated both before and behind), in conjunction with its somewhat shorter and more depressed pubescence, its rather less deeply punctured surface, and the straighter sides of its prothorax, will serve to distinguish it from that species. It is often, also, of a browner hue,—the elytra being but seldom of a clearer colour than the head and prothorax; and (which is very unusual for a *Cryptophagus*) its wings are obsolete. In its habits, too, it recedes from the *C. obesulus*, and is more strictly indigenous. I have taken it hitherto only in Teneriffe, in spots far removed from habitations,—such as at Las Mercedes, and from beneath the dead bark of Euphorbias on the mountains above S^ta^ Cruz, overlooking the plain of Laguna.

236. Cryptophagus hesperius.

C. fusiformi-oblongus, rufo-ferrugineus, pube brevi albidâ parce vestitus; prothorace profunde et dense punctato, postice angustato, angulis anticis ampliatis, ad latera denticulis acutis circa 4–5 armato; elytris subfusiformibus, sat dense punctatis; antennis pedibusque longiusculis, graciliusculis, vix pallidioribus.

Variat colore obscuriore, in elytris interdum etiam nigro-brunneo.

Var. β. occidentalis [an species distincta?] prothoracis denticulis obsoletis; elytris magis fusiformibus convexis, ad humeros paulo magis rotundatis.—Long. corp. lin. $\frac{2}{3}$–$\frac{3}{4}$.

Cryptophagus hesperius, *Woll., Ann. Nat. Hist.* (3rd series) xi. 217 (1863).

Habitat in sylvaticis et subsylvaticis Canariæ, Teneriffæ, Gomeræ et Palmæ, vulgaris: *varietatis β* exemplar unicum, in ins. Hierro captum, solum vidi.

In its small size, rather elongate and slender limbs, and general

aspect, the present insect is more suggestive, at first sight, of a *Paramecosoma* than of a *Cryptophagus*; and as such it was regarded by Dr. Kraatz, on a superficial examination of it two years ago. Nevertheless there can be no question that it is, in reality, a true *Cryptophagus*, since the hinder feet of its males (almost the only structural character of importance which distinguishes that genus from *Paramecosoma*) are most conspicuously tetramerous,—of which I have thoroughly convinced myself by mounting the posterior legs of both sexes in balsam, for the microscope. It is, in point of fact, nearly related to the common European *C. vini*—not only in the shape of its basally-narrowed prothorax, but also in its comparatively minute size; nevertheless it is, on the average, a little smaller still than that species, its prothorax is rather more closely punctured, with its hinder angles more evidently right angles, and its elytra are somewhat more fusiform—being rounder at the sides, or more perceptibly narrowed at either extremity. The form of its prothorax will, even alone, at once separate it from all the foregoing *Cryptophagi*—being comparatively more attenuated posteriorly and wider in front, with the anterior angles a good deal developed (or obliquely-thickened), and with the lateral margin armed with four or five small, acute, subequal teeth.

The *C. hesperius* is universal in the sylvan and subsylvan districts of Grand Canary, Teneriffe, Gomera, and Palma. In the first of these I have taken it more particularly throughout the region of El Monte; in the second, at Taganana, Las Mercedes, La Esperanza, the Agua Garcia, and Souzal; and in the fourth, about the wooded slopes of the Barranco da Agua and Galga. It was found by Dr. Crotch, also, at Hermigua in Gomera. When in the island of Hierro I captured a single specimen which has its prothoracic denticles obsolete, and its elytra more fusiform, or rounded at the sides; and I have treated it as a "*var.* β" of the present insect,—at the same time giving it a name, in the event of further material proving it hereafter to be specifically distinct.

(Subgenus?) 99. **MNIONOMUS.**

Corpus ellipticum, apterum: *prothorace* subconico, basi bisinuato, angulis posticis subproductis: *mesosterno* in medio canaliculato: *antennis pedibus*que crassis; *tarsis* articulo primo breviusculo, *anterioribus* subtus dense pilosis.

237. **Mnionomus ellipticus,** n. sp.

M. fusco-ferrugineus, convexus, nitidus, pube brevi depressâ flavo-albidâ parce vestitus, punctatus; prothorace longiusculo, ad latera

subrecto et denticulo medio acuto minutissimo armato, angulis anticis vix incrassatis; elytris ad basin prothorace haud latioribus, pone basin rotundatis, inde ad apicem leviter acutioribus et ad apicem paulo dilutioribus; antennis pedibusque rufo-testaceis.—Long. corp. lin. vix $1\frac{1}{3}$.

Habitat Teneriffam sylvaticam, inter muscos et humi sub foliis marcidis in lauretis ad Las Mercedes et Agua Garcia repertus.

Until I had examined accurately this curious insect I had failed entirely to identify it with *Cryptophagus*,—its convex, elliptic, apterous body and comparatively shining surface, in conjunction with its thickened limbs and subconical prothorax (which is wide behind —where it is of the same breadth as the base of the elytra—and bisinuated along its posterior margin, causing the hinder angles to be slightly produced), giving it a *primâ facie* appearance totally distinct from any of the representatives of that genus with which I am acquainted. Nevertheless, after a careful dissection of it, and a consideration of the various details of its structure, I cannot detect a single character, apart from the above-mentioned external ones, to justify its *entire* isolation. Its oral organs indeed are all of them precisely identical with those of the normal *Cryptophagi*, its hinder male-tarsi are tetramerous, and its prothorax when closely inspected will be seen to have its anterior angles slightly incrassated into the ordinary oblique ridge, and to be armed at about the middle of its lateral margins with a very minute denticle. Yet, whilst thus agreeing in every essential point with *Cryptophagus*, its outward characters cannot but stamp it as a most anomalous member of that Group,—since (in addition to its very peculiar *facies*) the completely apterous state of its body and the somewhat shortened first joint of its feet (the two anterior pair of which are densely pilose beneath) are features of considerable importance. Its under-segments are purely on the *Cryptophagus*-type, except that the mesosternum is more evidently channeled.

The *M. ellipticus* is apparently extremely rare, and confined (so far as I have observed hitherto) to the sylvan regions of Teneriffe. I have taken it sparingly, under fallen leaves, at the Agua Garcia; and (rather more commonly), amongst wet moss and vegetable detritus, on the steep sloping bank immediately to the left of the small waterfall in the wood of Las Mercedes.

Genus 100. **LEUCOHIMATIUM.**

Rosenhauer, *Die Thiere Andalus.* 179 (1856).

Corpus elongatum, angustum, parallelum; *capite* sat magno; *protho-*

race ad angulos anticos incrassato-ampliato necnon ad latera plus minus minutissime crenulato. *Antennæ* et *instrumenta cibaria* fere ut in generibus *Cryptophago* et *Paramecosomate*; sed *mandibulis* ad apicem grosse et longe bifidis necnon ad basin externam anguste incisis; *palporum maxillarium articulo basilari* minuto (nec elongato flexuoso), *secundo* elongato curvato clavato (nec brevi, sequentis longitudine), *ultimo* longissimo; et *mento* ad apicem haud emarginato, sed in parte mediâ producto et ibidem obtuse rotundato. *Pedes* ut in *Paramecosomate*, i. e. *tarsis* in utroque sexu 5-articulatis, articulo penultimo minuto.

As may be gathered from the above comparative diagnosis (drawn out from the European *L. elongatum*, described below), I believe that *Leucohimatium* possesses sufficient structural peculiarities of its own (as Dr. Kraatz has suggested—*vide* 'Berliner Ent. Zeitsch.' i. 190) to warrant its separation from *Paramecosoma*. M. Jacq. Duval indeed, in his 'Genera des Coléopt. d'Europe,' has not adopted it; but, apart from its differences of external *facies* (which are very considerable, and would of themselves incline us to suspect the presence of other less obvious ones), its very conspicuously and deeply bifid mandibles, in conjunction with the particular proportions (alluded to above) of the joints of its maxillary palpi, and its unemarginated, centrally-produced mentum, are, I think, more than enough to render its isolation both natural and desirable.

238. Leucohimatium elongatum.

L. fusco-ferrugineum, albido-pubescens; capite prothoraceque sat parce punctatis, hôc subquadrato postice paulo angustiore, angulis anticis oblique incrassatis, ad latera minutissime crenulato, basi utrinque foveolâ obscurâ punctiformi notato; elytris subtiliter striato-punctatis, interstitiis uniseriatim punctulatis.—Long. corp. lin. $1\frac{1}{3}$.

Paramecosoma elongata, *Sturm, Deutsch. Fna*, xviii. 72. pl. 342. f. a, A (1846).

—— ——, *Erich., Nat. der Ins. Deutsch.* iii. 371 (1848).

Leucohimatium angustum, *Rosenh., Die Thiere Andalus.* 179 (1856).

Habitat Palmam occidentalem; in regione calcareâ mox infra Argual sitâ Junio ineunte A.D. 1858 specimen unicum sub lapide inveni.

A single specimen of the European *L. elongatum* was captured by myself, from beneath a stone, on the calcareous plain immediately below Argual, on the western side of Palma, early in June 1858. It occurs also, though very rarely, in Madeira,—two examples having lately been detected, by Mr. F. A. Anderson, on the hills above Funchal.

Genus 101. **PARAMECOSOMA.**

Curtis, *in Ent. Mag.* i. 186 (1833).

239. **Paramecosoma simplex.**

Paramecosoma simplex, *Woll., Cat. Mad. Col.* 59 (1857).

Habitat Fuerteventuram et Gomeram; in illâ sub stercore camelino ad Rio Palmas mense Aprili ineunte A.D. 1859 tria specimina deprehensi; in hac cepit Dom. Crotch.

This insect, which is rather common (amongst vegetable refuse) around Funchal in Madeira, and which has so much the *primâ facie* aspect of a *Cryptophagus* or a *Typhœa*, is apparently scarce at the Canaries; though possibly it may be only local, having hitherto escaped our observation. At any rate I have myself taken, hitherto, but three examples—namely, under camels' dung, in the Rio Palmas of Fuerteventura, at the beginning of April 1859. Four more, however, were captured by Dr. Crotch, during the spring of 1862, at Hermigua in Gomera.

Genus 102. **HYPOCOPRUS.**

Motschulsky, *Bull. de Moscou*, 72 (1839) [script. *Upocoprus*].

240. **Hypocoprus Hochuthii.**

Myrmecinomus Hochuthii, *Chaud., Bull. de Moscou*, ii. 206 (1845).
Monotoma caucasicum, *Kolen., Melet. Ent.* iii. 43 (1845).

Habitat Teneriffam, a W. D. Crotch semel captus.

A single example of this minute insect was taken by Dr. Crotch in Teneriffe, during the spring of 1862. I can detect no appreciable difference in it from the European *H. Hochuthii*, unless perhaps the prothorax be a trifle more remotely punctured, and rather more impressed in the centre behind.

Regarding the affinities of *Hypocoprus*, I believe that it has nothing whatever to do, except in external *facies*, with *Monotoma* (despite the assertion of M. Jacq. Duval, who appears to have mistaken the structural features of the latter), but that all its details tend rather to associate it with *Paramecosoma*, *Leucohimatium*, and *Atomaria*. Indeed the proportions of its antennæ, with their lax triarticulate club and *unequal* intermediate joints, in conjunction with its slender limbs and pentamerous feet, are (apart from minor details) far more suggestive of the *Atomariæ* than of the thick-limbed, tetramerous *Monotomæ*, with their 10-articulated antennæ and compact, one-jointed club.

Genus 103. **ATOMARIA.**

(Kirby) Steph., *Ill. Brit. Ent.* iii. 64 (1830).

241. Atomaria pilosula, n. sp.

A. oblongo-ovata, rufo-ferruginea, punctata, pube longiusculâ minus depressâ (partim etiam suberectâ) albidâ vestita; prothorace convexo, ad basin ipsissimam transversim constricto, ad latera subæqualiter rotundato; elytris convexis, fere concoloribus, pygidium vix tegentibus.—Long. corp. lin. vix $\frac{7}{8}$.

Habitat editiores Teneriffæ, in excelsis illis "Cumbre v. Cañadas" dictis, semel capta.

Although I have, unfortunately, but a single specimen of this *Atomaria* to form an opinion from, I believe nevertheless that it is the exponent of a species truly distinct from the following one,—a supposition which is rendered the more probable from the fact of its having been captured on the lofty Cumbre of Teneriffe, adjoining the Cañadas, upwards of 8000 feet above the sea; whereas the *A. canariensis* is peculiar (so far as observed hitherto) to rather low and intermediate districts. Judging from the unique example now before me, the *A. pilosula* differs from the *canariensis* in being a little larger and more ovate (or less straightened at the sides), in having its pubescence longer and less depressed, in its punctation being a trifle less dense, in its scutellum being relatively somewhat wider and more transverse, and in its prothorax and elytra being each of them more convex. In the individual from which my diagnosis is drawn out there is, also, scarcely any indication of the suffused transverse elytral fascia, or cloud, which (more or less) characterizes its ally; but very likely this may be merely accidental.

242. Atomaria canariensis, n. sp.

A. suboblonga, rufo-ferruginea, punctata, pube brevi depressâ albidâ vestita; prothorace ad basin ipsissimam transversim paulo constricto, ad latera subæqualiter rotundato; elytris fasciâ mediâ magnâ plerumque valde indistinctâ suffusâ nigrescente nebulosis.
Variat fasciâ obsoletâ (elytris fere omnino rufo-ferrugineis).—Long. corp. lin. $\frac{2}{3}$–vix $\frac{3}{4}$.

Habitat insulas omnes Canarienses, in locis inferioribus et intermediis, passim.

The present *Atomaria* has somewhat the general aspect of the common European *A. atricapilla*; nevertheless it is on the average a trifle larger and more pubescent than that insect, its punctation is denser, its prothorax is both more and *less regularly* rounded at the sides, its head is never dark (being always concolorous with the rest of the surface), and its elytra are obscurely adorned with a large, ill-defined, suffused transverse fascia or cloud,—which, although often

very faintly expressed, is rarely quite absent in perfectly matured specimens. From the European *A. unifasciata* (which in colouring it slightly resembles) it is abundantly distinct, in all its features; but with the *A. contaminata* of Erichson it may perhaps have a greater affinity. It is *universal* throughout the archipelago. I have taken it (more or less abundantly) in the whole of the seven islands except Fuerteventura; and there is a single specimen now before me which I have found amongst the Coleoptera collected by Mr. Gray in that island. It is clearly more common in the central and western portions of the Group than in the eastern ones, and more general in subsylvan spots of intermediate elevations than elsewhere. It occurs, however, in the lowest districts also; but I have not detected it hitherto *above* the altitude of about 2500 feet. Thus, in Lanzarote, I have captured it near Haria; in Grand Canary, throughout the region of El Monte; in Teneriffe (where it was found also by Dr. Crotch), around S^ta^ Cruz, the Puerto Orotava, the Agua Garcia, Souzal, &c.; in Gomera, above San Sebastian; in Palma, on grassy slopes in the eastern Barrancos; and in Hierro, about Valverde.

243. **Atomaria ruficollis**, n. sp.

A. ovalis, punctata, pube brevissimâ depressâ albidâ parce vestita; capite prothoraceque læte ferrugineo-rufis, hôc ad basin ipsissimam vix transversim constricto, ad latera æqualiter rotundato; elytris convexis, nigris, ad apicem subacutis et ibidem paulo dilutioribus; antennis crassis, rufo-ferrugineis; pedibus rufo-testaceis.—Long. corp. lin. $\frac{2}{3}$.

Habitat Teneriffam sylvaticam, sub foliis marcidis humi latens.

In the colouring of its rufous head and prothorax and dark elytra, no less than in its shining and but very slightly pubescent surface and its thickened antennæ, the present beautiful and very distinct *Atomaria* is a good deal suggestive of the European *A. nigripennis*. It is, however, smaller, and relatively shorter (or more oval) than that insect, its punctation and pubescence are slightly coarser and denser, its prothorax is wider and less constricted behind, and less margined at the sides, and its antennal club is a little more abrupt. It is decidedly rare, and confined (so far as I have observed hitherto) to the sylvan districts of Teneriffe. I have taken it sparingly in the forest, at the edges of the Vueltas, above Taganana; and (more abundantly), from beneath damp leaves, on the steep, sloping bank immediately to the left of the small waterfall in the wood of Las Mercedes. A single specimen, also from Teneriffe, has lately been communicated by Dr. Crotch.

Genus 104. **EPISTEMUS.**

(Westwood) Steph., *Ill. Brit. Ent.* ii. 167 [script. *Ephistemus*] (1829).

244. **Epistemus gyrinoides.**

Dermestes gyrinoides, *Mshm, Ent. Brit.* i. 77 (1802).
Phalacrus dimidiatus, *Sturm, Deutsch. Fna,* ii. 85. t. 32. f. D (1807).
Ephistemus gyrinoides, *Steph., Ill. Brit. Ent.* ii. 168 (1829).
—— dimidiatus, *Woll., Ins. Mad.* 176 (1854).
—— gyrinoides, *Id., Cat. Mad. Col.* 63 (1857).

Habitat in Canaria, Teneriffa et Gomera, rarissimus.

The few examples of the *E. gyrinoides* which I have seen hitherto from these islands have the minute and distant punctules of their upper surface still less evident, beneath the microscope, than is the case in the ordinary European ones and in those from Madeira—being, in fact, scarcely distinguishable; nevertheless I cannot detect any character to warrant their separation from that species. I have taken it sparingly at Teror, in Grand Canary; as also near S^{ta} Cruz, and at the Agua Mansa, of Teneriffe; in which latter island, as well as in Gomera, it was found by Dr. Crotch.

Fam. 19. LATHRIDIADÆ.

Genus 105. **HOLOPARAMECUS.**

Curtis, *in Ent. Mag.* i. 186 (1833).

§ I. *Antennæ* 11-*articulatæ.*

245. **Holoparamecus caularum.**

H. rufo-testaceus, nitidus, subtilissime et parce pubescens; oculis sat magnis; prothorace antice lato, postice constricto, angulis posticis rectis, basi in medio late et fortiter transverse signato; elytris minute punctulatis, striâ suturali rectâ in utroque impressâ.—Long. corp. lin. vix $\frac{2}{3}$.

Calyptobium caularum, *Aubé, Ann. de la Soc. Ent. de France,* (2ième série) i. 244. pl. x. f. 2 (1843).
—— ——, *Redt., Fna Austr.* 204 (1849).

Habitat Lanzarotam, sub quisquiliis prope oppidum Haria repertus.

The present European *Holoparamecus* belongs, like the *H. niger*, to the Section of the genus in which the antennæ are 11-articulate. It may, however, be known from the latter by being a little larger, paler, and relatively more elongate; by its prothorax being wider in front, and much more conspicuously *embossed* in the centre behind, and by its sutural line being somewhat straighter. The example

described from, which I captured beneath vegetable refuse near Haria, in the north of Lanzarote, agrees precisely with a type of the *H. caularum* communicated to me some time ago by Dr. Aubé.

246. Holoparamecus niger.

Calyptobium nigrum, *Chevrier, in litt.*
—— ——, *Aubé, Ann. de la Soc. Ent. de France,* (2ième série) i. 246 (1843).
Holoparamecus niger, *Woll., Ins. Mad.* 182 (1854).
—— ——, *Id., Cat. Mad. Col.* 64 (1857).

Habitat Teneriffam: duo specimina, tempore vernali A.D. 1862, cepit Dom. Crotch.

Of the *H. niger*, which is universal throughout Madeira and Porto Santo, I have seen as yet but two Canarian examples. They were taken by Dr. Crotch in Teneriffe, during the spring of 1862. The characters which distinguish the species from the *H. caularum* have already been indicated. When viewed beneath a high magnifying power, the Canarian specimens of this insect (judging from the pair now before me) will be perceived to be a trifle more glabrous than the Madeiran ones (the excessively minute pubescence being, if possible, even still less traceable); also their elytra are a little less expanded before the middle, which causes the shoulders to appear somewhat less obliquely rounded-off: but I am satisfied that these very slight differences cannot be indicative, at the utmost, of more than an unimportant topographical state.

§ II. *Antennæ* 9- *et* 10-*articulatæ.*

247. Holoparamecus singularis.

H. subdepressus, rufo-testaceus, subnitidus, subtiliter et minus parce pubescens; oculis minutissimis; prothorace antice latiusculo, postice angustiore sed haud constricto, angulis posticis subobtusis, basi in medio anguste et minus fortiter transverse signato (impressione subluniformi); elytris paulo distinctius punctulatis, striâ suturali rectâ in singulis impressâ.—Long. corp. lin. $\frac{1}{2}$.

Silvanus singularis, *Beck, Beitr. zur Baierisch. Insectenf.* (1817).
Amphibolonarzron difficile, *Villa, Cat. Col. Eur.* 26 (1833).
Holoparamecus depressus, *Curt., Ent. Mag.* i. 186 (1833).
—— ——, *Id., Brit. Ent.* xiii. 614 (1836).
Calyptobium Villæ, *Aubé, Ann. de la Soc. Ent. de France,* (2ième série) i. 243. pl. x. f. 1 (1843).

Habitat Lanzarotam, in eodem loco ac præcedens semel captus.

As may be gathered from the diagnosis, the excessively minute eyes and rather more pubescent, depressed, and less shining surface of this insect, in conjunction with its somewhat less anteriorly-widened and

not so posteriorly-constricted prothorax (which has its basal angles more obtuse, and its hinder central space, between the foveæ, both *narrower* and *much less elevated*, or embossed), will at once serve, apart from the numerical peculiarities of its antennal joints, to distinguish it from the *H. caularum*. As regards this latter character indeed, it would appear that whilst some of the individuals of this species have those organs composed of only nine articulations, others have them made up of ten,—a feature which, in all probability, is a sexual one; but so singular a fact has occasioned, not unnaturally, some little confusion in the synonymy—the insect having, in consequence, been described under several different names. In specimens, however, which I have received from the Abbé Stabile of Milan, from Prof. Heer of Zurich, and from the late Mr. Melly of Liverpool (the *last two* sets of which were labelled as types coming from M. Villa, and all of which I believe are specifically identical), there are, in each case, examples falling under both of these categories. In the only Canarian specimen which has as yet come beneath my observation the antennæ are 10-articulate; which thus far, therefore, agrees with (I imagine both sexes of) the *H. Kunzei* *. Nevertheless it could not possibly be confounded with that species, since its smaller size, rather narrower outline, and more pubescent surface, combined with its comparatively diminutive eyes and less posteriorly-constricted and less basally-embossed prothorax, will suffice to separate it therefrom. My unique Canarian example was, like that of the *H. caularum*, captured from under vegetable refuse at Haria, in the north of Lanzarote.

Genus 106. **CORTICARIA.**

Marsham, *Ent. Brit.* i. 106 (1802).

248. **Corticaria fulva.**

Latridius fulvus (*Chevr.*), *Villa, Cat. Col. Eur.* 45 (1833).
Corticaria fulva, *Mann., in Germ. Zeitsch. für die Ent.* v. 42 (1844).
—— ——, *Woll., Ins. Mad.* 185 (1854).
—— ——, *Id., Cat. Mad. Col.* 65 (1857).

Habitat in domibus Lanzarotæ et Teneriffæ, forsan introducta.

The European *C. fulva*, remarkable for its pallid hue, coarse pubescence, and rather robust, elongate legs, is apparently scarce in these islands,—where, as in Madeira, it has most probably become

* It is rather curious that *all* the *Holoparameci* as yet characterized (four in number) have now been detected in the Atlantic islands,—namely, the *H. Kunzei* at Madeira, the *caularum* and *singularis* at the Canaries, and the *niger* in both Groups.

naturalized from more northern latitudes. I have taken it sparingly, in and about houses, in Lanzarote and Teneriffe.

249. Corticaria maculosa.

Corticaria maculosa, *Woll., Ann. of Nat. Hist.* (3rd series) ii. 408 (1858).
—— ——, *Id., Trans. Ent. Soc. Lond.* (3rd series) i. 156 (1862).

Habitat insulas Canarienses, in Canaria Grandi solâ adhuc haud detecta.

The *C. maculosa*, which I described fully in my Paper on 'Madeiran Additions' cited above, may be said without hesitation to be *universal* throughout the archipelago; for although I do not happen to have met with it hitherto in Grand Canary, there cannot be any doubt that it must exist there, no less than in the remaining six islands of the Group,—in all of which I have captured it, more or less abundantly. It occurs in various situations, but is more common, I think, beneath the dry outer fibre of the dead Euphorbias than elsewhere. In such positions I have observed it frequently at Haria, in the north of Lanzarote; as also on the mountains above S^ta^ Cruz of Teneriffe, and even on the little isle of Lobos, off the extreme north of Fuerteventura. In Fuerteventura itself, however, I brushed it, in considerable numbers, on the 28th of January 1858, from off an old bush of the common Rosemary (*Rosmarinus officinalis*, L.), at Agua Bueyes; and I have taken it out of the crevices of wood (used for a gate) in the Barranco above San Sebastian, of Gomera. It would seem likewise to be independent of elevation; for in Teneriffe I have found it from almost the sea-level (at S^ta^ Cruz and Puerto Orotava) to the slopes above Taganana, the Agua Mansa, and even to the lofty Cumbre adjoining the Cañadas,—at an altitude of more than 8000 feet*. In Teneriffe and Gomera it was met with also by Dr. Crotch.

The pale hue and dark (though often very obscure, and generally interrupted) postmedial fascia of this *Corticaria* will at once readily distinguish it. Examples, however, in which the elytral patch is quite obsolete (and such are by no means uncommon, particularly where the insect is immature) might almost be confounded, *primâ facie*, with those of the *C. fulva*; nevertheless they may always be known from the latter by their pubescence being shorter and less coarse, by their prothoracic fovea being somewhat shallower, by their elytra being

* The single example which I detected at this great elevation has its pubescence a trifle longer and coarser than is the case in the ordinary ones; but I can see nothing about it to warrant the suspicion that it is specifically distinct.

rather more evidently ovate (instead of oblong-oval), and by their legs being proportionally a little shorter and slenderer. The species, too, is *on the average* decidedly smaller than the *C. fulva*.

250. **Corticaria serrata.**

Dermestes serratus, *Payk.*, *Fna Suec.* i. 300 (1798).
Latridius serratus, *Gyll.*, *Ins. Suec.* iv. 126 (1827).
Corticaria serrata, *Mann.*, *in Germ. Zeitsch.* v. 28 (1844).
—— rotulicollis, *Woll.*, *Ins. Mad.* 184 (1854).
—— ——, *Id.*, *Cat. Mad. Col.* 64 (1857).

Habitat in Lanzarota, Fuerteventura, Teneriffa et Hierro, in domibus, granariis et præsertim sub recremento farris circa basin acervorum tritici sparso, vulgaris.

A more recent and careful comparison has convinced me that the *Corticaria* which I described in my 'Insecta Maderensia' under the specific name of *rotulicollis* is coincident with the European *C. serrata*; and I have therefore corrected the synonymy accordingly. Although hitherto I have taken the *C. serrata* only in Lanzarote, Fuerteventura, Teneriffe, and Hierro, I have but little doubt that it is universal throughout the archipelago; for as it has every appearance of having been naturalized from more northern latitudes (occurring principally about houses and granaries*), it is pretty certain that it will be found equally in all the islands if only searched for in its proper situations. It is beneath the refuse around the base of corn-stacks that it is principally to be met with; where it usually resides in company with the *Trogosita mauritanica*, *Silvanus surinamensis*, *Cryptophagus dentatus*, *Aglenus brunneus*, *Tenebrio obscurus*, and similar introduced species. Under such circumstances I have observed it in the greatest profusion at Haria, in the north of Lanzarote; and, during February 1858, I brushed it, in scarcely less abundance, from out of some ivy which covered the walls of an old building at El Golfo, on the western side of Hierro. My Fuerteventuran examples are from the Rio Palmas; and the Teneriffan ones from the precincts of a house at the Agua Mansa.

251. **Corticaria angulata,** n. sp.

C. oblongo-ovata, rufo-ferruginea, sat longe et grosse cinereo-pubescens; capite prothoraceque subopacis, hôc angustulo, ad latera (oculo armato) crenulato necnon in medio angulato-latiore, rugoso-punctato, postice foveâ transversâ impresso; elytris vix fuscescentioribus, subnitidis, leviter punctato-striatis, interstitiis uniseriatim

* Gyllenhal's observation "Habitat ad horreorum parietes" would seem to imply that the insect has much the same mode of life in Sweden as it has at the Canaries.

punctulatis; antennis breviusculis pedibusque testaceis.—Long. corp. lin. $\frac{2}{3}$–vix $\frac{3}{4}$.

Habitat Lanzarotam, Fuerteventuram et Canariam, hinc inde haud infrequens.

In its pale-fuscous (or testaceo-fuscous) hue, rather long and coarse pubescence, pallid limbs, and very peculiar prothorax (which, although narrow on the whole, is widened and *angular* on either side in the middle, minutely crenulated at the edges, and strongly impressed with a transverse fovea behind), the present *Corticaria* is abundantly characterized. Whether it be identical with any of the numerous ones in Mannerheim's Monograph I will not undertake to say; but it is certainly very nearly related to a Russian species in my collection bearing the name of *angulosa*, Motschulsky, and which was given me by the latter some years ago. Indeed, in its singularly shaped prothorax and general hue it is almost coincident with it; and possibly it may be but a local state of the same insect. Nevertheless, since I am not aware that M. Motschulsky has ever *published* his *C. angulosa*, and since the only example of that species from which I am compelled to form an opinion does not quite agree with the Canarian one, I have thought it safer to treat the latter as new, and have therefore characterized it under the (almost similar) title of *angulata*. Judging from the single specimen of Motschulsky's *angulosa* now before me, the *C. angulata* differs principally in its somewhat more oblong (or less rounded) outline, in its rather more developed prothorax (which is a little more prominent, or angular, in the middle, and has its sides, when viewed beneath the microscope, more evidently crenulated), in its longer and less decumbent pubescence, in its totally unkeeled forehead, and in its paler antennæ.

Hitherto I have observed the *C. angulata* only in the three eastern islands of the archipelago—Lanzarote, Fuerteventura, and Grand Canary. In the first of these it is apparently scarce; but in the second I took it commonly at Agua Bueyes and in the Rio Palmas; whilst in the third I beat it, in considerable abundance, from out of an old bush of a yellow *Ononis* at Mogan, towards the south-western portion of the island.

252. Corticaria curta.

Corticaria curta, *Woll., Ins. Mad.* 187 (1854).
—— ——, *Id., Cat. Mad. Col.* 65 (1857).

Habitat in Lanzarota, Fuerteventura, Canaria, Teneriffa, Gomera et Palma, late diffusa.

The present *Corticaria*, which abounds in the Madeiran Group, is

doubtless universal at the Canaries, though I did not happen to meet with it in Hierro; for there can be but little question that it must exist in that island also. It is found at nearly every elevation, and in spots both sylvan and exposed. In Lanzarote and Fuerteventura it would seem to be somewhat scarce; but throughout the region of El Monte in Grand Canary it is commoner; in Teneriffe I have taken it around S^ta^ Cruz, at Souzal, the Agua Garcia, the Agua Mansa, and Ycod el Alto; and in Palma I observed it, but sparingly. In Gomera it was found, rather abundantly, by Dr. Crotch. In size it is intermediate between the last species and the following one; and it may easily be recognized by its somewhat broad, compact, and ovate outline, rather wide and laterally-rounded prothorax (which has the punctures comparatively remote, distinct, and well defined, a shallow, more or less rounded fovea in the centre of its base, and its extreme hinder angles minutely prominent), by its *reddish*-brown hue (particularly of the head and prothorax), and by its pallid limbs, —even the antennal club not being infuscated.

253. **Corticaria tenella,** n. sp.

C. ovata, nigro-picea, minutissime et parce cinereo-pubescens; capite prothoraceque subopacis, hôc angusto, ad latera subintegro necnon æqualiter et leviter rotundato, dense rugoso-punctato, postice foveâ transversâ subarcuatâ impresso; elytris vix nigrescentioribus, subnitidis, convexis, leviter punctato-striatis, interstitiis uniseriatim punctulatis; antennis pedibusque rufo-testaceis, illarum clavâ obscuriore.

Var. β. Capite prothoraceque paulo rufescentioribus. [*Insulæ* Gomera et Hierro.]—Long. corp. lin. ½–vix ⅔.

Habitat in Canaria, Teneriffa, Palma, Gomera et Hierro, passim.

In its minute size, convex, ovate body, and narrow, posteriorly-impressed prothorax, the present insignificant little *Corticaria* is closely allied to the common European *C. gibbosa*. It is however, on the average, still smaller than that species, and of a blacker (or less fuscous) hue; its prothorax is not quite so narrow, a trifle rounder at the sides, more closely, roughly, and less definitely punctured, and with the hinder impression shallower; its head and prothorax are often (at any rate in the *var.* β, from Gomera and Hierro) of a rather more piceous, or even subrufescent, hue; and its antennæ are a little less abbreviated. I have taken it sparingly, and in various positions, in Grand Canary, Teneriffe, Palma, and Hierro; and it was found, rather plentifully, by Dr. Crotch in Gomera; but it has not yet been detected in the two eastern islands of the Group.

Genus 107. LATRIDIUS.

Herbst, *Natursyst.* v. 8 (1793).

254. Latridius minutus.

Tenebrio minutus, *Linn., Syst. Nat.* ii. 675 (1767).
Lathridius minutus, *Mann., in Germ. Zeitsch.* v. 96 (1844).
—— ——, *Woll., Ins. Mad.* 190 (1854).
—— ——, *Id., Cat. Mad. Col.* 65 (1857).

Habitat in Canaria, Teneriffa, Gomera, Palma et Hierro, passim.

The Canarian specimens of this common European *Latridius* (which has an excedingly wide geographical range) have their elytra perhaps a trifle more deeply punctate-striated (causing the interstices to appear rather more convex) than is the case in the ordinary ones and in those from Madeira, and their humeral *callus* is more evidently rufescent; but I can detect nothing about them to warrant the suspicion that they are specifically distinct. It is not a very abundant insect in these islands, but widely distributed over them. I have taken it in the region of El Monte in Grand Canary; at the Agua Garcia, the Agua Mansa, and Ycod el Alto, of Teneriffe; in the Barranco da Agua of Palma; and in Hierro. And it was captured, in considerable numbers, by Dr. Crotch in Gomera. I have but little doubt that it has been naturalized from more northern latitudes.

255. Latridius opacipennis, n. sp.

L. oblongo-ovatus, rufo-ferrugineus, opacus; capite prothoraceque profunde rugoso-punctatis, in medio canaliculatis, hôc latiusculo, transverso, angulis anticis obtuse rotundato-ampliatis, postice paulo angustiore, ad latera minute crenulato; elytris subdepressis, leviter substriato-punctatis, interstitiis latis planis; antennis brevibus, testaceis, clavâ minus abruptâ.—Long. corp. lin. $\frac{3}{4}$.

Habitat Teneriffam sylvaticam, ad Agua Garcia semel tantum repertus.

Amongst many examples of the *L. minutus* taken at the Agua Garcia, in Teneriffe, I find a single one which differs to a very remarkable extent (in some measure indeed even structurally) from the remainder; and from this the above diagnosis has been compiled. It differs from that species in its bright rufo-ferruginous hue, *opake* and less convex surface, in its very much broader prothorax (which has the anterior angles largely and obtusely rounded, and its edges minutely crenulated), in its very lightly sculptured elytra (the striæ of which are scarcely at all impressed, and the interstices wide and flattened), and in the less abrupt club of its rather shorter antennæ.

256. **Latridius ruficollis.**

Corticaria ruficollis, *Mshm, Ent. Brit.* i. 111 (1802).
Latridius ruficollis, *Steph., Ill. Brit. Ent.* iii. 114 (1830).
Lathridius liliputanus, *Mann., in Germ. Zeitsch.* v. 85 (1844).
—— ruficollis, *Woll., Cat. Mad. Col.* 66 (1857).

Habitat Lanzarotam borealem, prope oppidum Haria semel lectus.

The only Canarian example of this European *Latridius* which I have yet seen was taken by myself, from beneath the refuse at the base of a corn-stack, at Haria, in the north of Lanzarote. It occurs in similar positions at Madeira.

Fam. 20. MYCETOPHAGIDÆ.

Genus 108. **MYRMECOXENUS.**

Chevrolat, *in Silb. Rev.* iii. 267 [script. *Myrmechixenus*] (1835).

257. **Myrmecoxenus sordidus,** n. sp.

M. rufo-ferrugineus, subnitidus, parce cinereo-pubescens; capite prothoraceque dense et sat fortiter punctatis, hôc rotundato-quadrato postice vix attenuato; elytris paulo obscurioribus, vix minus dense punctatis; antennis pedibusque rufo-testaceis.—Long. corp. lin. vix 1.

Habitat Fuerteventuram, sub stercore camelino ad Rio Palmas detectus.

Although unwilling, in a small and rather obscure genus, to establish a species on the evidence afforded by merely two examples, I am nevertheless compelled to do so in this instance, since I cannot refer the present *Myrmecoxenus* (though partaking, in a measure, of the characters of them *all*) to any of the three European exponents of it which have been hitherto recognized. Thus, from the *M. vaporariorum* it differs, *inter alia*, in its smaller size, darker hue, and more deeply punctured and less densely pubescent surface; from the *subterraneus* it may be known by being a trifle larger and broader, with its prothorax less straightened (and less narrowed) behind, and (together with the head) of a paler hue, and by its surface being rather more pubescent; whilst from the *picinus* its much paler colour and longer and coarser pile, combined with its more thickly and less strongly punctured surface, and its duller, somewhat flatter, and less cylindric body, will equally remove it. The *M. epulo*, Mäklin, I have not been able to procure for comparison; so that I am unable to say to what extent the Canarian one may tally with that insect. The only two specimens of it which I have seen hitherto were cap-

tured by myself, from beneath camels' dung, in the Rio Palmas of Fuerteventura, at the beginning of April 1859.

Genus 109. SYMBIOTES.

Redtenbacher, *Fna Austr.* 198 (1849).

258. Symbiotes pygmæus.

Symbiotes pygmæus, *Hampe, in Ent. Zeit. Stett.* 353 (1850).
Microchondrus domuum, *Woll., Ins. Mad.* tab. iv. f. 2 (1854).
—— ——, *Id., Cat. Mad. Col.* 71 (1857).
Symbiotes pygmæus, *J. Duval, Gen. des Col. d'Eur.* ii. 221. pl. 54. f. 270 (1859).

Habitat Palmam, à Dom. Gray mense Februario A.D. 1858 repertus.

The small beetle which I described in 1854 under the name of *Microchondrus domuum* appears (as indeed I have elsewhere stated) to be identical with the European *Symbiotes pygmæus*. At least I can detect no sufficient difference to warrant its separation from that species; though, at the same time, the only two authentic specimens which I have yet seen of the latter (and which have been communicated by Dr. Hampe of Vienna) are certainly somewhat larger than those from the Atlantic islands. It seems to be very rare at the Canaries (even more so than it is in Madeira), where indeed I have not myself hitherto met with it. Two examples, however (one of which he has presented to the National Collection), were captured by Mr. Gray, during February 1858, in Palma.

Genus 110. TYPHÆA.

(Kirby) Steph., *Ill. Brit. Ent.* iii. 70 (1830).

259. Typhæa fumata.

Dermestes fumatus, *Linn., Syst. Nat.* ii. 564 (1767).
Mycetophagus fumatus, *Gyll., Ins. Suec.* iii. 399 (1813).
Typhæa fumata, *Woll., Ins. Mad.* 199 (1854).
—— ——, *Id., Cat. Mad. Col.* 71 (1857).

Habitat in Lanzarota, Fuerteventura, Teneriffa et Gomera, sub quisquiliis, rarior.

Of the common European *T. fumata* (which occurs also, though not very abundantly, in Madeira) I have seen hitherto but sixteen Canarian examples. Eleven of them were taken by myself, from beneath vegetable refuse, in Lanzarote, Fuerteventura, and Teneriffe; and the remaining five by Dr. Crotch in Teneriffe and Gomera. My Lanzarotan specimens were captured near Haria; those from Fuerteventura, in the Rio Palmas; and those from Teneriffe, at Taganana, the Agua Mansa, and close to the Puerto of Orotava.

Genus 111. LITARGUS.

Erichson, *Nat. der Ins. Deutsch.* iii. 415 (1848).

260. Litargus trifasciatus, n. sp.

L. ellipticus, dense pubescens, rufo-ferrugineus, elytris nigris, læte rufo-testaceo-fasciatis; oculis conicis, postice ciliatis; prothorace ad latera vix pallidiore; coleopteris nigrescentibus in limbo dilutioribus necnon in fasciis tribus [unâ sc. basali valde obliqua, secundâ postmediâ sub-obluniformi, et tertiâ parvâ apicali, omnibus plus minus fractis] rufo-testaceis ornatis; antennis pedibusque pallide testaceis, illis versus apicem obscurioribus.—Long. corp. lin. 1–1¼.

Habitat Gomeram, prope "Hermigua" à Dom. Crotch repertus.

This most interesting *Litargus* was detected near Hermigua, in Gomera, by Dr. Crotch, during the spring of 1862. It is of precisely the same type as the two Madeiran representatives of the group—the *L. pictus* and *pilosus*; though, in its small bulk, general structure, very conical eyes*, and unstriated elytra, it is perhaps, specifically, nearer to the latter than to the former. It may, however, be known from them both by its paler (or more rufescent) head and prothorax, and by its elytra being ornamented with *three*, usually well-defined (but occasionally broken up, or disjointed) reddish-yellow fasciæ—the first of which is basal and very oblique (running from either shoulder to nearly the middle of the suture), the second postmedial and somewhat obluniform (being less oblique than the preceding one, and drawn in an opposite direction), and the third small and subapical (being represented by two mere patches, or spots). It is more elliptical and depressed than the European *L. bifasciatus*; its head and prothorax (the latter of which is narrower posteriorly) are more rufescent; and its elytra have their markings more abbreviated laterally, and the two apical spots so largely developed as to form an additional (or third) fascia.

Fam. 21. DERMESTIDÆ.

Genus 112. DERMESTES.

Linnæus, *Syst. Nat.* ii. 561 (1767).

* In the diagnosis given in my 'Ins. Mad.' I overlooked the anomalous fact that the eyes of the *Litargi* are furnished behind with a few long, posteriorly-directed setæ. This peculiarity is correctly figured in the 347th plate of Sturm's 'Deutschlands Fauna'; yet I cannot see that it is *noticed* in any of the diagnoses to which I have had access. It exists, however, in all the species which I have examined,—namely, in the European *bifasciatus*, the Madeiran *pilosus* and (comparatively gigantic) *pictus*, and the Canarian *trifasciatus*.

261. Dermestes vulpinus.

Dermestes vulpinus, *Fab., Spec. Ins.* i. 64 (1781).
—— ——, *Brullé, in Webb et Berth. (Col.)* 59 (1838).
—— ——, *Sturm, Deutsch. Fna*, xix. 42. tab. 350. f. A (1847).
—— ——, *Woll., Ins. Mad.* 202 (1854).
—— ——, *Id., Cat. Mad. Col.* 72 (1857).

Habitat Lanzarotam, Teneriffam et Gomeram, in cadaveribus pellibusque sat vulgaris.

The almost cosmopolitan *D. vulpinus* (well characterized by the exceedingly minute spine with which the extreme apex of each of its elytra is furnished) is occasionally pretty abundant, in certain spots, at the Canaries. Hitherto, however, I have myself observed it only in Lanzarote and Teneriffe,—namely, near Arrecife of the former (where it was taken also by Mr. Gray), and near S^{ta} Cruz of the latter (where it was found likewise by the Barão do Castello de Paiva). But it was captured in Gomera by Dr. Crotch. It occurs in Madeira.

262. Dermestes Frischii.

Dermestes Frischii, *Kugel., in Schneid. Mag.* 478 (1794).
—— ——, *Sturm, Deutsch. Fna*, xix. 44. tab. 350. f. D (1847).
—— ——, *Erich., Nat. der Ins. Deutsch.* iii. 428 (1848).

Habitat Lanzarotam, Canariam et Teneriffam, in iisdem locis ac præcedens.

The present *Dermestes* is almost identical *primâ facie* with the *vulpinus*; nevertheless the apices of its elytra are destitute of the minute spinules which characterize that insect, its pubescence is blacker (with the paler portions, however, at the sides of the head and prothorax and on the scutellum, usually of a clearer white), and the ultimate segment of its abdomen beneath has merely a small, terminal, sublunate dark patch—instead of a band extending along its entire length. It is about equally common in these islands with the preceding species, with which it is generally found in company. It was taken by Mr. Gray and myself, from out of dead animals, near Arrecife, of Lanzarote; and subsequently, by myself, in the sandy region of Grand Canary between Las Palmas and the Isleta, as also close to S^{ta} Cruz in Teneriffe.

Genus 113. ATTAGENUS.

Latreille, *Gen. Crust. et Ins.* ii. 32 (1802).

263. Attagenus pellio.

Dermestes pellio, *Linn., Fna Suec.* 141 (1761).
—— ——, *Fab., Syst. Eleu.* i. 313 (1801).

Attagenus pellio, *Steph., Ill. Brit. Ent.* iii. 126 (1830).
Megatoma pellio, *Brullé, in Webb et Berth.* (*Col.*) 59 (1838).

Habitat? [testibus DD. Webb et Berth., in ins. Canariensibus] mihi non obvius.

I have not myself detected this almost cosmopolitan insect at the Canaries; nevertheless, since it is recorded by Messrs. Webb and Berthelot, and since the species is so well marked that it could scarcely be mistaken for anything else, I have ventured to admit it into the present Catalogue. I am totally unable, however, to state in which island it was found,—the miserably poor and loosely-strung list of Canarian Coleoptera included in that work not having so much as a single locality entered for any one of them! It is fortunate therefore that the *A. pellio* is quite unimportant, since, wherever taken, it was clearly a mere accidental introduction from more northern latitudes.

264. **Attagenus Schæfferi.**

Megatoma Schæfferi, *Hbst, Käf.* iv. 93 (1791).
—— macellarium ?, *Brullé, in Webb et Berth.* (*Col.*) 59 (1838).
Attagenus Schæfferi, *Erich., Nat. der Ins. Deutsch.* iii. 440 (1848).

Habitat Teneriffam, in domibus Sanctæ Crucis captus; nisi fallor, introductus.

I believe that the few Canarian examples which I have yet seen of the present *Attagenus* are rightly referred to the *A. Schæfferi*, rather than to the *A. megatoma*; nevertheless they do not precisely accord with Erichson's diagnosis of that species. I have taken the insect sparingly in houses at S^ta^ Cruz, of Teneriffe,—where, however, it has evidently been naturalized through the medium of commerce. When immature the specimens are more or less piceous, or even ferruginous. It occurs, in similar situations, at Madeira.

Genus 114. **TELOPES.**

Redtenbacher, *in Russeg. Reise*, i. 984 (1843).

Although agreeing with *Attagenus* proper in the exceedingly elongate, ensiform last joint of the male antennal club of at any rate *one* of its species, I have nevertheless retained the present genus as distinct (even though it has been re-merged into the former by Erichson), because it seems to me to possess sufficient peculiarities to render its separation therefrom desirable. Without entering into minor details, *Telopes* may be known from *Attagenus* by the relatively shorter, obtuser, and convexer bodies of the insects which compose it,—the surfaces of which are densely pubescent (and are likewise studded, in addition to the decumbent under-pile, though sometimes very sparingly so, with long and suberect hairs towards either side),

whilst their maxillæ and palpi are longer, and their legs are more robust,—the tibiæ being especially broader, much more coarsely spinulose along their outer edge, and with the terminal spurs considerably larger and stronger (that of the anterior pair being greatly developed, thickened, outwardly directed, and flexuose). It would appear to be peculiar, principally, to Mediterranean latitudes; and the species which constitute it, although variable in hue, are more or less evidently adorned with transverse (though often obscure and interrupted) fasciæ. They are less strictly *Dermestideous* in their modes of life than the true *Attageni*,—occurring for the most part (like *Anthrenus*) on flowers in the open country, and only occasionally exhibiting the skin-infesting habits which (as in the case of the normal members of the family) characterize the latter.

Although, as has already been intimated, one of the insects described below has the last joint of its male-clava enormously elongated as in the true *Attageni*, I nevertheless consider this fact of but slight importance, seeing that the antennæ of nearly *all* these immediate Dermestideous forms have their club so peculiarly modified that it is hardly possible to regard even the *structural* features of that organ as of more than specific signification; for it is scarcely too much to assert that we actually find them (within certain fixed limits) differently proportioned in almost every individual species. Hence the discrepancies (both specific and sexual) in the antennæ of the three insects here characterized (*each* of which possesses its own exact modification) offer no obstacle to their being generically associated; and I have but little doubt (when their many points of *agreement*, above alluded to, are duly considered) that they are strictly members of a single and perfectly natural assemblage. The two comprised under my latter Section have their tibiæ still more robust (and broader) than the representative of the former one; but this is merely a difference in degree, and not in kind: nevertheless the female *tarsal* peculiarity of the *T. obtusus* (which has the second joint of its four posterior feet less elongated than is the case in those of its males, and in those of *both sexes* of the other two species) is certainly much more remarkable.

§ I. *Corpus versus latera pilis longissimis erectis sat dense obsitum: tibiæ sublineares: tarsi in sexu fœmineo minus elongati, posteriores articulo 2^{ndo} quam tertius paulo (in sexu fœmineo) longiore: antennarum articulus ultimus in maribus longissimus.*

265. Telopes obtusus.

T. ovalis, niger vel fusco-niger, fulvo-cinereo-pubescens; prothorace

utrinque et basi elytrisque in fasciis tribus necnon ad apicem densius pallido-pilosis; antennis nigris, ad basin picescentibus; pedibus piceis, tarsis pallidioribus.

Variat fasciis plus minus obsoletis vel etiam confluentibus, pube plus minus albido-cinereâ.

Mas antennarum articulo ultimo longissimo ensiformi.

Fœm. antennarum articulis 9no, 10mo et 11mo inter se subæqualibus (ultimo vix majore).—Long. corp. lin. 1–vix 2.

Dermestes obtusus, *Gyll., in Schön. Syn. Ins.* ii. 88 (1808).
Attagenus obtusus, *Lucas, Col. d'Algérie*, 239 (1849).
—— abbreviatus, *Hartung, Geolog. Verhältn. Lanz. und Fuert.* 140 & 141.

Habitat Lanzarotam, Fuerteventuram et Canariam, in floribus tempore vernali, passim.

The excessive variability of this insect, in conjunction with the very different aspect of the sexes, might well lead to the establishment of two or three supposed species out of it, were but a few examples present (and those perhaps divergent ones *inter se*) to form an opinion from. Nevertheless, after a close examination of a very extensive series obtained in both Lanzarote and Fuerteventura, I am bound to confess (despite the opposite appearance of the highly coloured individuals and those in which the markings are obsolete) that I cannot detect any character sufficient to warrant its separation from the Mediterranean *T. obtusus*—an insect which occurs in Portugal and in the north of Africa. It is tolerably common, on flowers, in Lanzarote and Fuerteventura, during the spring; and I have also taken it, though sparingly, in the low sandy district between Las Palmas and the Isleta, of Grand Canary, as well as in the little island of Graciosa (off the extreme north of Lanzarote). Although principally, however (when in the imago-state), of flower-infesting habits, it is not entirely so; for, like the *Anthreni* and other allied Dermestideous forms, it will occasionally attack the skins and dried remains of animals also; and in such positions I have observed it on the sea-beach near Arrecife, of Lanzarote.

I possess Fuerteventuran specimens, communicated by Dr. Heer, and which were collected in that island by M. Hartung; so that I am enabled to assert positively that it is the *Attagenus abbreviatus* described in the volume (above cited) of the latter. Nevertheless without this corroboration such would have been sufficiently evident, since it is apparently the *only Attagenus* (or *Telopes*, as I have regarded it) which is common to the two eastern islands of the archipelago,—in *both* of which M. Hartung records the *A. abbreviatus*.

Brightly coloured examples of it approach very closely *at first sight*

to the *T. multifasciatus* from Grand Canary; nevertheless, apart from its *structural* peculiarities—of slenderer tibiæ, the immensely developed last joint of its male-clava, and the shorter feet of its female sex (which have their second joint less conspicuously elongated),—it may be further known by its rather larger size, by the long and suberect additional hairs with which it is studded towards either side being much more numerous, and by the dark portions of its surface being usually browner, whilst the fasciæ are generally of a duller and obscurer white.

§ II. *Corpus antice ad latera pilis longiusculis suberectis vix vestitum: tibiæ dilatatæ: tarsi posteriores (in utroque sexu) elongati, articulo* 2^ndo^ *(in utroque sexu) quam tertius multo longiore: antennarum articulus ultimus vel in utroque sexu parvus, vel in maribus paulo elongatus.*

266. Telopes anthrenoides, n. sp.

T. ovalis, fusco-niger, cinereo-pubescens; prothorace utrinque elytrisque in fasciis tribus obscuris necnon ad apicem densius pallido-pilosis; antennis nigris, ad basin picescentibus, articulo ultimo (in utroque sexu) parvo; pedibus rufo-piceis, tarsis pallidioribus.

Mas antennarum clavâ paulo longiore, articulis penultimo et antepenultimo leviter elongatis.

Fœm. antennarum clavâ paulo breviore, articulis penultimo et antepenultimo quam terminalis vix (singulatim) majoribus.—Long. corp. lin. vix $1\frac{1}{4}$.

Habitat Canariam australem, in arenosis aridis ad Maspalomas captus.

It is just possible that this insect may be only a depauperated state of the *T. multifasciatus* peculiar to the dry sandy region of Maspalomas, in the extreme south of Grand Canary (where my few specimens were captured); nevertheless I can hardly believe that such is really the case. It differs in being smaller than that insect, in its pubescence (as well as even the few elongate additional hairs with which it is studded on either side anteriorly) being altogether whiter or more cinereous and still more decumbent, in its elytral fasciæ being less distinct, and in its tibiæ being perhaps (if anything) a trifle narrower.

267. Telopes multifasciatus.

T. ovalis, niger, nigrescenti-pubescens; prothorace utrinque et in maculis duabus posticis elytrisque in fasciis tribus, necnon ad apicem, pallido-pilosis; antennis nigris, ad basin picescentibus, articulo ultimo (in utroque sexu) parvo; pedibus piceis, tarsis vix pallidioribus.

Mas antennarum clavâ paulo longiore, articulis penultimo et antepenultimo leviter elongatis.

Fœm. antennarum clavâ paulo breviore, articulis penultimo et antepenultimo quam terminalis vix (singulatim) majoribus.—Long. corp. lin. $1\frac{1}{3}$–vix $1\frac{2}{3}$.

Telopes multifasciatus, *Woll., Ann. Nat. Hist.* (3rd series) xi. 218 (1863).

Habitat Canariam Grandem, ad flores varios (sed præsertim *Cisti monspeliensis* L.) tempore vernali hinc inde vulgaris.

The present *Telopes* seems to be the universal one of Grand Canary, which is the only island in which I have hitherto observed it. It occurs more particularly at intermediate elevations,—where, during the spring months, I have taken it throughout the region of El Monte, in the district between Tarajana and Maspalomas, &c.; in the latter of which it abounds on the blossoms of the *Cistus monspeliensis*. At first sight it very much resembles the following species (from Teneriffe and Palma); but it is, on the average, a trifle larger, with indications (more or less expressed) of *three* elytral fasciæ (instead of only two), and with the terminal joint of its club rather smaller *in both sexes* than either of the two which precede it,—the males, moreover, having their penultimate and antepenultimate ones slightly elongated, causing the entire clava to be less shortened than that of the females.

268. **Telopes fasciatus.**

T. breviter ovalis, niger, nigrescenti-pubescens; prothorace utrinque et in maculis duabus posticis elytrisque in fasciis duabus (posticâ subevanescente) necnon mox ante apicem pallido-pilosis; antennis nigris, ad basin picescentibus; pedibus piceis, tarsis vix pallidioribus. *Mas* antennarum clavâ paulo longiore, articulo ultimo leviter elongato. *Fœm.* antennarum clavâ paulo breviore, articulis tribus inter se subæqualibus.—Long. corp. lin. $1\frac{1}{4}$–vix $1\frac{1}{2}$.

Telopes fasciatus, *Woll., Ann. Nat. Hist.* (3rd series) xi. 218 (1863).

Habitat in floribus Teneriffæ, Gomeræ et Palmæ, tempore vernali frequens.

Whilst the last species is the ordinary one of Grand Canary, the *T. fasciatus* is apparently universal throughout the low and intermediate elevations of Teneriffe, Gomera, and Palma. It will probably occur in Hierro likewise, though, as we visited that island too early in the season for the flower-infesting Coleoptera, I did not observe it there. Between the Villa and Puerto of Orotava it abounds during the spring, and it is almost equally common in the Barranco above S^{ta} Cruz of Palma. In Gomera it was taken by Dr. Crotch, near San Sebastian. It is, on the average, a little smaller and proportionally shorter than the preceding species, and its elytral fasciæ (instead of being three in number) are reduced to only two; and

even of these the hinder one is usually more or less obsolete. Its antennal club, however, constitutes its chief distinctive feature—the three joints being subequal in the females, whilst the *terminal* one is slightly elongated in the males; whereas in its ally the last one is comparatively minute in both sexes, and the penultimate and antepenultimate ones (instead of the terminal) are a little enlarged in the males.

Genus 115. **ANTHRENUS.**

Geoffroy, *Hist. des Ins.* i. 113 (1764).

269. **Anthrenus varius.**

Anthrenus verbasci, *Oliv.* [nec *Linn.* 1767], *Ent.* ii. 14. pl. 1. f. 2 (1790).
—— varius, *Fab., Ent. Syst.* i. 262 (1792).
Megatoma verbasci, *Brullé, in Webb et Berth.* (*Col.*) 59 (1838).
Anthrenus varius, *Erich., Nat. der Ins. Deutsch.* iii. 455 (1848).
—— ——, *Woll., Ins. Mad.* 205 (1854).
—— ——, *Id., Cat. Mad. Col.* 73 (1857).

Habitat in Lanzarota, Fuerteventura, Canaria et Teneriffa, ad flores, passim.

The common European *A. varius* (which occurs in Madeira and Porto Santo) is probably universal at the Canaries, though (owing to our visit to those two islands having been too early in the season for the flower-infesting Coleoptera) I did not capture it in either Gomera or Hierro; nor indeed do I happen to have detected it even in Palma: but in Lanzarote, Fuerteventura, Grand Canary, and Teneriffe it is here and there abundant—both on flowers and about the inner walls of houses. From Teneriffe it has also been communicated by the Barão do Castello de Paiva. It may be readily known, *inter alia*, by its 11-jointed antennæ and triarticulate club.

270. **Anthrenus claviger.**

Anthrenus claviger, *Erich., Nat. der Ins. Deutsch.* iii. 458 (1848).

Habitat in Palma, tempore vernali A.D. 1858 sat copiose lectus.

It is rather singular that, whilst failing to detect the last species in Palma, I should have met with the common European *A. claviger* there instead. It is the only island of the seven in which I have hitherto observed this small and very distinct *Anthrenus*.

Fam. 22. BYRRHIDÆ.

Genus 116. **SYNCALYPTA.**

(Dillwyn) Steph., *Ill. Brit. Ent.* iii. 133 (1830).

271. **Syncalypta integra,** n. sp.

S. breviter ovalis, valde convexa, nigra, setis rigidis parce obsita; prothorace punctato; elytris leviter striatis (striis obsolete et valde remote punctatis); antennis pedibusque rufo-ferrugineis; tibiis anticis brevibus, latis, extus integris.—Long. corp. lin. 1¼.

Habitat in Hierro, in regione sylvaticâ "El Golfo" dictâ semel capta.

The present *Syncalypta* is about the size of the Madeiran *S. capitata*; nevertheless it is a little rounder (or more *regularly* oval) than that insect, its prothorax is less deeply punctured, its elytra are more convex, with their striæ (which, except under the microscope, seem to be quite impunctate) very much finer, its front tibiæ are broader, shorter, and apparently entire along their outer edge, and the terminal joint of its clava is larger. The only example which I have seen was captured by myself, during February 1858, in the sylvan district of El Golfo, on the western slopes of Hierro.

272. **Syncalypta ovuliformis.**

S. breviter obovata, convexa, nigra, setis rigidis obsita; prothorace profunde punctato; elytris profunde striato-punctatis; antennis pedibusque rufo-ferrugineis; tibiis anticis extus parce spinulosis. —Long. corp. lin. 1.

Syncalypta ovuliformis, *Woll., Ins. Mad.* 207 (1854).
—— ——, *Id., Cat. Mad. Col.* 73 (1857).

Habitat Teneriffam sylvaticam, ad Agua Garcia semel reperta.

Although I have at present no type in my possession for comparison, I believe nevertheless that this *Syncalypta* is identical with the Madeiran *S. ovuliformis*. It may be known from the last species by its rather smaller size and more obovate outline, by its prothorax being more coarsely punctured, by its elytra being less convex and regularly and deeply striate-punctate, and by its fore tibiæ being relatively less dilated, and minutely (though sparingly) spinulose along their outer edge. As in the case of that insect, I have hitherto seen but a single example—which was taken by myself at the Agua Garcia, in Teneriffe.

Fam. 23. HISTERIDÆ.

Genus 117. **HOLOLEPTA.**

Paykull, *Mon. Hist.* 101 (1811).

273. **Hololepta Perraudieri.**

H. parallelo-ovalis postice subangustior, depressa, atra, nitidissima; fronte latâ, haud striatâ; mandibulis elongatis, porrectis, in medio

unidentatis; prothorace lato, ad latera marginato, intra angulos anticos foveâ valde profundâ auriculiformi notato, postice canaliculâ tenui mediâ impresso; elytris ad apicem valde oblique truncatis, sulco subhumerali sinuato utrinque abbreviato striisque 2 dorsalibus (sc. 1mâ abbreviatâ profundâ, et 2dâ valde abbreviatâ quasi foveam punctiformem simulante) impressis; propygidio utrinque punctis perpaucis magnis irrorato; pygidio impunctato; tibiis anticis 4-, posterioribus 3-dentatis.—Long. corp. lin. 6.

Hololepta Perraudieri, *de Mars.*, *Ann. de la Soc. Ent. de France*, (3ième série) v. 397. pl. 10 (1857).

Habitat Teneriffam (sec. cl. de Marseul) et Gomeram, rarissima, in hac a Dom. Crotch tempore vernali A.D. 1862 semel deprehensa.

This large and peculiar Histerid altogether escaped my own observation in these islands, and I should have had no other evidence of its existence beyond the assertion of M. de Marseul (who has figured it, very accurately, from a specimen stated to have been found in Teneriffe by M. Henri de la Perraudière) had not a single example, now before me, been captured by Dr. Crotch in Gomera. Dr. Crotch informs me that he took the individual referred to in a house at San Sebastian; and I have but little doubt, therefore, that it must have crawled from out of one of the dried *Euphorbia*-stems which it is the custom to bring down from the hills for fuel. It corresponds precisely with de Marseul's admirable diagnosis, except that it is considerably larger than the type which he appears to have described from.

The excessively depressed and highly polished surface of the *H. Perraudieri*, in conjunction with its subparallel-oval outline (which, however, is perceptibly wider in front than behind), its elongate porrect mandibles (which are armed with a small central tooth internally), its large and wide prothorax (which has a deep auriculiform impression immediately within each of its anterior angles, and a thin line, or channel, down its *posterior* disc), and the two very short dorsal striæ (particularly the inner one, which is nearly obsolete, or reduced to a mere fovea) with which its obliquely-truncated elytra are furnished, will suffice, apart from minor characters, to distinguish it.

Dr. Crotch has presented his specimen to the British Museum collection.

Genus 118. TERETRIUS.

Erichson, *in Klug Jahrb.* i. 201 (1834).

I refer the insect described below to *Teretrius* because in nearly all its structural characters, and every one of its external ones, it agrees precisely with the members of that group. Nevertheless, on carefully dissecting it, I find that there are a few points at all events in

which its generic features do not coincide with those given by de Marseul,—which, however, I ought perhaps to add, do not completely agree with the conclusions that I have arrived at even as regards the ordinary European *T. picipes*. Thus, in the Teneriffan species the mentum is semicircular (being regularly *rounded*, instead of emarginated, in front), the second and third joints of the maxillary palpi are subequal (instead of the former being much the longer of the two), and the antennæ have their club exceedingly solid and *un*-annulated (which, however, is equally the case in the *T. picipes*), the first joint of their funiculus considerably enlarged and subglobose, and the last (or anteclaval) one extremely thin and lamelliform.

274. **Teretrius cylindricus**, n. sp.

T. cylindricus, niger, nitidus, ubique punctulatus ; prothorace amplo, convexo, vix picescentiore ; prosterno brevi, simplici (nec bistriato); mesosterno canaliculato, lobo antico magno ; pedibus rufo-piceis ; tibiis anticis extus 6-, posterioribus 5-spinosis.—Long. corp. lin. $1\frac{1}{4}$.

Habitat Teneriffam sylvaticam ; ad Agua Garcia exemplar unicum cepi.

The present *Teretrius* is about the size of (or perhaps a trifle larger than) the European *T. picipes*, which at first sight it much resembles. It is, however, a little broader than that insect, its prothorax (which is slightly picescent) is convexer and more developed (it being proportionally somewhat wider in front), its tibiæ are more powerfully spinulose (the hinder pair, which are more evidently curved, having *five* spines along their outer edge, instead of only two), its prosternum is rather shorter (being more broadly truncated at the apex) and free from the two longitudinal costæ which exist in that species, and its mesosternum is channeled down the centre, with its anterior lobe larger, or more produced. The proportions of its abdominal segments, likewise, are not quite the same as in the *T. picipes*. The only example of it which I have hitherto seen was captured crawling on the inner canvas of my tent, whilst encamped at the Agua Garcia, in Teneriffe, during April 1859.

Genus 119. **EUTRIPTUS.**

Wollaston, *Trans. Ent. Soc. Lond.* (3rd series) i. 157 (1862).

275. **Eutriptus putricola.**

Eutriptus putricola, *Woll., Trans. Ent. Soc. Lond.* (3rd series) i. 159. pl. vii. f. 7 (1862).

Habitat in Lanzarota, Fuerteventura, Canaria, Teneriffa, Gomera et Hierro, sub cortice Euphorbiarum laxo putrido, hinc inde haud infrequens.

This very distinct little insect, so remarkable (*inter alia*) for its 6-jointed funiculus, and the immense outwardly-directed spine into which the inner apical angle of its fore tibiæ is merged, as also for its keeled prosternum, which is much produced in front and elongated into a lobe (instead of being *excavated*) behind, whilst the *meso*-sternum is scooped-out at the central point of contact, to receive this hinder prosternal process, has been so fully described in my Paper on the "Euphorbia-infesting Coleoptera of the Canaries" (lately published in the 'Transactions of the Ent. Soc. of London') that I need not enter here into its many peculiarities. It appears to be confined (so far as observed hitherto) to the rotten *Euphorbia*-stems,—beneath the damp putrid bark of which it resides, in company with the numerous other insects of similar habits. There can be little doubt that it is universal throughout the archipelago; although I did not happen to meet with it in Palma. But in Lanzarote, Fuerteventura, Grand Canary, Teneriffe, and Hierro I have captured it, more or less abundantly; and it was found, during the spring of 1862, by Dr. Crotch, near San Sebastian, in Gomera. In Lanzarote it was taken also by Mr. Gray; and I detected it even in the little island of Lobos, off the north of Fuerteventura. It has been discovered during the past year in Madeira,—where four examples of it were obtained by Mr. Bewicke, from out of the decayed branches of Euphorbias, in the east of the island.

Genus 120. **HISTER.**

Linnæus, *Syst. Nat.* ii. 566 (1767).

276. **Hister major.**

Hister major, *Linn.*, *Syst. Nat.* ii. 566 (1767).
—— ——, *Brullé, in Webb et Berth.* (*Col.*) 59 (1838).
—— ——, *de Marseul, Ann. de la Soc. Ent. de France,* (3ième série) ii. 173. pl. 6. f. 4 (1854).
—— ——, *Woll., Ins. Mad.* 210 (1854).
—— ——, *Id., Cat. Mad. Col.* 74 (1857).

Habitat in inferioribus Canariæ et Teneriffæ, minus frequens.

The *H. major*, which is found throughout southern Europe and northern Africa, and which occurs sparingly in the Madeiran Group, appears to be somewhat scarce in these islands. I have taken it in Grand Canary; and it has been communicated by the Rev. R. T. Lowe from Orotava, and by the Barão do Castello de Paiva from S^ta^ Cruz, in Teneriffe.

277. **Hister canariensis,** n. sp.

H. subquadrato-ovalis, niger, nitidus; striâ frontali arcuatâ; pro-

thoracis striis duabus lateralibus subparallelis fere integris (exteriore postice vix abbreviatâ); elytrorum striâ humerali obliquâ, subhumerali nullâ, 1–3tiam dorsalibus integris, 4tâ obsoletâ (e punctis perpaucis elongatis versus apicem compositâ), 5tâ nullâ, suturali sat elongatâ (postice vix, sed antice valde abbreviatâ), striis omnibus fere impunctatis; pygidio subopaco, fortiter punctato; antennis pedibusque nigro-piceis; tibiis anticis 3-dentatis, posterioribus biseriatim multispinosis.—Long. corp. lin. $2\frac{1}{2}$–$3\frac{1}{3}$.

Habitat in montibus Teneriffæ, rarior.

Although unwilling to erect an additional species in a group so extensive as *Hister*, yet, after a careful survey of de Marseul's monograph, I am satisfied that the present one cannot be referred to any of those which he has recorded. Its *position*, however, in his arrangement is easily determined, since it belongs to that comparatively small Section of the genus in which the lateral, or "subhumeral," stria is obsolete and in which (at the same time) the pronotum is furnished with *two* striæ at either side. Judging from his figures and diagnoses, its nearest allies would appear to be the *H. fossor* from Senegal, and the *obesus* from Guinea and southern Africa: but the following *combination* of characters will serve to distinguish it from the forms which it most closely resembles. Thus, its two prothoracic lines are nearly entire (the outer one only being *very* slightly abbreviated behind); its elytral striæ are deep and simple (though the sutural one is sometimes just perceptibly crenated), the three dorsal ones being complete (for the inner two are merely a trifle shorter *at the base*); the fourth is obsolete (being represented by a few elongate punctures, or a broken-up line, *behind*); the fifth is quite absent; and the sixth (or sutural one) commences at about a third of the distance between the scutellum and the apex, and is continued *almost* to the latter. Its front tibiæ are externally tridentate (the apical tooth being large, obtuse, and surmounted by three spinules, whilst the second and third are gradually smaller and capped, each of them, by a single spinule); and its four posterior ones are densely spinose.

Hitherto the *H. canariensis* has been observed only in Teneriffe, where it would seem to be somewhat scarce. I have taken it at Taganana, and it has been communicated by the Barão do Castello de Paiva from Las Mercedes.

Genus 121. CARCINOPS.

De Marseul, *Ann. de la Soc. Ent. de France*, (3ième série) iii. 83 (1855).

278. Carcinops 14-striatus.

Dendrophilus 14-striatus, *Steph.*, *Ill. Brit. Ent.* v. 412 (1832).
Paromalus pumilio, *Erich.*, *in Klug Jakrb.* i. 169 (1834).

Paromalus pumilio, *Woll., Ins. Mad.* 213 (1854).
Carcinops pumilio, *de Marseul, Ann. de la Soc. Ent. de France*, iii. 91. pl. 22. f. 4 (1855).
Paromalus pumilio, *Woll., Cat. Mad. Col.* 74 (1857).

Habitat Lanzarotam, Fuerteventuram, Teneriffam et Gomeram, sub quisquiliis degens.

The little *C. 14-striatus*, which occurs throughout central and southern Europe, the north of Africa, and Madeira, is pretty widely distributed over these islands—where in all probability it will be found to be universal, if searched for in the proper situations. Nevertheless, hitherto, I have observed it only in Lanzarote, Fuerteventura, and Teneriffe; in the last of which, however, as well as in Gomera, it has been captured by Dr. Crotch. It is chiefly to be met with beneath decaying vegetable detritus, especially under the putrid leaves of the Prickly Pear (*Opuntia Tuna*), in waste spots where they have been thrown away as refuse.

Genus 122. **SAPRINUS.**

Erichson, *in Klug Jahrb.* i. 172 (1834).

§ I. *Elytrorum striâ suturali antice plus minus abbreviatâ.*

279. **Saprinus nobilis,** n. sp.

S. cyaneo-niger, supra subopacus, densissime rugoso-punctatus; prothorace in disco postico elytrisque in spatio communi obcordato pone scutellum necnon per marginem ipsissimum posticum politis; striâ frontali nullâ; elytris singulis striâ suturali tenui antice valde abbreviatâ (a medio usque ad apicem continuatâ) necnon duabus parvis obliquis versus humeros impressis; prosterno punctulato, lineis antice late divaricatis; mesosterno sat dense et profunde punctato; tibiis anticis extus leviter et obtuse denticulatis, posterioribus biseriatim spinulosis; tarsis (sed præsertim anticis) piceis. —Long. corp. lin. $2\frac{1}{2}$–$3\frac{1}{3}$.

Habitat Teneriffam, rarissimus; prope Sanctam Crucem necnon sub stercore humano in sylvâ "Las Mercedes" dictâ captus.

I believe that the present *Saprinus* is undoubtedly distinct from every species described in de Marseul's Monograph, though perhaps it approaches nearer to the *S. figuratus*, from northern Africa, than to any other of them. Apparently, however, it is much larger than that insect, of a dark cyaneous-blue (instead of a brownish black), with its polished prothoracic space single (instead of being shaped-out into three compartments), and with its sutural line (instead of being complete) greatly abbreviated anteriorly. Apart from minor characteristics, its almost evanescent striæ, combined with its cya-

neous and very densely punctured upper surface (which has only the disc of its pronotum, and an obcordate elytral space behind the scutellum, highly polished and impunctate), will at once separate it from the other Canarian *Saprini*. The only two specimens which I have yet seen were captured by myself in Teneriffe,—one of them near S^ta^ Cruz, and the other at a comparatively high elevation in the wood of Las Mercedes.

280. **Saprinus osculans**, n. sp.

S. subcyaneo-niger, supra convexus, vix subopacus, dense rugoso-punctatus; prothorace in disco late elytrisque in spatio communi obcordato pone scutellum necnon per marginem ipsissimum posticum politis; striâ frontali subobsoletâ; elytris singulis striâ suturali antice paulo abbreviatâ necnon quinque obliquis abbreviatis (internis tenuibus subpunctulatis, et secundâ, vel tertiâ dorsali, brevi fere obsoletâ) impressis; prosterno sublævi, lineis antice paulo divaricatis; mesosterno parce punctato; tibiis anticis extus denticulatis, posterioribus biseriatim spinulosis; tarsis (sed præsertim anticis) piceis.—Long. corp. lin. $2\frac{1}{3}$.

Habitat in Fuerteventura, semel tantum captus.

Closely allied to the preceding species; from which, however, it differs in being smaller and less evidently cyaneous, in the sculptured portion of its upper surface being rather less densely punctured, and therefore not quite so opake (the polished prothoracic space moreover being larger, and occupying *in its middle* the entire length of the pronotum), in its sutural line being less abbreviated in front, in its having at least *five* oblique striæ (instead of only two) developed at the base of its elytra (the inner ones of which are minutely punctured, but the second nevertheless, or third "dorsal" one, short and subobsolete), in its prosternum being almost impunctate and with the lateral lines less divergent in front, in its mesosternum being less closely and less deeply punctured, and in its anterior tibiæ being more powerfully spined.

Judging from de Marseul's diagnosis and figure, the *S. osculans* would perhaps agree better with the *detersus* (from the south of France, Spain, Portugal, Algeria, Senegal, &c.) than with any other species; nevertheless it has no indication of the small additional polished space between the second and third dorsal striæ (at the base of the elytra), or of the less-defined one at the shoulders, which characterize that insect; and, moreover, in the description of the *S. detersus* no mention is made of the obscure cyaneous tint which is very traceable on the *osculans*. It is hitherto unique, a single example having been captured by myself in Fuerteventura.

281. **Saprinus nitidulus.**

S. æneo-niger, nitidus; fronte postice minus punctulatâ, striâ subobsoletâ; prothorace ad latera necnon per basin ipsam profunde punctato, intra angulos anticos (rotundatos) distincte impresso; elytris postice profunde punctatis (punctis versus latera inter strias minus ascendentibus), striis profundis, punctatis, suturali antice valde abbreviatâ, humerali in subhumeralem mergente, 1–4^{tam} dorsalibus plerumque ultra medium postice continuatis; prosterno obtuse subcarinato, lineis antice divergentibus; mesosterno profunde punctato (per marginem posticum serie punctorum quasi bisectorum terminato), antice sat profunde emarginato angulis obtusis; antennis pedibusque nigro-piceis, capitulo sæpius vix dilutiore.—Long. corp. lin. 2–3.

Hister nitidulus, *Fab., Syst. Eleu.* i. 85 (1801).
—— ——, *Brullé, in Webb et Berth.* (*Col.*) 59 (1838).
Saprinus nitidulus, *Woll., Ins. Mad.* 215 (1854).
—— ——, *de Mars., Ann. de la Soc. Ent. de France,* 402. pl. 17. f. 40 (1855).
—— ——, *Woll., Cat. Mad. Col.* 75 (1857).

Habitat Lanzarotam et Teneriffam, in cadaveribus frequens.

I have given the above comparative diagnosis of this common European insect for the sake of calling attention to the exact points in which it differs from the following closely allied species. I have taken it, in tolerable abundance, from out of dead animals, both near Arrecife of Lanzarote and around S^{ta} Cruz of Teneriffe,—from the latter of which islands it has also been communicated by the Barão do Castello de Paiva.

282. **Saprinus subnitidus.**

S. niger, nitidus; fronte densissime punctulatâ, striâ obsoletâ; prothorace ad latera necnon per basin ipsam punctato, intra angulos anticos (oblique subtruncatos) leviter impresso; elytris convexis, postice leviter punctulatis (punctulis versus latera inter strias plus minus ascendentibus), striis tenuibus, vix punctulatis, suturali antice paulo abbreviatâ, humerali in subhumeralem mergente, 1–3^{tiam} dorsalibus vix ultra et 3^{tiâ} 4^{tâ}que vix ad medium postice continuatis; prosterno minus carinato, lineis antice leviter divergentibus; mesosterno leviter et vage punctato, antice paulo emarginato angulis sat argute determinatis; antennis pedibusque nigro-piceis, capitulo sæpius ferrugineo.

Var. β [an species?]. Elytris paulo distinctius punctulatis, punctulis inter strias utrinque densius ascendentibus. [*Ins.* Palma.]—Long. corp. lin. 2–vix 3.

Saprinus subnitidus?, *de Mars., Ann. de la Soc. Ent. de France,* 404. pl. 17. f. 41 (1855).

Habitat in Lanzarota, Fuerteventura et Canaria, unà cum sp. præcedente degens.

As may be gathered from the above comparative diagnosis, the present *Saprinus* differs from the *nitidulus* in being blacker (with scarcely any perceptible ænescent tinge), in its forehead being as densely punctured behind as in front, in the punctures and striæ of its upper surface being altogether very much finer (the latter being nearly *simple*, or but delicately crenulated), in the anterior angles of its pronotum being rather more obliquely-truncated at their apex and with the shallow depression within them a trifle less distinct, in its elytra being somewhat rounder and convexer, with the sutural stria a little less abbreviated in front, and the others (particularly the two inner ones) perceptibly shorter, in its prosternum being a little more depressed (or less carinated down the centre) and perhaps somewhat less divergent anteriorly, in its mesosternum being very much less deeply punctured, more lightly emarginate at its apex, and with the angles better defined, and in its antennal club being *usually* paler, or more ferruginous. It is found in company with the *S. nitidulus*, but is very much the scarcer of the two. I have, however, taken it sparingly around Arrecife in Lanzarote, close to the Puerto de Cabras in Fuerteventura, and in the sandy region between Las Palmas and the Isleta in Grand Canary. A single example which I captured in the island of Palma I have regarded as a "*var.* β" of this species. It differs merely in having the punctures of its upper surface a little denser—particularly on the elytra, where they ascend more decidedly on either side, nearly filling the whole space between the striæ. I believe, however, it is nothing more than a slight insular modification of the present insect.

As to the synonymy of this *Saprinus*, I am somewhat in doubt. I have therefore referred it to the *subnitidus* of de Marseul (with which, judging from the description, in its lightly punctured upper surface and rather flattened prosternum it would seem to agree), in preference to treating it as new; nevertheless, since there are many points in which it certainly does *not* accord with the diagnosis of that insect (such as its blacker, or unmetallic, tint, its humeral stria merging into the subhumeral one, and its prosternal lines being by no means *parallel* anteriorly, though they do not diverge quite so much as those of the *S. nitidulus*), I would propose for it the provisional name of *proximus*, in the event of its proving hereafter to be distinct from the *subnitidus*. In some respects it might be assigned to the *S. algericus*; but (judging from de Marseul's diagnosis) that appears to be a much smaller species than the present one, and of a pitchy-brown hue.

§ II. *Elytrorum striâ suturali antice integrâ (cum quartâ dorsali coëunte).*

a. *Fronte a clypeo haud distincte divisâ.*

283. Saprinus chalcites.

S. æneus, nitidus; fronte dense punctulatâ, striâ nullâ; prothorace sat dense punctato, in disco postico lævi, intra angulos anticos (oblique subtruncatos) distincte impresso; elytris punctatis, spatio communi pone scutellum (striâ tertiâ, vel secundâ dorsali, terminato) lævi, necnon versus humeros minus dense punctatis, striis indistincte punctulatis, humerali sæpius indistinctâ, 1–4^{tam} dorsalibus circa medium postice continuatis; prosterno lineis antice et postice divergentibus; mesosterno sat profunde punctato, angulis obtusis; antennis pedibusque læte rufo-piceis; tibiis anticis extus multidenticulatis, intermediis parce, posticis (angustulis) vix spinulosis; calcaribus minutis; tarsis longiusculis, subgracilibus.

Mas metasterno postice in medio leviter bituberculato.—Long. corp. lin. 1–vix 2.

Hister chalcites, *Illig., Mag. für Ins.* vi. 40 (1807).
—— æneus ♀, *Brullé* [nec *Fab.*], *in Webb et Berth.* (*Col.*) 59 (1838).
Saprinus chalcites, *Woll., Ins. Mad.* 216 (1854).
—— ——, *de Mars., Ann. de la Soc. Ent. de France,* 445. pl. 18. f. 71 (1855).
—— ——, *Woll., Cat. Mad. Col.* 75 (1857).

Habitat Lanzarotam, Fuerteventuram, Canariam, Teneriffam, Gomeram et Palmam, vel in cadaveribus vel in stercore humano, hinc inde sat vulgaris.

The *S. chalcites*, which is common throughout Mediterranean latitudes and which is rather abundant in the Madeiran Group, is in all probability *universal* in these islands,—though I do not happen to have met with it in either Gomera or Hierro, in the former of which, however, it was captured by Dr. Crotch. But in Lanzarote, Fuerteventura, Grand Canary, Teneriffe, and Palma I have taken it, more or less plentifully; and in the first of these it was found also by Mr. Gray. It is exceedingly variable in stature; but it may be readily known from the other species here described by its bright æneous surface and pale rufo-piceous limbs, by its forehead being densely punctulated and with its stria obsolete, by its prothorax having the front angles very obtuse and the rounded depression within them comparatively deep, by the sculptured portion of its elytra being not very closely punctured, and the polished part (which is not always very rigidly bounded) terminated laterally by the third oblique stria (or second "dorsal" one), by the teeth of its anterior tibiæ being rather small and numerous, whilst its intermediate pair are but sparingly spinulose, and the hinder ones (which are comparatively

narrow) still less so, by its tarsi being somewhat long and slender, by its prosternal lines divaricating equally at the base and in front, and by the metasternum of its male sex being furnished with two small tubercles in the centre (between the posterior coxæ) behind.

284. **Saprinus fortunatus,** n. sp.

S. virescenti-subæneo-niger, nitidus; fronte densissime punctulatâ, striâ nullâ; prothorace ad latera necnon per basin ipsam dense punctato, intra angulos anticos (oblique subtruncatos) vix impresso; elytris densissime punctulatis, spatio communi pone scutellum (striâ recurvâ, vel quartâ dorsali, terminato) politissimo necnon ad humeros minus punctulatis, striis sat tenuibus, vix punctulatis, humerali in subhumeralem mergente, 1–4^{tam} dorsalibus versus medium postice continuatis; prosterno lineis antice subapproximatis parallelis, ad basin divergentibus; mesosterno sat profunde punctato, angulis sat argute determinatis; antennis pedibusque piceis; tibiis anticis circa 7- (fortiter 4-) dentatis, intermediis parce, posticis (angustis, subcurvatis) vix spinulosis; calcaribus parvis; tarsis longiusculis, gracilibus.—Long. corp. lin. $1\frac{1}{4}$–2.

Hister virescens, *Brullé* [nec *Payk.*], *in Webb et Berth.* (*Col.*) 59 (1838).

Habitat Lanzarotam, Fuerteventuram et Canariam, in stercore bovino, equino, camelino præcipue degens: in Lanzarota plerumque abundat.

The present well-marked *Saprinus* appears to be intermediate in structure between two distinct specific *types*, namely that of the *S. virescens* and *rugifrons*,—agreeing with the former in its somewhat narrow and comparatively unspinulose hinder tibiæ, minute spurs, slender feet, and simple, densely punctulated forehead; but with the latter in its anteriorly *parallel* and subapproximated prosternal lines, and in its rather powerfully dentate fore tibiæ. In its greenish hue (which, however, is very much duller than that of the *S. virescens*, and is also slightly subænescent) it is more suggestive, *primâ facie*, of the first of those insects than of the second; nevertheless I am inclined to think that it has, in reality, almost as great an affinity with the species around the *metallicus* and *rugifrons* as it has with those around the *chalcites* and *virescens**.

The *S. fortunatus* is rather a common insect in Lanzarote and

* *Apart* from the characters above alluded to (which, being *structural*, are necessarily all-important), the most superficial inspection, one would imagine, must have sufficed to distinguish the present *Saprinus* from the European *virescens*—which has its colour immensely brighter, its punctation *very much* less dense (though, at the same time, continued lightly *even over the disc* of the pronotum), its forehead more convex, its outline considerably rounder, &c.; but scarcely a "superficial" examination seems to have been bestowed on the few Coleoptera which constitute the very meagre list included in MM. Webb and

Fuerteventura, where it occurs (principally in dung) during the spring months; and I have likewise taken it, though sparingly, in the region of El Monte, in Grand Canary. In Lanzarote it was found also by Mr. Gray.

285. **Saprinus ignobilis**, n. sp.

S. niger, nitidus; fronte vix marginatâ, minute punctulatâ; prothorace subæqualiter punctato, intra angulos anticos (valde obtusos) haud impresso; elytris sat profunde (pone scutellum vix levius) punctatis, striis profundis sat distincte crenulatis, humerali indistinctâ a subhumerali disjunctâ, 1–4^{tam} dorsalibus versus medium postice continuatis (1^{mâ} interdum longiore), suturali postice obsoletâ, parte basali recurvâ minute irregulariter undulatâ; prosterno horizontali, obelisciformi (*i. e.* striis a basi usque versus apicem subparallelis vel potius paulo subapproximatis, et dein subito oblique approximatis, ad apicem ipsum confluentibus); meso- et metasternis depressis, sat dense et profunde punctatis, illo antice minus emarginato sed angulis parum argute determinatis; antennis brevibus pedibusque piceis; tibiis anticis circa 6-angulato-dentatis, intermediis parce, posticis vix spinulosis; calcaribus parvis, anticis paulo majoribus subcurvatis.—Long. corp. lin. 1½.

Habitat Lanzarotam, prope oppidum Arrecife à Dom. Gray repertus.

In their small size and dark hue, as well as in the fact of their upper surfaces being minutely punctulated *throughout*, the present *Saprinus* and the following one have much in common. The *S. ignobilis*, however, is a little larger and blacker than its ally; its punctures are deeper, and carried *more evidently* over the entire surface; its forehead is less distinctly margined, more rounded-off at the anterior angles, and without any appearance of being separated from the epistome by a transverse line; its elytral striæ are coarser, slightly longer, and not quite so oblique (the sutural one, moreover, being evanescent, except at its extreme base, and with the *recurved portion* which connects it with the ordinary "dorsal" one minutely and irregularly undulated); its prosternum is flatter, or more horizontal, and very peculiarly formed,—the striæ being *sub*parallel, or only very slightly approximating, from the base to about two-thirds of the distance to the apex, at which point they suddenly converge obliquely (causing the space between them to be, what I can only express intelligibly by calling, of an *obelisk*-shape); its meso- and meta-sterna are more depressed, and very much more deeply and closely punctured (the former being also less excavated at the apex, but with its

Berthelot's ponderous work; and therefore it is not surprising that we should find this insect (through the mere fact of its possessing a slightly greenish tinge!) referred to the *H. virescens*.

angles nevertheless more rigidly defined); its four hinder tibiæ have their spines shorter, and *less concentrated* towards the outer extremity; and the front pair have their terminal spur (instead of being obsolete) well defined, and (although not large) subflexuose.

Hitherto I have seen but three specimens of the *S. ignobilis*. They were all taken by Mr. Gray near Arrecife, in Lanzarote,—by whom one of them has been presented to the British Museum collection.

b. *Fronte a clypeo lineâ (vel carinâ) transversâ plus minus distinctâ divisâ.*

286. **Saprinus minyops,** n. sp.

S. niger (vix obsoletissime subænescens), nitidus; fronte semicirculari, grosse marginatâ, carinâ transversâ rectâ sed utrinque minute sinuatâ, angulis ipsis prominulis subacutis (oculos parvos occultantibus), minutissime punctulatâ; prothorace leviter (præsertim in disco) punctulato, intra angulos anticos (obtusos) haud impresso; elytris minute et parce punctulatis, antice paulatim lævioribus (sed etiam ibidem, oculo fortiter armato, minutissime punctulatis), striis minute crenulatis, humerali a subhumerali disjunctâ, 1–3$^{\text{tiam}}$ dorsalibus fere ad medium postice continuatis, 4$^{\text{tâ}}$ plus minus interruptâ breviore; prosterno subsinuato, lineis subapproximatis, antice fere parallelis, ad apicem vix sed ad basin paulo divergentibus; meso- et meta-sternis subconvexis, parce (præcipue hôc) et leviter punctatis, illo angulis anticis obtusis; antennis brevibus pedibusque piceis; tibiis anticis circa 6-dentatis, posterioribus versus apicem longe spinuloso-ciliatis; calcaribus parvis, anticis obsoletis.—Long. corp. lin. $\frac{3}{4}$–$1\frac{1}{4}$.

Habitat Lanzarotam, Fuerteventuram et Canariam, in cadaveribus necnon etiam in stercore humano, in arenosis degens.

This very minute *Saprinus* is still smaller and of a less intense black than the last species (though its subænescent tinge is often hardly traceable); and, apart from its diminutive bulk, it may be readily known by its distinctly margined, semicircular forehead, which has the transverse line which separates it from the epistome rather strongly defined, and its anterior angles sharp and prominent, so as almost to conceal from view the (rather small, reniform) eyes beneath them. This prominence of the frontal angles causes the transverse frontal keel, which at first sight appears quite straight, to be minutely sinuated towards either end. Its punctures are considerably smaller, and perhaps a little less dense, than those of the *S. ignobilis*, being in fact so small on the disc of its prothorax and (more particularly) on the anterior portion of its elytra as to require a high magnifying power to be perceived: nevertheless (though less conspicuously so than in that insect) they do certainly extend over the *whole* surface.

Its elytral striæ are rather shorter, finer, and more oblique than those of the last species, the recurved "dorsal" one is more or less shortened, or interrupted, and the sutural one is continued to the apex; its antennæ are much abbreviated; its four hinder tibiæ (particularly, however, the intermediate pair) are studded with very long spinules, especially towards their extremities; its two front spurs are almost (if not, indeed, entirely) obsolete; and its prosternal lines are nearly parallel, or only *very* obscurely divergent, anteriorly (enclosing an exceedingly narrow space), but slightly divaricate behind.

I have taken the *S. minyops*, from out of dead animals, &c., in low spots behind the sea-beach, immediately outside Arrecife of Lanzarote; as also, though more sparingly, in Fuerteventura, and in the sandy region between Las Palmas and the Isleta of Grand Canary.

287. **Saprinus angulosus**, n. sp.

S. piceo-æneus, nitidus; fronte semicirculari, immarginatâ, carinâ transversâ rectâ, angulis prominulis rectis (oculos fere occultantibus), ubique (sed præsertim antice) minute transversim strigulosâ; prothorace in disco postico levissime sed versus latera et per basin profundius punctato, punctis utrinque longitudinaliter confluentibus, intra angulos anticos (vix oblique subtruncatos) haud impresso; elytris postice minute et parce punctulatis, antice lævibus, striis profundis crenulatis, humerali a subhumerali disjunctâ, 1ma 2daque dorsalibus longe ultra sed 3tia 4taque vix ultra medium postice continuatis, suturalis parte recurvâ transversâ subrectâ angulos duos (sc. cum suturali et cum quartâ dorsali) efficiente; prosterno lineis subapproximatis, parallelis sed ad basin paulo divergentibus; mesosterno leviter punctato; antennis pedibusque læte rufo-piceis; tibiis anticis extus minute multispinulosis, posterioribus præsertim versus apicem longe ciliato-spinulosis; calcaribus parvis, anticis obsoletis. —Long. corp. lin. 1.

Habitat Lanzarotam, in cadaveribus prope oppidum Arrecife captus.

In its prothorax being punctulated throughout (though *very* minutely so on the hinder disc), and in the rather prominent anterior angles of its semicircular forehead, the present *Saprinus* nearly coincides with the *S. minyops*; nevertheless the resemblance there ceases, for it has no other distinctive feature in common with that insect. It may readily be known by the two characters just mentioned, in conjunction with its æneous (and somewhat pitchy) hue and its brightly rufescent limbs, by almost its entire forehead (which is unmargined at the sides) being minutely strigulose transversely, by its prothoracic punctures being longitudinally subconfluent towards the edges, by the *recurved portion* of its sutural stria (at the base of the

elytra) being rather straightened—thus forming a tolerably defined angle with each of the striæ which it connects,—by merely the posterior half of its elytra being finely (and somewhat sparingly) punctured, by its front tibiæ being armed externally with a row of short and small spinules (as in the *S. chalcites*), whilst the four hinder ones are studded (particularly towards their extremities) with long spinose cilia, and by its anterior spurs being apparently almost obsolete.

The only four examples which I have seen of this minute *Saprinus* were captured by myself in the low ground immediately outside Arrecife, in Lanzarote.

288. **Saprinus mundus**, n. sp.

S. subvirescenti- vel subæneoscenti-niger, nitidus; fronte marginatâ, carinâ transversâ rectâ, antice valde irregulariter transversim scabroso-strigosâ; prothoracĕ leviter striguloso-punctato, in disco postico lævi, intra angulos anticos (oblique subtruncatos) haud impresso; elytris postice in medio sat profunde et densissime punctatis, striis profundis crenatis, humerali a subhumerali disjunctâ, 1^{mâ} 2^{dâ}que dorsalibus ultra sed 3^{tiâ} 4^{tâ}que vix ad medium postice continuatis; prosterno lineis antice subapproximatis parallelis evanescentibus, ad basin paulo divergentibus; mesosterno impunctato; antennis pedibusque piceis; tibiis anticis circa 6- (longe 3-) dentatis, posterioribus longe ciliato-spinulosis; calcaribus posterioribus elongatis; tarsis paulo incrassatis, subconicis.

Var. β [an species?]. Læte æneus, elytrorum striis 3^{tiâ} 4^{tâ}que dorsalibus paulo longioribus, mesosterno subpunctato. [*Ins.* Canariæ Grandis.]—Long. corp. lin. $1\frac{1}{3}$–$1\frac{1}{2}$.

Hister metallicus?, *Brullé, in Webb et Berth.* (*Col.*) 59 (1838).

Habitat Lanzarotam et Fuerteventuram, in cadaveribus et stercore humano: *var.* β in Canaria Grandi adhuc solâ collegi.

The present *Saprinus* may be known by its greenish-black hue (which has also a just perceptible æneoscent tinge), by the very close and rather deep punctures on the hinder half of its elytra, by its frontal keel being straight, and its forehead very irregularly *scabroso*-striguloso anteriorly, by the third and fourth "dorsal" striæ of its elytra being usually much shorter than the first and second, and by its four hinder tibiæ being rather thickly studded with exceedingly long setiform spinules, and with their apical spurs (though somewhat slender) considerably developed. It is nearly allied to the European *S. metallicus*. Its prothorax, however, is relatively a little larger than is the case in that insect; its elytra are more densely punctured behind and have their striæ very much shorter—the two inner dorsal ones being exceedingly abbreviated, and the outer (or first) one, which is greatly

elongated in the *metallicus*, reaching scarcely to the middle; and its surface has a more conspicuously *œnescent* tinge.

The *S. mundus* is not uncommon in Lanzarote and Fuerteventura; and in the sandy region of Grand Canary between Las Palmas and the Isleta I captured two specimens which are uniformly of a pure æneous hue, like the *S. chalcites*; but I hardly think they are more than a variety of the present species. Nevertheless their third and fourth dorsal striæ are a little longer than is the case in the ordinary type, and their mesosternum has a slight tendency to be obsoletely punctured.

289. **Saprinus erosus**, n. sp.

S. niger postice picescens, nitidus; fronte marginatâ, carinâ transversâ bisinuatâ, antice irregulariter transversim bistrigosâ; prothorace magno, convexo, leviter striguloso-punctato, in disco postico lævi, intra angulos anticos (obtusos) haud impresso; elytris postice in medio leviter et parce punctatis, striis profundis crenatis, humerali indistinctâ a subhumerali disjunctâ, $1^{mâ}$–4^{tam} dorsalibus paulo ultra medium postice continuatis; prosterno striis antice subapproximatis subparallelis, mox ante apicem confluentibus, ad basin paulo divergentibus; mesosterno longiusculo, impunctato; antennis pedibusque (crassis) rufo-piceis; tibiis anticis pone apicem profunde erosis, ante excavationem dentibus 2 obtusis subconfluentibus et pone excavationem dente singulo obtuso armatis, posterioribus longe, dense et grosse ciliato-spinulosis; calcaribus posterioribus elongatis, robustis; tarsis valde incrassatis, setosis, subconicis.—Long. corp. lin. $1\frac{1}{2}$.

Habitat Fuerteventuram, subrejectamentis per litora maris repertus.

Had I but a single example to judge from, I might perhaps have been inclined to consider the curious excavation, or cavity, in the outer edge of the front tibiæ of this insect as accidental; but since it exists equally, and without the slightest variation, in six specimens from which the above diagnosis has been drawn out, I am compelled to regard it as a most remarkable specific feature. The two teeth, moreover, between this *sinus* and the apex are short, obtuse, and *subconfluent*; and a similarly blunt one exists behind it,—after which the margin is hardly perceptibly serrated. Apart, however, from this peculiarity of its anterior tibiæ, the *S. erosus* may be distinguished by its black but *posteriorly piceous* hue; by its large and convex prothorax, which has its front angles obtusely prominent (and *not* obliquely truncated); by its frontal keel being *bisinuated* (instead of straight), and its forehead branded with two rather irregular transverse strigæ; by its elytra being only lightly and *sparingly* punctured behind; by its rufo-piceous legs being exceedingly thick and robust

—the four posterior tibiæ being densely armed with long spinules, and with their apical spurs largely developed; and by its feet being much incrassated, subconical, and more powerfully spinose beneath than is the case with the generality of the *Saprini*.

The *S. erosus* appears (like the following species) to be of *maritime* habits, as indeed the very robust structure of its greatly thickened four hinder legs, with their densely spinulose tibiæ and feet and somewhat largely developed apical spurs, would seem to indicate. My six specimens were all captured, from beneath marine *rejectamenta*, on the sandy beach at Corralejo, in the extreme north of Fuerteventura.

290. **Saprinus lobatus**, n. sp.

S. nigro-æneus (postice interdum piceus), nitidus; fronte marginatâ, carinâ transversâ rectâ, antice transversim bistrigosâ (strigâ posticâ plus minus obsoletâ); prothorace lævissimo (per marginem ipsissimum posticum serie punctorum solum notato), intra angulos anticos (porrectos, rotundatos) haud impresso; elytris postice in medio sat dense punctatis, striis profundis crenatis, humerali a subhumerali disjunctâ, 1ma–4tam dorsalibus vel versus vel paulo ultra medium postice continuatis; prosterno sinuato, antice valde desiliente lobiformi, lineis ad basin paulo divergentibus, inde usque ad medium gradatim approximatis (fere confluentibus), dein vix divaricatis et ad apicem ipsum junctis; mesosterno impunctato; antennis pedibusque rufo-piceis; tibiis anticis circa 6- (longe 3-) dentatis, posterioribus longe et dense ciliato-spinulosis; calcaribus posterioribus elongatis, parum robustis; tarsis elongatis, incrassatis, setosis, subconicis.—Long. corp. lin. $1\frac{1}{2}$–2.

Habitat per oras arenosas maritimas Lanzarotæ, Fuerteventuræ et Canariæ, sub rejectamentis haud infrequens.

Although very closely allied to the European *S. maritimus* (=*sabulosus*, de Mars.), it certainly would not be safe to refer the present *Saprinus* to that species. It may be known from it by its entire surface having a more or less conspicuous æneous tinge (though occasionally picescent posteriorly), instead of being black; by its elytra having their striæ rather shorter and considerably finer, and their punctation denser and less coarse, and extending over a larger portion of the posterior disc; by the three apical teeth of its anterior tibiæ being perhaps a trifle longer; by its pronotum being rather more *narrowly* punctured along its extreme base; by its prosternum being somewhat more uneven, or sinuated, with its apex a little more prominent (or downwardly directed), and with its lines almost parallel (or not quite so approximated in the middle, and therefore not so perceptibly divergent *before* the middle); and by its mesosternum

being less coarsely bordered, especially in front, and always totally impunctate. Its smooth and shining prothorax (which has merely a row of punctures along its extreme hinder margin) will, apart from all other distinctions, at once separate it from the other *Saprini* here enumerated.

Like its more northern ally, the *S. lobatus* is purely a maritime species, occurring beneath marine and other *rejectamenta* on the sandy sea-shores. In such situations I have taken it in Lanzarote, Fuerteventura, and between Las Palmas and the Isleta of Grand Canary; in the second of which islands it was also found by Mr. Gray. I have likewise captured it at Mogadore, on the opposite coast of Morocco.

Genus 123. **XENONYCHUS** (nov. gen.).

Corpus ut in *Saprino*, sed subtus valde convexum (meso- et metasternis abdomineque crassis inflatis) necnon subtus utrinque longissime pilosum: *fronte* marginatâ, valde depressâ; *oculis* parvis, demissis, semicircularibus, sub frontis angulo laterali absconditis: *pronoto* ubique æqualiter punctulato; *prosterno* (ut in *Pachylopo*) valde carinato (*i. e.* striis mox ante basin confluentibus, carinam acutam inde ad apicem efficientibus): *elytrorum striâ* etiam 5ta *dorsali* (*i. e.* inter suturalem et quartam recurvam sitâ) haud omnino obsoletâ, interdum parum distinctâ: *alis* magnis: *propygidio* longiusculo. *Antennæ* fere ut in *Saprino*, sed scapo pilis multo longioribus (*sc.* longissimis) subtus et supra obsito. *Instrumenta cibaria* fere ut in *Saprino*; sed *mandibulis* acutioribus necnon ad apicem multo magis et subito incurvis, longe intra apicem dente (in unâ magno, in alterâ minore obtuso) armatis; *palporum* (maxillarium ac labialium) *articulo ultimo* paulo longiore et omnino cylindrico, in *labialibus* multo majore et crassiore quam penultimo; *paraglossis* longissimis, usque ad basin articuli ultimi ductis. *Pedes* anomali, robustissimi, *posteriores* valde distantes et *postici* e coxis crassis alte conicis perpendicularibus surgentes: *femoribus* parce sed longe pilosis, *anticis* paulo longioribus quam tibiis, *intermediis* tibiarum longitudine, *posticis* ovatis brevioribus: *tibiis anticis* versus apicem profunde tridentatis, inde ad basin minute crenulatis, *posterioribus* intra longissime sed parce pilosis, extus longe et densissime multispinulosis: *tarsis anticis* gracilibus, subcalvis, *posterioribus* subincrassatis brevibus subconicis, art^{is} 1mo–4^{um} supra in medio pilo gracili sed infra ad apicem singulis setâ robustissimâ longissimis instructis, *tarsis omnibus* art^{o} 1mo longiusculo, ultimo ovali *unguiculis* setiformibus rectis (sed in *anticis* ad apicem ipsum paulo inflexis) longissimis (*sc.* articulo sublongioribus) instructis.

Obs.—Genus corpore subtus convexissimo et longe sed parce piloso, coxis posticis valde distantibus incrassatis alte conicis perpendiculariter elevatis, tibiis posterioribus super faciem internam pilis tenuibus longissimis instructis necnon unguiculis valde elongatis

setiformibus rectis inter Histeridas anomalum. Prosterni formâ antice acute carinati cum gen. *Pachylopo* congruit; sed mandibulis ad apicem longe et subito inflexis acutis necnon intus dente armatis, pronoto ubique æqualiter punctulato, propygidio longiusculo, antennarum scapo pilis longissimis densius instructo, palporumque articulo ultimo cylindrico, in labialibus magno, a *Pachylopo* et *Saprino* insuper dignoscitur.

A ξένος, alienus, et ὄνυξ, unguiculus.

The singular insect for which I have established the present genus resides about the drifting sand-hills of Fuerteventura, where it burrows at the roots of the various sand-plants which stud those arid maritime wastes, in company with the two anomalous *Curculionidæ* (one of them blind, and the other nearly so) which I described at considerable length in a recent Paper* on the "Atlantic *Cossonides*"; and, although exponents of families so remote from each other, one nevertheless cannot help remarking a certain curious analogy in several of the structural peculiarities of *all* these sand-infesting Coleoptera. Whether we regard indeed the enormous length of the hairs and cilia with which they are beset on portions of their surface and organs *which are not usually thus clothed*, or their unnaturally abbreviated antennæ and more or less diminished eyes, or their extraordinarily spinulose legs, and the fact of their feet being in every instance most wonderfully modified (either by additions to or detractions from what is normal in their respective central types), it is impossible not to be struck by the quaint and mysterious analogy which would seem to bind them together (however distant in affinity) into at any rate a *locally associated* assemblage.

Viewing the characters, however, of *Xenonychus* as compared with those of its actual allies, it is at once remarkable amongst the *Histeridæ* by the singular convexity of its body beneath (occasioned by the inflation of its meso- and meta-sterna and abdominal segments), and the thickened, conical, elevated form of its (most widely separated) posterior coxæ; by the enormously long hairs with which either side of its under surface, and the inner face of its four hinder tibiæ, are studded; and by the wonderful construction of its tarsal claws, which are immensely long, slender and *setiform*, and (with the exception of the anterior pair which are *slightly* incurved at the apex) almost perfectly straight.

In minor details the genus is distinguished by its shortened antennæ (which have the scape beset with excessively long hairs) and

* *Vide* Trans. Ent. Soc. Lond. (new series) v. pp. 388, 394.

small semicircular eyes, which are concealed beneath the lateral angles of the forehead; by its prosternum being sharply keeled in front (as in *Pachylopus*); by its prothorax being densely and equally punctulated throughout, and the four dorsal striæ of its elytra entire; by its propygidium being less abbreviated than is ordinarily the case; by its mandibles being exceedingly acute, greatly and suddenly incurved at their apex, and armed with a tooth internally; and by the ultimate joint of its palpi being perfectly cylindric, and in the labial pair somewhat enlarged.

291. **Xenonychus fossor**, n. sp.

X. piceo-niger, subnitidus, ad latera ipsissima longissime fulvo-ciliatus; fronte impunctatâ, carinâ transversâ tenui subobsoletâ bisinuatâ; prothorace densissime sed levissime punctulato (punctis serratulis et minus impressis sed vix minutis); elytris in medio (præsertim postice) sat profunde punctatis, striis profundis crenatis, humerali in subhumeralem mergente, 1ma–4tam dorsalibus postice ad apicem continuatis, suturali tenui integrâ cum 4tâ dorsali ad basin junctâ, necnon in spatio inter suturalem et quartam striâ 5tâ plus minus indistinctâ antice evanescente impressis; mesosterno sat profunde punctato, apice late sed leviter excavato; antennis brevibus, flavo-piceis; pedibus robustissimis, rufo-piceis.—Long. corp. lin. $1\frac{1}{2}$–$1\frac{2}{3}$.

Habitat Fuerteventuram, præsertim ad radices plantarum (*Zygophylli Fontanesii*, Webb, et cæt.) in arenosis aridis submaritimis crescentium fodiens.

As already stated, this curious insect is found in the dry sandy regions of Fuerteventura adjoining the coast. It was taken, sparingly, both by Mr. Gray and myself, around the roots of *Zygophyllum Fontanesii* and other shrubby plants, on the exposed sand-hills about a mile to the south of Puerto de Cabras, during February 1858.

Genus 124. **EUBRACHIUM.**

Wollaston, *Trans. Ent. Soc. Lond.* (3rd series) i. 159 (1862).

292. **Eubrachium punctatum.**

Eubrachium punctatum, *Woll., Trans. Ent. Soc. Lond.* (3rd series) i. 162 (1862).

Habitat in lauretis Teneriffæ et Palmæ, sub cortice arborum laxo humido, rarissime.

I have pointed out the distinctive characters of the present and two following species in a paper which has lately been published in the 'Trans. of the Ent. Soc. of London.' The *E. punctatum* appears

to be of the greatest rarity, and confined (so far as I have observed hitherto) to the laurel-regions of Teneriffe and Palma. In the former, I have taken it at the Agua Garcia, at Las Mercedes, and in the forest above Taganana; and in the latter, at a rather high elevation in the Barranco de Galga. It occurs principally beneath the loose, damp, rotten bark of trees.

293. Eubrachium ovale.

Eubrachium ovale, *Woll., Trans. Ent. Soc. Lond.* (3rd series) i. 161. pl. vii. f. 9 (1862).

Habitat in Hierro, sub cortice *Euphorbiarum* laxo putrido in regione El Golfo repertum.

The only island in which I have as yet observed this interesting little insect is Hierro—where, during February 1858, I captured several specimens of it, from beneath the rotten bark of old Euphorbias, in the lower part of the region of El Golfo.

294. Eubrachium politum.

Eubrachium politum, *Woll., Trans. Ent. Soc. Lond.* (3rd series) i. 163 (1862).

Habitat in Lanzarota et Hierro, in iisdem locis ac præcedens, rarissimum.

Of the present *Eubrachium* four specimens only have hitherto come beneath my notice. One of them I took on the *Euphorbia*-clad cliffs (known as the "Risco") overlooking the Salinas, in the extreme north of Lanzarote; and the other three, in company with the last species, at El Golfo, on the western side of Hierro.

Genus 125. ACRITUS.

Le Conte, *Proc. of the Acad. of Philad.* iii. 288 (1853).

§ I. *Prothorax lineâ punctorum ante basin haud impressus.*

295. Acritus punctum.

A. oblongus, fusco-niger, nitidus; fronte minutissime et parce punctulatâ, oculis sat magnis prominulis, minute et parce setosis; prothorace elytrisque distinctius sed parce punctatis, illo antice et postice subæqualiter latiusculo, lateribus ipsis paulo sinuatis et striâ integrâ impressis, his versus humeros obsolete oblique striatis; prosterno et mesosterno vix punctatis, illo striis integris, a basi usque ad apicem gradatim arcuato-divergentibus, hôc antice integro obtuse lobato, ad latera marginato, suturâ posticâ indistinctâ; metasterno magno, punctato; pygidio et propygidio densissime subtilissimeque transversim rugatis sed haud punctatis; antennis pedibusque piceo-ferrugineis; tibiis anticis arcuatis, extus minutissime

spinulosis et ante apicem subito dilatatis, posterioribus subrectis, parce ciliato-spinulosis.—Long. corp. lin. $\frac{2}{3}$.

Abræus punctum, *Aubé, Ann. de la Soc. Ent. de France*, 232 (1842).
Acritus punctum, *de Mars., ibid.*, 607 (1856).

Habitat Lanzarotam, per oram arenosam maritimam prope oppidum Arrecife sub fucis captus.

Its oblong, entirely punctulated body, its freedom from a punctured subbasal prothoracic line, and the shape of its sterna, no less than its maritime habits, prove the present *Acritus* to be identical with the *A. punctum* from the south of Europe—of which I have lately received four examples from A. H. Haliday, Esq., taken by himself in Italy; nevertheless many of its most important characters are totally unalluded to by De Marseul. Thus, he expressly says, of the *punctum*, "Front convexe, *saillant sur les yeux*"; whereas in reality the forehead is depressed, and the eyes are not only large and prominent, but also (which is a most unusual feature) minutely and sparingly *setose**. Again, he states, "pygidium et propygidium très finement ponctués"; whereas there is not the vestige of a puncture on that portion of the surface (which is closely and delicately transversely-rugulose). And, lastly, he speaks of the colour of the limbs as pale-testaceous; whereas they are piceo-ferruginous. In addition to these discrepancies, I should add that he makes no mention of the *arcuated* and rather *suddenly dilated* anterior tibiæ, which constitute one of its most conspicuous peculiarities. Nevertheless the Canarian insect is clearly identical with the *A. punctum*; with which (as just stated) it likewise agrees in its mode of life. Indeed the only six specimens which I have seen were captured, by myself, from beneath sea-weed on the sandy beach close to Arrecife of Lanzarote; and in the 'Faune Française' the *habitat* given for the *punctum* is "La Teste, sous les algues."

§ II. *Prothorax lineâ punctorum ante basin impressus.*

296. Acritus minutus.

Hister minutus, *Hbst, Natursyst.* iv. 41. tab. 36. f. 4 (1791).
Acritus minutus, *de Marseul, Ann. de la Soc. Ent. de France*, (3ième série) iv. 614 (1857).
—— ——, *Woll., Cat. Mad. Col.* 76 (1857).

Habitat in Fuerteventura, Canaria, Teneriffa, Gomera et Palma, sub quisquiliis, passim.

* I can recall but few Coleopterous insects in which this structure exists; indeed the only ones that I now recollect, in which it obtains, are *Litargus* and my genus *Tarphiodes* (from the Malay Peninsula).

The common European *A. minutus* (which occurs in Madeira and Porto Santo, and which I have also taken at Mogadore, on the opposite coast of Morocco) is probably universal in these islands, though from its small size it is very liable to escape observation. Hitherto, however, I have myself met with it only in Fuerteventura, Grand Canary, Teneriffe, and Palma; but I have received specimens which were found by Dr. Crotch in Gomera. My Fuerteventuran examples are from the Rio Palmas; and the Teneriffan ones from Orotava, the Agua Garcia, and Ycod el Alto.

Fam. 24. THORICTIDÆ.

Genus 126. THORICTUS.

Germar, *in Silb. Rev. Ent.* ii. 2. 15 (1834).

297. Thorictus gigas.

T. quadrato-oblongus, rufo-piceus, nitidus, minute et parce asperato-punctatus, subtiliter fulvescenti-pubescens; prothorace brevi, transverso, in disco postico convexo, ad latera valde rotundato dilutiore vix subpellucido, angulis posticis obtusis; elytris piceis, ad humeros calloso-incrassatis et ibidem obtuse prominentibus, in disco valde convexis, ad basin ipsissimam lineâ mediâ sinuatâ terminatis necnon utrinque breviter longitudinaliter bicostatis; pedibus longiusculis.—Long. corp. lin. $1\frac{1}{4}$–vix $1\frac{1}{2}$.

Thorictus gigas, *Woll., Ann. Nat. Hist.* (3rd series) ix. 439 (1862).

Habitat Canariam Grandem, in formicarum nidis rarissimus.

The large size of this gigantic *Thorictus* and its *relatively* shorter and more transverse prothorax (which is slightly subpellucid towards the edges and has its posterior angles obtuse), combined with its greatly prominent *nodiform* shoulders, the very distinct biflexuose costa with which the central portion of the *extreme* base of its elytra is terminated, its conspicuous subhumeral plicæ, and its comparatively elongated legs, will readily characterize it. The punctules of its upper surface, although small and distant, are sharply defined and somewhat *asperate* (the anterior edge of each being a little raised); and they are much denser on the humeral callosity than elsewhere. It is apparently of the greatest rarity, and confined (so far as I have observed hitherto) to Grand Canary—in which island I have taken it sparingly, from out of the nests of a large brown Ant (a *Formica*) on the mountains above San Mateo, as well as on the northern side of the Barranco at Aldea de San Nicholas. It is about the size of the *T. Germari*, Lucas, from Algeria (of which a specimen has been communi-

cated to me by Mr. Janson), but is totally distinct in all its characters—of colour, outline, sculpture, clothing, proportions, and the inequalities of its surface.

298. **Thorictus canariensis.**

T. oblongus, rufo-piceus, nitidus, minutissime et parce punctulatus, subtilissime (oculo fortiter armato) cinereo-pubescens; prothorace convexo, ad latera valde rotundato, angulis ipsis posticis oblique impresso-marginatis; elytris piceis, antice subparallelis, in disco valde convexis, ad basin lineâ mediâ vix terminatis sed utrinque breviter longitudinaliter subcostatis; pedibus brevibus.

Variat capite prothoraceque plus minus rufescentioribus necnon regione scutellari plus minus obliquo-desiliente.

Var. β. *obsitus* [an species distincta?]. Prothorace vix rufescentiore, paulo distinctius punctato, versus utrumque latus obsoletissime impresso; elytris vix angustioribus, pube longiore erectâ irroratis, versus humeros paulo evidentius subplicatis.—Long. corp. lin. ¾–vix 1.

Thorictus canariensis, *Woll., Ann. Nat. Hist.* (3rd series) ix. 439 (1862).

Habitat insulas omnes Canarienses, sub lapidibus in formicarum nidis hinc inde parum vulgaris. *Var.* β ad locos editiores Teneriffæ necnon ad Gomeram pertinet.

In its general outline and very minutely punctulated surface the present *Thorictus* closely resembles the Sicilian *T. grandicollis**. It differs from it, however, in being, on the average, of a distinctly darker hue (though the head and prothorax, nevertheless, are more or less rufescent), in having the sides of its pronotum a little rounder behind, with the posterior angles more conspicuously depressed by an oblique marginal band (which lops them off on their *upper* surface), in its elytra being almost free from the minute central *rim* which terminates the middle portion of their extreme base in that species, and with the short subhumeral (posteriorly evanescent) costæ perhaps somewhat less developed, and by its surface being *very* delicately and sparingly pubescent; whereas in the *grandicollis* I cannot detect, except at the lateral margins, the slightest trace of pile even under the highest microscopic power. It is also very nearly allied, both in aspect and hue, to the *bicolor* of Kraatz, from Greece and Sicily (*vide* Berl. Ent. Zeit. 1858, p. 141)—for types of which I am indebted to

* The Madeiran *T. Westwoodii* differs from the *canariensis* in being paler and a little more strongly punctured, in having its prothorax still more rounded at the sides, and its scutellum (although very minute) quite traceable beneath a high magnifying power, in the small elevated line with which the central portion of the extreme base of its elytra is terminated being distinctly developed, and in its antennæ and feet (particularly the hinder pair) being shorter and thicker.

Dr. Schaum; nevertheless it has its elytra just perceptibly narrower and longer than is the case in that species, as also less ventricose on their hinder disc (or less incurved posteriorly), very much less plicate at the shoulders, and with the *extreme* basal rim less elevated; the anterior angles of its prothorax are somewhat more rounded off; and its tarsi are a trifle longer and slenderer.

I have given a provisional name, in the event of their proving to be specifically distinct, to the specimens which I have regarded as the "*var.* β." I think, however, it would be scarcely safe, at any rate until further evidence is obtained, to treat them as more than a local modification; though, at the same time, when viewed even beneath an ordinary lens, they are easily separable from the normal examples. They have been taken hitherto only in Gomera and the higher regions of Teneriffe; and differ in having their prothorax a trifle more evidently punctured, and their elytra (which are perhaps just perceptibly narrower, and have their abbreviated subhumeral plicæ rather more developed) sparingly beset with comparatively long and erect hairs.

The *T. canariensis* is *universal* throughout the archipelago; though, at the same time, I should state that the only example which has hitherto been taken in Gomera belongs to the "*var.* β" (which, as already implied, may *possibly* be distinct). I have captured it, however, in its normal state, on the rocky ground immediately behind the Salinas, in the extreme north of Lanzarote (where a single specimen was first detected by Mr. Gray, during January 1858); at La Antigua, and in the Rio Palmas, of Fuerteventura; at a high elevation, close to the Roca del Soucilho, on the mountains of Grand Canary; near the Puerto Orotava, in Teneriffe; in the Barranco above S^ta^ Cruz, of Palma; and near Valverde, in Hierro. It occurs beneath stones, and either actually in Ants' nests or in the immediate vicinity of them.

Of the "*var.* β" a single specimen was found by Mr. Gray in the Barranco above San Sebastian, of Gomera; and I have myself taken it in Teneriffe—namely at the Agua Mansa, and on the lofty Cumbre (adjoining the Cañadas) above Ycod el Alto, at an elevation of more than 8000 feet.

299. **Thorictus vestitus**, n. sp.

T. præcedenti similis, sed vix minor angustior, paulo minus nitidus (oculo fortissime armato minutissime alutaceus), profundius punctatus et pube elongatâ robustâ demissâ fulvescente ubique parce vestitus; prothorace ad basin ipsissimam paulo magis constricto; elytris ad basin ipsissimam lineâ tenuissimâ (subobsoletâ, vix ob-

servandâ) in medio paulo arcuatâ terminatis, versus humeros vix distinctius subplicatis, regione scutellari obliquo-desiliente.—Long. corp. lin. $\frac{3}{4}$.

Habitat Lanzarotam, sub lapidibus in saxosis submaritimis inter Haria et Barranquillo d. 15. Mart. A.D. 1859 repertus.

From out of a large number of the *T. canariensis*, collected throughout the archipelago, I find three specimens, captured in Lanzarote, which differ very considerably from the remainder; and from these the above diagnosis has been compiled. Nor can I believe them to be any local phasis of that insect, since I have taken the *T. canariensis* (in its most typical state) in Lanzarote also, and therefore exposed to the same external influences as the *vestitus*. The characters which distinguish the latter are its stronger punctation (which is very evident when viewed under a high magnifying power) and less shining surface, its just perceptibly smaller and relatively narrower outline, and (more especially) the long, coarse, *decumbent* fulvescent pile with which it is sparingly clothed. Its prothorax, also, is a trifle more constricted at its extreme base; and its elytra are rather more *uneven* (or longitudinally subplicate) towards either shoulder, and have just traceable indications, beneath the microscope, of being terminated by a minute basal line—behind the central (obsolete) portion of which the scutellary region is more sloping, or obliquely-depressed.

My three specimens of the *T. vestitus* were captured, from beneath stones, in the submaritime district adjoining the coast-road between Haria and Barranquillo, in the north-east of Lanzarote, on the 15th of March 1859.

Fam. 25. APHODIADÆ.

Genus 127. **APHODIUS.**

Illiger, *Käf. Preuss.* i. 28 (1798).

300. **Aphodius hydrochæris.**

Scarabæus hydrochæris, *Fab., Ent. Syst. Suppl.* 23 (1798).
Aphodius hydrochæris, *Woll., Ins. Mad.* 222 (1854).
—— ——, *Id., Cat. Mad. Col.* 78 (1857).
—— ——, *Hartung, Geolog. Verhältn. Lanz. und Fuert.* 140 et 141.

Habitat insulas Canarienses, in Palma solâ adhuc haud detectus.

The *A. hydrochæris*, which is general throughout southern Europe and northern Africa, and which is tolerably common in the Madeiran Group, is almost certainly *universal* in these islands,—though hitherto

it does not happen to have been observed in Palma. But in Lanzarote, Fuerteventura, Grand Canary, Teneriffe, and Hierro I have myself taken it, more or less abundantly; and in Gomera it was found by Dr. Crotch. In Teneriffe it was also captured by Dr. Crotch and Mr. Gray. Apart from minor distinctions, it may be known from the other *Aphodii* here enumerated by its larger size and less shining surface, by its dull, brownish-testaceous hue and densely punctured scutellum, and by its anteriorly margined prothorax.

301. **Aphodius Wollastonii.**

A. elongatus, ovato-oblongus (antice subangustatus), nitidus, testaceus, clypeo (rugoso, utrinque ante oculos angulato-exstante), scutello pedibusque picescentioribus, capite postice, prothorace in dorso late necnon in nebulâ parvâ sublaterali elytrisque anguste per suturam nigrescentibus; prothorace breviusculo, leviter inæqualiter punctato; elytrorum striis subtenuibus, interstitiis minutissime et parce punctulatis; palpis antennisque pallide testaceis; tibiis posterioribus, sed præsertim intermediis, longe spinulosis.

Mas tuberculis frontalibus (præsertim medio) distinctioribus, prothorace vix latiore subtiliusque punctato.—Long. corp. lin. $2\frac{1}{2}$–$3\frac{1}{2}$.

Aphodius Wollastonii, *Harold, Berl. Ent. Zeit.* 397 (1862).

Habitat Lanzarotam et Fuerteventuram, in stercore bovino, equino, camelino, tempore vernali parum vulgaris.

In size and general colouring the present *Aphodius* is somewhat intermediate between the *A. hydrochœris* and *nitidulus*; its surface, however, is brighter and less deeply sculptured, and its colour is altogether clearer, than that of the former, and moreover its pronotum is *un*margined anteriorly, its scutellum is more sparingly punctured, and its elytral striæ are narrower; whilst its prothorax (which has only a broad cloudy band down the disc, and a small ill-defined spot towards either side, piceous-black) is very much paler than that of the latter. From *both* of them, however, its anteriorly subacuminated outline and more roughened clypeus, combined with its very pale antennæ and the much longer spinules of its four hinder (though more particularly of its intermediate) tibiæ, will additionally distinguish it. It is rather a common insect in Lanzarote and Fuerteventura during the spring months, in the former of which it was also captured by Mr. Gray; but I have not yet observed it in any of the other islands of the Group.

302. **Aphodius nitidulus.**

Scarabæus nitidulus, *Fab., Ent. Syst.* i. 30 (1792).
Aphodius sordidus, *Brullé* [nec *Fab.*], *in Webb et Berth.* (*Col.*) 60 (1838).

Aphodius nitidulus, *Woll., Ins. Mad.* 223 (1854).
—— ——, *Id., Cat. Mad. Col.* 78 (1857).

Habitat insulas omnes Canarienses, in stercore bovino vulgaris.

This common European insect, which abounds throughout the Madeiran Group, is *universal* at the Canaries—in the whole seven islands of which I have myself taken it, more or less profusely. In Lanzarote and Gomera it was also found by Mr. Gray; and in Gomera and Teneriffe by Dr. Crotch.

303. **Aphodius tæniatus**, n. sp.

A. cylindricus, nitidissimus; capite, prothorace (convexo, latiusculo, leviter inæqualiter punctato, versus latera sola pallidiore) elytrisque late per suturam nigris; clypeo ad latera picescente, recurvo; elytrorum striis tenuibus, interstitiis subdepressis minutissime et sat dense punctulatis; pedibus picescentibus, tarsis, antennis palpisque infuscato-testaceis.

Mas tuberculis frontalibus (præsertim medio) distinctioribus, prothorace vix latiore subtiliusque punctato.—Long. corp. lin. 2–2$\frac{1}{3}$.

Habitat Lanzarotam et Fuerteventuram, unà cum *A. Wollastonii* degens.

The rather small size and cylindric outline of this *Aphodius*, in conjunction with its very convex prothorax, which (together with the head, scutellum, and a *broad* sutural band) is black except at the extreme edges, its fine elytral striæ, its somewhat more densely (though equally minutely) punctulated interstices, and its rather darker femora and tibiæ, will serve to separate it from the other species here enumerated. In colouring and general aspect it resembles a good deal the common European *A. merdarius*; nevertheless it is a little larger, more cylindric, and much more shining than that insect, its clypeus (which is subpicescent) is more truncated at the apex and more recurved at the sides, its prothorax is more convex, its elytral interstices more depressed, its head is broader and with the frontal suture and tubercles (instead of being obsolete in both sexes) well developed in the males, and its antennæ and palpi are paler.

The *A. tæniatus* I have observed hitherto only in Lanzarote and Fuerteventura, where it occurs, during the spring months, in company with the *A. Wollastonii*; it is, however, the rarer of the two species.

304. **Aphodius maculosus**, n. sp.

A. elongatus, nitidus; capite lato piceo, clypeo (ante oculos angulato-exstante) rufescentiore; prothorace (sat profunde inæqualiter punctato) fusco-piceo ad latera late (necnon sæpius per basin ipsissimam anguste) testaceo et utrinque maculâ parvâ mediâ nigres-

cente ornato; scutello fusco-piceo; elytris pallide testaceis, singulis maculis parvis irregularibus nigrescentibus (circa 5) ornatis, interstitiis alutaceis convexis minutissime punctulatis; antennis, palpis pedibusque subpicescenti-testaceis, tarsis elongatis, articulo primo in posterioribus longissimo.

Mas tuberculo frontali paulo distinctiore, prothorace vix latiore subtiliusque punctato.—Long. corp. lin. $2\frac{1}{4}$–$2\frac{3}{4}$.

Aphodius conspurcatus, *Brullé* [nec *Linn.*], *in Webb et Berth.* (*Col.*) 60 (1838).
—— sticticus, *Hart.* [nec *Pnz.*], *Geolog. Verhältn. Lanz. und Fuert.* 140.
—— maculosus, *Harold, in litt.*

Habitat in Lanzarota et Fuerteventura sat vulgaris, necnon in Canaria Grandi rarior; in stercore humano præsertim gaudet.

The present *Aphodius* may be regarded as the representative in these islands of the European *A. inquinatus*, which at first sight it much resembles. It is, however, a little larger and more elongate than that insect, its surface is more alutaceous (and therefore somewhat less shining), its elytra are of a paler yellow and with their small broken patches less developed (the elongate dash within the lateral margin of that species being entirely absent), its head and prothorax are less black (the former having the clypeus rufescent, and the latter being much more broadly pale at the edges and with the extreme *basal* margin more or less testaceous, whilst even the darker portions are merely of a brownish-piceous hue), its elytral interstices are more convex, and its antennæ, palpi, and legs are paler.

From the *A. conspurcatus*, Linn., judging from specimens which I have received from Bordeaux (and which I believe to be correctly identified), the *A. maculosus* is abundantly distinct,—differing from it, apart from minor characters, in its larger size and more pallid hue, in its more developed clypeus and head, in its more convex elytral interstices, and in its paler and longer limbs—the basal joint of its four hinder feet being more particularly elongate, and the tibial spurs proportionally enlarged.

The *A. maculosus* is common in Lanzarote and Fuerteventura during the spring (in the former of which it was also taken by Mr. Gray, and in both by M. Hartung); and I have likewise captured it, though very sparingly, in the south of Grand Canary. Having received it from Dr. Heer under the name of "*sticticus*, Pnz.," I am enabled to state for certain that it is the *Aphodius* referred by him (though erroneously) to that species in the list compiled for M. Hartung's volume; and there can be no doubt whatsoever that it is also the *A. conspurcatus* of M. Brullé's inaccurate Catalogue, in the work of Messrs. Webb and Berthelot.

305. Aphodius lividus.

Scarabæus lividus, *Oliv., Ent.* i. 3. 86 (1789).
—— bilituratus, *Mshm, Ent. Brit.* i. 15 (1802).
Aphodius lividus, *Woll., Ins. Mad.* 225 (1854).
—— ——, *Id., Cat. Mad. Col.* 78 (1857).

Habitat Canariam, Teneriffam, Gomeram et Palmam, in stercore, rarius.

The European *A. lividus*, which occurs sparingly in Madeira and Porto Santo, and which I have taken at Mogadore on the opposite coast of Morocco, is decidedly rare in these islands. I have, however, captured it in the region of El Monte in Grand Canary, near the Puerto Orotava of Teneriffe, and below Argual (in the district of the Banda) on the western side of Palma; and I have received examples which were found by Dr. Crotch in Gomera. The Palman specimens are unusually dark; but it is a variable species as to colour. Its *more or less* livid hue, however, in conjunction with its short outline, its highly polished and comparatively unpunctured surface, and the *un*margined hinder edge of its pronotum, will readily distinguish it from the other *Aphodii* here enumerated.

306. Aphodius granarius.

Scarabæus granarius, *Linn., Syst. Nat.* i. ii. 547 (1767).
Aphodius carbonarius, *Brullé, in Webb et Berth. (Col.)* 60 (1838).
—— granarius, *Woll., Ins. Mad.* 226 (1854).
—— ——, *Id., Cat. Mad. Col.* 79 (1857).

Habitat insulas omnes Canarienses, vulgaris.

This common European *Aphodius*, which abounds in the Madeiran Group and which is recorded by M. Morelet at the Azores, is *universal* at the Canaries—in all the islands of which I have myself met with it except Gomera, where however it has been found lately by Dr. Crotch. In Lanzarote it was captured also by Mr. Gray, and in Teneriffe by Dr. Crotch and the Barão do Castello de Paiva. It may be known at once from all the foregoing species by, *inter alia*, its totally black hue.

Genus 128. OXYOMUS.

(Eschscholtz) De Castelnau, *Hist.* ii. 98 (1840).

307. Oxyomus brevicollis.

Oxyomus brevicollis, *Woll., Ins. Mad.* 229 (1854).
—— ——, *Id., Cat. Mad. Col.* 79 (1857).

Habitat Gomeram et Palmam; in illâ a Dom. Crotch, in hac a Dom. Gray repertus.

The only Canarian examples which I have seen of this insect

(which is tolerably common around Funchal, in Madeira) were captured in Gomera by Dr. Crotch (near the sea-shore below Hermigua), and in Palma by Mr. Gray—who took a single specimen in that island, during February 1858.

Genus 129. **PSAMMODIUS.**

Gyllenhal, *Ins. Suec.* i. 6 (1808).

308. **Psammodius cæsus.**

Scarabæus cæsus, *Pnz., Fna Ins. Germ.* 35. 2 (1796).
Psammodius cæsus, *Erich., Nat. der Ins. Deutsch.* iii. 913 (1848).
—— ——, *Woll., Ins. Mad.* 231 (1854).
—— ——, *Id., Cat. Mad. Col.* 79 (1857).

Habitat in Lanzarota et Canaria, sub quisquiliis, minus frequens.

The European *P. cæsus* (which occurs also in the north of Africa and in Madeira) is apparently scarce, or at any rate very local, in these islands. I have taken it in the north of Lanzarote, and about Las Palmas in Grand Canary.

309. **Psammodius sabulosus.**

Oxyomus sabulosus, *Dej. Cat.* (edit. 3) 163 (1837).
Platytomus sabulosus, *Muls., Lamell. de France,* 310 (1842).
Psammodius sabulosus, *Woll., Ins. Mad.* 230 (1854).
—— ——, *Id., Cat. Mad. Col.* 79 (1857).

Habitat insulas Canarienses, in Palma solâ adhuc haud detectus; sub quisquiliis (præsertim in arenosis) hinc inde occurrit.

The *P. sabulosus* is eminently an insect of Mediterranean latitudes, being found in the south of Europe, the north of Africa, and in the Madeiran Group. Like the last species it is very local in this archipelago, though not rare in the districts where it occurs; and we may be quite certain that it is universal, Palma being the only island where it has not hitherto been observed. I have taken it in Lanzarote, Fuerteventura, in the sandy region between Las Palmas and the Isleta of Grand Canary, near S^{ta} Cruz and Orotava in Teneriffe, and also in Hierro; and it was captured by Dr. Crotch near Hermigua in Gomera.

310. **Psammodius porcicollis.**

Aphodius porcicollis, *Illig., Mag. für Ins.* ii. 195 (1803).
Psammodius porcicollis, *Muls., Lamell. de France,* 322 (1842).
—— ——, *Lucas, Col. de l'Algérie,* 267 (1849).
—— ——, *Woll., Cat. Mad. Col.* 80 (1857).

Habitat in arenosis (præsertim maritimis) Lanzarotæ et Fuerteventuræ, sub quisquiliis necnon ad radices plantarum fodiens.

The geographical range of the *P. porcicollis* is almost identical with that of the last species, being found, like it, in the south of Europe and the north of Africa. At the Madeiran Group it occurs about the roots of sand-plants behind the sea-beach in Porto Santo; and at the Canaries I have taken it in precisely similar situations—near Arrecife of Lanzarote, and (more particularly) at Corralejo, in the extreme north of Fuerteventura.

Fam. 26. TROGIDÆ.

Genus 130. TROX.

Fabricius, *Ent. Syst.* i. 86 (1792).

311. Trox confluens, n. sp.

T. subovato-oblongus, niger, marginibus longe fulvo-ciliatis; clypeo apice subporrecto acutiusculo; prothorace inæquali, sat dense inæqualiter punctato; elytris singulis 10-striatis (striis latis, utrinque costulâ marginatis), interstitiis depressis subnitidis seriatim tuberculatis (serie alternâ majore), tuberculis singulis postice parce et breviter fulvo-fasciculatis; antennis rufo-ferrugineis; tarsis piceis; tibiis anticis subgracilibus, processu obtusissimo (e dentibus duobus omnino suffusis confluentibus composito) extus terminatis et pone hunc dentibus duobus brevibus valde obtusis armatis.—Long. corp. lin. $3\frac{2}{3}$.

Trox hispidus ?, *Brullé* [nec *Fab.*], *in Webb et Berth.* (*Col.*) 60 (1838).

Habitat Teneriffam, juxta oppidum Sanctam Crucem exemplar unicum cepi.

After comparing this *Trox* carefully with the types of no less than nine species which have been lent me by Dr. Schaum, and four more in my own possession, I cannot identify it with any of them; and although I have unfortunately but a single example to compile my diagnosis from, I am nevertheless compelled to regard it as new. Indeed, in the structure of the tooth at the outer apex of its front tibiæ it differs from all the members of the genus to the descriptions of which I have had access; for whilst that process is composed normally of two teeth more or less *sub*confluent (and usually very distinct from each other), in the present species (judging from the individual before me) they are *completely* suffused, so as to form a single obtuse projection having no appearance whatsoever of being *even obsoletely* bipartite. In other respects the *T. confluens* is about the size and general outline of the European *T. sabulosus*, but is rather more oblong and much less coarsely (and differently) sculptured. Al-

together it seems to approach nearer, *primâ facie*, to the *T. mixtus* of Mulsant, from Syria, than to any other, perhaps, with which I have compared it; but the *clearly*-defined sculpture of its elytra, which have their ten striæ broad, unconfused, and sharply expressed and their tubercles well marked and isolated (the alternate series moreover differing less considerably in size from the remainder), will, apart from the structure of its tibiæ and numerous minor characters, readily separate it both from that insect and from others to which it is in some respects allied. My unique specimen was captured, from beneath a stone, at a low elevation in the Barranco do Passo Alto, near S^ta^ Cruz of Teneriffe. I have little doubt that it is the species referred by M. Brullé to the *T. hispidus*, F.—from which however it is totally distinct.

Fam. 27. MELOLONTHIDÆ.

Genus 131. OOTOMA.

Blanchard, *Cat. Col. Ent.* 120 (1850).

The present genus is regarded by Lacordaire as a mere Section of *Pachydema*, in which the *front* tarsi only (instead of the anterior *four*) have their second and third joints dilated in the males; nevertheless, since he seems to have overlooked one or two of its most important features, which equally escaped the notice of M. Blanchard (by whom the group was enunciated, from Messrs. Webb and Berthelot's Canarian types which still exist at the Jardin des Plantes), I think it may be desirable to retain it as distinct, more particularly since the insects which compose it form a small geographical assemblage apparently peculiar to these islands. The structural character to which I especially allude, and which I am not aware obtains in *Pachydema* proper, is the immense *sexual* difference in the development of the last joint of the maxillary palpi—which is more or less greatly enlarged in the males, but comparatively cylindric in the females. With respect to its feet, Prof. Lacordaire is not quite correct when he says "les tarses antérieurs sont simples et *sans brosses de poils* chez la seule de leurs femelles qui soit connue"; for the front pair have *in both sexes* their four basal articulations clothed beneath with short densely-set setæ (though of course *less* so in the females); whilst even the intermediate pair have their second and third joints (though scarcely, *in the female sex*, their first and fourth) sparingly setose. So that the generic diagnosis of *Ootoma* requires revising, as regards the sexual peculiarities both of its feet and palpi.

M. Blanchard was clearly wrong (as indeed Prof. Lacordaire has

remarked) in stating that the antennæ of *Ootoma* are 9-articulate, for they have distinctly ten joints,—the pentaphyllous club appropriating (as in *Pachydema*) five of them. Both sexes are winged; and the habits of the species (which have very much the external aspect of the *Elaphocerœ*) are subterraneous, like those of the earth-boring *Rhizotrogi* (=*Geotrogus*, Guérin) of northern Africa.

Were it not that M. Brullé expressly mentions that he had not seen the female of his *Melolontha* (*Ootoma*) *obscura*, I should have concluded that the difference to which he calls attention, in the fact of the maxillary palpi of that species having their terminal joint *but very slightly wider than the preceding one*, and which he regards as abnormal, was simply due to his having drawn up his diagnosis *from a female specimen*; but as the great length of its antennal clava necessarily implies that it was a male one, this hypothesis is hardly tenable.

§ I. *Scutellum impunctatum, sed lineis duabus obliquis postice connexis impressum.*

a. *Tarsorum intermediorum masculorum art. penultimus subtus vix setoso-penicillatus.*

312. Ootoma bipartita.

O. nigra, nitida, subtus (abdomine excepto) necnon supra ad margines longe subnigrescenti-pilosa, elytris rufo-castaneis; capite densissime punctato, clypeo recurvo ad latera ampliato, a fronte lineâ obsoletâ diviso; prothorace dense punctato; elytris parcius subrugoso-punctatis, singulis striâ suturali sat profundâ lineisque tribus obsoletis instructis; pedibus piceis, tarsis clarioribus; palpis antennisque rufo-testaceis, clavâ pallidiore.

Mas plerumque minor, pygidio propygidioque subtilius punctatis, antennarum clavâ elongatâ, palporum maxillarium articulo ultimo lato obovato.

Fœm. plerumque major, pygidio propygidioque profundius punctatis, antennarum clavâ breviore, palporum maxillarium articulo ultimo subcylindrico (quam præcedens vix crassiore), versus apicem subincrassato.—Long. corp. lin. 5–8½.

Melolontha bipartita, *Brullé, in Webb et Berth. (Col.)* 60 (1838).
Ootoma bipartita, *Blanch., Cat. Col. Mus. de Paris*, 120 (1850).
Melolontha bipartita, *Hartung, Geolog. Verhältn. Lanz. und Fuert.* 140 et 141.

Habitat Lanzarotam et Fuerteventuram (rarius Canariam et Teneriffam), in cuniculis fodiens.

Although the descriptions which M. Brullé intended to apply to

his four Canarian *Melolonthidæ** are both inadequate and inaccurate —and from which the identification of the species is rendered even still more hopeless by his entire omission (as is the case throughout the *whole* of his Catalogue) of the particular *islands* which they inhabit,—I think that the fact of his mentioning that the *M. bipartita* has its head and prothorax "noirâtres" is sufficient to render it at least *probable* that that insect is identical with the present one.

Although excessively inconstant, both in size and in the development of its (*more or less* darkened) pile, the present species may be known from the *O. fuscipennis* (with which it agrees in its usually quite impunctate but biimpressed scutellum) by, apart from minor distinctions, its head, prothorax, and scutellum being of a blackish hue, whilst its elytra are rufo-castaneous; by its pubescence (especially on the under side of the body) being generally darker; by its pronotum being just perceptibly more densely punctured; and by the last joint of the maxillary palpi of its males being less enormously enlarged, whilst those of its females are likewise a little narrower—being (instead of oblong or suboval) nearly cylindric.

The *O. bipartita* occurs principally in Lanzarote and Fuerteventura (especially the former); nevertheless I have taken it sparingly in Grand Canary, as also a single specimen in Teneriffe. It is found, for the most part, in small holes, or burrows, in the soil,—either beneath stones or the dung of cattle. It was captured likewise (in Lanzarote and Fuerteventura) by M. Hartung.

b. *Tarsorum intermediorum masculorum art. penultimus subtus haud setoso-penicillatus.*

313. Ootoma fuscipennis.

O. fusco-castanea, nitida, subtus (abdomine excepto) necnon supra ad margines longe subflavescenti-pilosa; capite densissime punctato,

* He ignores the very few distinctive features which these exceedingly variable insects possess,—referring *almost solely*, in his four "diagnoses," to the characters which they have *in common*. Take, for instance, his "description" of the *M. fuscipennis*. "Moindre d'un tiers que le *bipartita* [this is incorrect], cet insecte se distingue par la couleur obscure de ses élytres qui sont presque noirs, tandis que tout le reste du corps est châtain. [This is equally inaccurate; in *rare cases* the head and prothorax are slightly more rufescent than the elytra, but the insect is usually *perfectly concolorous*.] Ce petit hanneton a le dessous du corps très-velu excepté le bout de l'abdomen [which is the case with them *all*], et de longs poils se montrent en outre aux bords antérieur et postérieur de son corselet, de manière à cacher presque entièrement l'écusson [a *generic* feature which, although exceedingly variable, is applicable alike *to the whole* of the species]. La ponctuation du dessus du corps et la disposition des stries et des côtes sur les élytres sont analogues à ce que l'on remarque dans le *M. bipartita*, et la forme du chaperon est à peu près la même." In which entire description there is not so much as one single statement which is even *approximately* diagnostic.

clypeo recurvo ad latera ampliato, a fronte lineâ obsoletissimâ diviso; prothorace brevi, vix dense punctato; elytris parcius subrugoso-punctatis, singulis striâ suturali lineisque tribus obsoletissimis instructis; pedibus rufo-piceis, tarsis clarioribus; palpis antennisque rufo-testaceis, clavâ pallidiore.

Mas plerumque minor, pygidio propygidioque subtilius punctatis, antennarum clavâ elongatâ, palporum maxillarium articulo ultimo latissimo obovato-ovali.

Fœm. plerumque major, pygidio propygidioque profundius punctatis, antennarum clavâ breviore, palporum maxillarium articulo ultimo subovali (in medio paulo latiore).—Long. corp. lin. 6–8.

Melolontha fuscipennis, *Brullé, in Webb et Berth.* (*Col.*) 61. pl. 1. f. 1 (1838).
Ootoma fuscipennis, *Blanch., Cat. Col. Mus. de Paris,* 120 (1850).

Habitat Fuerteventuram et Teneriffam, in iisdem locis ac præcedens degens.

As may be gathered from what has been said, the dull, brownish-castaneous, more or less concolorous hue of this insect (in which, however, *occasionally* the prothorax and *occasionally* the elytra are somewhat more rufescent than the rest of the surface), combined with its just perceptibly less densely punctured pronotum, and the enormously developed last joint of the maxillary palpi of its males, whilst that even of its females is slightly wider (and *less cylindric*) than is the case in the corresponding sex of the *bipartita*, will serve to distinguish it from that species. I have taken it, from out of burrows in the soil beneath camels' dung, in the Rio Palmas of Fuerteventura; as also, though more sparingly, in Teneriffe: and I captured two *dead* specimens in Palma which are in all probability referable to this species; but they were in such a mutilated condition (having been extracted from a cobweb) that I cannot state this for certain.

§ II. *Scutellum parce punctatum, sed lineis duabus obliquis vix impressum.*

314. **Ootoma integra**, n. sp.

O. fusco-castanea, nitida, subtus (abdomine excepto) necnon supra ad margines subfulvescenti-pilosa; capite densissime et profunde punctato, clypeo recurvo ad latera ampliato, a fronte lineâ obsoletâ diviso; prothorace valde profunde rugoso-punctato; scutello postice rotundato-obtuso, ad basin ipsam punctis perpaucis (et vix lineis duabus brevissimis rudimentaribus) notato; elytris paulo rufescentioribus parciusque rugoso-punctatis, singulis striâ suturali obsoletâ lineisque tribus obsoletissimis instructis; pedibus rufo-piceis, tarsis clarioribus, tibiis anticis extus fere integris (*i. e.* dentibus obsoletis); palpis antennisque rufo-testaceis, clavâ pallidiore.

Mas adhuc latet.

Fœm. palporum maxillarium articulo ultimo subcylindrico-ovali.—Long. corp. lin. $6\frac{1}{2}$.

Habitat Canariam Grandem, in regione "El Monte" dictâ capta.

In its scutellum having only three or four scattered punctures at its extreme base and the merest rudiments of two very abbreviated obliquely impressed lines behind, the *O. integra* is somewhat intermediate between the last Section and the present one; and did it not possess one or two decided structural peculiarities of its own, I should have been unwilling to erect an additional species from the evidence afforded by a single specimen, in such a variable group. But since it has really a few very remarkable characters, which I have no reason to regard as accidental, and since its *habitat*-island, moreover, is different from that of any of the remainder, I have been almost compelled to treat it as distinct.

The *O. integra* differs from the last species and the following one in the above-mentioned sculpture of its *posteriorly rounder* (or more obtuse) scutellum, in its more deeply punctured surface, in the last joint of the maxillary palpi of its females being more strictly oblong, and blunter at the tip (the corresponding articulation in the *O. castanea* being regularly acuminated, or *conical*), and in its two front tibiæ having their outer edge almost entire—the teeth being nearly obsolete. Its elytra are not quite so rufescent as those of the *O. bipartita*; and its head, prothorax, and scutellum are much less dark—being, in fact, scarcely obscurer than the elytra. The unique example from which the above diagnosis has been compiled was captured by myself, during the spring of 1858, in the region of El Monte in Grand Canary.

315. **Ootoma castanea.**

O. fere ut *O. fuscipennis*, sed corpore subtus sæpius pallidiore; clypeo vix breviore, a fronte lineâ rectâ distinctiore diviso, antice paulo magis sinuato, ad latera minus ampliato-recurvo (ergo mox ante oculos minus angulato-exstante); prothorace paulo densius punctato, per basin ipsissimam minus evidenter marginato; elytris striâ suturali plerumque levius impressa; tibiis anticis vix obsoletius dentatis.

Mas palporum maxillarium articulo ultimo magno lato sed minore et breviore quam in *O. fuscipenni* necnon magis regulariter ovali.

Fœm. palporum maxillarium articulo ultimo regulariter conico (quare apicem versus magis acuminato quam in *O. fuscipenni*).

Variat colore a pallido-castaneo usque ad fusco-piceo.—Long. corp. lin. $4\frac{1}{2}$–$6\frac{1}{2}$.

Melolontha castanea, *Brullé, in Webb et Berth.* (*Col.*) 60 (1838).

Dasysterna canariensis?, *Rambur, Ann. de la Soc. Ent. de France,* 331 (1843).

Ootoma castanea, *Blanch., Cat. Col. Mus. de Paris,* 120 (1850).

Habitat Teneriffam, rarissime, in cuniculis fodiens.

The present *Ootoma* (which seems, so far as observed hitherto, to be peculiar to Teneriffe) might be almost regarded at first sight as a mere insular modification of the *O. fuscipennis*; nevertheless, since the sexual proportions of its palpi are different, I am bound to regard its *other* small distinctions as of greater importance than I should have been inclined to have done had there been no *structural* character to warrant its separation. Judging from the few examples which I have seen, it is, on the average, a little smaller than that insect; its colour is more variable (being sometimes of a pale reddish-chestnut, and at others of a dark piceous-brown); its body beneath is nearly always of a more pallid hue than is the case in that species (being often yellowish-testaceous); its clypeus is relatively a trifle shorter, more sinuated in front, less recurved and developed at the sides (and therefore less *laterally-prominent* immediately in front of either eye), and more evidently divided from the forehead by a straight transverse line; its prothorax is just perceptibly more densely punctured, and less coarsely margined along its extreme basal edge; its elytra have their sutural stria *usually* less deep; its scutellum is beset with a few rather large punctures, but apparently *not* impressed with two oblique lines; and its anterior tibiæ have their external teeth perhaps somewhat less developed. In addition to which, the terminal joint of its maxillary palpi is relatively smaller in both sexes,—being, also, more regularly oval in the males and much more acuminated (or conical) in the females.

The only two of the above diagnostic features which M. Brullé has mentioned are, the fact of its abdomen being pale and of its clypeus being separated from the forehead by a transverse line; nevertheless the latter of these is, after all, only a *relative* difference, the suture being merely a little more evident in the *O. castanea* than in the other species; whereas his description would certainly lead to the supposition that it was *only* traceable in the present one. However, I think there is sufficient to conclude (even from such meagre evidence) that the *Teneriffan* insect is the one which he referred to (described from a single individual, without anterior feet, palpi, and antennæ!) under the trivial name of *castanea**.

* Scarcely more intelligible is Rambur's description of his *Dasysterna canariensis*, nearly all the characters which he gives being merely such as are common to the Ootomas *generally*. Nevertheless, since he alludes to the species as "infra

I have taken the *O. castanea* near Orotava; and it has likewise been communicated by the Barão do Castello de Paiva from the vicinity of Laguna.

316. Ootoma obscurella, n. sp.

O. fere ut *O. castanea*, sed ubique (subtus et supra) fusco-nigra, pube obscuriore; suturâ frontali vix minus distinctâ; scutello paulo densius punctato; pedibus piceis, tarsis clarioribus; palpis antennisque rufo-testaceis.

Mas palporum maxillarium articulo ultimo magno, lato et paulo longiore quam in *O. castaneâ*.

Fœm. palporum maxillarium articulo ultimo subcylindrico-ovali (multo minus conico quam in *O. castaneâ*).—Long. corp. lin. 5–6.

Habitat in Hierro, mense Februario A.D. 1858 duo specimina collegi.

Were it not for the slight differences in the shape of the ultimate joint of their respective maxillary palpi, I might perhaps have regarded the present *Ootoma* as a dark insular modification of the *castanea*, peculiar to Hierro; but as I cannot suppose that those organs would vary structurally in the same species, I am compelled to treat the *O. obscurella* as an additional member of this small geographical assemblage. It may be known from the *castanea* by its uniformly dark hue (both the under and upper surfaces being of a brownish-black), by its obscurer pubescence, by its frontal suture being a little less distinct, by its scutellum being apparently somewhat more thickly punctured, and by the terminal articulation of its maxillary palpi being (relatively) a trifle longer in the males and much *less conical* (or more oblong) in the females.

Judging from its colour alone, I should have had no hesitation in referring this insect to the *Melolontha obscura* of Brullé; but since he mentions that that species has the last joint of its *male* maxillary palpi only very slightly wider than the preceding one (and the enlarged antennal clava to which he alludes would seem to imply that it *cannot* have been a female from which he drew up his diagnosis), I am precluded altogether from acting on that supposition. The only two examples which I have seen were taken by myself, in the island of Hierro, during February 1858.

317. Ootoma obscura.

Melolontha obscura, *Brullé, in Webb et Berth. (Col.)* 61. pl. 1. f. 2 (1838).
Ootoma obscura, *Blanch., Cat. Col. Mus. de Paris*, 120 (1850).

Habitat?

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dilutior, ... tibiis anticis obsolete trifidis," and cites it as coming from "l'île de Ténériffe," I think we may safely assign it to the *O. castanea* (for it is manifestly, as Lacordaire has rightly conjectured, an *Ootoma*).

Although I cannot say whether it belongs to the present Section or the preceding one, I nevertheless admit this species into the Catalogue, —feeling sure (from the reasons already stated, and assuming M. Brullé's description to be correct) that it cannot be referred to any of the preceding members of the genus; though in its darkened hue it would appear to agree with the *O. obscurella*. The enlarged *spatuliform* clava of its antennæ, moreover, which it is stated to possess, would still further tend to distinguish it. All the other particulars to which M. Brullé calls attention are merely generic ones, existing equally in *all* the representatives of the group hitherto detected. As to the island in which it was found I am, of course, unable to conjecture,—M. Brullé, as though to make his Catalogue (if possible) even still more inaccurate and incomprehensible, having entirely omitted all reference to "*habitat*" throughout the whole of it.

Fam. 28. DYNASTIDÆ.

Genus 132. PHYLLOGNATHUS.

Eschscholtz, *Bull. de Moscou*, 65 (1830).

318. Phyllognathus Silenus.

Scarabæus Silenus, *Fab., Syst. Ent.* i. 13 (1775).
—— ——, *Brullé, in Webb et Berth. (Col.)* 60 (1838).
Phyllognathus Silenus, *Muls., Lamell. de France*, 379 (1842).
—— ——, *Lucas, Col. de l'Algérie*, 273 (1849).
Oryctes Silenus, *Hartung, Geolog. Verhältn. Lanz. und Fuert.* 141.

Habitat Lanzarotam, Fuerteventuram et Teneriffam, præsertim sub rejectamentis stabulorum necnon sub stercore bovino, equino, camelino fodiens.

The excessive variability of the *males* of this insect, both in size and in the development of the frontal horn, which is often so reduced in dimensions as to be almost obsolete (under which circumstances the sublateral cavities of the prothorax, and the wider central one, are comparatively evanescent), renders *extreme* specimens of that sex sometimes liable to be confounded, at first sight, with the females; nevertheless the inequality of the claws of the anterior feet will serve immediately, in every instance, to distinguish the males. It is eminently a species of Mediterranean latitudes, occurring in the south of Europe and the north of Africa*; and the only differences, at all constant, that I can detect in the Canarian examples are, that their

* I have captured it at Mogadore, on the opposite coast of Morocco; and it is recorded by M. Lucas in Algeria.

clypeus is somewhat more pointed, and less recurved, at the apex, and, together with the basal portion of the frontal process, more rugosely sculptured; whilst the *genæ* (or the lateral rim of the head which projects over either eye) are not quite so prominent, and the prothorax of its *female* sex is rather less *regularly* rounded at the sides (or more obliquely truncated anteriorly): but these are points, I imagine, of but slight importance in an insect so essentially variable.

I have taken the *P. Silenus* in Lanzarote and Fuerteventura (in the latter of which islands it was also found by M. Hartung); and it has been communicated by the Barão do Castello de Paiva from Teneriffe. The females would appear to be very much scarcer than the males; for out of 16 specimens which I captured in the Rio Palmas of Fuerteventura (from beneath the refuse of a camels' stable) *two only* belong to the former sex. In Lanzarote (and probably in the other islands likewise) it is called "Chamorro" by the inhabitants.

Genus 133. ORYCTES.

Illiger, *Käf. Preuss.* 11 (1798).

319. Oryctes prolixus, n. sp.

O. fere ut *O. Grypus*, sed paulo minor, prothorace minore, elytris parum longioribus (aut potius abdomine breviore), propygidium vel fere vel omnino tegentibus, subtus densius pilosus; clypeo in rostellum brevius, magis triangulare et plerumque magis recurvum producto; genis antice minus porrectis, postice brevioribus, haud ultra medium oculorum (nigrorum) ductis; prothoracis excavatione (in maribus) latius politissimâ, postice utrinque argutius determinatâ et ibidem impressione parvâ adjunctâ profundiore auctâ, parte mediâ basali minus convexâ necnon antice acutiore haud tridentatâ (sed obsolete trisinuatâ necnon ad apicem, vix bipartitum, paulo magis quam ad angulos laterales porrectâ); elytrorum punctis versus seriem subsuturalem majoribus; propygidio (necnon pygidio in sexu masculo) multo magis pubescente grossiusque transversim scrobinato.—Long. corp. lin. 13–15.

Scarabæus nasicornis, *Brullé* [nec *Linn.*], *in Webb et Berth.* (*Col.*) 60 (1838).

Habitat in Teneriffa, Gomera et Hierro, rarissimus.

The present *Oryctes* belongs to the same Section of the genus as the European *O. Grypus*, in which the anterior tibiæ are 3-dentate, the beak-like projection of the clypeus is comparatively small and narrow, and the elytra are furnished along their hinder margin with a narrow fringe of short yellowish hairs. Indeed it is closely allied to that species, though I believe undoubtedly distinct,—displaying a number of small differential characters which I cannot detect in *any*

of the specimens which I possess of the *O. Grypus* from Portugal, Spain, and the south of France. Thus, it is rather smaller (its male prothorax being more particularly diminished); and its body beneath, as also its pygidium and propygidium, are more pilose,—the two latter moreover being less developed, so that the elytra cover either the whole or nearly the whole of the propygidium (which also has its minute transverse strigæ, used for the purpose of stridulating, very much coarser). In other respects, the beak-like process of the clypeus is rather shorter, more triangular, and usually more recurved (though less evidently excavated) at the apex; its *genæ* are much less porrect in front and less produced behind (where they do not extend below the middle of either eye); the large prothoracic excavation of its males is more *widely* polished posteriorly, and has the hinder supplemental depression at either side deeper and better defined, whilst the elevated middle portion at the base is much less convex and has its edge acuter and differently formed—being obscurely trisinuate, with the centre minutely and obsoletely bifid and *rather more advanced* than the lateral angles (instead of being obtusely tridentate, with the outer projections greatly developed); and the punctures of its elytra immediately outside the subsutural series are larger*.

The *O. prolixus* appears to be decidedly rare. I took a single specimen of it in Hierro, during February of 1858; and another, at Taganana, in Teneriffe, towards the end of May 1859,—from which latter island a male has lately been communicated by the Barão do Castello de Paiva; and a fourth example was captured by the Rev. R. T. Lowe at Hermigua, in Gomera, during April of 1861. So that it probably exists throughout at any rate the central and western portions of the archipelago.

Fam. 29. CETONIADÆ.

Genus 134. EPICOMETIS.

Burmeister, *Handb. der Ent.* iii. 434 (1842).

320. Epicometis squalida.

Scarabœus squalidus, *Linn., Syst. Nat.* i. 2. 556 (1767).
Cetonia crinita, *Charp., Horæ Ent.* 213 (1825).

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* It will be seen at once that the *greater number* of these characters distinguish it equally from the *O. nasicornis* (which has very much in common with the *O. Grypus*).

Cetonia hirta, *Brullé* [nec *Fab.*], *in Webb et Berth.* (*Col.*) 62 (1838).
Tropinota Reyi, *Muls., Lamell. de France,* 575 (1842).

Habitat insulas omnes Canarienses, ad flores vulgaris.

The present insect, which occurs in the south of France, Italy, Sicily, &c., is *universal* in the Canaries—in the whole seven islands of which I have myself captured it, and in some of them very abundantly. It is particularly partial to the flowers of the *Asphodelus fistulosus*, on which it may often be taken in actual clusters,—as I have more especially observed in the region of El Golfo on the western side of Hierro, and on the mountains above S^ta^ Cruz of Teneriffe (in the direction of Las Mercedes). Nevertheless it is frequently almost as common on thistles. From Teneriffe it has likewise been communicated by the Barão do Castello de Paiva and Dr. Crotch, the latter of whom found it also in Gomera. Messrs. Webb and Berthelot's examples are referred by Blanchard [*Cat. Col. Mus. de Paris*, p. 9] to the *E. hirtella*, L.; but all the specimens which I have hitherto seen from these islands belong certainly to the *larger* of the two nearly allied species (in which the outer elytral costa is comparatively well developed and elevated, and obscurely bifurcate at either shoulder), namely the *E. squalida*.

321. Epicometis femorata.

Cetonia femorata, *Illig., Mag. für Insekt.* ii. 231 (1803).
—— hispanica, *Gory et Perch., Mon. des Cét.* 280 (1833).
Epicometis femorata, *Burm., Handb. der Ent.* iii. 435 (1842).
—— ——, *Blanch., Cat. Col. Mus. de Paris,* 9 (1850).

Habitat Fuerteventuram borealem, in arenosis ad Corralejo capta.

The only locality in the whole seven islands in which I have taken this insect (which occurs in Spain and Algeria) is the sandy region at Corralejo, in the extreme north of Fuerteventura,—where, during the spring of 1859, I captured eight specimens of it, burrowing in the loose sand around the roots of the few shrubby plants which stud that arid waste. It is therefore of extreme rarity at the Canaries.

Fam. 30. BUPRESTIDÆ.

Genus 135. ACMÆODERA.

Eschscholtz, *Zool. Atlas,* i. 9 (1823).

322. Acmæodera cisti.

A. elongata, subconvexa, nigra, subtus cinereo-pilosa; capite prothoraceque submetallicis subnitidis profunde et dense punctatis et

pube longiusculâ (præsertim in illo) suberectâ cinereâ fulvâque obsitis, hôc leviter canaliculato; elytris flavo multivittatis, profunde striato-punctatis, interstitiis minute uniseriatim punctulatis. —Long. corp. lin. 2–3½.

Acmæodera cisti, *Woll., Ann. Nat. Hist.* (3rd series) ix. 439 (1862).

Habitat Canariam, Teneriffam et Palmam, præsertim ad flores *Cistorum* (sc. *monspeliensis* atque *vagantis*) in excelsioribus crescentium.

Its very deeply and densely punctured head and prothorax, in conjunction with the exceedingly numerous and more or less confluent yellow *vittæ* of its very coarsely punctate-striated elytra, which seem in a great measure as though formed by broken-up lines, will sufficiently distinguish the present *Acmæodera* from any of the following species*. It appears to occur for the most part in the higher regions of Grand Canary, Teneriffe, and Palma; in the first of which I captured it in the lofty Pinal of Tarajana, above San Bartolomé, during April 1858,—almost exclusively on the flowers of the *Cistus monspeliensis* and *vagans*; whilst in the second I beat it, more sparingly, from off the blossoms of the *Spartium nubigena*, on the Cumbre adjoining the Cañadas (above Ycod el Alto), at an elevation of more than 8000 feet, early in May of 1859; as also, at the beginning of June of the preceding year, from amongst the herbage growing on the perpendicular rocks which bound the great Pinal, above the plains known as "Los Llanos," in the Banda of Palma. In Teneriffe it was found also by Dr. Crotch. The Palman specimens are, on the average, larger than those from Grand Canary and Teneriffe.

323. **Acmæodera fracta**, n. sp.

A. breviuscula, subdepressa, nigra, subtus cinereo-pilosa; capite prothoraceque submetallicis subnitidis ruguloso-punctatis et (unà cum elytris) pube brevi demissâ albido-cinereâ dense irroratis, hôc subconvexo leviter canaliculato et ad latera maculâ parvâ obscurâ flavescente ornato; elytris subdepressis, flavo multivittatis, striato-punctatis, interstitiis valde rugosis et minute uniseriatim punctulatis.—Long. corp. lin. 1¾–2¼.

Habitat Canariam Grandem, in inferioribus ad El Charco necnon in pineto quodam in montibus excelsis capta.

* In markings and general aspect the *A. cisti* is closely allied to a species given me by the Rev. Hamlet Clark, and which he captured near Algiers. It is, however, not quite so narrow as that insect; its prothorax is more particularly wider, as also proportionally shorter, rounder at the sides, regularly punctured (instead of being *rugosely imbricated*), and very much more *even* (being entirely free from the bipartite gibbosity which forms the anterior disc in that species); its elytral *vittæ* are more numerous; its upper surface has the pubescence both considerably longer and very much more erect; and its antennæ are less abbreviated.

The present species (which appears to be of the greatest rarity) is very closely related to the *A. cisti*. It is, however, a little smaller, and relatively shorter, as also a trifle wider anteriorly, than that insect; its prothorax is somewhat convexer, rather less deeply (though perhaps a little more roughly) punctured, and (instead of being concolorous) with an obscure testaceous patch behind the middle of either lateral edge; its elytra are flatter, less coarsely punctate-striated, but with the interstices considerably more rugose (being sculptured after the fashion of seal-skin); and its entire upper surface has the pubescence very much shorter, perfectly *decumbent*, and of a pure cinereous-white—being apparently unmixed with the fulvous hairs which are sufficiently conspicuous on the *A. cisti*. The only two specimens which I have seen were captured by myself in Grand Canary, during April 1858,—one of them (in company with the *A. cisti*) in the lofty Pinal of Tarajana, above San Bartolomé; and the other in the low sandy tract at El Charco, in the district of Maspalomas, in the extreme south of the island. It would appear, therefore, to be quite independent of elevation.

324. **Acmæodera plagiata**, n. sp.

A. subconvexa, nigra, subtus cinereo-pilosa; capite prothoraceque metallicis nitidis minus dense punctatis et pube longiusculâ (præsertim in illo) suberectâ fulvâ cinereâque obsitis, hôc convexo antice et postice canaliculato; elytris singulis vittis quatuor (sc. basali minutâ, postbasali majore, discali elongatâ undulatâ, et apicali minore) pallide testaceis ornatis, profunde punctato-striatis, interstitiis minutissime uniseriatim punctulatis.—Long. corp. lin. $2\frac{1}{2}$.

Habitat Canariam Grandem; in clivo quodam submaritimo inter Maspalomas et Juan Grande d. 12. Apr. A.D. 1858 specimen unicum sub lapide deprehendi.

The convex, very metallic, and rather less densely punctured prothorax of this *Acmæodera*, which has its central channel interrupted in the middle, combined with its rather long, suberect, and more fulvescent pile and the large and very pale longitudinal patches of its dark elytra (the basal one of which is small, the second larger, the third very large, irregular and elongate, and the fourth, which is nearly connected with it, narrow and subapical), and the excessively minute punctules of their interstices, will sufficiently distinguish it. It is hitherto unique, the only specimen which I have seen having been captured by myself (on the 12th of April 1858), from beneath a stone, on a dry arid slope in the south of Grand Canary—between Maspalomas and Juan Grande.

325. **Acmæodera ornata,** n. sp.

A. angustula, convexa, nigra, subtus albido-squamosa; capite prothoraceque cupreo-metallicis nitidis dense sed minus profunde punctatis et (unà cum elytris) pube brevissimâ demissâ minutissimâ cinereâ parce irroratis, hôc antice convexo profunde canaliculato; elytris postice acutis, singulis maculâ minutâ basali et alterâ longiore postmediâ (e lineâ fractâ efformatis) necnon plagâ maximâ sinuatâ sublaterali (a basi usque ad apicem ductâ) testaceis ornatis, leviter striato-punctatis, interstitiis sat minute punctulatis.—Long. corp. lin. 2.

Habitat Fuerteventuram, Aprili ineunte A.D. 1859 exemplar unicum ad Rio Palmas collegi.

The shining, cupreo-metallic, and *comparatively* finely (though densely) punctured prothorax of this species, which has its anterior disc prominent and convex and its longitudinal channel very deep, in conjunction with its narrow and posteriorly rather acute outline, its less coarsely striated elytra (which however have the minute punctules of their interstices rather conspicuous), and the peculiar shape of its pale elytral *vittæ* (the basal and postmedial ones of which are small and narrow, as though caused by a broken-up line, whilst the outer, or sublateral, one is large, sinuated, and elongate—reaching from the base to the apex), will readily separate it from the three preceding species*. The only example which has come beneath my notice I brushed from out of vegetation in the Rio Palmas of Fuerteventura, at the beginning of April 1859.

Genus 136. **BUPRESTIS.**

Linnæus, *Syst. Nat.* i. ii. 659 (1767).

326. **Buprestis Bertheloti.**

B. nitida, submetallico-nigra, fronte (maculis duabus virescentibus exceptis), prothoracis margine antico ipsissimo necnon laterali antice elytrorumque (nigrorum) fasciis quatuor obliquis confluentibus (e maculis minutis disjunctis compositis) flavo-ornatis; capite prothoraceque profunde punctatis, hôc antice angustato, in disco an-

* The *A. ornata* is a good deal allied to the *discoidea*, Fab., from northern Africa; but is rather smaller and narrower, with its prothorax less developed, much more shining and metallic, and regularly punctured (instead of being coarsely imbricated), its elytra are more acute behind and with their inner, broken-up line almost obsolete, its limbs are slenderer, and its entire upper surface has the pubescence very much more minute, sparing, and depressed. Possibly it may approach nearer to the *A. flavovittata*, Lucas; but, judging from the description, the different punctation of the head of that species, and the broken-up *sublateral* band of its elytra (which appears to be resolved into four *vittæ* and two spots) would, apart from minor characters, seem to remove it from the *A. ornata*.

tico utrinque spatio polito instructo; elytris profunde subcrenato-striatis, interstitiis minute et parce punctulatis, singulis ad apicem excavatis bispinosis; tibiis anticis (in maribus saltem) robustis, leviter incurvis, intus paulo excavatis.—Long. corp. lin. 11.

Buprestis Bertheloti, *Brullé, in Webb et Berth.* (*Col.*) pl. 2. f. 12 (1838).

Habitat Teneriffam, mihi non obvia; exemplar unicum a Barone *Castello de Paiva* communicatum solum vidi.

Judging from the figure of the *Buprestis Bertheloti* given by M. Brullé in Webb and Berthelot's volume (for it is unaccompanied by a *description*—in at all events the portion of the work which I possess), there can be no doubt that the specimen from which I have compiled the above diagnosis is the insect there referred to. This example has lately been communicated by the Barão do Castello de Paiva, who obtained it from Teneriffe in a small (but very old) collection which was formed there by a friend; and I may add that I have found the various localities assigned to the species so exceedingly correct, in every instance, that I have no hesitation in regarding the present *Buprestis* as having been undoubtedly captured in the island. Unfortunately, however, no special *habitat* was assigned to it; though, from subsequent inquiries instituted by the Baron Paiva, the *species* (if not indeed this actual specimen) appears to have been taken in the vicinity of the Agua Garcia*, and also (on one occasion at any rate) even in the Plaza de San Francisco, of S^ta^ Cruz, where it was found, on the wing, by a Spaniard. Since, however, it entirely escaped my own observation, I conclude that it is at all events, considering its large size and conspicuous appearance, of the greatest rarity.

Genus 137. **ANTHRAXIA.**

Eschscholtz, *Zool. Atlas*, i. 9 (1823).

327. **Anthraxia senilis,** n. sp.

A. parallela, sat nitida, subdepressa, ænescenti- necnon subcuprescenti-nigra, ubique (scutello polito excepto) dense transversim rugosa (haud punctata) et pilis tenuibus longiusculis (præsertim in capite) suberectis cinereis vestita; prothorace latiusculo, trans-

* With respect to the exact *habitat* of this fine *Buprestis*, the Baron Paiva writes to me as follows: "M. S. Berthelot m'a répondu *textuellement* à ce sujet les lignes suivantes: 'Le *Buprestis Bertheloti*, dont vous me demander l'*habitat*, est un beau Coléoptère que j'ai trouvé la première fois à Ténérife, en 1824 ou 1825, aux environs de la Forêt d'Agua Garcia. Il a été rencontré ensuite, dans la même localité, par mon ami Dumont d'Urville, toujours près de l'auge de bois où l'on abreuvait les chevaux, à quelques pas de l'entrée de la Forêt. Cette auge ou abreuvoir se trouve située sur le bord de l'ancienne route qui conduisait alors de Lagune à l'Orotave.'"

verso, grossius rugoso et versus latera reticulato, intra angulos posticos subrectos late impresso; elytris (præcipue ad basin) paulo inæqualibus, suturâ margineque leviter incrassatis, hôc versus apicem minutissime serratulo; antennis pedibusque gracilibus, vix metallicis.—Long. corp. lin. $2\frac{1}{4}$–3.

Habitat Canariam Grandem, in pineto quodam in montibus excelsis sito pauca specimina inter flores *Cistorum* volantia mense Aprili ineunte A.D. 1858 deprehendi.

The present *Anthraxia* is a little larger than, and *relatively* not quite so broad as, the *A. sepulchralis* and *morio* of southern Europe. It is, however, considerably brighter and more metallic; its sculpture is less dense, and on the pronotum reticulose (and very widely so) only towards either side; its prothorax is straighter at the edges, and much more deeply impressed within the posterior angles (which are nearly right angles); its scutellum is unsculptured and highly polished; the margins of its elytra behind are minutely serrated; and its entire upper surface is clothed with very much longer, suberect, and whitish-cinereous hairs. The few specimens which I have seen were taken by myself in the lofty Pinal above San Bartolomé, in the district of Tarajana, of Grand Canary, at the beginning of April 1858. They were exceedingly active on the wing,—flying, in the hot sunshine, amongst the flowers of the *Cistus monspeliensis* and *vagans*, to which they seemed to be specially attached.

Fam. 31. THROSCIDÆ.

Genus 138. THROSCUS.

Latreille, *Préc. des Caract. Gén. des Ins.* 42 (1796).

328. Throscus integer.

Trixagus integer, *Woll., Cat. Mad. Col.* 82 (1857).

Habitat in sylvaticis excelsis Teneriffæ et Palmæ, rarissimus.

Although I no longer possess a specimen of the Madeiran *T. integer* for comparison, I nevertheless refer the few examples of *Throscus* which I have hitherto seen from these islands to that insect, inasmuch as I can detect nothing in my original diagnosis to warrant the suspicion that the two species are distinct. *Perhaps* the elytral interstices may be a little more evidently punctulated in the Canarian one; but the eyes are totally ungrooved, as in the *T. integer*,—though with the faintest possible tendency to be truncated-off (scarcely subemarginated) at that particular point of their anterior edge (close to

the insertion of the antennæ) where in certain other species the oblique groove commences. But this (which indeed is scarcely perceptible, even beneath the microscope) may be equally the case in the Madeiran type. I have taken it sparingly, out of damp rotten sticks, in the laurel-regions between Taganana and Point Anaga, of Teneriffe; as also, in similar situations, on the ascent to the Cumbre, above Buenavista, of Palma.

Fam. 32. ELATERIDÆ.

Genus 139. COPTOSTETHUS.

Wollaston, *Ins. Mad.* 238. tab. iv. f. 8 (1854).

329. Coptostethus brunneipennis.

C. elongatus, niger vel fusco-niger elytris plus minus brunneis, fulvo-pubescens; prothorace elongato, basi paulo angustato; elytris pube suberectâ tenui vestitis, sat profunde crenato-striatis, interstitiis subconvexis; antennis pedibusque elongatis, testaceis.

Variat prothorace ad latera elytrisque ad humeros plus minus conspicue pallidioribus, necnon etiam (immaturus) colore omnino ferrugineo.

Var. β. *obscurus* [an species?]. Prothorace elytrisque obscurioribus concoloribus, illo ad basin angustiore, pedibus (sed præsertim tarsis) vix brevioribus.—Long. corp. lin. $2\frac{2}{3}$–$3\frac{1}{2}$.

Coptostethus brunneipennis, *Woll., Ann. Nat. Hist.* xi. 218 (1863).

Habitat in Teneriffa, Palma et Hierro, sub lapidibus, passim.

The excessive variability of this insect makes it a very difficult one to define; for, after carefully studying many specimens, collected in various islands and altitudes, it appears to me that nearly the whole of its characters are inconstant. Its colour is eminently so, and even the relative length of its tarsi seems to be unstable; but as the latter are always a trifle longer in the males than in the females, this may occasionally perhaps be more apparent than real. Upon the whole, however, it is more elongate than the other *Coptostethi* here enumerated, and also larger than any of them, except perhaps the *C. obtusus*; its elytra are *generally* of a browner tint; and even its prothorax (which is less abbreviated and convex, and not quite so narrowed behind, as is the case in the *C. canariensis* and *globulicollis*) is often more or less diluted in hue. In its comparatively elongated limbs it agrees with the *C. gracilis*. It occurs principally at intermediate elevations, though sparingly in lower ones also. Thus, it was taken both by Mr. Gray and myself close to the Puerto Orotava in Tene-

riffe; and I subsequently captured it at the Agua Garcia, on the mountains above S^ta^ Cruz, and at Las Mercedes and Taganana, in the same island; as also in the Barranco de Galga of Palma, and near Valverde in Hierro. But it is decidedly everywhere scarce. The *var.* β was found in the district of El Golfo, on the western side of Hierro.

330. **Coptostethus gracilis,** n. sp.

C. angusto-elongatus, fusco-niger elytris plus minus brunneis, fulvo-pubescens; prothorace elongato, basi angustato; elytris pube suberectâ tenuissimâ vestitis, sat profunde crenato-striatis, interstitiis subconvexis; antennis pedibusque elongatis pallide testaceis, tarsis præsertim elongatis gracilibus.

Var. β. Elytris ad humeros paulo rufescentioribus.—Long. corp. lin. $1\frac{3}{4}$–$2\frac{1}{2}$.

Habitat in montibus excelsis Teneriffæ, usque ad 8000 vel 9000′ s. m. ascendens.

Whether this be anything more than a small and narrow state of the *C. brunneipennis*, peculiar to the higher regions of Teneriffe, I will not undertake to pronounce. Judging, however, from the six individuals now before me, it is not only smaller and narrower than that insect, but is perhaps of a somewhat browner hue, its prothorax is a little more drawn-in at the base, and its legs (particularly the tarsi) are relatively rather longer still; it is likewise a trifle more opake; and in all the specimens except one (which was found at a lower altitude) the shoulders are concolorous with the rest of the surface. Three of my examples were captured, from beneath stones, in the lofty district adjoining the Cañadas, above Ycod el Alto (at an elevation of more than 8000 feet), during May 1859; and two a few weeks later, in similar situations, on the opposite Cumbre, above the Agua Mansa; whilst the remaining one (*var.* β) was taken at the Agua Mansa itself.

331. **Coptostethus canariensis.**

C. nitidiusculus, niger elytris vel vix vel distincte fuscescentioribus, subcinereo-pubescens; prothorace convexo, basi angustato, antice lato, prosterno antice subhorizontali; elytris convexis, pube brevi subdemissâ tenui parce vestitis, ad humeros oblique truncatis, leviter crenato-striatis, interstitiis subdepressis; antennis pedibusque gracilibus, pallido-testaceis.

Variat elytris ad humeros plus minus obscure dilutioribus necnon (immaturus) colore omnino ferrugineo.—Long. corp. lin. 2–vix $2\frac{1}{2}$.

Coptostethus canariensis, *Woll., Ann. Nat. Hist.* ii. 196 (1858).
—— ——, *Candèze, Mon. des Elat.* iii. 105 (1860).

Habitat sub lapidibus in inferioribus Teneriffæ, hinc inde haud infrequens.

In their general outline and size, as well as in their comparatively globose prothoraces (which are very convex anteriorly and much narrowed behind) and in their elytra being more truncated obliquely at either shoulder, the present *Coptostethus* and the following one have a good deal in common. The *C. canariensis* however is, on the average, browner (or less dark), as also a little more shining, than the *globulicollis*; its elytra are more finely crenate-striated, with their interstices flatter, and their pubescence perhaps somewhat shorter and less dense; its antennæ, palpi, and legs are always paler (being invariably pale-testaceous); and its prosternum is horizontal anteriorly, instead of being bent downwards just behind the mouth. The *C. canariensis* appears to occur in the *lower* altitudes of Teneriffe—where it is not uncommon, beneath stones, around the Puerto Orotava, from the sea-level up to the elevation of about 800 feet. And although it may very likely exist in spots of a rather higher altitude, it evidently does not ascend into the regions of the *C. globulicollis*.

332. **Coptostethus globulicollis.**

C. niger elytris rarius dilutioribus, subcinereo-pubescens; prothorace convexo, basi angustato, antice lato, prosterno antice deflexo; elytris convexis, pube subdemissâ tenui vestitis, ad humeros oblique truncatis, sat profunde crenato-striatis, interstitiis subconvexis; antennis pedibusque subgracilibus, infuscato-testaceis, illis interdum etiam subnigrescentibus.

Variat elytris vel concoloribus vel versus humeros plus minus distincte rufescentioribus.—Long. corp. lin. $1\frac{2}{3}$–$2\frac{1}{2}$.

Coptostethus globulicollis, *Woll., Ann. Nat. Hist.* (3rd series) ix. 440 (1862).

Habitat sub lapidibus in montibus excelsis Teneriffæ, a 3500′ usque ad 8000 vel 9000′ s. m. ascendens.

Whilst the *C. canariensis* occurs in the lower elevations of Teneriffe, the *globulicollis*, on the other hand, would appear to be confined to the higher ones of the same island,—attaining its maximum on the lofty Cumbres, at an altitude of from about 8000 to 9000 feet above the sea. It may be known from its ally by being, on the average, darker and a little less shining (being often quite black throughout, except the limbs); by its elytra being more deeply crenate-striated, with their interstices more convex and their pubescence perhaps somewhat denser; by the front portion of its prosternum (which covers the mouth) being more evidently bent downwards; and by its

antennæ, palpi, and legs being always more or less infuscated—the two former being occasionally much darkened. I have taken it, rather abundantly, from beneath stones, during the spring, both on the lofty Cumbre (adjoining the Cañadas) above Ycod el Alto, and likewise on the *opposite* one (separated from the other by the great interval which constitutes the valley of Orotava) above the Agua Mansa; and I have also captured it, though more sparingly, at the Agua Mansa itself. This last locality represents the lowest altitude (about 3500 feet) at which I have hitherto observed it. Dr. Crotch likewise met with it on the Cumbre above Ycod.

333. **Coptostethus obtusus,** n. sp.

C. niger elytris vix dilutioribus, subfulvescenti-pubescens; prothorace longiusculo, basi vix angustato, lateribus subrectis; elytris pube longiusculâ suberectâ tenui dense vestitis, versus humeros paulo rufescentioribus, valde profunde crenato-striatis, interstitiis convexis; antennis pedibusque longiusculis, testaceis, tibiis posterioribus ad basin ipsissimam nigrescentibus.—Long. corp. lin. $3\frac{1}{2}$.

Habitat Teneriffam sylvaticam, ad Agua Mansa sub lapide semel lectus.

Although unwilling to establish an additional species amongst these variable *Coptostethi* from the evidence afforded by a single example, I am nevertheless compelled to do so, since the insect from which the above diagnosis has been compiled differs so essentially from all the others here enumerated that I cannot possibly refer it to any of them. In its general colour, however, and deeply striated elytra (with their convex interstices) it has perhaps a greater affinity with the *C. globulicollis* than with any of the remainder; but its *comparatively* enormous bulk and longer, more erect, and denser pubescence, combined with its more elongate limbs and totally different prothorax, *which is scarcely narrower behind than in front*, will readily separate it from that species. The unique specimen was captured, during May 1859, in the sylvan region of the Agua Mansa, in Teneriffe.

334. **Coptostethus crassiusculus,** n. sp.

C. nitidiusculus, subobtusus, niger elytris vix dilutioribus, subfulvescenti-pubescens; prothorace convexo, basi vix angustato; elytris basi minus contractis, pube longiusculâ suberectâ tenui dense vestitis, leviter crenato-striatis, interstitiis depressis; antennis pedibusque pallide testaceis.

Variat elytris vel concoloribus vel ad humeros læte rufescentioribus, necnon (immaturus) colore omnino ferrugineo.

Var. β. Prothorace elytrisque ad basin paulo magis (singulatim) con-

tractis, horum striis paulo profundioribus interstitiisque minus depressis.—Long. corp. lin. 2–3.

Habitat Canariam Grandem, in locis intermediis et editioribus sub lapidibus parce captus.

Like the *C. brunneipennis*, the present *Coptostethus* is exceedingly variable in all its characters. It is the only one that I have taken hitherto in Grand Canary; and, in its normal state at all events, it may be known from all other species here described by its rather obtuse, thickened, and more pilose body; by its prothorax and elytra being, each of them, less contracted at their respective bases; and by the latter being but very finely crenate-striated, with their interstices depressed, and with their pile denser and more erect. Its elytra are extremely inconstant in hue, being sometimes quite dark and concolorous, and at others more brightly rufescent towards the shoulders than is the case in any of the preceding species—under which circumstances the reddish dash frequently extends backwards more than half-way to the apex.

The *C. crassiusculus* seems to be peculiar to Grand Canary. I have taken what I regard as the normal phasis of it in the region of El Monte; but the form in which the prothorax and elytra are a trifle less pubescent and somewhat narrower at their respective bases, with the striæ of the latter a little deeper and the interstices more convex, appears to occur at a higher elevation,—for I have captured it both on the mountains above San Mateo and in the lofty Pinal of the district of Tarajana, above San Bartolomé.

Fam. 33. CYPHONIDÆ.

Genus 140. CYPHON.

Paykull, *Fna Suec.* ii. 117 (1798).

335. Cyphon gracilicornis, n. sp.

C. oblongus, dense griseo-pubescens, fusco-testaceus; capite prothoraceque nitidis, subtilissime punctulatis; elytris paulo fuscescentioribus et minus nitidis, densissime profundiusque punctulatis (nec striatis, nec costatis); antennis gracilibus, nigrescentibus, versus basin pedibusque testaceis.

Variat (immaturus) colore omnino testaceo.—Long. corp. lin. 1–1½.

Habitat Canariam, Teneriffam et Gomeram, in sylvaticis et subsylvaticis humidiusculis haud infrequens.

In size, oblong outline, and infuscated hue, the present *Cyphon* is very similar to the common European *C. coarctatus*; from which it

seems mainly to differ in its elytra being a little more densely and evidently punctulated, and free (as in the *C. variabilis*) from the obscure longitudinal costæ which are always traceable (though occasionally indistinct) in that species. Its antennæ, also, are perhaps a trifle slenderer. I am very doubtful, however, whether it is more than a geographical phasis of that insect. It is far from uncommon in damp sylvan (and subsylvan) spots of the intermediate altitudes of Grand Canary and Teneriffe. In the former I have taken it throughout the region of El Monte, and elsewhere; and in the latter, at Taganana, Las Mercedes, the Agua Garcia, &c. And I have examined specimens which were found by Dr. Crotch in Gomera.

Genus 141. **EUCINETUS.**

Schüppel, *in Germ. Mag.* iii. 255 (1818).

336. **Eucinetus ovum.**

Eucinetus ovum, *Woll., Ins. Mad.* 242 (1854).
—— ——, *Id., Cat. Mad. Col.* 85 (1857).

Habitat in excelsis sylvaticis Teneriffæ, rarissimus.

A single specimen only of this very distinct *Eucinetus* (the differential characters of which, as compared with those of the European *E. hæmorrhoidalis*, are fully pointed out in my 'Ins. Mad.') has hitherto come beneath my observation in these islands. It was taken by myself on the wooded mountains above Point Anaga, in the north-eastern extremity of Teneriffe, during May 1859. In Madeira it is not uncommon in certain spots, though exceedingly local.

Fam. 34. DRILIDÆ.

Genus 142. **MALACOGASTER.**

Bassi, *Mag. de Zool.* (*Ins.*) pl. 99 (1832).

337. **Malacogaster tilloides,** n. sp.

M. angustulus, niger, nitidus, pilis longissimis erectis fulvis obsitus; capite prothoraceque rufis (hôc interdum postice, sed haud inter antennas, obscuriore), hôc leviter sed illo vix punctulatis; elytris postice valde rugulosis, antice paulo lævioribus; antennis pallide rufo-fuscis; pedibus rufo-testaceis, femoribus (apicibus exceptis) obscurioribus.—Long. corp. lin. $2\frac{1}{2}$–vix 3.

Habitat Fuerteventuram, rarissimus; mense Aprili ineunte A.D. 1859 specimina septem inter *Arundines* ad Rio Palmas deprehendi.

The present insect differs from the European *M. Passerinii* (of

which I possess two Sicilian specimens) in being a little smaller, narrower, and more shining,—its entire surface (which is studded with longer, more erect, and paler hairs) being less sculptured. Indeed its prothorax (which is more cylindric, being much less widened, or margined, at the hinder angles) is almost free from punctures, whilst its elytra are less densely (though perhaps even more roughly) rugulose. Its head is usually, like the prothorax, of a light red (being rarely somewhat darkened behind); its antennæ (instead of being black) are of a pale rufous-brown; and its tibiæ and tarsi are more brightly testaceous. It is of the greatest rarity,—the only specimens which I have seen (seven in number) having been captured by myself, in the Rio Palmas of Fuerteventura, at the beginning of April 1859, by brushing the *Arundo donax* in swampy spots alongside the stream. I believe that they are all of them males.

Fam. 35. TELEPHORIDÆ.

As the members of the present and following two families (*Malachiidæ* and *Melyridæ*) formed the subjects of a lengthened Paper "on the Canarian Malacoderms," published by myself in the first volume of the 'Journ. of Ent.' in 1862, I must refer to that memoir for the actual descriptions of the several species. Nevertheless, since (as in the analogous case of the *Calathi*) the diagnostic, and other, *observations* which it will be desirable here to add can scarcely be compressed into less space than that which I there devoted to them, I shall in the present re-enumeration extract such of them, *verbatim*, as appear necessary to impart the information required. Two additions, however, and some fresh *localities*, the result of Dr. Crotch's late researches in the islands, will render occasional alterations necessary.

Genus 143. MALTHINUS.

Latreille, *Gen. Crust. et Ins.* i. 261 (1806).

338. Malthinus mutabilis.

Malthinus mutabilis, *Woll., Journ. of Ent.* i. 424 (1862).

Habitat insulas omnes Canarienses, ad flores, frequens.

The present *Malthinus* may be regarded as the representative in these islands of the European *M. flaveolus*. It is, however, on the average considerably smaller than that insect (descending to a comparatively minute size); its limbs and elytra are relatively shorter; its head, although greatly narrowed, is not quite *so* attenuated pos-

teriorly, and has its darker portion more often resolved into separate patches; its prothorax has merely the disc ornamented with two longitudinal lines (which are sometimes broken up into detached spots, and at others completely confluent); its elytra have even their *basal* region usually of a rather clearer yellow; and its legs are less uniformly pale, the hinder pair (and often the intermediate ones also) having the apex of their femora black, and frequently their tibiæ and tarsi a good deal infuscated. It is a most variable species, both in size and hue; and in some of the smaller examples, particularly certain ones of those from the more barren islands of Lanzarote and Fuerteventura, the femora, especially the posterior pair, are clouded towards their *base* (leaving only the apex paler), and their palpi have the terminal joint more decidedly blackened; but after comparing them with an extensive series collected in the seven islands of the Group, I have come to the conclusion that they cannot be detached from the remainder,—their slight differences seeming to be the mere result of depauperation, in those individuals in which the stature is diminished. Nevertheless I have thought it desirable to treat them as a variety—the "var. *β. depauperatus.*"

The *M. mutabilis* is universal throughout the archipelago, in the whole seven islands of which, except Gomera, I have myself captured it; whilst in Gomera it was found, during the spring of 1862, by Dr. Crotch. In Teneriffe, Palma, and Hierro it was taken also by Mr. Gray.

339. **Malthinus croceicollis.**

Malthinus croceicollis, *Woll., loc. cit.* 426 (1862).

Habitat Canariam Grandem, ad flores in regione "El Monte" captus.

In general colour and aspect this species a good deal resembles the European *sanguinolentus*; nevertheless, by the construction of its anteriorly widened and posteriorly contracted head, it is a true *Malthinus*, and no *Malthodes*. Apart from which, it is considerably smaller than that insect, its forehead and the extreme apex of its elytra are more broadly flavescent, and its limbs are shorter, darker, and less robust. Hitherto I have observed it only in Grand Canary; where it is not uncommon, on flowers, during the spring months, throughout the region of El Monte.

Fam. 36. MALACHIIDÆ.

Genus 144. **PECTEROPUS.**

Wollaston, *Ins. Mad.* 247 (1854).

340. **Pecteropus angustifrons.**

Pecteropus angustifrons, *Woll., loc. cit.* 427. pl. xx. f. 1 (1862).

Habitat Gomeram, in collibus mox supra Sanctum Sebastianum mense Februario A.D. 1858 ad flores deprehensus.

Apart from its *structural* characters (of narrower and more rostrate head, &c.), the present insect is *primâ facie* remarkable amongst the *Attali*, to which it necessarily bears a general resemblance, by its brightly rufous prothorax and dark-cyaneous elytra and head (the latter of which is subopake, and most densely and minutely roughened). Its four anterior legs, also, are more or less rufo-testaceous, whilst the two hinder ones are nearly black. The second joint of the front feet of its males is so very slightly produced into a hood-like lobe on the upper side, that the latter is scarcely perceptible except beneath the microscope; but when thus viewed it will be seen, nevertheless, to be *more* strongly pectinated than is usually the case in the true *Attali*. Hitherto it has been observed only in Gomera, where, during February 1858, it was taken by Mr. Gray and myself from off flowers on the ridge immediately to the north of San Sebastian.

341. **Pecteropus scitulus,** n. sp.

P. viridi-ænescenti-niger prothorace vel ad latera vel ad angulos posticos rufo-testaceo, parce et minute cinereo-pubescens, nitidus, ubique minutissime et parce punctulatus; capite angusto, ovali, fronte depressâ, oculis minus prominentibus, clypeo pallido; elytris minute subrugulosis, pilis erectis longiusculis (præsertim postice) obsitis; antennis brevibus, ad basin rufo-testaceis.

Variat pedibus vel concoloribus, vel anterioribus (rarius posticis) plus minus pallidis.—Long. corp. lin. 2.

Habitat Gomeram, a cl. W. D. Crotch tempore vernali A.D. 1862 captus.

In its general colouring (which is greenish-brassy, with only the clypeus, either the sides or merely the hinder angles of the prothorax, and occasionally the anterior legs pale) this insect is almost coincident with the *Attalus ovatipennis*, nevertheless it is considerably larger and has its legs more elongate; and, moreover, its somewhat narrow, oval head and depressed forehead, in conjunction with its but slightly prominent eyes and its short antennæ, would all tend, I think, to refer it to the *Pecteropus*-group rather than to *Attalus* proper. It was detected by Dr. Crotch in Gomera, during the spring of 1862.

Genus 145. **ATTALUS.**

Erichson, *Entomograph.* 89 (1840).

§ I. *Prothorax plus minus* (i. e. *vel omnino, vel in parte majore, vel versus angulos solos posticos*) *pallidus.*

342. Attalus ruficollis.

Attalus ruficollis, *Woll., loc. cit.* 428 (1862).

Habitat Teneriffam, ad flores vulgaris; ab orâ maritimâ usque ad 8000′ s. m. ascendit. In Palma est minor, depauperatus, tibiis tarsisque plus minus testaceis, varietatem (="var. β. pauperculus," mihi) efficiens.

The present *Attalus* and the following one are the universal species of Teneriffe, abounding on flowers from the sea-level to an elevation of at least 8000 feet. The *A. ruficollis* may be known by its bright-red prothorax, which is usually quite immaculate. The specimens from the higher altitudes are generally a little more densely punctured and ænescent, and have their minute *under*-pile (of short, decumbent, subcinereous hairs) more evidently developed; but they merge gradually into the others as we descend into the lower districts. The "var. β" appears to be only a small state peculiar to Palma, in which the tibiæ and tarsi and the base of the antennæ have a tendency to be testaceous: I captured it high up in the Barranco da Agua, as also in the Barranco de Galga, and (in a state approaching nearer to the Teneriffan one) at the Banda. In Teneriffe it seems to occur universally; and it has also been taken in that island by Mr. Gray, Dr. Crotch, and the Barão do Castello de Paiva.

343. Attalus pellucidus.

Pecteropus pellucidus, *Woll., Ins. Mad.* 247 (note) (1854).
Attalus pellucidus, *Id., loc. cit.* 429 (1862).

Habitat Teneriffam, vulgaris, in iisdem locis ac præcedens.

The only important character which separates the present *Attalus* from the preceding one is, that its prothorax, instead of being bright-red, is (like the rest of the surface) black, with merely a small portion at either posterior angle (and sometimes the basal margin itself, though very narrowly) of a somewhat pellucid yellow. I can detect no other differential feature (except that the surface is *usually* a trifle more ænescent); and I might therefore have been inclined perhaps to regard it as a variety of the other, had I been able to discover the *least trace* of a passage between the two. But since both of them are equally diffused over Teneriffe, independently of elevation, and since in an extensive series now before me, collected in ten or twelve different (and distant) localities, *each* is equally constant, I have no option but to treat them as distinct. Like the last species, it was

met with also by Mr. Gray, Dr. Crotch, and the Barão do Castello de Paiva.

344. **Attalus pallipes**, n. sp.

A. nitidus; capite (vel omnino vel antice solum) prothoraceque (vel omnino vel haud in disco nigro) rufo-testaceis, minutissime et parce punctulatis; elytris subænescenti-nigris, dense et sat profunde ruguloso-punctatis, pilis nigris erectis longiusculis obsitis; antennis nigris, versus basin pedibusque (elongatis) testaceis.—Long. corp. lin. $1\frac{3}{4}$–2.

Habitat in Teneriffa et Gomera, a Dom. W. D. Crotch deprehensus.

I do not feel perfectly satisfied that this *Attalus* is more than an extreme modification of the *ruficollis*; nevertheless, since the whole of the specimens now before me (seventeen in number, and all of them except one, which is from Gomera, captured by Dr. Crotch in Teneriffe) show no tendency to merge into the type assumed by that rather constant species, I do not think it would be safe to treat it as such. It differs from the *ruficollis*, chiefly, in its legs being invariably pale (instead of black), and in the basal portion of its antennæ being likewise more or less brightly testaceous; in its head being either *altogether* pale reddish-testaceous (like the prothorax), or else (as in that insect) with the hinder portion dark; in its prothorax being of a paler, or yellower, hue, and with its disc sometimes black; and in its elytra being a little more roughly punctulated. Its legs are perhaps a trifle longer; and its head just perceptibly more produced, with the antennæ inserted, if anything, somewhat further from either eye.

345. **Attalus ovatipennis.**

Attalus ovatipennis, *Woll., loc. cit.* 429 (1862).

Habitat in Lanzarota, Fuerteventura, Canaria, Teneriffa, Gomera et Palma, ad flores, passim.

Evidently a most variable insect (having a slightly different aspect in each of the islands in which it has been observed), but one which may be known generally by its ovate (or posteriorly-expanded) outline, by the greenish-brassy tinge of its dark elytra and head, by its prothorax having usually only the hinder margin and angles pale (though occasionally a larger portion of its surface), and by its tibiæ and tarsi (and *parts* of the femora) being diluted-testaceous. It appears to be more widely spread over the Group than any of the other species, Hierro being the only island in which it has not been detected. I have myself taken it in Fuerteventura, Grand Canary,

Teneriffe, Gomera, and Palma. In Lanzarote it was captured by M. Hartung (one of whose specimens has been communicated to me by Dr. Heer), and in Palma by Dr. Crotch.

346. **Attalus bisculpturatus.**

Attalus bisculpturatus, *Woll., loc. cit.* 430 (1862).

Habitat Fuerteventuram, Aprili ineunte A.D. 1859 repertus.

This singular little *Attalus* may be known at once from the other species here enumerated by its very remarkable sculpture,—the head and prothorax (which are much depressed, particularly the former) being opake, and coarsely and evenly alutaceous (or minutely granulated) throughout, whilst the elytra are shining and merely roughened in the ordinary manner. Its colour is black, except the hinder part of the prothorax (which is dull yellow), and the tibiæ, tarsi, and the base of the antennæ (which are brownish-testaceous). The only two examples which I have seen (a male and a female) were captured by myself in Fuerteventura—I believe, in the Rio Palmas—early in April of 1859.

347. **Attalus rugifrons.**

Attalus rugifrons, *Woll., loc. cit.* 431 (1862).

Habitat Gomeram, in collibus prope Sanctum Sebastianum ad flores lectus.

The present *Attalus*, which has been observed hitherto only in Gomera, is, like most of the species, very variable in colour; nevertheless its subopake and densely and minutely rugulose head (in which respect it somewhat resembles the *Pecteropus angustifrons*), combined with the rufo-testaceous hue of its four anterior legs and the base of its antennæ (the former of which, however, have the *upper edge* of their femora, and occasionally of the tibiæ also, black), will sufficiently distinguish it. Its prothorax has *usually* the sides and base broadly testaceo-rufous; but sometimes it is entirely dark, except towards the hinder angles; whilst at others even the *discal* patch is almost obsolete, when nearly the whole surface is pale. It was taken from off flowers by Mr. Gray and myself on the hills above San Sebastian of Gomera, at the beginning of February 1858.

348. **Attalus ornatissimus.**

Attalus ornatissimus, *Woll., loc. cit.* 431. pl. xx. f. 2 (1862).

Habitat in montibus Palmæ, ad flores frequens.

The bright cyaneous, or greenish-cyaneous, head and elytra of this beautiful *Attalus*, combined with its rufous prothorax, which

has generally only a very broad central band darker, and its usually black limbs, will serve to characterize it. Its head is less shining than the rest of the surface, and is very closely and most minutely rugulose; and much the same kind of sculpture exists, though less densely, on its pronotum; whilst its elytra are very thickly though delicately punctulated, and with the additional erect hairs almost evanescent at the base but very long towards the apex. It has been observed hitherto only on the mountains of Palma. On the 12th of June 1858 I captured it rather abundantly from off flowers, at a high elevation, immediately below the Cumbre above Buenavista; and during the preceding February it was taken more sparingly by Mr. Gray at a lower altitude—I believe, in the district of Buenavista itself. Mr. Gray's examples I indicated in my diagnosis as a "var. *β*," in which the prothorax is either almost or entirely rufous, and in *some* of which the anterior legs and the base of the intermediate femora are infuscated-testaceous. The *A. ornatissimus* was likewise met with, in Palma, by Dr. Crotch.

349. Attalus chrysanthemi.

Attalus chrysanthemi, *Woll., loc. cit.* 432. pl. xx. f. 3 (1862).
Anthocomus analis, *Hart.* [nec *Pnz.*], *Geolog. Verhältn. Lanz. und Fuert.* 140.

Habitat Lanzarotam et Fuerteventuram, ad flores (præsertim *Chrysanthemi ochroleuci*, W. et B.) hinc inde vulgaris, sed præcipue in illâ.

This beautiful and comparatively constant *Attalus* may immediately be known by its bluish-green, and sometimes æneseent, surface,—the hinder angles and extreme base of the prothorax, together with a large apical portion of the elytra (and a narrow lateral *strip* arising out of it, and extending to about the middle of the margin) and the legs, being of a pale yellow. The legs, however, which are sometimes infuscated in parts, should perhaps be described as testaceous rather than strictly "yellow." Its surface also is very densely and rather coarsely sculptured, particularly the head and prothorax (which are less shining than the elytra); and its antennæ are black, with the basal joints more or less obscurely rufo-testaceous. That it is the species referred in M. Hartung's list to the *Anthocomus analis*, Panzer, I am enabled to state for certain, having received examples thus identified from Dr. Heer (who compiled it): it does not, however, possess a single feature in common with that insect. In very rare cases the large yellow portion at the apex of the elytra is much reduced both in dimensions and intensity, when the legs also are apt to be almost, or

even entirely, dark. Such specimens as these (which however can be connected gradually with the others) I defined, in my diagnosis, as the "var. *β. dasytoides.*"

So far as observed hitherto, the *A. chrysanthemi* appears to be peculiar to Lanzarote and Fuerteventura, where it occurs on the flowers of various plants during the winter and spring, though more particularly those of the *Chrysanthemum ochroleucum* of Webb and Berthelot. In such situations it was taken abundantly by Mr. Gray and myself, between Haria and Mágui, in the north of Lanzarote, during January 1858; as also subsequently, by myself, in the same locality, during March of the following year; and, a few weeks later, at Oliva, in Fuerteventura.

350. **Attalus commixtus.**

Attalus commixtus, *Woll., loc. cit.* 433 (1862).

Habitat Lanzarotam borealem, ad flores *Euphorbiarum* captus.

This *Attalus* is apparently a good deal allied to the *A. chrysanthemi.* It is, however, less depressed, and more acuminated anteriorly; its surface, instead of being cyaneous-green, is dark-æneous, with the entire margins of the prothorax (and not merely the posterior one) of a dull fulvous-yellow; its head and pronotum are narrower, much more shining, and very much less sculptured (the former being almost impunctate, whilst the punctures of the latter are exceedingly shallow and ill-defined); its elytra (which have, especially towards the suture, obscure indications of being longitudinally costate) have a much smaller portion at the apex, and also the *entire* lateral margin (instead of only half of it) pale; and its paler parts are *altogether* of a duller or browner tint. The few specimens which I have seen (five in number) were captured by myself from off the flowers of the *Euphorbia piscatoria* and *balsamifera*, on the lofty cliffs known as the "Risco" (overlooking the Salinas), in the extreme north of Lanzarote.

351. **Attalus lævicollis.**

Attalus lævicollis, *Woll., loc. cit.* 434 (1862).

Habitat Lanzarotam borealem, cum sp. præcedente semel lectus.

In general character and outline the present species somewhat resembles the last one. It is however larger, with its head and prothorax very highly polished and almost entirely impunctate (a few extremely minute and remote points being alone traceable even beneath the microscope); its elytra are blacker, more coarsely sculp-

tured and with the punctures better defined, apparently free from any indications of longitudinal costæ, and rather less pilose (particularly in front); and its pale portions are altogether of a much lighter yellow,—the prothorax, moreover, having merely a broad central band on its fore disc dark. It is hitherto unique, the single example from which the diagnosis was compiled having been captured by myself (in company with the last species and the *A. chrysanthemi*) in the extreme north of Lanzarote.

352. Attalus posticus.

Attalus posticus, *Woll., loc. cit.* 434 (1862).

Habitat Fuerteventuram, juxta oppidulum Betancuriam semel lectus.

The present *Attalus* may readily be known by its rather large size and somewhat parallel outline; by its short and depressed elytra (which leave, at any rate in the female sex, a considerable portion of the pygidium uncovered); by its large, convex, and deeply punctured head; by its exceedingly bright and very lightly punctulated prothorax; and by its dark hue, the hinder margin of the prothorax and the extreme apex of the elytra (which are less æenescent than the rest of the surface) being alone of a pale whitish-yellow. It was taken by myself in the Rio Palmas of Fuerteventura, close to the little town of Betancuria, at the beginning of April 1859; and is hitherto unique.

353. Attalus anthicoides.

Attalus anthicoides, *Woll., loc. cit.* 435. pl. xx. f. 4 (1862).

Habitat Lanzarotam et Fuerteventuram; vel ad flores vel præsertim sub recremento farris circa basin acervorum tritici sparso, unà cum *Anthico canariensi* et cæt. degens.

In its general outline, size, and colour this *Attalus* bears such a curious *primâ facie* resemblance to the Heteromerous *Anthicus canariensis* that, until carefully examined, it might literally (although in affinity so remote) be mistaken for that insect. And this analogy is the more remarkable from the fact of the *habits* of the two being almost identical,—the *A. anthicoides* receding from the other members of the group here enumerated in being found not *merely* upon flowers, but (far oftener), like the *Anthici*, beneath dry vegetable refuse lying upon the ground. In such situations I have captured it, rather abundantly, both in Lanzarote and Fuerteventura, to which islands (so far as observed hitherto) it would seem to be peculiar. In fact I have frequently taken it *in company* with the little *Anthicus* above

alluded to; and *when in motion*, at all events, it is next to impossible, from their likeness to each other, to recognize the difference between them. It is usually under the rubbish around the base of corn-stacks that it is to be found; in which positions it appeared pretty general around Haria, in the north of Lanzarote, during March of 1859; and it was only at the *close* of our sojourn there, when the sun had become more powerful, that I succeeded in detecting it upon flowers. My Fuerteventuran specimens are principally from the Rio Palmas.

The almost testaceous hue of the *A. anthicoides*—which has merely its head, the disc of its prothorax, its femora, the basal joint and apical portion of its antennæ, and the region of its elytra about the base and suture dark (the latter being only *gradually* obscured, the two tints shading off into each other)—will immediately characterize it. Its minute cinereous under-pile is rather denser than is the case in any of the preceding species; and its elytra, which are much less shining than the head and prothorax, are of a somewhat softer texture

§ II. *Prothorax cum capite elytrisque concolor* (*rarius ad angulos ipsissimos posticos obscurissime et anguste pallidus*).

354. Attalus tuberculatus.

Attalus tuberculatus, *Woll., loc. cit.* 436 (1862).

Habitat Teneriffam, ad flores juxta Portum Orotavæ haud infrequens.

Its *uneven* prothorax, which is distinctly longer than broad, and has the central portion at the base slightly raised and *divided in the middle* (so as to form two obscure nodules), and of which the extreme margin at the posterior angles is *usually* narrowly and *obscurely* pale, combined with the minute and somewhat longitudinally disposed subglabrous tubercles of its elytra (the additional hairs of which are very long and very erect), will easily characterize this *Attalus*. Its colour is black, with a barely traceable metallic tinge (which, however, is a *little* more apparent on the head and prothorax than on the elytra); its cinereous under-pile is comparatively coarse and dense; and its limbs are rather thickened, or robust. Hitherto I have observed it only around the Puerto Orotava in Teneriffe; where, however, it is far from uncommon, during the spring months, on flowers.

355. Attalus obscurus.

Attalus obscurus, *Woll., loc. cit.* 437 (1862).

Habitat Canariam Grandem; in regione El Monte, præsertim in summo monte "Bandama," tempore vernali ad flores captus.

The present *Attalus* I have detected hitherto only in Grand Canary, where it is tolerably common throughout the region of El Monte—particularly towards the summit of the Bandama mountain—during the spring. It may readily be known by its black and *subopake* surface (which however has a slightly æneseent tinge); by its very closely, evenly, and minutely granulose, or *alutaceous*, head and prothorax (in which respect it approaches the *A. bisculpturatus*); by its elytra being almost free from additional erect hairs (the few which are present being moreover exceedingly short); and by the antennæ of its male sex being rather longer than is the case in the generality of the *Attali* here enumerated. Its prothorax is *even*, and more transverse than that of the last species; its cinereous under-pile is more minute; and its elytra have no indications of the small subglabrous longitudinally disposed tubercles which are so evident in that insect.

356. Attalus subopacus.

Attalus subopacus, *Woll., loc. cit.* 437 (1862).

Habitat Lanzarotam et Fuerteventuram, tempore vernali sat frequens.

This *Attalus* appears to be peculiar to Lanzarote and Fuerteventura, where it is rather common during the spring months on flowers, and in the former of which it was taken also by Mr. Gray. It may be known by its dark-*cyaneous* hue and but slightly shining (though scarcely subopake) surface, which is more or less perceptibly clothed with a minute cinereous pubescence; by the light (but not very regular) subalutaceous sculpture of its head and prothorax, on which there are only a few excessively small and remote punctures intermixed; and by its very closely punctulated elytra, which are rather flattened on the disc, usually with very faint indications of longitudinal costæ, and beset with erect hairs. My Fuerteventuran examples are principally from the Rio Palmas.

357. Attalus metallicus.

Attalus metallicus, *Woll., loc. cit.* 438 (1862).

Habitat Lanzarotam, ad flores præsertim *Euphorbiarum* frequens: etiam in Teneriffa specimen unum, vix distinctum (=var. *β. similis*, mihi), deprehendi.

The comparatively deeply sculptured and almost *glabrous* surface of this *Attalus*, in conjunction with its metallic hue (which is generally greenish-brassy, but occasionally almost cyaneous), will sufficiently characterize it. It is rather common in Lanzarote, in the north of

which island it was taken by Mr. Gray and myself, during January 1858, from off the flowers of Euphorbias; in which district I again met with it early in March of the following year. I also captured a single specimen (the "var. *β. similis*" of my diagnosis) in Teneriffe, which is altogether a little more deeply and closely punctured, and has the base of its pronotum a trifle raised and uneven; but I cannot think that it is specifically distinct.

358. **Attalus ænescens.**

Attalus ænescens, *Woll., loc. cit.* 438 (1862).

Habitat in Canaria, Teneriffa, Gomera et Palma, ab orâ maritimâ usque ad 8000′ s. m. ascendens.

A variable insect, in size, hue, and sculpture; nevertheless it may be known *generally* by its æneous tint, and the small bulk to which it descends; by its rather pubescent and finely punctulated surface; and by its usually dark and more or less slender limbs. The state which I should regard as its typical one is eminently attached to the intermediate and higher elevations of Teneriffe, occurring at the Agua Mansa and on the lofty Cumbre above it, as well as on the *opposite* Cumbre adjoining the Cañadas: it is almost always of a bright-æneous hue, and has its prothorax moderately punctured. The examples in the lower regions have their prothoracic punctures perhaps a trifle more dense, whilst those from the wooded slopes above Taganana have them denser still. The specimens from Palma have, also, their prothorax very thickly, though minutely, punctulated; whilst the few that I met with in the district of El Monte, in Grand Canary, are of a blacker tint. It was taken by the Rev. R. T. Lowe at Garachico, in Teneriffe; and by Dr. Crotch on the Cañadas, in the same island, as well as in Gomera and Palma.

Genus 146. **MICROMIMETES.**

Wollaston, *Journ. of Ent.* i. 439 (1862).

Corpus (in utroque sexu) alatum, *instrumenta cibaria* et *pedes* fere ut in *Attalo* et *Pecteropo*; sed *capite* paulo majore et (unà cum *prothorace*) convexiore; et *tarsis anticis masculis* 4-articulatis, simplicibus [nec 5-articulatis artº 2^do^ supra in lobum producto].

359. **Micromimetes alutaceus.**

Micromimetes alutaceus, *Woll., loc. cit.* 441. pl. xx. f. 5 (1862).

Habitat Canariam Grandem australem, ad Maspalomas repertus.

Although perfectly distinct from it in real *structure*, yet, regarding the present insect *superficially* as an *Attalus* (for which at first sight

it would be taken), I will just add that it may readily be known from its *apparent* allies by its subopake and entirely *alutaceous* surface; by its dull brassy-black hue (which has often a slightly greenish tinge), the hinder margin of the prothorax, the extreme apex and lateral edges of the elytra, and the limbs (except occasionally a portion of the posterior legs) being pale-yellow; by its head and pronotum being convex, whilst the elytra are somewhat parallel and depressed; and by the latter being almost entirely free from any indication of additional erect pile. The few specimens which I have seen (only fourteen in number) were captured by myself, during April 1858, in the sandy district at Maspalomas, in the extreme south of Grand Canary.

360. **Micromimetes? jucundus.**

Micromimetes? jucundus, *Woll., loc. cit.* 441 (1862).

Habitat Canariam Grandem; in regione El Monte exemplar unicum (fœmineum), tempore vernali A.D. 1858 collegi.

I have placed the present insect here merely provisionally, and not with the idea that it is truly a second species of *Micromimetes*; but having unfortunately only a single individual to judge from, and that a *female*, I am unable to conjecture to what group the fore tarsi of its males would tend to assign it. From the shape however of its posteriorly contracted prothorax, which is *raised in the centre* behind, as well as from its general *facies* and nearly glabrous surface, I feel pretty confident that it is not an *Attalus*. But, apart from these particular features, it may readily be known from all the *Attali* here enumerated (with which in some respects it of course agrees) by its rather large, convex, oval, and regularly punctured head; by its bright-rufous and nearly unsculptured prothorax; and by its dark-*cyaneous* elytra, which apparently have no minute under-pile, and merely an exceedingly few and remote additional erect hairs. My unique example was captured in the region of El Monte, in Grand Canary, during the spring of 1858.

Genus 147. **CEPHALOGONIA.**

Wollaston, *Journ. of Ent.* i. 442 (1862).

Caput in maribus antice excavatum, excavatione postice trisinuatâ, in medio tuberculo sat magno (ciliato) instructâ. Tarsi antici in maribus 4-*articulati.*

361. **Cephalogonia cerasina.**

Cephalogonia cerasina, *Woll., loc. cit.* 444. pl. xx. f. 6 (1862).

Habitat in Teneriffa et Palma, floribus *Physalidis aristatæ* gaudens.

The very remarkable colour of this beautiful insect—the *head* (!) and prothorax being of a clear cherry-red, whilst the elytra and legs are dark-cyaneous—will, apart from its structural peculiarities, immediately distinguish it from everything else here enumerated. Its legs are extremely long and slender, and its surface is *almost* glabrous. I have myself observed it only around the Puerto Orotava and Realejo, in the north of Teneriffe—where it is not uncommon during the spring months, making its appearance about the end of February. I have examined, however, a specimen which was taken in Palma, during the spring of 1862, by Dr. Crotch. It is particularly attached to the flowers of the *Physalis aristata*; indeed I have never yet detected it upon any other plant or shrub.

Genus 148. **CEPHALONCUS.**

Westwood, *in Proc. Ent. Soc. Lond.* (1863).

Caput in maribus postice excavatum, excavatione latâ, antice trisinuatâ, in medio tuberculo minuto obscuro instructâ. Tarsi omnes (in utroque sexu) 5-articulati.

362. **Cephaloncus capito.**

C. subtilissime pubescens, flavus; capite in maribus plerumque nigro-maculato, sed in fœminis nigro; prothorace brevi, transverso, subrufescenti-flavo, nigro uni- vel trimaculato (maculis interdum transversim confluentibus); elytris maculis duabus (sc. unâ humerali, sed alterâ in medio longe ante apicem sitâ) in singulis necnon communi scutellari (sæpius in humerales utrinque mergente) nigris ornatis; antennis, palpis pedibusque pallidis.—Long. corp. lin. 1.

Ogcocephalus capito, *Westw., loc. cit.* (1863).

Habitat Canariam Grandem; super arbusculas *Plocamæ pendulæ* juxta Aldea de San Nicholas die 18. Apr. A.D. 1858 parcissime collegi.

The comparatively minute size and yellow surface of this insect, the head of which is black in the females, but (judging from the single male example now before me) only *spotted* with black in the opposite sex, whilst the prothorax has three more or less distinct (though sometimes transversely confluent) patches across its disc, and each of the elytra two larger ones (namely at the shoulders and towards the apex, respectively), render it as easy to be recognized, even *primâ facie*, as the last species. Its limbs, which are relatively not so elongated as those of the *Cephalogonia cerasina*, are entirely pale; the whole of its tarsi (in *both* sexes) are 5-articulate; its surface is more perceptibly, though very minutely, pubescent; and the excavation on the head of its males is wider and *reversed*—being behind instead of

in front, and the trisinuated edge which terminates it being at its *anterior* extremity instead of at the posterior one. The little tubercle in the centre of the scooped-out portion is very minute, and (from the depth of the depression) only just traceable.

The *C. capito* appears to be of the utmost rarity, the very few specimens which I have seen having been captured by myself, on the 18th of April 1858, from off the flowers of *Plocama pendula* in the Barranco at Aldea de San Nicholas, on the western side of Grand Canary.

Fam. 37. MELYRIDÆ.

Genus 149. DASYTES.

Paykull, *Fna Suec.* ii. 156 (1798).

363. Dasytes subænescens.

Dasytes nigricornis?, *Brullé* [nec *Fab.*], *in Webb et Berth.* (*Col.*) 60 (1838).
—— subænescens, *Woll., loc. cit.* 444 (1862).

Habitat insulas Canarienses, in Hierro solâ adhuc haud detectus.

The present *Dasytes* is closely allied to the common European *D. flavipes*; nevertheless it is a little larger and more pilose, its prothorax is less abbreviated (or somewhat more produced anteriorly) and more transversely constricted behind the apex, its antennæ and tarsi are relatively a little longer, and its entire sculpture is more coarse. We may be almost certain that it is universal throughout the archipelago, though I did not happen to meet with it in Hierro; but in Lanzarote, Fuerteventura, Grand Canary, Teneriffe, and Palma I have taken it (more or less abundantly), and in Gomera it was found by Dr. Crotch. Lanzarotan examples, which were collected by M. Hartung, have been communicated by Professor Heer; and from Teneriffe it has been sent by the Barão do Castello de Paiva. In Teneriffe I have captured it from the level of the shore, at the Puerto Orotava, to the lofty Cumbre overlooking the Cañadas—more than 8000 feet above the sea.

364. Dasytes dispar.

Dasytes dispar, *Woll., loc. cit.* 445 (1862).

Habitat Canariam Grandem, in regione El Monte ad flores captus.

Were it not for the *structural* dissimilarity between the male antennæ of the present *Dasytes* and the last one, I might perhaps have regarded them as but states of the same insect; but since those organs

in the species now under consideration are longer and slenderer than in the *subœnescens* (their last five joints being *considerably* more elongated, narrower, and differently shaped), I am compelled to lay greater stress upon certain small additional characters than I should otherwise have done. Apart, therefore, from the antennæ of its male sex, the *D. dispar* may be known from its ally by being a trifle slenderer, blacker, and more pilose; by its prothorax (particularly in the males) being narrower and less developed, and in the females a little more deeply and less closely punctured; by its elytra in the latter sex being more rugose; and by the legs of its males (especially the feet) being, like the antennæ, longer and less robust. I have taken it sparingly throughout the district of El Monte, in Grand Canary, in company with the *D. subœnescens*.

Genus 150. **DOLICHOSOMA.**

Stephens, *Man. Brit. Col.* 193 (1839).

365. **Dolichosoma Hartungii.**

Dasytes filiformis, *Heer, in litt.*
—— ——, *Hartung, Geolog. Verhältn. Lanz. und Fuert.* 140, 141.
Dolichosoma Hartungii, *Woll., loc. cit.* 446 (1862).

Habitat Lanzarotam, Fuerteventuram, Canariam et Teneriffam, ad flores tempore vernali hinc inde vulgaris.

Judging from the description and figure, the present insect is closely allied to the *D. protensum*, Gené, from Sardinia, though at the same time quite distinct from it specifically in most of its characters. It is apparently altogether darker and more deeply punctured, with its prothorax narrower behind and unchanneled on the disc, and with its entire surface considerably less pilose. The sixth joint of its antennæ, from the apex, is perceptibly smaller than either of those which precede and follow it; but this may very probably be the case in its European representative also, though I do not see any notice of the fact in the generic formula. It is *locally* rather common, during the spring months, throughout the eastern and central islands of the Group. I have taken it around Haria, and elsewhere, in Lanzarote; near Oliva, in Fuerteventura; on the calcareous ground at Tafira, in the region of El Monte, in Grand Canary; and on the mountains above S^{ta} Cruz, as well as around the Puerto Orotava, in Teneriffe. In Lanzarote and Fuerteventura it was captured likewise by M. Hartung; and that it is the insect referred to in his volume under the title of *Dasytes filiformis* I can state for certain, having received a specimen thus identified from Dr. Heer (who prepared the list). It

is, however, unaccompanied by any description; and even if it *had* been characterized, the name could not have been retained, it having been employed by Creutzer for the type of the genus—the *D. linearis* of Fabricius.

Genus 151. HAPLOCNEMUS.

Stephens, *Ill. Brit. Ent.* iii. 316 [script. *Aplocnemus*] (1830).

366. Haplocnemus sculpturatus.

Haplocnemus sculpturatus, *Woll., loc. cit.* 447 (1862).

Habitat Teneriffam, Gomeram et Palmam, in locis intermediis et elevatis (præsertim his); rarissimus.

This large *Haplocnemus* is remarkable for its brassy-brown surface and very deeply sculptured elytra. Its head and prothorax are clothed with a fine silken decumbent pile; but its elytra are *comparatively* bald, the hairs (likewise decumbent ones) with which they are studded being short and few. Its prothorax is convex, with the extreme lateral edges rather pale and minutely crenulated; its legs are testaceous, with the tibiæ sometimes a little darkened; and the last joint of its maxillary palpi is distinctly securiform. It is apparently extremely rare, though widely distributed over Teneriffe, occurring at intermediate and lofty elevations. I have taken it in the wood at La Esperanza, at the Agua Garcia, the Agua Mansa, and from beneath the dead sticks (as well as on the blossoms) of the "Retamas" on the Cumbre overlooking the Cañadas—more than 8000 feet above the sea. I also observed the mutilated remains of it (for they were unquestionably referable to this species) in Palma; and have examined an individual which was captured by Dr. Crotch, during the spring of 1862, in Gomera.

367. Haplocnemus vestitus.

Haplocnemus vestitus, *Woll., loc. cit.* 447 (1862).

Habitat in Hierro, in regione El Golfo parce deprehensus.

The present *Haplocnemus* differs from the preceding one (which at first sight it much resembles) in being densely beset all over (in addition to the decumbent under-pile of its head and prothorax) with very long, fine, and erect hairs, of which there is no indication whatsoever in the *H. sculpturatus*. Its elytra are perhaps a trifle less deeply punctured; and the antennæ of its male sex are somewhat longer and thicker. Hitherto I have observed it only in Hierro, where, during February 1858, I captured five specimens of it in the sylvan district of El Golfo, on the western side of that island.

Genus 152. MELYROSOMA.

Wollaston, *Ins. Mad.* 253 (1854).

368. Melyrosoma costipenne.

Melyrosoma costipenne, *Woll., loc. cit.* 448 (1862).

Habitat in montibus Canariæ Grandis; ad flores in pineto quodam excelso Tarajanæ, mense Aprili A.D. 1858, sat copiose collegi.

The intensely black hue of this *Melyrosoma*, combined with its short, robust, and *decumbent* pile, its subconical prothorax, and the three very elevated costæ with which each of its elytra is furnished, will sufficiently characterize it. It is allied to the Madeiran *M. oceanicum*, but is rather larger and of a deeper black, its pubescence also is darker and more decumbent, its prothorax is less abbreviated and more conical, its elytral ridges are more distinct, its entire sculpture is denser and coarser, and its antennæ and palpi are a little more elongated. Like that insect, it is strictly a mountain species; and the only region in which I have hitherto observed it is the lofty Pinal of Tarajana (above San Bartolomé) in the centre of Grand Canary, where, during April 1858, I took it, not uncommonly, on the blossoms of the *Cytisi* and *Cisti*.

369. Melyrosoma hirtum.

Melyrosoma hirtum, *Woll., loc. cit.* 449 (1862).

Habitat in montibus valde excelsis Teneriffæ, rarissimum.

The present *Melyrosoma* may be known from the preceding one by the very long, erect, and fine hairs with which it is densely clothed; by its still coarser sculpture; by its prothorax being shorter and more transverse, and with a lightly impressed channel down the disc (instead of merely an abbreviated one, or fovea, behind); and by its elytral costæ being less developed. It bears about the same relation to the Madeiran *M. abdominale* as the last species does to the *oceanicum* of those islands; nevertheless its elongated pubescence is still denser, its prothorax is altogether wider (particularly behind), and, together with the head, much more deeply and closely sculptured, and its elytral punctures are larger and more confused (or roughened), having no tendency whatever to be disposed in longitudinal rows.

The *M. hirtum* appears to be confined to the higher elevations of Teneriffe, ascending to the very summit of the Peak itself (more than 12,000 feet above the sea), where it was taken by Dr. Crotch, during the spring of 1862. Previous to his detection of it at this immense altitude, I had captured only a single individual,—namely, from off

the blossoms of a *Cytisus*, during May 1859, on the ascent to the Cumbre above the Agua Mansa.

370. **Melyrosoma flavescens.**

Melyrosoma flavescens, *Woll., loc. cit.* 449 (1862).

Habitat in montibus Palmæ, Junio ineunte A.D. 1858 ad flores captum.

The comparatively small size and narrow outline of this interesting little *Melyrosoma*, in conjunction with the rather robust but nearly decumbent *yellowish*-cinereous pile with which it is densely clothed, and its slender limbs, will at once separate it from both of the preceding species. And it is somewhat remarkable that, whilst the *M. costipenne* and *hirtum* would seem to represent at the Canaries the Madeiran *M. oceanicum* and *abdominale*, respectively, the present one may be regarded as the analogue of the *M. artemisiæ* of those islands. And yet, in spite of this general resemblance, it is abundantly distinct from it specifically. Thus, it may be known from it by its larger size and more anteriorly-acuminated outline; by its pubescence being comparatively short and decumbent (instead of long, fine, and erect); by its prothorax being much narrower, less abbreviated, and more conical; by its entire sculpture being closer and less coarse; and by its male antennæ being very much shorter, with each individual joint considerably less developed.

The *M. flavescens* was captured by myself on the mountains of Palma—from off the perpendicular rocks which bound the great Pinal (above the plains of Los Llanos) in the district of the Banda, at the beginning of June 1858.

Fam. 38. CLERIDÆ.

Genus 153. **CLERUS.**

Geoffroy, *Hist. Abr. des Ins.* 303 (1764).

371. **Clerus Paivæ.**

Clerus Paivæ, *Woll., Trans. Ent. Soc. Lond.* (3rd series) i. 163. pl. vii. f. 5 (1862).

Habitat in ramis *Euphorbiarum* emortuis in Lanzarota, Fuerteventura, Canaria, Teneriffa et Hierro, rarissimus.

This most interesting little *Clerus*, which is the only member of the genus hitherto detected in *any* of these Atlantic islands, is apparently extremely scarce; though from the peculiarity of its habits it

would probably be found more plentifully if searched for in the proper situations. It is quite peculiar to the stems and branches of the decayed Euphorbias; and although it has not been observed as yet in either Gomera or Palma, there can be little doubt (despite its rarity) that it must exist there also, and that it is consequently universal throughout the archipelago. I have taken it on the *Euphorbia*-clad cliffs in the extreme north of Lanzarote; near Betancuria, in the Rio Palmas, of Fuerteventura; close to Puerto da Luz and the Isleta, in Grand Canary; and on the mountains above S^ta^ Cruz, as well as around Orotava, in Teneriffe: and it was likewise captured by Mr. Gray in Lanzarote, and near Valverde in Hierro.

Genus 154. **CORYNETES.**

Herbst, *Käf.* iv. 148 [script. *Korynetes*] (1791).

§ I. *Corpus minus profunde sculpturatum; oculis magnis; antennarum clavâ magnâ obtriangulari, ad apicem latâ truncatâ; palporum maxillarium articulo ultimo fusiformi.* [Necrobia, *Oliv.*]

372. **Corynetes rufipes.**

Anobium rufipes, *Thunb., Nov. Ins. Spec.* i. 10 (1781).
Corynetes rufipes, *Fab., Syst. Eleu.* i. 286 (1801).
Necrobia rufipes, *Brullé, in Webb et Berth.* (*Col.*) 60 (1838).
Corynetes rufipes, *Klug, Abhandl. der Wissensch. Acad. zu Berl.* 340 (1840).

Habitat Lanzarotam, Fuerteventuram, Canariam, Teneriffam et Gomeram, in cadaveribus et circa domos, hinc inde sat vulgaris.

This almost cosmopolitan insect (which is found at the Cape de Verds and Ascension, and which I have captured abundantly at Mogadore, on the coast of Morocco) has established itself pretty generally at the Canaries, occurring principally in and around the towns. We may be tolerably sure that it is universal throughout the archipelago; nevertheless I have myself observed it only at Arrecife in Lanzarote, in Fuerteventura, about Las Palmas in Grand Canary, and near S^ta^ Cruz in Teneriffe. But I have examined specimens which were taken by Dr. Crotch in Gomera; and I have little doubt that it must exist equally in Palma and Hierro. In Lanzarote it was met with likewise by Mr. Gray; and from Teneriffe it has been communicated by the Barão do Castello de Paiva.

373. **Corynetes ruficollis.**

Anobium ruficolle, *Thunb., Nov. Ins. Spec.* i. 8 (1781).
Dermestes ruficollis, *Fab., Ent. Syst.* i. 230 (1792).
Necrobia ruficollis, *Woll., Ins. Mad.* 258 (1854).
—— ——, *Id., Cat. Mad. Col.* 88 (1857).

Habitat Teneriffam, juxta urbem Sanctæ Crucis captus.

Like the last species, the present one (which abounds around Funchal in Madeira) is nearly cosmopolitan—having become naturalized, through the medium of commerce, in most countries of the civilized world; nevertheless hitherto I happen to have taken but two specimens of it in these islands, namely in the Barranco Santo, near S^ta^ Cruz, of Teneriffe. It is clearly, therefore, scarcer than the *C. rufipes*.

§ II. *Corpus profunde sculpturatum; oculis paulo minoribus; antennarum clavâ minore (sed ad basin magis abruptâ) oblongâ, articulis inter se subæqualibus (ultimo vix longiore); palporum maxillarium articulo ultimo fusiformi, apice subacuminato.* [Opetiopalpus, *Spinola.*]

374. Corynetes fimetarius.

C. nitidus, pilis erectis mollibus et (præsertim in capite prothoraceque) elongatis ubique vestitus; capite prothoraceque læte cupreis, dense et profunde punctatis; scutello cupreo-viridi; elytris cyaneis, valde profunde seriatim rugoso-punctatis; antennis nigris, basin versus vix dilutioribus; pedibus nigrescentibus, tarsis dilutioribus ad basin testaceis.

Variat (rarissime) capite prothoraceque (ut scutello) cupreo-viridibus.

—Long. corp. lin. 1½–2.

Corynetes fimetarius, *Woll., Ann. Nat. Hist.* (3rd series) ix. 440 (1862).

Habitat Lanzarotam et Fuerteventuram, in stercore arido bovino, equino, camelino (nec humano), tempore vernali haud infrequens.

I believe that this beautiful *Corynetes* should be regarded as a member of the subgenus *Opetiopalpus*, Spinola; though certainly in the last joint of its maxillary palpi (which is but *very* slightly acuminated at the apex), and in the shape of its prothorax, it departs *less* from the ordinary *Necrobiæ* than the *O. collaris* (from the Cape of Good Hope) does, of which I have several examples now before me. However, even in these two particulars it undoubtedly *approaches* the South-African *Opetiopalpi*; whilst in its general *facies*, deeply sculptured and greatly pubescent surface, as also in the structure of its antennæ —which have their anteclaval articulations minute, and the club itself (which is consequently *abrupt at the base*) much smaller and more oblong (the first and second joints being equal, whilst the third is not at all wider, and but very slightly longer)—it is so precisely similar to the representatives of that group that I suspect it should be included in it. Nevertheless, being osculant in some respects, it would tend still further to prove that the group itself, like *Necrobia*, is, at the utmost, but a Section of *Corynetes*.

In its purely specific details, the *C. fimetarius* may be immediately known by its coarsely sculptured and very hairy surface, by the bright

coppery hue of its head and prothorax, and by its cyaneous elytra. So far as observed hitherto, it appears to be confined to Lanzarote and Fuerteventura; and in its habits it is (for a *Corynetes*) exceedingly anomalous, for I have never yet captured it except in the dung of cattle (horses, oxen, camels, &c.) in the open country. But in such situations it is far from uncommon during the spring months (in company with the *Notiomimus fimicola* and various *Saprini* and *Aphodii*), preferring the driest and most barren spots. In Lanzarote it was found also by Mr. Gray.

Fam. 39. PTINIDÆ.

Genus 155. CASOPUS.

Wollaston, *Trans. Ent. Soc. Lond.* i. 194 [script. *Casapus*] (1862).

375. Casopus Bonvouloirii.

Casapus Bonvouloirii, *Woll., Trans. Ent. Soc. Lond.* (3rd series) i. 196. pl. viii. f. 1 (1862).

Habitat in sylvaticis subeditioribus humidis Teneriffæ, rarissimus.

I do not think it necessary to give any lengthened details (diagnostic or critical) respecting the members of the present Family here enumerated, having fully done so (both as to genera and species) in my Paper on the "*Ptinidæ* of the Canary Islands" which has lately been published in the 'Trans. of the Ent. Soc. of London.' I must therefore refer the reader, for all minute particulars, to that Memoir.

The large and posteriorly-acuminated *C. Bonvouloirii* appears to be confined to the damp sylvan regions of a rather high elevation, in Teneriffe, my specimens being from the mountain-district of the Agua Mansa. It is evidently both local and rare. It was found also, though sparingly, by Dr. Crotch.

376. Casopus dilaticollis.

Casapus dilaticollis, *Woll., Trans. Ent. Soc. Lond.* (3rd series) i. 197 (1862).

Habitat Teneriffam et Gomeram, in locis inferioribus necnon intermediis (præsertim illis) degens.

Whilst the *C. Bonvouloirii* is confined to the damp sylvan districts of a rather high elevation, in Teneriffe, the present species (which, *inter alia*, has its prothorax much dilated anteriorly) descends to the sea-level,—the upper limit of its range scarcely reaching the lower one of that insect. Indeed the examples from the *intermediate* districts (Taganana, Las Mercedes, Souzal, &c.) are less typical than those

from the inferior ones, being a little less densely setose, rather more acute behind, and with the basal ridges of their elytra more developed. Such specimens I regarded in my Paper as the "*var.* β." In its normal phasis I have taken it in the Barranco do Passo Alto, close to S^ta^ Cruz; on the lower mountain-slopes towards Laguna; adjoining the beach at the Puerto Orotava, in the direction of the Cemetery and Lazaretto; and at Ycod el Alto. Two examples of it have also been communicated by the Barão do Castello de Paiva; and I have inspected two more which were found by Dr. Crotch in Gomera. These latter have their inner prothoracic costæ rather more developed than in the ordinary Teneriffan specimens, and their outer ones somewhat less so; and their elytra are a little more oblong. But I do not think that they are indicative of more than an insular state (var. γ) of the *C. dilaticollis*.

377. Casopus alticola.

Casapus alticola, *Woll., Trans. Ent. Soc. Lond.* (3rd series) i. 198. pl. viii. f. 2 (1862).

Habitat in locis intermediis et valde elevatis Teneriffæ, rarissimus.

As stated in my Paper above alluded to, it is just possible that this insect may be but a phasis of the preceding one peculiar to the loftier elevations of Teneriffe,—in which case, however, it would of course imply the range of that species to be greater than I have supposed. Nevertheless I gave my reasons for concluding that, although undoubtedly nearly allied to the *dilaticollis*, it is probably distinct from it. It differs mainly in its elytra being more deeply striate-punctate, a little more drawn-in at the shoulders and with their fasciæ generally more conspicuous, and in the first joint of its hinder male-feet being somewhat less developed. I have taken it, sparingly, on the wooded mountains about the Agua Mansa, and also on the Cumbre (adjoining the Cañadas) above Ycod el Alto—at more than 8000 feet above the sea.

378. Casopus radiosus.

Casapus radiosus, *Woll., Trans. Ent. Soc. Lond.* (3rd series) i. 199 (1862).

Habitat in montibus Canariæ Grandis, sub lapidibus parce lectus.

This *Casopus* (remarkable, *inter alia*, for its prothorax being scarcely at all dilated in front, and for its elytra being distinctly striate-punctate, with their abbreviated basal ridges very *numerous* and well defined) seems to be peculiar to the mountains of Grand Canary—where, during the spring of 1858, I captured it, very sparingly, on the ascent to the Roca del Soucilho, above San Mateo.

379. **Casopus subcalvus.**

Casapus subcalvus, *Woll., Trans. Ent. Soc. Lond.* (3rd series) i. 200. pl. viii. f. 3 (1862).

Habitat in ins. Hierro, haud procul ab oppido Valverde, mense Februario A.D. 1858, sub lapidibus parce repertus.

The entire, or almost entire, freedom of the elytra of this *Casopus* from erect hairs (but which are nevertheless studded with a very minute decumbent pile), combined with the immensely developed basal joint of its hinder male-feet, will, apart from numerous other characters of secondary importance, at once distinguish it. So far as observed hitherto, it is confined to the island of Hierro—where, in February of 1858, it was captured, very sparingly, by Mr. Gray and myself, from beneath stones, about a mile to the north-westward of Valverde. It must be regarded, therefore, when the remoteness of its *habitat* is taken into account, as one of the rarest of the Canarian Coleoptera.

Genus 156. **DIGNOMUS.**

Wollaston, *Trans. Ent. Soc. Lond.* (3rd series) i. 201 (1862).

380. **Dignomus gracilipes.**

Dignomus gracilipes, *Woll., Trans. Ent. Soc. Lond.* (3rd series) i. 202. pl. viii. f. 4 (1862).

Habitat Lanzarotam et Fuerteventuram, in stercore arido (bovino, equino, camelino, nec humano) tempore vernali, rarissimus.

Of this singular insect (which has all the aspect *primâ facie* of a parallel, slender, and curiously mottled *Ptinus*) I have given the full structural and diagnostic details in my Paper on the Canarian *Ptinidæ*. It seems to be of excessive rarity, and to be peculiar to Lanzarote and Fuerteventura—where, during the spring of 1859, I took it, very sparingly, in the low sandy districts, near Arrecife of the former and Corralejo in the extreme north of the latter. In its habits it is (for a member of the present Family) very anomalous—occurring only, so far as I have observed hitherto, in the dried dung of horses, oxen, and camels, in company with the *Notiomimus fimicola* (of the *Anobiadæ*), the beautiful *Corynetes fimetarius* (of the *Cleridæ*), and sundry other insects of *normally* stercoracious propensities.

Genus 157. **PTINUS.**

Linnæus, *Syst. Nat.* ii. 565 (1767).

381. **Ptinus testaceus.**

Ptinus testaceus, *Oliv., Ent.* ix. 8 (1790).
—— advena, *Woll., Ins. Mad.* 261 (1854).

Ptinus testaceus, *de Boield., Ann. de la Soc. Ent. de France,* (3ième série) iv. 654 (1857).
—— ——, *Woll., Cat. Mad. Col.* 89 (1857).

Habitat in Hierro, semel tantum lectus.

A single (female) example of this European *Ptinus* was taken, by myself, on the walls of a house, in Hierro, during our visit to that island in February 1858. It is unquestionably a mere importation, or at the utmost naturalized from more northern latitudes, and is therefore of but trifling importance.

Genus 158. **MEZIUM.**

(Leach) Curtis, *Brit. Ent.* v. 232 (1828).

382. **Mezium sulcatum.**

Ptinus sulcatus, *Fab., Spec. Ins.* i. 73 (1781).
Gibbium sulcicolle, *Brullé, in Webb et Berth. (Col.)* 60 (1838).
Mezium sulcatum, *Woll., Ins. Mad.* 273 (1854).
—— ——, *Id., Cat. Mad. Col.* 92 (1857).
Gibbium sulcicolle, *Hartung, Geolog. Verhältm. Lanz. und Fuert.* 140.

Habitat insulas omnes Canarienses, præsertim sub lapidibus in aridis vulgaris.

The *M. sulcatum* (which is common at Madeira, and which is scattered sparingly over central and southern Europe) is universal at the Canaries; for although I did not happen myself to meet with it during our short stay at Gomera, it has been found there subsequently (at Hermigua) by Dr. Crotch, and in the other six islands of the Group I have taken it, more or less abundantly. It occurs principally beneath stones and scoriæ in dry, rocky spots,—especially in the open basaltic caves towards the coast (in company with certain Hegeters), and at a rather low elevation. It varies immensely in size, and has its elytra occasionally studded with a few stiff erect bristles; nevertheless they are usually quite glabrous. From Teneriffe it has likewise been communicated by the Barão do Castello de Paiva.

Genus 159. **NITPUS.**

Duval, *Glan. Entom.* 138 (1860).

383. **Nitpus gonospermi.**

Nitpus gonospermi, *Duv., Glan. Entom.* 138 (1860).
—— ——, *Woll., Trans. Ent. Soc. Lond.* (3rd series) i. 206 (1862).

Habitat Teneriffam et Gomeram, hinc inde haud infrequens.

The remarkable fact of the antennæ of this minute member of the *Ptinidæ* being composed of merely nine joints is sufficient of itself to characterize it; nevertheless in other respects it has much the ap-

pearance, *primâ facie*, of the two following *Sphærici*, and of the *S. albopictus* from the Madeiran Group. Hitherto I have myself observed it only in Teneriffe; but it was taken rather commonly, by Dr. Crotch, near Hermigua in Gomera. In the rocky ground above the Puerto of Orotava, in Teneriffe, I have brushed it, abundantly, from off the dead plants of a large *Tanacetum*; and I have likewise met with it in a small Barranco near Souzal, as well as at Taganana. Like the *Sphærici* it is excessively variable in stature, descending to a most diminutive bulk.

Genus 160. SPHÆRICUS.

Wollaston, *Ins. Mad.* 263 (1854).

384. Sphæricus simplex.

Sphæricus simplex, *Woll., Trans. Ent. Soc. Lond.* (3rd series) i. 207. pl. viii. f. 6 (1862).

Habitat in Gomera et Hierro; in hac haud procul ab oppido Valverde mense Februario A.D. 1858 pauca specimina collegi; in illâ cepit W. D. Crotch.

The distinctions between the present insect and the Madeiran *S. albopictus*, which at first sight it closely resembles (its almost undilated penultimate tarsal joint being the most important of them), have been fully pointed out in my Paper on the Canarian *Ptinidæ*. The few specimens of the *S. simplex* which I have myself taken were captured near Valverde, in the island of Hierro, during February 1858; but I have lately examined an individual which was found by Dr. Crotch in Gomera.

385. Sphæricus gibbicollis.

Sphæricus gibbicollis, *Woll., Trans. Ent. Soc. Lond.* (3rd series) i. 208 (1862).

Habitat in Lanzarota et Fuerteventura, rarissimus.

Four specimens only of this distinct *Sphæricus* (which may be known, *inter alia*, by its anteriorly-gibbous prothorax) have as yet come beneath my notice. Two of them I captured at Yé, in the extreme north of Lanzarote, during March 1859; and the other two I beat out of an old bush of the Common Rosemary (*Rosmarinus officinalis*) at Agua Bueyes, in Fuerteventura, on the 28th of January of the preceding year.

386. Sphæricus impunctipennis, n. sp.

S. vel nigro- vel fusco-piceus; capite prothoraceque ruguloso-punctatis, squamis magnis flavescenti-cinereis densissime tectis, hôc bre-

viter subcylindrico, in disco postico vix subgibboso; elytris convexis, rotundato-obovatis, haud sculpturatis sed parce et minute subflavescenti-brunneo-squamosis et fasciâ postmediâ albidiore (valde indistinctâ et valde fractâ) ornatis; antennis pedibusque robustis, vel piceis vel rufo-ferrugineis, dense subflavescenti-squamosis.—Long. corp. lin. 1–1¼.

Habitat Gomeram, a cl. W. D. Crotch nuper repertus.

The three specimens from which the above diagnosis has been compiled were taken near Hermigua in Gomera, by Dr. Crotch, during the spring of 1862. They are at once characterized by their totally unsculptured elytra (which are convex and *ob*ovate, and ornamented with a very indistinct and much broken postmedial paler fascia), and by their surface being clothed with yellowish-brown silken scales—which however are paler, denser, and more robust upon the head and prothorax than on the elytra. The species is very closely related to the Madeiran *S. pinguis*.

387. **Sphæricus Crotchianus**, n. sp.

S. capite prothoràceque squamis cinereo-brunneis densissime tectis, hôc sat magno, ad latera subangulato-ampliato, in disco postico gibboso et in medio canaliculato; elytris rotundato-subquadratis, profunde punctato-striatis, brunneo-squamosis, setulis brevissimis suberectis parcissime obsitis et fasciâ postmediâ albidâ (plus minus indistinctâ fractâ) ornatis; antennis pedibusque robustis, clare rufo-ferrugineis, fulvo-squamosis.—Long. corp. lin. 1¼–1½.

Habitat Gomeram, a Dom. Crotch cum specie præcedente captus.

This robust *Sphæricus* may at once be known from the three preceding species by its larger size, and by its surface being more uniformly and densely clothed with dirty-brown mud-like scales (which, however, are a shade paler on the head and prothorax than on the elytra); by its prothorax (which is a good deal developed) being uneven, or gibbose, on the hinder disc, with a wide but shallow channel, and suddenly rounded-out on either side so as to form almost an angle in the middle; and by its elytra being subquadrate, a good deal drawn-in (or downwards) at their apex, very deeply punctate-striated, beset with exceedingly short and remote suberect setæ, and ornamented with a whitish postmedial fascia (which, however, in one of the examples now before me is scarcely traceable). Like the last species, it is due to the researches of Dr. Crotch,—the only two specimens which I have seen having been taken by him near Hermigua in Gomera, during the spring of 1862. I have much pleasure in dedicating to its discoverer so distinct and interesting a *Sphæricus*.

Genus 161. **PIARUS.**

Wollaston, *Trans. Ent. Soc. Lond.* (3rd series) i. 209 (1862).

388. **Piarus basalis.**

Piarus basalis, *Woll., Trans. Ent. Soc. Lond.* (3rd series) i. 210. pl. viii. f. 7 (1862).

Habitat Lanzarotam et Fuerteventuram, in stercore arido (sc. bovino, equino, camelino) unà cum *Dignomo*, *Notiomimo* et cæt. degens.

The dark blackish-piceous hue of this insect, combined with its very densely and roughly punctured prothorax, the fascia of pale scales with which its elytra are ornamented immediately behind their extreme base, and the long, stiff, and suberect hairs with which it is thickly clothed, will readily distinguish it. It seems to be peculiar to Lanzarote and Fuerteventura, where it is not uncommon during the winter and spring months,—secreting itself principally (like *Dignomus*, *Notiomimus*, and the *Corynetes fimetarius*) in the dried dung of horses, oxen, and camels, in the most arid and dusty spots. It occurs, however, though less frequently, beneath stones likewise. In both of those islands it was found also by Mr. Gray.

Genus 162. **PIOTES.**

Wollaston, *Trans. Ent. Soc. Lond.* (3rd series) i. 211 (1862).

389. **Piotes inconstans.**

Piotes inconstans, *Woll., Trans. Ent. Soc. Lond.* (3rd series) i. 212. pl. viii. f. 8 (1862).

Habitat Canariam Grandem, sub lapidibus in locis aridis, rarissima.

The present insect, which I have observed only in Grand Canary, is a most variable one, both in its clothing and in the ornamentation of its elytra. As regards the former, the rigid scale-like pubescence with which it is densely beset is sometimes unmixed with additional erect hairs; and this state, which is found at Maspalomas in the extreme south of the island, is the "α" of my diagnosis (above referred to): at others the additional erect hairs are elongate and robust (the "β" of my diagnosis, which occurs at Arguiniguin): whilst occasionally they are extremely long and fine—in which last predicament it corresponds with the "γ" indicated in my description; and this is the form which it assumes in sandy and calcareous places around and above Las Palmas. And with respect to the arrangement of its paler scales, it may be sufficient here to remark that the two large transverse fasciæ with which its elytra are adorned are

sometimes (though rarely) distinct and well defined, whilst at others they are almost, or even entirely, suffused *inter se* and lost sight of —under which circumstances the elytra are simply of a dull dirty-white, with scarcely any indications of markings at all.

390. Piotes vestita.

Piotes vestita, *Woll., Trans. Ent. Soc. Lond.* (3rd series) i. 213. pl. viii. f. 9 (1862).

Habitat Palmam, in locis intermediis sub lapidibus, rarissima.

The very short and perfectly decumbent yellowish-brown pile with which the entire surface of this large *Piotes* is uniformly and densely clothed, combined with the two greatly elevated and parallel ridges of its laterally-compressed prothorax, and its very oval elytra (which are much rounded-off about the shoulders), will sufficiently characterize it. It is apparently peculiar to Palma, and of excessive rarity. I have taken it, very sparingly, high up in the Barranco above S^{ta} Cruz; as also on the sylvan slopes above Buenavista, on the ascent to the Cumbre; and I have examined a specimen which was captured in Palma by Dr. Crotch.

Fam. 40. ANOBIADÆ.

Genus 163. STAGETUS.

Wollaston, *Ann. Nat. Hist.* (3rd series) vii. 11 (1861).

After comparing my *Stageti* (published on the 1st of January 1861, and re-enumerated below) with a specimen of the *Theca byrrhoides* of Aubé, which has been lent me by Mr. Pascoe, and which was captured by him in the south of France, I feel almost certain that the two genera are identical; though, as I have not been in a position to dissect the latter, perhaps I ought to speak with some little hesitation, seeing that there are undoubtedly a few points *even externally* in which the members of them do not exactly coincide. Upon the whole, I should say that *Theca* was rather more on the true *Anobium*-type than *Stagetus*,—its entire outline being less orbicular and its prothorax less strictly conical: its scutellum, also, is considerably larger, and less triangular; and its antennæ are slenderer, except the club, which, on the contrary, is rather more developed—its first and second joints being more produced internally (whilst in *Stagetus* the whole three are *comparatively* parallel at the sides, or elongate-quadrate). Still, whether these modifications are indicative of others, of at least equal importance, in the oral organs, I am of course unable to say; though,

as I have given the full details of *Stagetus* in my Paper on the "*Anobiadæ* of the Canary Islands," this point may perhaps be decided positively by those who possess the genus *Theca* in sufficient abundance to permit them to destroy a specimen for dissection. Even should they prove, however, to be identical, I believe that *Stagetus* will have the priority as regards the date of publication.

391. **Stagetus crenatus.**

Stagetus crenatus, *Woll., Ann. Nat. Hist.* (3rd series) vii. 13 (1861).

Habitat Teneriffam, rarissimus, inter lichenes ad truncos arborum vetustos crescentes præcipue degens.

Apparently of the greatest rarity, but scattered over the intermediate elevations of Teneriffe,—occurring usually amongst lichens on the trunks and branches of trees. In such situations I have taken it in the woods above Taganana, in a small Barranco near Souzal, and at Ycod de los Vinhos; and I have examined a single specimen which was captured by Dr. Crotch—I believe, at Ycod el Alto.

392. **Stagetus hirtulus.**

Stagetus hirtulus, *Woll., Ann. Nat. Hist.* (3rd series) vii. 12 (1861).

Habitat in Gomera et Hierro, in locis similibus ac præcedens rarissimus.

Whether the *S. hirtulus* be more than an insular modification of the last species I will not undertake to pronounce for certain. It differs from it mainly in the striæ of its elytra being finer and scarcely perceptibly (if indeed at all) crenated, and by the pubescence which clothes its entire upper surface being longer and somewhat denser. I have observed it hitherto only in Hierro—where, during February 1858, I captured it, very sparingly, from amongst rubbish at the base of an old wall in an exposed situation near Valverde. Possibly, however, it may have fallen from off the minute Cryptogamic plants with which the wall was partially studded. And I likewise took it in the sylvan district of El Golfo, on the western side of that island. I have inspected an example which was found by Dr. Crotch, during the spring of 1862, in Gomera; and likewise two others (captured in the same locality) which differ in being larger and in having their elytral striæ still more lightly impressed. But I doubt if they can be regarded as more than a "var. β" of the *hirtulus*.

Genus 164. **XYLETINUS.**

Latreille, *Règne Anim.* (ed. 2) iv. 483 (1829).

§ I. *Oculi maximi: palpi maxillares articulo ultimo securiformi, simplici.*

393. Xyletinus latitans.

Xyletinus latitans, *Woll., Ann. Nat. Hist.* (3rd series) vii. 14 (1861).

Habitat in Lanzarota, Fuerteventura, Teneriffa et Hierro, sub cortice *Euphorbiarum* arido laxo latitans.

Not to mention the slight difference in the form of the ultimate joint of its maxillary palpi, which appears to have no indication whatever of a scooping-out along its oblique apical edge, the less evidently punctulated surface and rather longer and paler pubescence of this *Xyletinus*, combined with its somewhat less rounded-off shoulders, very much larger eyes, and usually paler limbs, will serve to distinguish it from the following one (which at first sight it closely resembles). It seems to be pretty widely spread over the archipelago; and indeed, from its *Euphorbia*-infesting habits, it is most probably universal. Hitherto, however, I have observed it in only four out of the seven islands of the Group—namely Lanzarote, (in the Rio Palmas of) Fuerteventura, (at Taganana and Orotava in) Teneriffe, and (at a low elevation in the district of El Golfo in) Hierro.

§ II. *Oculi minores (sed sat magni): palpi maxillares articulo ultimo securiformi, sed per apicem internum plus minus oblique excavato.* [Gen. *Metholcus*, Duval.]

394. Xyletinus desectus.

Xyletinus desectus, *Woll., Ann. Nat. Hist.* (3rd series) vii. 13 (1861).

Habitat in Canaria et Teneriffa, rarissimus.

On re-examining this insect, I find that the securiform last joint of its maxillary palpi is slightly excavated along its oblique apical edge; so that it must needs be removed into the present Section. The scooping-out, however, of this terminal articulation is a character (even though a structural one) which is *more* or *less* expressed according to the species; and I am doubtful, therefore, whether it can be employed for more than a *sub*generic purpose. As may be gathered from a reference to the diagnosis given in my Paper (above alluded to) on the Canarian *Anobiadæ*, the present *Xyletinus* and the preceding one approach each other very closely at first sight; but in spite of this, their distinctions are not the less real. Apart from the difference in the last joint of their respective maxillary palpi, the *X. desectus* may be known from the *latitans* by being (although minutely) much more evidently punctulated (when viewed beneath the micro-

scope); by its pubescence being a little shorter and yellower, and with a more perceptible tendency to be longitudinally disposed on the elytra; by its humeral angles being a trifle more rounded-off; by its eyes being considerably smaller; and by its limbs being usually a shade darker,—the antennæ having, also, their basal articulation a little less inflated.

Hitherto I have seen but three specimens of the *X. desectus*,—two of which I captured in the region of El Monte in Grand Canary, and the remaining one (which is rather smaller) at Souzal in Teneriffe.

395. **Xyletinus brevis.**

Xyletinus brevis, *Woll.*, *Ann. Nat. Hist.* (3rd series) vii. 15 (1861).

Habitat Palmam, mense Maio A.D. 1858 deprehensus.

The last joint of the maxillary palpi of the present little *Xyletinus* is rather more evidently scooped-out than in the preceding species, but not so much so as is the case in the following one. In other respects it may be known by its small size and short-oval outline, and by its subventricose elytra, which are a good deal rounded at the sides. The only two specimens which I have seen were captured by myself in the Barranco above S^ta^ Cruz in the island of Palma, during May 1858.

396. **Xyletinus excavatus.**

Xyletinus excavatus, *Woll.*, *Ann. Nat. Hist.* (3rd series) vii. 15 (1861).

Habitat Canariam Grandem; mense Aprili A.D. 1858 exemplar unicum cepi.

In the *X. excavatus* the ultimate joint of the maxillary palpi is very considerably scooped-out along its oblique apical edge; and, apart from this, it may be known by its comparatively dark hue, more distinctly punctulated prothorax, broader tibiæ, and slender feet, the first and second articulations of which are relatively somewhat longer. The only example which I have seen was captured, by myself, in the south of Grand Canary, during April 1858.

Genus 165. **NOTIOMIMUS.**

Wollaston, *Ann. Nat. Hist.* (3rd series) vii. 15 (1861).

397. **Notiomimus fimicola.**

Notiomimus fimicola, *Woll.*, *Ann. Nat. Hist.* (3rd series) vii. 17 (1861).

Habitat Lanzarotam et Fuerteventuram, in stercore arido (bovino, equino, camelino, nec humano) latitans.

For the less conspicuous structural details of this species I must

refer to my Paper on the Canarian *Anobiadæ*, already alluded to. In its reddish-brown hue, minutely sericeous surface, crenate-striated elytra, and general outline, it is more on the *Anobium*-type than the Canarian *Xyletini* just enumerated; whilst the strictly *fusiform* last joint of its palpi, and the *comparatively* elongated second one of its feet, will still further separate it therefrom. Its head is rather largely developed, and closely applied to the chest when the insect is in a state of repose; and its habits, for a member of the present family, are decidedly anomalous—being, in fact, precisely similar to those of *Dignomus gracilipes* (of the *Ptinidæ*) and the *Corynetes fimetarius* (of the *Cleridæ*). Indeed I have never yet detected it except in the dried dung of oxen, horses, and camels—in which situations it is not uncommon throughout Lanzarote and Fuerteventura during the spring months, particularly in the most arid and dusty spots. So far as I have observed hitherto, it is peculiar to those two islands.

Whether *Notiomimus* be identical with *Pseudochina* of M. Duval, I have no means of deciding for certain; but as the diagnosis of that genus asserts the terminal joint of its palpi to be exceedingly long and *subcylindric*, its body *ovate*, and its elytra merely minutely punctulated (whilst those of *Notiomimus* are deeply crenate-striate), I am inclined to believe that it is probably distinct from it.

398. **Notiomimus holosericeus.**

Notiomimus holosericeus, *Woll., Ann. Nat. Hist.* vii. 17 (1861).

Habitat Teneriffam et Palmam, mihi non obvius: mense Februario A.D. 1858 exemplar unicum in hac deprehendit Dom. Gray; et alterum in illâ cepit W. D. Crotch.

As stated in my Paper on the Canarian *Anobiadæ*, this species may be readily distinguished from the preceding one "by its less rufescent hue and more densely and coarsely sericeous surface (which is more glossy, or variegated, with the short silken pubescence), by its rather larger and more prominent eyes, its obscurely raised alternate elytral interstices, its more decidedly carinated forehead, and by its longer and robuster limbs." A single example of it was captured by Mr. Gray in Palma, during February 1858, and has by him been presented to the collection of the British Museum; and a second was found by Dr. Crotch in Teneriffe ("from under rubbish in the ravine below Ycod el Alto"), during the spring of 1862.

399. **Notiomimus punctulatissimus.**

Notiomimus punctulatissimus, *Woll., Ann. Nat. Hist.* vii. 17 (1861).

Habitat Canariam Grandem, mense Aprili A.D. 1858 repertus.

The smaller size and rather more oval outline of this *Notiomimus*, combined with its perceptibly shorter limbs, yellower pubescence, most densely (though minutely) punctulated surface, and unstriated elytra (which entirely cover the pygidium), will sufficiently distinguish it from both of the foregoing species. Indeed its entire aspect is altogether somewhat different; and it is not impossible that *it*, at least, may be congeneric with *Pseudochina*. Like the *N. holosericeus* it is hitherto unique, the single example from which I drew out my diagnosis having been captured by myself in the south of Grand Canary during April 1858.

Genus 166. **ANOBIUM.**

Fabricius, *Syst. Ent.* 62 (1775).

400. **Anobium velatum.**

Anobium velatum, *Woll., Ins. Mad.* 276. tab. 5. f. 3 (1854).
—— ——, *Id., Cat. Mad. Col.* 92 (1857).
—— ——, *Id., Ann. Nat. Hist.* (3rd series) vii. 18 (1861).

Habitat Lanzarotam et Gomeram, rarissimum.

The distinctions between the present insect and the following one have been fully pointed out in my Paper on the *Anobiadæ* of these islands. The only example of the *A. velatum* (which is not uncommon in Madeira) which I have myself detected at the Canaries was found, dead, in a house at Haria, in the north of Lanzarote, during the spring of 1859. A second, however, has lately been communicated by Dr. Crotch—who captured it in Gomera, during the spring of 1862.

401. **Anobium villosum.**

Anobium villosum, *Bonelli, ined.*
—— ——, *Dej., Cat.* 130 (1837).
—— ——, *Brullé, in Webb et Berth.* (*Col.*) 60 (1838).
—— ——, *Woll., Ann. Nat. Hist.* (3rd series) vii. 18 (1861).

Habitat Teneriffam, hinc inde in domibus, rarissime.

The *A. villosum* (of southern Europe), which differs *principally* from the last species in the form of its rather smaller and more posteriorly-rounded prothorax, may perhaps have been naturalized in these islands from higher latitudes. At any rate I have as yet observed it only in houses in Teneriffe,—particularly (though very sparingly) at S^{ta} Cruz. Nevertheless I took the remains of a single example in the house at the Agua Mansa likewise—which is certainly far removed from, at all events, the towns. The minor characters

which distinguish it, additionally, from the *A. velatum* have been fully pointed out in my paper on the Canarian *Anobiadæ*.

402. Anobium paniceum.

Dermestes paniceus, *Linn.*, *Fna Suec.* 431 (1761).
Anobium paniceum, *Steph.*, *Ill. Brit. Ent.* iii. 340 (1830).
—— ——, *Woll.*, *Ins. Mad.* 277 (1854).
—— ——, *Id.*, *Cat. Mad. Col.* 93 (1857).

Habitat in domibus Lanzarotæ, Canariæ, Teneriffæ et Gomeræ, passim.

Clearly naturalized through the medium of commerce—being a species liable to importation, in farinaceous substances, throughout the civilized world. I have taken it sparingly, in or about houses, in Lanzarote, Grand Canary, and Teneriffe; and I have examined a specimen which was found by Dr. Crotch in Gomera.

403. Anobium molle.

Dermestes mollis, *Linn.*, *Fna Suec.* 415 (1761).
Anobium molle, *Steph.*, *Ill. Brit. Ent.* iii. 341 (1830).
—— ——, *Woll.*, *Cat. Mad. Col.* 93 (1857).

Habitat Palmam; mense Maio A.D. 1858 specimen unicum (mortuum) cepi.

A single example of what I believe to be the common European *A. molle* was taken by myself, dead, from out of a cone of a *Pinus canariensis* in the Barranco above S^ta^ Cruz in the island of Palma, during May 1858. Although considerably mutilated, I can detect nothing about it to warrant the suspicion that it is distinct from that species. It occurs also, sparingly, around Funchal in Madeira.

404. Anobium striatum.

Anobium striatum, *Oliv.*, *Ent.* ii. 16. 9 (1790).
—— ——, *Gyll.*, *Ins. Suec.* i. 291 (1808).
—— ——, *Woll.*, *Ins. Mad.* 278 (1854).
—— ——, *Id.*, *Cat. Mad. Col.* 92 (1857).

Habitat in domibus Teneriffæ et Palmæ, haud frequens.

This common European insect (which is rather abundant in Madeira, and which is evidently a mere importation into these islands) is decidedly scarce at the Canaries. I have, however, taken it sparingly in houses both in Teneriffe and Palma, in the former of which it was found likewise by Dr. Crotch.

405. Anobium cryptophagoides, n. sp.

A. oblongo-ovatum, rufo-brunneum, sat nitidum, grosse sericeo-pubescens; prothorace subconico (ad latera haud explanato-margi-

nato), æquali, convexo, subtuberculato-rugoso (vix punctato); elytris profunde subcrenato-striatis, interstitiis depressis et parce punctulatis; antennis vix obscurioribus, articulis ultimis tribus haud valde elongatis.—Long. corp. lin. 1.

Habitat ins. Hierro; in loco quodam mox supra mare in regione "El Golfo" dictâ sito mense Februario A.D. 1858 exemplar unicum cepi.

Of this minute *Anobium*, which has much the colour and *primâ facie* aspect of a *Cryptophagus*, I have seen hitherto but a single example—which was taken by myself, during February 1858, in a sandy lane at a very low elevation in the district of El Golfo, on the western side of Hierro. It is remarkable for its reddish-brown hue and rather shining and sericeous surface, for its oblong-ovate outline, for its prothorax being even and subconical and not at all margined (or expanded) at the sides, and for the last three joints of its antennæ being rather less elongated than is the case in the generality of the true *Anobia*.

Genus 167. PTILINUS.

Geoffroy, *Hist. Abr. des Ins.* i. 65 (1764).

406. Ptilinus lepidus, n. sp.

P. mas opacus, fusco-niger, densissime et minute pubescens; prothorace postice inæquali dense et minute granulato et carinâ abbreviatâ lævi instructo, antice asperato; elytris (præsertim versus basin) paulo rufescentioribus, subpunctato-rugulosis; antennis pedibusque pallidioribus, illis longe flabellatis (flabellis nigrescentioribus).

P. fœm. nitidus, rufo-brunneus, glaber; prothorace postice cylindrico parce et minute punctulato, antice latiusculo convexo et valde asperato; elytris minutissime punctulato-subrugulosis; antennis pedibusque vix pallidioribus, illis serratis.—Long. corp. lin. (*mas*) $1\frac{1}{2}$–vix 2, et (*fœm.*) $1\frac{2}{3}$–$2\frac{1}{2}$.

Habitat Teneriffam et Palmam, in locis intermediis degens.

The excessive dissimilarity of the sexes of this insect renders it absolutely necessary to give a separate diagnosis for each of them, since they have scarcely a single feature in common. In my Paper on the Canarian *Anobiadæ* I queried it as probably identical with the Madeiran *P. cylindripennis*, of which I did not, at the time, happen to possess a type for comparison. A subsequent examination, however, of the two proves them to be unquestionably distinct; for although they do not differ materially in their *male* sex (which indeed, in both cases, has much the *primâ facie* aspect of the common European *P. pectinicornis*), the *females* of the *P. lepidus*, when closely inspected, will be seen to have nearly *all* their characters considerably

modified. Thus, they have their entire surface more shining and *quite glabrous* (whereas that of the *cylindripennis* is very minutely, but densely, pubescent); their prothorax is larger, relatively wider anteriorly, more obtusely rounded (or less acuminate) in front, and delicately *punctulated* (instead of granulose) behind; and their elytra are rather more decidedly (though *most* minutely) punctulated, and apparently without even the faintest tendency to be longitudinally subcostate.

Hitherto I have observed the *P. lepidus* only in the intermediate elevations of Teneriffe and Palma,—namely at Taganana of the former, and (more abundantly) in an old paling at Galga, of the latter.

Fam. 41. BOSTRICHIDÆ.

Genus 168. XYLOPERTHA*.

Guérin, *Ann. de la Soc. Ent. de France, Bull.* 17 (1845).

407. Xylopertha barbifrons, n. sp.

X. cylindrica, fusco-picea, subnitida, pube flavescente sericeâ demissâ grosse irrorata; capitis limbo longissime barbato; prothorace antice mucronibus maximis asperato et ibidem pilis tenuibus longissimis erectis obsito, postice parce granulato; elytris basin versus paulo pallidioribus, subseriatim punctatis (punctis postice magnis, antice paulatim minutissimis), ad apicem retusis, parte truncatâ utrinque nodulo parvo instructâ necnon per suturam elevatâ; antennis pedibusque testaceis, illarum clavâ tibiisque subinfuscatis. —Long. corp. lin. $1\frac{3}{4}$.

Habitat Palmam; mense Maio A.D. 1858 exemplar unicum haud procul a Galga deprehendi.

The present insect differs, *inter alia*, from the Madeiran *X. barbata* in being more densely clothed with a *coarser* decumbent sericeous pile; in the hinder region of its prothorax being much less polished, and *distinctly granulose* (instead of most minutely punctulated); in the paler parts of its surface being darker, or more infuscated; in its forehead being still more densely penicillated; and in its suture being more uniformly raised along the whole of the truncated portion at the apex of its elytra. The single specimen from which the above

* It appears that the *Xyloperthæ* (at any rate the European ones) have but *nine* distinct joints to their antennæ, and not ten as has been usually supposed. Consequently M. Mulsant's genus *Enneadesmus*, which was based solely on the former character, has to be suppressed; and the Madeiran insect which I described in 1860 (*vide* Ann. of Nat. Hist., 3rd series, v. 359), under the name of *Enneadesmus barbatus*, must be regarded, therefore, as a *Xylopertha*.

diagnosis has been compiled was captured by myself in the east of Palma (on the mountains between Galga and the sea), on the 24th of May 1858.

Genus 169. **DINODERUS.**

Stephens, *Man. Brit. Col.* 203 (1839).

408. **Dinoderus brunneus.**

D. cylindricus, piceo-brunneus, fere opacus, ubique densissime et grosse rugoso-asperatus, breviter et parce sed in limbo longius fulvo-pubescens; prothorace antice subangustato et valde mucronato, postice dense granulato truncato; elytrorum granulis magnis sed vix subseriatim dispositis; antennarum clavâ tarsisque paulo magis testaceis.—Long. corp. lin. 2–2½.

Dinoderus brunneus, *Woll., Ann. Nat. Hist.* (3rd series) ix. 440 (1862).

Habitat in pinetis Teneriffæ et Palmæ, truncos *Pini canariensis* emortuos destruens.

I am doubtful whether this *Dinoderus* is more, in reality, than a local phasis of the European *D. substriatus*,—from which it seems to differ merely in its rather smaller size, narrower outline, and browner hue, in the sculpture of its elytra being somewhat closer and not quite so coarse, and in its prothorax being relatively a trifle narrower in front, less dilated in the middle and more truncated at the base—the hinder angles being rather less rounded off. It seems to be exceedingly rare, or at all events local, being confined (so far as I have observed hitherto) to the rotten trunks of the *Pinus canariensis*, at intermediate and somewhat lofty elevations. In such positions I have taken it at the Agua Mansa in Teneriffe, and high up in the Barranco above S^ta^ Cruz in Palma.

Fam. 42. CIOIDÆ.

Genus 170. **CIS.**

Latreille, *Préc. des Caract. Gén. des Ins.* 50 (1796).

409. **Cis lauri.**

Cis lauri, *Woll., Ins. Mad.* 282. tab. v. f. 7 (1854).
—— ——, *Id., Cat. Mad. Col.* 94 (1857).

Habitat in lauretis Teneriffæ, hinc inde sat vulgaris.

The *C. lauri*, so common in the laurel-regions of Madeira, occurs in similar spots at the Canaries—where, however, it seems to be both more local and less abundant. Hitherto I have observed it only in the woods of Las Mercedes and the Agua Garcia, in Teneriffe;

but we may be almost certain that it will be found generally, wherever the remains of the old laurel-forests, which are fast disappearing, still exist. Teneriffan examples have also been communicated by Dr. Crotch.

Genus 171. OCTOTEMNUS.

Mellié, *Ann. de la Soc. Ent. de France*, (2ième série) vi. 384 (1848).

410. Octotemnus opacus.

Octotemnus opacus, *Mellié, loc. cit.* 386 (1848).
—— ——, *Woll., Ins. Mad.* 283 (1854).
—— ——, *Id., Cat. Mad. Col.* 94 (1857).

Habitat in sylvaticis Teneriffæ et Palmæ, minus frequens.

Like the *Cis lauri*, the present insect abounds in Madeira, but is comparatively scarce, and also exceedingly local, at the Canaries. Hitherto I have observed it only in sylvan and subsylvan spots of the intermediate altitudes of Teneriffe and Palma,—namely at the Agua Garcia and the laurel-woods above Taganana of the former, and high up in the Barranco da Agua of the latter.

Fam. 43. TOMICIDÆ.

Genus 172. TOMICUS.

Latreille, *Hist. Nat. des Ins.* iii. 203 (1802).

411. Tomicus nobilis.

T. cylindricus, piceo-niger, subnitidus, pilis tenuibus longissimis erectis fulvescentibus præsertim in limbo obsitus; prothorace elongato, postice profunde punctato, antice valde asperato; elytris picescentioribus, profunde punctato-striatis, ad apicem subito et valde retusis, parte excavatâ dentibus lateralibus tribus (superiore maximo noduliformi), uno parvo antico et duobus vel tribus obscuris subconfluentibus posticis utrinque armatâ; femoribus tibiisque rufo-ferrugineis, tarsis antennisque rufo-testaceis.

Variat (immaturus) colore omnino ferrugineo; necnon (forsan in sexu fœmineo) dentibus elytrorum apicalibus minus distinctis.—Long. corp. lin. $1\frac{1}{2}$–2.

Tomicus nobilis, *Woll., Ann. Nat. Hist.* (3rd series) ix. 441 (1862).

Habitat in pinetis Teneriffæ et Palmæ, lignum antiquum destruens.

This large *Tomicus* is remarkable for the hinder portion of its prothorax being coarsely punctured (with the punctures distinct and well defined); for its elytra being more or less piceous and the head and prothorax piceous-black, whilst its legs are more rufescent, with their tarsi (like the antennæ) testaceous; and for its elytra being

very deeply punctate-striated, with the excavated portion at their apex bounded on either side by a large obtuse tooth, two acuter ones behind it, and two or three still smaller, obscurer, and more or less subconfluent ones towards the apex; in addition to which there is a minute and sharp one *in front*, on each side of the suture. In some examples, however, which are perhaps the females, these teeth are altogether smaller and more confused. It seems to be confined to the rotten wood of the *Pinus canariensis*, beneath the loose bark of which it is locally abundant, in the intermediate elevations of Teneriffe and Palma. In such situations I have taken it at the Agua Mansa of the former, and in the Barranco above S^ta^ Cruz of the latter.

I am far from certain, however, that the present *Tomicus* is in reality distinct from the Madeiran *T. erosus*; from which it appears mainly to differ in its larger size and relatively broader outline; in its prothorax being rather more deeply punctured behind and just perceptibly narrower in front; in its elytra being usually more piceous or rufescent, and with the large punctures of their striæ a *trifle* more distant *inter se*; and in its tibiæ being perhaps a little less spinulose externally.

412. Tomicus Saxesenii.

Bostrichus Saxesenii, *Ratz., die Forst-Insect.* i. 167 (1837).
Tomicus Dohrnii, *Woll., Ins. Mad.* 290 (1854).
—— ——, *Id., Cat. Mad. Col.* 96 (1857).

Habitat Teneriffam et Palmam, rarissimus.

The *T. Saxesenii*, which in Madeira seems to be confined principally to the laurel-woods of a high elevation, where it is often extremely abundant, would appear (so far as I have observed hitherto) to be very rare in these islands; and it is somewhat remarkable that the few examples of it which I have met with were beneath the bark of the *Pinus canariensis*. Under such circumstances I have taken it, very sparingly, in Teneriffe, and in the Barranco above S^ta^ Cruz in Palma.

Genus 173. XYLOTERUS.

Erichson, *in Wiegm. Archiv*, ii. 60 (1836).

Although I have but a single example (and that, I believe, a female one) to judge from, I nevertheless refer the insect described below to *Xyloterus*, since in the exact proportions of its *quadriarticulate* funiculus, as well as in the shape of its compressed and *extremely solid* club, it agrees precisely with (at all events the corresponding sex of) that genus. Its feet, too, have their antepenultimate joint nearly simple, whilst its tibiæ (which are a good deal widened) have their

outer edge rounded and minutely serrated, as in the *Xyloteri*. Nevertheless, in its very much smaller size and concolorous hue, as well as in its much longer prothorax, which is considerably more produced in front, and its total freedom from a visible scutellum, it recedes from *Xyloterus*, and perhaps might almost seem to constitute the type of an allied Group. In the absence, however, of further material, and considering the essential points which it possesses in common with *Xyloterus*, I prefer treating it as an exponent of that genus. The only other genera of the *Tomicidæ* which have, so far as I am aware, a 4-jointed funiculus are *Cryphalus* and *Leiparthrum*,—from both of which it differs far *more*, in its primary details, than it does from *Xyloterus*.

413. **Xyloterus longicollis**, n. sp.

X. breviter cylindricus, crassiusculus, rufo-ferrugineus, subnitidus, pilis erectis subcinereis sat parce obsitus; prothorace elongato, asperato (etiam postice vix punctato); elytris paulo rugulosis et leviter seriatim punctatis, ad apicem obtusis sed integris; antennis pedibusque clarioribus; tibiis latis, extus minute spinuloso-serratis. —Long. corp. lin. 1.

Habitat Fuerteventuram; sub stercore camelino ad Rio Palmas d. 6. Apr. A.D. 1859 exemplar unicum collegi.

The unique specimen from which the above diagnosis has been compiled was captured by myself, on the 6th of April 1859, together with numerous other insects, from beneath the refuse of a camels' stable in the Rio Palmas of Fuerteventura. It is probable, however, that its presence in a position so anomalous for a member of this family was merely accidental.

Genus 174. **CRYPHALUS.**

Erichson, *in Wiegm. Archiv*, ii. 61 (1836).

414. **Cryphalus aspericollis.**

Cryphalus aspericollis, *Woll., Ann. Nat. Hist.* (3rd series) v. 365 (1860).

Habitat Teneriffam, in caulibus emortuis lignoque antiquo degens.

This very minute wood-borer, which is not uncommon in Madeira, occurs also at the Canaries. Hitherto, however, I have detected it only in Teneriffe, namely (sparingly) near S^ta^ Cruz, and (more abundantly) above the Puerto of Orotava; in the latter of which localities I captured it, during May 1858, from out of the dead stalks of a Geranium in the garden of the "Dehesa." From its diminutive size it is extremely likely to escape observation; but there is reason to believe that its geographical range is by no means restricted to these imme-

diate Atlantic Groups, for a single example of it was found by Mr. Bewicke at Ascension; and although it was probably imported accidentally into that island, there is nothing to warrant the suspicion (but quite the reverse) that it had been brought there from either the Canaries or Madeira.

Genus 175. APHANARTHRUM.

Wollaston, *Ins. Mad.* 292. tab. vi. f. 2 (1854).

For the diagnoses of *nine* out of the eleven *Aphanarthra* enumerated below I must refer to a Paper on the members of this curious *Euphorbia*-infesting genus, published in the 'Annals of Nat. Hist.,' and which I have cited under each of them; though, at the same time, the few diagnostic observations which I here add may perhaps, in some instances, almost suffice, practically, for identifying them. It will be seen that *two* of the representatives were not included in that Memoir,—one of them (the *A. armatum*) having escaped my observation amongst a mass of specimens of the *A. bicinctum* and *affine*; whilst the other (the *A. concolor*) I had failed until recently to recognize as an *Aphanarthrum* at all.

§ I. *Pronotum antice productum, caput fere occultans.*

A. *Pronotum ad apicem ipsissimum tuberculis minutis armatum.*

415. Aphanarthrum Jubæ.

Aphanarthrum Jubæ, *Woll., Ann. Nat. Hist.* (3rd series) v. 164 (1860).

Habitat Lanzarotam, in ramis *Euphorbiæ regis-Jubæ* desiccatis prope oppidum Haria mense Martio A.D. 1859 sat copiose repertum.

The comparatively large size and very long and coarse pubescence of this *Aphanarthrum*, combined with the lurid apex of its prothorax, which is armed with two tolerably distinct tubercles (besides one or two smaller collateral ones) at its extreme point, and its pale-testaceous elytra, which are ornamented with two large, black, zigzag transverse fasciæ (the anterior one of which is much developed, and more or less double, or looped, in the middle), will sufficiently characterize it. Hitherto I have observed it only in the north of Lanzarote, where, during March 1859, I captured it in considerable abundance from out of some dried stems of the *Euphorbia regis-Jubæ* which had been piled up for burning, at Haria.

416. Aphanarthrum armatum.

A. nigro-fuscum, pilis brevibus demissis dense vestitum; prothorace alutaceo et minute punctulato, apice producto acutiusculo vix sub-

lurido et ibidem tuberculis duobus spiniformibus porrectis subapproximatis instructo; elytris dense sed leviter subseriatim punctatis, fasciâ magnâ transversâ testaceâ mox pone basin ornatis; antennis pedibusque infuscato-testaceis.—Long. corp. lin. vix $\frac{3}{4}$.

Aphanarthrum armatum, *Woll., Trans. Ent. Soc. Lond.* (3rd series) i. 167 (1862).

Habitat Lanzarotam, duobus speciminibus a meipso deprehensis.

When preparing my Paper on the *Aphanarthra* of these islands I overlooked, as has been already stated, the present species,—having (without accurate examination) regarded the two specimens from which the above diagnosis has been compiled as merely immature ones of the *A. bicinctum*. A more careful inspection of them, however, shows that (amongst other characters) they have the extreme apex of their pronotum (which is not at all thickened or recurved) armed with about four tubercles, of which the inner pair are comparatively elongated, acute, somewhat spiniform, and subapproximated. Indeed in this respect they approach the *A. Jubæ*; nevertheless, apart from the different shape of these minute projections (the inner two of which are *relatively* longer, more porrect, and placed closer together), the *A. armatum* may be immediately known from that insect by its very much smaller size and by its considerably shorter, finer, and more decumbent pubescence; by its alutaceous prothorax (which is rather acuter, and less decidedly diluted, at its extreme apex); by its entire punctation being closer and less coarse; and by its elytra (so far, indeed, as I am able to judge from the two examples now before me) being ornamented by merely a large transverse pallid fascia immediately behind their base. It was taken by myself in Lanzarote (I believe, in the vicinity of Haria), along with the *A. Jubæ*, *affine*, and *bicinctum*.

B. *Pronotum ad apicem ipsissimum haud* (*rarius vix*) *tuberculatum, sed ibidem anguste plus minus incrassatum.*

417. Aphanarthrum glabrum.

Aphanarthrum glabrum, *Woll., loc. cit.* 167 (1860).

Habitat in Gomera et Hierro, rarissimum.

The rather small size and comparatively *glabrous* surface of this little *Aphanarthrum* (the pubescence of which is so excessively short and minute as to be quite untraceable except beneath the microscope), in conjunction with its alutaceous and densely (though delicately) punctulated prothorax, the extreme apex of which is somewhat lurid and has occasionally the faintest possible indications of

being studded with two just perceptibly elevated points, or tubercles, will serve to characterize it. Its elytra (which are testaceous, and ornamented, when the insect is mature, with two exceedingly black transverse dentate fasciæ) are substriated, and closely and finely punctulated,—the punctures, however, having but a slight tendency to be arranged in longitudinal rows. Hitherto I have myself observed it only in Hierro, where I captured it sparingly, from out of dead *Euphorbia*-stems, during February 1858; but I have examined two more individuals which were found by Dr. Crotch, during the spring of 1862, in Gomera.

418. **Aphanarthrum bicolor.**

Aphanarthrum bicolor, *Woll.*, *loc. cit.* 165 (1860).

Habitat in Teneriffa, Gomera, Palma et Hierro, Euphorbias emortuas destruens.

The present beautiful *Aphanarthrum* (which occurs also in Madeira) is not uncommon, in dead *Euphorbia*-stems, in Teneriffe, Gomera, Palma*, and Hierro, in the last of which it was found likewise by Mr. Gray. It may be easily known by its whitish-testaceous hue, and the number of dark patches and broken fasciæ with which it is ornamented; and by its elytra being rather more shining than is the case in the generality of the species, somewhat diaphanous (or subhyaline), most lightly sculptured, and nearly unpubescent—being studded with only a few distant and stiff erect hairs. It is probably universal throughout the archipelago; nevertheless, as yet, I am unable to record it except for Teneriffe, Gomera, Palma, and Hierro.

419. **Aphanarthrum affine.**

Aphanarthrum affine, *Woll.*, *loc. cit.* 166 (1860).

Habitat in Lanzarota, Fuerteventura, Canaria et Gomera, vulgaris.

When viewed beneath a high magnifying power, the sculpture of the elytra of this insect (the punctures being more distant *inter se*, and more evidently disposed in longitudinal rows) would almost suffice to separate it from the other *Aphanarthra* here enumerated. In minor particulars, its prothorax, which in matured specimens is generally brownish-black with the apex (the extreme margin of which is a good deal incrassated) lurid yellow, is rather coarsely

* In my Paper on the *Aphanarthra* I have stated that I captured the *A. bicolor* in Palma, but (through a typographical error) the island "Gomera" is recorded, instead of Palma, in the *habitat* which immediately follows the diagnosis. However, it has subsequently been taken in Gomera also by Dr. Crotch.

alutaceous and most minutely punctulated; its elytra are pale-testaceous, with the two ordinary darker dentate fasciæ strongly expressed (the anterior one being deeply *looped*, or double, in its central portion, whilst the hinder one is considerably removed from the apex); and its entire surface is studded (though not very densely so) with rather long and coarse erect hairs. It is the common species of Lanzarote and Fuerteventura, where it often swarms in the stems and branches of the decayed Euphorbias; and it is likewise pretty abundant in Grand Canary; whilst in Gomera it was found by Dr. Crotch.

In Lanzarote it was taken also by Mr. Gray; and, on the 28th of March 1859, I captured it even on the little uninhabited island of Lobos, off the extreme north of Fuerteventura, where the Euphorbias attain a most gigantic size*.

420. Aphanarthrum piscatorium.

Aphanarthrum piscatorium, *Woll., loc. cit.* 166 (1860).

Habitat in Teneriffa, Gomera, Palma et Hierro, ramos Euphorbiarum emortuos (præsertim *E. piscatoriæ*) perforans.

Whilst the *A. affine* is more particularly abundant throughout the eastern islands of the archipelago, the present somewhat insignificant little species would appear to be exceedingly common in the central and western ones. In Teneriffe, Gomera (where it was found by Dr. Crotch), Palma, and Hierro it is locally abundant, occasionally teeming in the rotten *Euphorbia*-stems—principally those of the *E. piscatoria* (under which circumstances it occurs likewise at Madeira). It may be known by its rather small size and by the dull- or brownish-testaceous hue of its elytra—the darker fasciæ of which are not very well defined, the hinder one being more especially suffused and reaching consequently almost (or entirely) to the extreme apex. Its elytra, which are closely punctured, have their sides perhaps *just perceptibly* less parallel than is the case in the other species; and its entire surface is densely beset with rather soft and suberect hairs.

421. Aphanarthrum bicinctum.

Aphanarthrum bicinctum, *Woll., loc. cit.* 165 (1860).

Habitat in Lanzarota et Fuerteventura sat vulgaris, necnon in Canaria et Teneriffa minus frequens.

* The *A. affine* is a good deal allied, in general *facies*, to the *A. euphorbiæ* of the higher elevations of Madeira; it is, however, on the average, a little smaller than that insect, its pubescence is longer, its prothorax is relatively more developed and less acuminated in front, and the punctures of its elytra are larger, fewer, and more decidedly arranged in longitudinal rows.

The dark brownish-yellow hue of the elytra of this species, which has usually both of its fasciæ well expressed (the anterior one being largely developed), together with the apex of its prothorax being almost, or even entirely, dark, and its surface clothed with somewhat long and erect hairs, will serve to discriminate it. It is rather common in Lanzarote and Fuerteventura, where it occurs in company with the *A. affine*; in Grand Canary it is scarcer, and in Teneriffe still more so: so that it would seem to be more particularly characteristic of the eastern portion of the archipelago. The few examples which I have taken in Grand Canary and Teneriffe are a trifle larger than those from Lanzarote and Fuerteventura, and at first sight might easily be mistaken for the *A. canariense*. Nevertheless, on closer inspection, they will always be seen to have their pubescence longer and more erect, and their pronotum almost (or even entirely) concolorous at its apex: their elytra, too, are generally a shade darker, with the sculpture less dense, and with the fasciæ (although occasionally suffused) more developed—the anterior one extending to the outer margin, and the hinder one being less often broken in the centre (and even when resolved forming two large and conspicuous patches). In its habits, also, it is not quite the same, since it infests the Euphorbias promiscuously, and is not partial like that insect to the *E. canariensis* especially.

422. Aphanarthrum canariense.

Aphanarthrum canariense, *Woll., loc. cit.* 164 (1860).

Habitat in Canaria, Teneriffa, Gomera, Palma et Hierro, plantas *Euphorbiæ canariensis* putridas destruens.

The rather broad and shortly-cylindric outline (in proportion to its size) of this *Aphanarthrum*, in conjunction with its very abbreviated pubescence, the brightly lurid apex of its prothorax (which has the extreme anterior margin perceptibly thickened), and the dense (though not very deep) sculpture, and somewhat *dusky*-yellow hue, of its elytra (which are usually, nevertheless, a shade clearer than those of the *A. bicinctum*), will sufficiently characterize it. Its fasciæ are more or less transversely abbreviated—the anterior one (which is thick, and much developed, in the centre) seldom reaching to the lateral margins, whilst the hinder one is more or less obsolete, being always broken in the middle, and generally represented by a detached central dash at a short distance from the apex of each of the elytra.

In its habits, the present species would seem to be almost (if not

indeed entirely) confined to the decayed stalks of the *Euphorbia canariensis*, and I have consequently observed it in those islands only where that curious plant still remains—that is to say, in *all* of them except Lanzarote and Fuerteventura, in which (if indeed it ever existed there at all) I do not remember to have ever met with the *E. canariensis*. But in Grand Canary, Teneriffe, Gomera, Palma, and Hierro I have captured the species, more or less abundantly. In Teneriffe it was found likewise by Dr. Crotch.

§ II. *Pronotum antice minus productum, caput (longiusculum, fere subrostratum) haud occultans.*

423. Aphanarthrum luridum.

Aphanarthrum luridum, *Woll., loc. cit.* 163 (1860).

Habitat Teneriffam et Gomeram, in plantis *Euphorbiæ canariensis* putridis degens.

The present species and the two following ones differ from the rest of the *Aphanarthra* here enumerated in having their pronotum only slightly produced in front, so that their heads (which are somewhat longer and more rostrate) are less concealed from view. In their external details, however, they all three differ very considerably *inter se*,—the *A. luridum*, in its comparatively large size and testaceous colour, being, to all appearance (*primâ facie*), a true *Aphanarthrum*; whilst the second, in its diminutive bulk, dark-brown surface, and less parallel outline, has a totally different aspect; and the third, which is blacker still and relatively more elongate, recedes so completely, both in its *facies* and *habits*, from the *Aphanarthra*, that, were it not for the exact form of its antennæ with their biarticulated funiculus, I should have totally failed to recognize it as a member of this group.

In its minor details, and apart from its less produced prothorax and rather square, subrostrate head, the *A. luridum* may be known by its pale lurid-testaceous hue,—a longitudinal dash on the hinder disc of each of its elytra (representing the anterior fascia), the dorsal line of its prothorax, a spot on either side of the latter, and a suffused portion in front being alone more or less dark. It is sparingly studded with long and erect hairs; its punctation is fine; and (which is one of its most distinctive features) its elytra are suddenly shortened, or slightly *truncated obliquely*, at their apex.

The *A. luridum* seems to be confined (so far as I have observed hitherto) to the rotten plants of the *Euphorbia canariensis*,—in which situations I have taken it on the mountains above S^{ta} Cruz of Tene-

riffe (in the direction of Las Mercedes), and (more abundantly) on a hill-top in Gomera, immediately to the north-west of San Sebastian. In this latter locality it was found also by Mr. Gray; and in Teneriffe it has been captured subsequently by Dr. Crotch.

424. Aphanarthrum pusillum.

Aphanarthrum pusillum, *Woll., loc. cit.* 167 (1860).

Habitat Canariam, Teneriffam et Gomeram, in iisdem locis ac præcedens, ramos *Euphorbiæ canariensis* putridos destruens.

This curious little insect may be known from all the *Aphanarthra* which precede it by its very minute size and uniformly dark-brown hue, by its triangular head and laterally rounded prothorax, and by its lightly sculptured surface, which is sparingly beset with soft erect pile. Like the (comparatively gigantic) *A. luridum*, it appears to be peculiar to the rotten stalks of the *Euphorbia canariensis*; in which situations I have taken it, in company with that species, in the two localities above alluded to—of Teneriffe and Gomera; as also in the great crater of the Bandama mountain, in Grand Canary. In Teneriffe it was found likewise by Dr. Crotch.

425. Aphanarthrum concolor, n. sp.

A. nigrum vel subfusco-nigrum, subnitidum, pilis erectis et demissis fulvescenti-cinereis obsitum; prothorace distincte punctato et (oculo fortiter armato) minute reticulato; elytris striato-punctatis; antennis testaceis; pedibus piceo-testaceis.—Long. corp. lin. vix $\frac{2}{3}$.

Habitat Teneriffam et Palmam, sub cortice *Pini canariensis* degens.

As already implied, the present diminutive insect (which, however, is not *quite* so small as the *A. pusillum*) is so aberrant as an *Aphanarthrum* that it is with reluctance I am compelled to regard it as a member of that group. In its uniformly dark surface (which, except occasionally from immaturity, is scarcely at all diluted in hue), as well as in its general contour and rather distinct sculpture, it has much the appearance of an excessively minute *Hylastes*; whilst in its *habits*, on which I lay far greater stress, it recedes entirely from the whole of the preceding species, whose exclusive attachment to the various Euphorbias is one of their most remarkable peculiarities. Nevertheless, after a careful examination of its antennæ, they seem to me to be moulded on *precisely* the same type as those of the normal *Aphanarthra**; nor is there any difference in its tarsi that I can

* As stated in my Paper "on the *Euphorbia*-infesting Coleoptera of the Canaries," the funiculus of *Aphanarthrum* is not *distinctly* more than biarticulate. There may possibly be a third (excessively minute) joint which is rendered in-

detect: so that I have no option but to treat it as congeneric with the ten insects just enumerated. But having hitherto looked upon the *Aphanarthra* as essentially of *Euphorbia*-infesting propensities, I must confess that I am somewhat loath to associate with them a species of another mode of life, and (in the majority of its characters) of a very opposite aspect.

The *A. concolor*, so far as I have observed hitherto, is confined to the rotten trunks of the *Pinus canariensis*, of intermediate and rather lofty elevations,—beneath the dead bark of which I have taken it at the Agua Mansa in Teneriffe, and in the Barranco above S^ta^ Cruz in Palma.

Genus 176. **TRIOTEMNUS** (nov. gen.).

Corpus, *antennæ* et *pedes* fere ut in *Aphanarthro*, sed *funiculo* distincte 3-articulato, articulis 2^do^ et 3^tio^ parvis (nec minutissimis), inter se æqualibus, *capitulo* solidissimo compresso (nec 4-annulato); *elytris* apice subretusis (nec omnino integris); *colore* obscuro (ut in *Tomicidis* typicis), nec læte variegato.

A τρεῖς, tres, et τέμνω, seco.

Although unwilling to erect a genus for the reception of a unique insect which has nothing anomalous in its structure, yet the present species is so completely removed from *Aphanarthrum* (the only other group, I believe, except *Hypothenemus*, as yet enunciated, in the *Tomicidæ*, with a professedly 3-jointed funiculus) that I am compelled to separate it therefrom. As above defined, the funiculus in *Triotemnus* is very conspicuously triarticulate (whereas in *Aphanarthrum* it seems doubtful whether that organ has in reality more than two joints *), the second and third joints being comparatively distinct, and of equal dimensions, and the club (instead of being quadriarticulate) is extremely solid and compressed; moreover the former is

visible from the *oblique* implantation of the funiculus into the club (for I believe that I can just detect one in, at all events, the Madeiran *A. euphorbiæ*); nevertheless, even under the highest power of the microscope, I cannot satisfy myself that it exists in the generality of the species. In the figure given of the *A. euphorbiæ* in my 'Ins. Mad.,' this infinitesimal extra articulation is made very much too conspicuous.

* *Vide* the observations (Trans. Ent. Soc. Lond., 3rd series, i. 165) in my Paper "on the *Euphorbia*-infesting Coleoptera of the Canary Islands," where I implied that I was doubtful whether the funiculus of *Aphanarthrum* could be regarded, after all, as more than biarticulate; for although in my original diagnosis of the group (Ins. Mad. 292) I affirmed that portion of the antennæ to be 3-jointed, and although I still think that I am able to detect a third, infinitesimal joint in the particular species (the *A. euphorbiæ*) on which the genus was established, yet I have been so completely unable to satisfy myself of the presence of more than two articulations in the funiculi of any of the *Canarian Aphanarthra*, that I am half inclined to believe that the supposed additional one in the Madeiran *A. euphorbiæ* may perhaps be more apparent than real.

implanted into the axis of the latter in the ordinary way, and not obliquely. The elytra, also, instead of being entire, have a faint tendency to be lopped-off at their apex, as in *Tomicus*; and the colour, instead of being variegated, is of the ordinary kind for the members of this family.

426. **Triotemnus subretusus**, n. sp.

T. nigro-piceus elytris piceis, nitidus, cylindricus postice vix latior, pilis longiusculis suberectis cinereis parce obsitus; prothorace longiusculo, subconico, parce et sat profunde punctato (antice haud asperato); elytris profunde rugoso-punctatis (nec striatis), punctis haud sed pilis evidentius seriatim dispositis, ad apicem subretusis; antennis pedibusque piceo-testaceis.—Long. corp. lin. 1.

Habitat Gomeram, a Dom. Crotch tempore vernali A.D. 1862 semel captus.

Apart from the structural peculiarities of its funiculus and club already referred to, the present insect (which has much the appearance, *primâ facie*, of an ordinary, though minute, *Tomicus*) may be known by its rather shining and deeply punctured surface (particularly of the elytra, where the punctures are *not* disposed in longitudinal rows), and by its being sparingly beset all over with rather long, coarse, and partly suberect, cinereous hairs. The unique specimen described from was captured by Dr. Crotch in Gomera during the spring of 1862, and has by him been presented to the collection of the British Museum.

Genus 177. **LIPARTHRUM.**

Wollaston, *Ins. Mad.* 294 [script. *Leiparthrum*] (1854).

427. **Liparthrum bituberculatum.**

Leiparthrum bituberculatum, *Woll., Ins. Mad.* 297. tab. vi. f. 3 (1854).
—— ——, *Id., Cat. Mad. Col.* 97 (1857).

Habitat Teneriffam, præsertim in sylvaticis et editioribus, rarissimum.

The present insect, which is not uncommon in the sylvan districts of Madeira, and which may be known from the *L. curtum* by its *relatively* somewhat narrower and more cylindric outline, rather darker hue, slightly longer antennæ, more developed mandibles, and by the pustules on the anterior portion of its pronotum being usually more numerous and coarse, is decidedly rare in these islands, where it appears to occur at intermediate and lofty elevations. I have taken it hitherto only in Teneriffe,—namely, in the wood of the Agua Garcia, and (though merely a single specimen) on the Cumbre

above the Agua Mansa (at an elevation of more than 7000 feet above the sea). The individual from the latter locality is altogether a little darker than those from the former, and has its prothoracic tubercles a trifle more evident; but I can detect nothing about it to warrant the suspicion that it is specifically distinct. A Teneriffan example has also been communicated by Dr. Crotch.

428. Liparthrum curtum.

Leiparthrum curtum, *Woll., Ins. Mad.* 298 (1854).
—— ——, *Id., Cat. Mad. Col.* 97 (1857).

Habitat insulas Canarienses, in Gomera solâ adhuc haud detectum.

The *L. curtum*, which likewise occurs in Madeira, and (on the average) at a rather lower elevation than the *bituberculatum*, is almost certainly *universal* at the Canaries,—though I did not happen to meet with it in Gomera, during our short visit to that island: but in Lanzarote, Fuerteventura, Grand Canary, Teneriffe, Palma, and Hierro I have captured it, more or less abundantly. It is found more particularly beneath the old and loosened bark of palings, gates, &c., and in the dead *Euphorbia*-stems; and it is, apparently, less strictly sylvan in its habits (or, at all events, less peculiar to the laurel-districts) than the last species. It may be known from it by its outline being *relatively* rather shorter and broader, by its paler hue, and by its antennæ, mandibles, and prothorax being a trifle more developed,—the last, also, having the pustules of its anterior portion considerably smaller, and indeed often nearly imperceptible.

429. Liparthrum inarmatum.

Leiparthrum inarmatum, *Woll., Ann. Nat. Hist.* v. 364 (1860).

Habitat Lanzarotam, Canariam, Teneriffam, Gomeram et Palmam, ramos Euphorbiarum emortuos parce destruens.

This little *Liparthrum*, which seems to be peculiar to the branches and stems of the dead Euphorbias, and which (like the last two species) occurs also in Madeira, may be known by its short and posteriorly-obtuse outline; by its prothorax being a good deal developed, though rather acuminated in front, and quite free from anterior pustules, or tubercles; and by its elytra being somewhat wide, and suddenly truncated, at their apex, very deeply striate-punctate (the punctures being large and conspicuous), with their interstices perceptibly elevated, and with their pubescence comparatively long (especially behind) and very decidedly arranged in longitudinal rows. Like the *L. curtum*, it will probably be found to be universal through-

out the archipelago,—its *Euphorbia*-infesting habits rendering this the more certain; nevertheless hitherto I happen to have met with it only in Lanzarote, Grand Canary, Teneriffe, and Palma,—though I have examined two specimens which were found by Dr. Crotch in Gomera.

430. Liparthrum Lowei.

Leiparthrum Lowei, *Woll., Trans. Ent. Soc. Lond.* i. 174 (1862).

Habitat Teneriffam et Gomeram, in ramis Euphorbiarum emortuis degens.

This excessively minute wood-borer was detected by the Rev. R. T. Lowe, in dead *Euphorbia*-stems, near Garachico, in the north of Teneriffe, during April 1860. In the diagnosis of it, given in my Paper (cited above) "on the *Euphorbia*-infesting Coleoptera of the Canaries," I have stated that "it is not only smaller than the smallest examples of the *inarmatum*, but it is usually of a blacker (and quite concolorous) hue, of a strictly cylindric outline (being neither expanded nor *subtruncated* posteriorly), with its prothorax shorter and sinuated along the extreme base, and with its elytra (the interstices of which are *not* raised) less deeply punctured and without any *additional* setæ at their apex. Its limbs also are considerably darker than is the case in that insect. Its structural characters are quite those of *Liparthrum*, the proportions of its 4-jointed funiculus and feet being precisely similar to what obtains in the other members of the group. Its fore tibiæ, however, are not altogether unarmed, there being two short, obtuse teeth on their outer edge." It occurs likewise in Gomera, where a single example was found by Dr. Crotch; and we may expect it, therefore, to be pretty general amongst the decayed Euphorbias.

Fam. 44. HYLESINIDÆ.

Genus 178. HYLESINUS.

Fabricius, *Syst. Eleu.* ii. 390 (1801).

431. Hylesinus indigenus, n. sp.

H. ovalis, convexus, niger, pilis robustis (fere squamis) demissis fulvescentibus vestitus; prothorace subconico, per basin ipsissimam bisinuato, subopaco, leviter et obscure punctato sed utrinque asperato; elytris vix nitidioribus, leviter et obscure seriatim punctatis sed ad basin asperatis; antennis rufo-testaceis.—Long. corp. lin. 1.

Habitat in Hierro, sub cortice lauri cujusdam antiquæ laxo emortuo in regione "El Golfo" dictâ Februario A.D. 1858 repertus.

I have, unfortunately, but a single individual of this insect to judge

from, which was extracted, dead and mutilated, from out of an old laurel, the decayed portions of which were completely perforated with its burrows, in the wooded district of El Golfo, on the western side of Hierro. Although it has merely the scape of one of its antennæ remaining, I have little doubt nevertheless, from its convex, ovate body and general aspect, as well as from the peculiarity of its sculpture (the extreme base of its elytra, and either side of its *subconical* prothorax, being coarsely asperate, or mucronated), that it is a true *Hylesinus*; and I have therefore treated it accordingly. And if such should be the case (of which I feel pretty confident), it is of the greatest importance that its imperfect condition should not prevent me from admitting it into the present Catalogue, it being the only veritable *Hylesinus* which has hitherto been detected in *any* of these Atlantic islands. Moreover, from the extent to which its devastating powers were traceable in the old tree from whence my example was taken, there is reason to believe that it must play a significant part amongst the Xylophagous Coleoptera of (at any rate a portion of) the Canarian Group; but as our sojourn in Hierro was both brief and during the month of February (when the insects of this Family are necessarily difficult to procure), I was unable to obtain specimens in a more satisfactory state.

Genus 179. **HYLURGUS.**

Latreille, *Gen. Crust. et Ins.* ii. 274 (1807).

432. **Hylurgus ligniperda.**

Bostrichus ligniperda, *Fab., Ent. Syst.* i. ii. 367 (1792).
Hylurgus ligniperda, *Erich., Wiegm. Archiv*, ii. 52 (1836).
—— ——, *Woll., Ins. Mad.* 302 (1854).
—— ——, *Id., Cat. Mad. Col.* 99 (1857).

Habitat in pinetis Teneriffæ et Palmæ, truncos *Pini canariensis* destruens.

The *H. ligniperda*, which occurs throughout the whole of Europe, and which has become naturalized in the fir-woods of Madeira, although extremely local is far from uncommon in certain situations at the Canaries. Hitherto I have observed it only in Teneriffe and Palma; but it will probably be found wherever the remains of the old Pinals still exist,—that is to say, in all the islands except Lanzarote and Fuerteventura. I have taken it from beneath the rotten bark of the *Pinus canariensis* at the Agua Mansa, and in the Pinal above Yeod el Alto, in Teneriffe; as also, in similar situations, in the Barranco above S^ta^ Cruz of Palma.

Genus 180. **HYLASTES.**

Erichson, *in Wiegm. Archiv*, ii. 47 (1836).

433. **Hylastes Lowei.**

Hylastes Lowei, *Paiva, Ann. Nat. Hist.* (3rd series) viii. 211 (1861).

Habitat Teneriffam et Palmam, in iisdem locis ac præcedens, hinc inde vulgaris.

This insect appears to have exactly the same range as the preceding one, and will probably be found to be equally universal throughout the scattered remains of the ancient Pinals, wherever such still exist. Nevertheless, up to the present time, I have observed it only in precisely the same spots as that insect,—namely, at the Agua Mansa, and in the fir-woods above Ycod el Alto, of Teneriffe; and in the Barranco above S^ta^ Cruz in Palma. In Teneriffe it was captured also by Dr. Crotch. It is closely allied to the European *H. ater*; but is smaller, with its punctation much finer and denser, and with the unsculptured line down the middle of its pronotum more distinct.

Fam. 45. CURCULIONIDÆ.

(Subfam. COSSONIDES *.)

Genus 181. **EREMOTES.**

Wollaston, *Trans. Ent. Soc. Lond.* (new series) v. 364 (1861).

434. **Eremotes crassicornis.**

Hylurgus crassicornis?, *Brullé, in Webb et Berth.* (*Col.*) 71 (1838).
Eremotes crassicornis, *Woll., Trans. Ent. Soc. Lond.* v. 365. pl. 18. f. 1 (1861).

Habitat in pinetis Canariæ, Teneriffæ et Palmæ, rarissimus, truncos *Pini canariensis* antiquos emortuos perforans.

This curious insect, so remarkable for its exceedingly round and prominent eyes, enormously thickened antennæ, with their reduced capitulum and the greatly abbreviated second joint of their funiculus, which is almost buried within the enlarged basal one, as well as for the small spine with which the *inner* apex of its tibiæ is armed, seems to be confined to the rotten trunks of the *Pinus canariensis*, at intermediate and lofty elevations. It will probably be found wherever

* For the exact details (structural and diagnostic) of the various members here enumerated of this Subfamily of the *Rhynchophora*, I must refer to my Paper "on the Atlantic *Cossonides*," published in the fifth volume (new series) of the 'Transactions of the Entom. Soc. of London.'

the remains of the old Pinals still exist; nevertheless hitherto I have observed it only on the mountains above San Bartolomé (in the district of Tarajana) of Grand Canary, at the Agua Mansa in Teneriffe, and in the Barranco above S^ta^ Cruz in Palma,—in the last of which islands it was captured also by Dr. Crotch. Its cylindric outline, intensely black hue, and deeply sculptured surface give it much the appearance at first sight of certain members of the *Hylesinidæ*; nevertheless, apart from all minor distinctions, the structure of its *undilated, apically uncinate*, and *externally simple* tibiæ will immediately remove it from the whole of those groups.

Genus 182. **RHYNCOLUS.**

(Creutzer) Germ., *Ins. Spec.* 307 (1824).

435. **Rhyncolus crassirostris.**

Rhyncolus crassirostris, *Woll., Trans. Ent. Soc. Lond.* v. 367. pl. 18. f. 3 (1861).

Habitat in montibus Canariæ Grandis, pinos emortuas destruens.

The few examples which have come hitherto beneath my notice of this insect I captured, during April 1859, from out of the trunk of an old *Pinus canariensis*, on the ascent to the Pinal above San Bartolomé, in the mountains of Grand Canary. It would appear, therefore, to have the same habits as the *Eremotes crassicornis*, and may consequently be expected to occur in spots where the latter, and other pine-infesting species, are found. Its distinctions from the European *R. truncorum*, which at first sight it somewhat resembles, may be gathered from a reference to my Paper cited above.

Genus 183. **PHLŒOPHAGUS.**

Schönherr, *Gen. et Spec. Curc.* iv. 1047 (1838).

436. **Phlœophagus caulium.**

Phlœophagus caulium, *Woll., Trans. Ent. Soc. Lond.* v. 370 (1861).

Habitat Lanzarotam et Fuerteventuram, in truncis ramisque Euphorbiarum emortuis degens.

So far as observed hitherto, the present *Phlœophagus* seems to be peculiar to the dead *Euphorbia*-stems of Lanzarote and Fuerteventura, where it is occasionally very abundant, and in the former of which it was first captured by Mr. Gray and myself, at Haria, during January 1858. It may be known by its deeply sculptured surface (the punctures of its prothorax, particularly in the Lanzarotan specimens, being exceedingly large) and by its obsolete scutellum, the latter being

usually quite untraceable even beneath the highest powers of the microscope.

437. **Phlœophagus laurineus.**

Phlœophagus laurineus, *Woll., Trans. Ent. Soc. Lond.* v. 371 (1861).

Habitat in sylvaticis editioribus Teneriffæ, Gomeræ et Palmæ, sub cortice laurorum erodens.

Although approaching each other at first sight, the present *Phlœophagus* and the last one will be seen, on a closer inspection, to be totally distinct. Their habits, also, are quite different; for whilst the *P. caulium* is apparently peculiar to the decayed *Euphorbia*-stems in the two arid islands of Lanzarote and Fuerteventura, the *laurineus*, on the other hand, has been observed hitherto only in the laurel-regions of a comparatively high elevation in Teneriffe, Gomera, and Palma, where it occurs beneath the dead bark of the old trees, in the dampest and most sylvan spots. It may be known from the *caulium* by its elytra being just perceptibly less ovate and still more deeply sculptured (the punctures being excessively large and the interstices somewhat raised, or convex), by its antennæ and legs being a trifle longer and paler, and by its scutellum (although minute) being always developed and readily distinguishable even under an ordinary lens. The Palman form, which in my Paper "on the Atlantic *Cossonides*" I have regarded as the "*var.* β. *capitulatus*," differs a little from that which obtains in Teneriffe, "having its prothorax (when viewed beneath the microscope) subalutaceous, with the punctures rather smaller and more dense, its elytral interstices somewhat less convex, and its antennal club a trifle more abbreviated and abrupt;" but there can be no doubt, I think, that it is a mere insular phasis of the other.

I have taken the *P. laurineus*, in its typical state, in the laurel-woods above Taganana, as also in those at Las Mercedes and the Agua Garcia, of Teneriffe; and the *var.* β, in similar situations, in the Barranco da Agua and the Barranco de Galga, of Palma. It was likewise found, though sparingly, by Dr. Crotch in Gomera.

438. **Phlœophagus affinis.**

Phlœophagus affinis, *Woll., Trans. Ent. Soc. Lond.* v. 373 (1861).

Habitat in Teneriffa et Hierro, ramos Euphorbiarum emortuos nisi fallor præcipue destruens.

In my Paper "on the Atlantic *Cossonides*" I have remarked that "For the present *Phlœophagus* I have no very decided structural character, and I can therefore best express it *negatively*—*i. e.*, by

stating what it is *not*. Thus, its exceedingly perceptible scutellum (when viewed beneath the microscope) at once removes it from the *P. caulium* and *piceus*, whilst its sufficiently expanded third tarsal joint will likewise prevent its confusion with the latter, and therefore *à fortiori* with the *simplicipes*. It remains, therefore, only to point out its distinctions from the *laurineus*; and this, *in its normal state*, is easily done, since it is not only less deeply sculptured, and with its antennæ somewhat darker and not quite so elongate, but its elytral interstices are less convex, and its prothorax (like the *var.* β of the *laurineus*) is more or less subalutaceous, and with its punctures a little smaller and more dense."

The *P. affinis* is, I *believe*, attached principally to the *Euphorbia*-stems of low and intermediate altitudes; at all events I have taken it in such situations at Taganana, and the Agua Mansa, in Teneriffe; as also, at a very slight elevation above the sea-level, in the district of El Golfo, on the western side of Hierro. The specimens from Hierro (corresponding to the "*var.* β. *proximus*" of my Paper) have their elytral interstices a trifle more elevated and their prothorax (when viewed beneath the microscope) not perceptibly alutaceous; but I think they merely represent a slight variety of the Teneriffan species.

439. Phlœophagus simplicipes.

Phlœophagus simplicipes, *Woll., Trans. Ent. Soc. Lond.* v. 374 (1861).

Habitat Teneriffam, arbores *Fici* antiquas in inferioribus perforans.

In its dark hue and deeply sculptured surface the present *Phlœophagus* has every appearance, at first sight, of the *laurineus*, except that it is a little smaller; nevertheless on a closer inspection it will be seen to have its third tarsal joint scarcely at all dilated or bilobed —at any rate very much less so than is the case in that species; whilst, in minor particulars, its somewhat shorter scape, and just perceptibly less ventricose elytra, the punctures of which are *proportionally* still larger, should be noticed. In its habits also it is not the same as that insect; for whilst the *P. laurineus* occurs in damp sylvan spots of intermediate and lofty altitudes, the only examples (ten in number) which I have seen of the *simplicipes* were captured from out of the dry, rotten wood of an old fig-tree, at the mouth of the Barranco do Passo Alto, near S^ta^ Cruz, in Teneriffe, on an arid slope only just elevated above the sea-level. It is probable, however, that its attachment, in that particular locality, to the *fig*-tree may have been accidental; though such, at all events, would imply that its *range* is lower than that of the *laurineus*.

440. Phlœophagus piceus.

Phlœophagus piceus, *Woll., Trans. Ent. Soc. Lond.* v. 374 (1861).

Habitat Lanzarotam, Fuerteventuram et Canariam, in arboribus antiquis *Fici* præcipue degens.

Its somewhat narrower outline and more piceous hue, in conjunction with its rather less coarsely punctured prothorax, its obsolete (or subobsolete) scutellum, and its only slightly expanded antepenultimate tarsal joint, will sufficiently characterize this species. As regards its mode of life, it seems to occur principally in the rotten wood of old fig-trees at low and intermediate elevations; under which circumstances I have taken it in Lanzarote and Fuerteventura, and at Mogan in Grand Canary,—in the first of which islands it was found also by Mr. Gray. The Lanzarotan and Fuerteventuran specimens, which in my Memoir "on the Atlantic *Cossonides*" I have regarded as the "*var. β. subparallelus*," are a little larger and more parallel than those from Mogan in Grand Canary, and have their prothorax somewhat more finely and closely punctured; but their other details, no less than their habits, do not appear to differ from the Canarian ones, and I believe that it would scarcely be safe to treat them as specifically distinct.

Genus 184. PENTATEMNUS.

Wollaston, *Trans. Ent. Soc. Lond.* v. 385 (1861).

441. Pentatemnus arenarius.

Pentatemnus arenarius, *Woll., Trans. Ent. Soc. Lond.* v. 388. pl. 19. f. 1 (1861).

Habitat Lanzarotam, Fuerteventuram et Canariam, ad radices plantarum in arenosis aridis submaritimis crescentium fodiens.

Of this curious insect, so remarkable (*amongst the Cossonides*) for its convex, fusiform, *pilose* body, obsolete eyes, thick, abbreviated antennæ (with their 5-jointed funiculus), subfossorial habits, and for the minute spine with which the *inner* apical angle of its tibiæ is furnished, I have given the full details (structural and diagnostic) in my Paper "on the Atlantic *Cossonides*." Its mode of life is very peculiar, it being found about the roots of the few shrubby plants (particularly the *Zygophyllum Fontanesii*, Webb, and a small *Euphorbia*) which stud the dry sandy wastes of Lanzarote, Fuerteventura, and Grand Canary,—usually at a considerable depth beneath the surface of the ground. Hitherto I have observed it principally in Fuerteventura, where it was first captured by Mr. Gray and myself

(on the sand-hills to the south of the Puerto de Cabras) at the end of January 1858,—in which locality I again met with it during April of the following year. But it is in the arid tracts in the north of that island, at Corralejo, that I have taken it more abundantly. My few Lanzarotan specimens are from the neighbourhood of Arrecife; and the Grand Canarian ones from the sandy district in the extreme south, around Maspalomas. I likewise met with it (on the 11th of March 1859) in the little island of Graciosa, off the north of Lanzarote.

Genus 185. **ONYCHOLIPS.**

Wollaston, *Trans. Ent. Soc. Lond.* v. 389 (1861).

442. **Onycholips bifurcatus.**

Onycholips bifurcatus, *Woll., Trans. Ent. Soc. Lond.* v. 394. pl. 19. f. 2 (1861).

Habitat Lanzarotam, Fuerteventuram et Canariam, in locis similibus ac *Pentatemnus arenarius* et unà cum illo degens, sed rarior.

It will be needless for me here to enter into any details concerning the *O. bifurcatus*, since I have done so, at very great length, in my Paper "on the Atlantic *Cossonides*." I may, however, just repeat, what I there stated, that "in its marvellously reduced antennal scape (which is so excessively short as to be entirely buried within the deep fovea, or abbreviated *scrobs*, in which it is implanted), as well as in the very unusual proportions of its *six*-jointed funiculus*, its total freedom from even the rudiments of eyes, and its most wonderful tibiæ and feet, this extraordinary insect presents a combination of features perfectly anomalous, and which I believe are quite unparalleled in any Coleopterous genus on record. Indeed the structure of its tibiæ and tarsi are so outrageously abnormal, that, did not the general outward contour of the creature, and the formation of its rostrum, oral organs, and antennæ (not to mention its *superficial* points of resemblance with the exponent of the preceding genus) bespeak it as Rhynchophorous, it would have been quite impossible to decide to what primary division of the Coleoptera it should be referred."

In its *subglobose*, *hairy*, and testaceous body, as well as in its fossorial habits, no form could appear further removed, *primâ facie*, from the normal members of the present Section of the *Rhynchophora* than *Onycholips*. Nevertheless, after considering this question very care-

* The first and *second* (!) joints of the funiculus are very large and thick, whilst the remaining four are short and small.

fully, I am satisfied that the whole of these blind, pilose, sand-infesting, burrowing *Curculionidæ* of the Atlantic islands (namely, *Pentatemnus, Onycholips,* and the Porto Santan *Lipommata*) are most intimately allied; and in my Memoir above alluded to I discussed their affinities *in extenso,* together with those of the almost blind *Mesoxenus,* and arrived at the conclusion that the four genera could not properly, in a natural system of arrangement, be placed far asunder,—adding, "If we may consider, therefore, their near relationship as a settled point, it becomes comparatively easy to discuss their affinities; for, had the *second of them only* (*i. e. Onycholips*) been brought to light, we might have had great difficulty in referring it to any known subfamily or group,—the structure of its four hinder tarsi and other minutiæ being quite unintelligible without the aid of some collateral form to suggest a partial explanation. But, granting its kinship with *Pentatemnus* and *Lipommata,* we at once connect it with the *Mesoxeni* (of Madeira and Teneriffe), which *Pentatemnus* manifestly approaches, and thence with *Pentarthrum* and the typical *Cossonides.*"

In its mode of life *Onycholips* seems to be identical with *Pentatemnus,* with which indeed it is found in company. It was first taken, by Mr. Gray and myself, at the end of January 1858, about the roots of the few shrubby plants, around which solid hillocks have been gradually accumulated from the drifting sand, in the arid tract to the south of Puerto de Cabras in Fuerteventura—a spot in which I again met with it during April of the following year. And I also captured a single specimen, in a similar situation, on the sandy isthmus of Grand Canary which connects the Isleta with the mainland; as well as in the little island of Graciosa, off the north of Lanzarote.

Genus 186. **MESOXENUS.**

Wollaston, *Trans. Ent. Soc. Lond.* v. 395 (1861).

443. **Mesoxenus Monizianus.**

Pentarthrum Monizianum, *Woll., Ann. Nat. Hist.* v. 450 (1860).
Mesoxenus Monizianus, *Id., Trans. Ent. Soc. Lond.* v. 396. pl. 19. f. 4 (1861).

Habitat in Teneriffa, rarissimus.

This insect is the only member of the *Cossonides* enumerated in the present Catalogue which has been observed hitherto beyond the Canarian Group, it having been detected also in Madeira—by Senhor Moniz, who obtained many specimens of it from under old boards lying on the amp earth, in his garden at Funchal. At the Canaries

it would appear to be very rare, two examples only, both of them from Teneriffe, having as yet come beneath my notice,—one of which I captured in a house immediately above the Puerto of Orotava, during March 1858, whilst the other was found by the Rev. R. T. Lowe, during April 1860, in a dead *Euphorbia*-stem at Garachico. Its convex, fusiform body, æneous hue, and shining, lightly sculptured surface, in conjunction with its obsolete eyes and 5-jointed funiculus, will, apart from numerous secondary characters (fully pointed out in my diagnosis), suffice to distinguish it.

Genus 187. **MESITES.**

Schönherr, *Gen. et Spec. Curc.* iv. 1043 (1838).

§ I. *Corpus sat magnum, parallelum; femoribus omnibus muticis.*

444. **Mesites complanatus.**

Mesites complanatus, *Woll., Trans. Ent. Soc. Lond.* v. 401 (1861).

Habitat Palmam, sub cortice laurorum laxo in editioribus sylvaticis hinc inde haud infrequens.

In my Paper on the *Cossonides* I have stated that "the present large and beautiful *Mesites* (which, so far as I have hitherto observed, appears to be peculiar to the island of Palma) may be known readily from the following one by its broader outline, more depressed, deeply sculptured surface, and darker hue. Its prothorax is wider, and more rounded at the sides, than is the case in that insect, with its punctures considerably larger and less dense, and its central keel more evident; whilst its elytral striæ are *much* deeper, wider, and more coarsely crenated, and the interstices proportionally narrower and more costate. I took it, not uncommonly, beneath the loose bark of the native laurels, in the dense sylvan ravines of Palma, at rather a high elevation—especially the Barranco da Agua and the Barranco de Galga—during May and June of 1858."

445. **Mesites persimilis.**

Mesites persimilis, *Woll., Trans. Ent. Soc. Lond.* v. 402 (1861).

Habitat in locis similibus ac præcedens, sed in Teneriffa (nec Palma).

"The *M. persimilis*, which abounds in certain spots within the sylvan regions of Teneriffe, is narrower, less depressed, more piceous, and (on the average) rather smaller than its Palman representative; its prothorax, also, is less rounded, or widened, at the sides, more closely and less deeply punctured, and with its central keel less dis-

tinct; whilst its elytra have their striæ very much narrower and less deeply crenated, and their interstices (proportionally) broader and less convex.

"Both the present *Mesites* and the last one belong more particularly to the same type as the *M. maderensis* and the British *M. Tardii*; and, indeed, the *persimilis* is very closely allied to the former, with which I had at first imagined it to be identical. It may, however, be at once known from it through its almost entirely wanting (as is the case also with the *M. complanatus*) the fine elytral pubescence which is so conspicuous in the Madeiran species; its prothoracic keel, also, is more obscure; and its elytra are less convex, with their striæ much broader, deeper, and more coarsely crenulated. In both of these Canarian species the eyes are rather smaller, and more oblong, than in the *M. maderensis*." [*loc. cit.* pp. 402, 403.] Teneriffan examples of the *M. persimilis* have also been communicated by Dr. Crotch.

446. Mesites proximus.

Mesites proximus, *Woll., Trans. Ent. Soc. Lond.* v. 404 (1861).

Habitat Teneriffam, ad Taganana Maio A.D. 1859 parce repertus.

"In outline the *M. proximus* is a trifle less parallel than the preceding members of this Section, though its elytra have only a faint tendency to the posterior attenuation which is so very evident in the two exponents of the following one; its male femora, however, have not any appearance of that obtuse, subdentiform projection on their underside which characterizes the *M. fusiformis* and *pubipennis*. It is a little smaller and more depressed than the *persimilis*, its colour is more cloudy, or *unequal* (after the fashion of tortoiseshell), its prothorax is more rounded at the sides, rather coarsely alutaceous, and very much more finely and remotely punctured (and with comparatively larger *additional* punctures in its central basal depression), its elytra are more evidently (though very slightly) subpubescent and with their striæ proportionally broader and deeper, and its funiculus-joints are altogether somewhat shorter and more compact. From the Madeiran *M. euphorbiæ* it may be known by its darker hue, more laterally-rounded prothorax (which has its hinder central punctures much more coarse), by its larger frontal fovea, and by its elytral striæ being very much broader, deeper, and more distinctly crenated." [*loc. cit.* pp. 404, 405.]

Hitherto I have seen but two examples of this species, both of which I captured at Taganana, in the north of Teneriffe, during May 1859.

§ II. *Corpus minus, subfusiforme (elytris postice sensim acuminatis); femoribus masculis subtus obtuse subdentatis.*

447. Mesites fusiformis.

Mesites fusiformis, *Woll., Trans. Ent. Soc. Lond.* v. 405 (1861).

Habitat insulas Canarienses, in Palma solâ adhuc haud detectus, truncos ramulosque Euphorbiarum emortuos ubique destruens.

"The present *Mesites* and the *M. pubipennis* may at once be known from those already enumerated by their subfusiform outline (their elytra being more or less perceptibly attenuated posteriorly) and by their male femora being obtusely *sub*dentate beneath; whilst *inter se* they will be recognized by the *M. fusiformis* being (like the three preceding species) free from any trace of the lurid pubescence which is so conspicuous in the Palman representative. The *M. fusiformis* is, likewise, less deeply sculptured than the *pubipennis*, and its elytral interstices are less convex and more sparingly (and even more minutely) punctulated."

"The *M. fusiformis* is most abundant throughout the Canarian Group,—Palma being the only one of the seven islands in which, up to the present date, I have not taken it. Being thus universal, however, there can be little doubt that it must exist in Palma likewise; and the fact of my sojourn there, in May and June of 1858, being somewhat late in the season for the *Euphorbia*-insects, may perhaps be a sufficient explanation for its having escaped me in that island. Nevertheless it is certainly remarkable that the few specimens of the genus *Mesites* which I happened to secure whilst at Palma (or which were secured previously by Mr. Gray) from the dead stems of the Euphorbias should have been specifically distinct from those which obtain throughout the remainder of the archipelago. Nor is this rendered the less curious from the circumstance that the large *M. persimilis*, which infests the laurel-woods of Teneriffe, should be, also, represented in the sylvan districts of Palma by an allied but most conspicuous species, the *M. complanatus*!" [*loc. cit.* pp. 405, 406.]

In Lanzarote and Hierro the *M. fusiformis* was taken likewise by Mr. Gray, in Teneriffe by the Barão do Castello de Paiva, and in Teneriffe and Gomera by Dr. Crotch; and in the little islands of Graciosa and Lobos, off the extreme north of Lanzarote and Fuerteventura (respectively), I have myself captured it.

448. Mesites pubipennis.

Mesites pubipennis, *Woll., Trans. Ent. Soc. Lond.* v. 406 (1861).

Habitat in locis similibus ac præcedens, sed in ins. Palma, nec alibi.

As already stated, the *M. pubipennis* is apparently peculiar to Palma, where it was first captured by Mr. Gray during February 1858; and where, at the end of May of the same year, I took a few more specimens, from out of the decayed *Euphorbia*-stems in the Barranco above S^ta^ Cruz. "That it is no modification of the *M. fusiformis*, which is so abundant and universal throughout the other islands of the Canarian archipelago, seems evident from the fact that that insect remains constant under the various circumstances and conditions, and in the innumerable localities, in which it is elsewhere found—being, to all appearance, quite independent both of external agencies and altitude. I conclude, therefore, that the very decided characters of sculpture and clothing which distinguish the *M. pubipennis* are truly specific ones, and such as cannot be referred to local influences of any kind."

"The pubescent elytra of the *M. pubipennis* (which have their interstices more convex and evidently punctulated, and their striæ broader and deeper), in conjunction with its more closely and roughly punctured prothorax (especially, however, of the female sex)," will immediately distinguish it from the last species. [*loc. cit.* p. 407.]

(Subfam. RHYNCHOPHORIDES.)

Genus 188. **SITOPHILUS.**

Schönherr, *Gen. et Spec. Curc.* iv. 967 (1838).

449. **Sitophilus granarius.**

Curculio granarius, *Linn.*, *Fna Suec.* 587 (1761).
Sitophilus granarius, *Schön.*, *Gen. et Spec. Curc.* iv. 977 (1838).
—— * linearis?, *Brullé, in Webb et Berth.* (*Col.*) 73 (1838).
—— granarius, *Woll.*, *Ins. Mad.* 321 (1854).
—— ——, *Id.*, *Cat. Mad. Col.* 104 (1857).

Habitat insulas Canarienses, in Gomera solâ adhuc haud observatus.

This cosmopolitan insect has become naturalized at the Canaries (as completely as in Madeira), where it is doubtless universal. Hitherto, however, like the following one, I do not happen to have observed it in Gomera—where, however, there can be no question that it is as common as elsewhere. But in Lanzarote, Fuerteventura, Grand Ca-

* M. Brullé omits all notice of the common *S. granarius*, which abounds at the Canaries, but records in his list (in addition to the *S. oryzæ*) the *S. linearis*, Hbst. Amongst the numerous *Sitophili* which I have examined from the various islands, I cannot detect a vestige of any species except the *granarius* and *oryzæ*; and, from the inaccuracy, therefore, of M. Brullé's Catalogue, which moreover does not give so much as a single *habitat*, I have little doubt that he has mistaken an immature example of the former for that insect.

nary, Palma, and Hierro I have captured it, more or less abundantly. In Lanzarote and Hierro it was found likewise by Mr. Gray; and from Teneriffe it has been communicated by the Barão do Castello de Paiva. It occurs principally beneath the refuse around the base of corn-stacks; though it may also be taken in, and about, houses and granaries.

450. **Sitophilus oryzæ.**

Curculio oryzæ, *Linn., Cent. Ins.* 12 (1763).
Sitophilus oryzæ, *Brullé, in Webb et Berth.* (*Col.*) 73 (1838).
—— ——, *Woll., Ins. Mad.* 322 (1854).
—— ——, *Id., Cat. Mad. Col.* 105 (1857).
—— ——, *Hartung, Geolog. Verhältn. Lanz. und Fuert.* 141.

Habitat insulas omnes Canarienses, vulgaris.

Like the last species, a mere importation into these islands, where, however, it has established itself even more completely than it has at Madeira. It is universal throughout the archipelago; for although I did not myself meet with it during our short sojourn in Gomera, four Gomeran examples have lately been communicated by Dr. Crotch. But in the other six islands of the Group I have taken it, more or less abundantly. In Lanzarote, Palma, and Hierro it was found also by Mr. Gray; and from Teneriffe it has been sent by the Barão do Castello de Paiva. It occurs in similar spots as the *S. granarius*, and usually indeed in company with it. It is recorded by M. Morelet at the Azores.

(Subfam. CRYPTORHYNCHIDES.)

Genus 189. **CEUTHORHYNCHUS.**

Schönherr, *Curc. Disp. Meth.* 298 (1826).

451. **Ceuthorhynchus pollinarius.**

Curculio pollinarius, *Forst., Nov. Ins. Spec.* 33 (1772).
—— dentatus, *Mshm, Ent. Brit.* 280 (1802).
Ceuthorhynchus pollinarius, *Schön., Gen. et Spec. Curc.* iv. 543 (1837).

Habitat in Teneriffa et Hierro, hinc inde super folia Urticarum.

The common European *C. pollinarius* occurs sparingly at the Canaries, where it has perhaps been naturalized from more northern latitudes. I have taken it, from off nettles, in semicultivated spots, above the Puerto Orotava, as also at the Agua Garcia, in Teneriffe, and near Valverde in Hierro,—in the first of which islands it was found likewise by Mr. Gray and Dr. Crotch.

452. **Ceuthorhynchus quadridens.**

Curculio quadridens, *Pnz., Fna Germ.* xxxvi. 13 (1796).
Ceuthorhynchus quadridens, *Schön., Gen. et Spec. Curc.* iv. 534 (1837).

Ceutorhynchus quadridens, *Woll., Ins. Mad.* 326 (1854).
—— ——, *Id., Cat. Mad. Col.* 105 (1857).

Habitat in Fuerteventura, Teneriffa, Gomera, Palma et Hierro, super folia plantarum præcipue in cultis occurrens.

There can be little doubt, I think, that the present insect, which abounds in most parts of Europe and which occurs also at Madeira, has been imported into these islands. I have taken it, in cultivated spots, in the Rio Palmas of Fuerteventura; at S^{ta} Cruz and on the mountains above it, as well as about Souzal, in Teneriffe, and near Valverde in Hierro; and it was captured by Mr. Gray in Gomera and Palma, and by Dr. Crotch in Teneriffe and Gomera. We may be pretty sure, therefore, that it is universal throughout the archipelago; for it can scarcely be absent from either Lanzarote or Grand Canary.

453. Ceuthorhynchus nigroterminatus.

Ceutorhynchus nigroterminatus, *Woll., Ins. Mad.* 327 (1854).
—— ——, *Id., Cat. Mad. Col.* 106 (1857).

Habitat in Teneriffa et Hierro, passim.

This insect, which occurs sparingly in Madeira, is in all probability pretty generally distributed over the Canarian Group, though hitherto I have observed it only in Teneriffe and Hierro,—namely, at Souzal, the Agua Garcia, the Agua Mansa, and near Orotava, of the former, and close to Valverde of the latter. A Teneriffan example has also been communicated by Dr. Crotch. It occurs principally in, or in the vicinity of, cultivated spots.

454. Ceuthorhynchus pyrrhorhynchus.

Curculio pyrrhorhynchus, *Mshm, Ent. Brit.* 257 (1802).
Nedyus suturalis, *Steph., Ill. Brit. Ent.* v. 419 (1832).
Ceuthorhynchus pulvinatus, *Schön., Gen. et Spec. Curc.* iv. 494 (1837)

Habitat Fuerteventuram, in cultis parce deprehensus.

The common European *C. pyrrhorhynchus* may perhaps have been accidentally introduced from more northern latitudes into these islands, where, however, it is extremely rare. Hitherto I have met with it only in Fuerteventura, namely at Agua Bueyes and at Oliva.

455. Ceuthorhynchus phytobioides, n. sp.

C. niger, capite prothoraceque dense rugoso-punctatis, hôc pone apicem (dilutiorem subrecurvum) profunde constricto, postice canaliculâ mediâ latâ necnon utrinque tubereulo instructo; elytris picescentioribus, rotundato-obovatis basi truncatis, profunde striatis (striis vix punctatis), interstitio tertio (necnon extra hoc etiam al-

ternis, sed minus evidenter) latiore elevato et nigro albidoque squamoso-tessellato; antennis pedibusque elongatis, rufo-testaceis, illarum capitulo nigrescente; femoribus dentatis; tarsorum articulo primo longiusculo.

Mas tibiis posterioribus ad apicem internum spinâ minutâ armatis.—Long. corp. lin. $1\frac{1}{3}$.

Habitat Teneriffam sylvaticam, supra Taganaam semel captus.

The present *Ceuthorhynchus* and the *hesperus* are remarkable, *inter alia*, for their third elytral interstice (and indeed the alternate ones also on the *outer* side of it, though less evidently so) being not only widened and somewhat raised, but also sparingly tessellated with blackish and whitish scales. Their femora, moreover, are armed beneath with an acute spine. In its special characters, the *C. phytobioides* is rather smaller than its ally; its elytra (which are rounder and more *obovate*) are not quite so black and have their striæ less evidently punctured; and its limbs are longer and rather paler—the first two joints of the funiculus and the basal one of the feet being conspicuously more elongated. As in many of the *Ceuthorhynchi*, its male sex (which I have alone seen) has the inner apices of its four hinder tibiæ produced into a very minute terminal spine. It is hitherto unique, the single example from which the above diagnosis has been drawn out having been captured by myself, during May 1859, at Taganana, in the north of Teneriffe. Its rounded elytra and elongate legs, in conjunction with its tubercled prothorax, give it much the appearance, *primâ facie*, of a *Phytobius*—a fact which has suggested its specific name*.

456. **Ceuthorhynchus hesperus**, n. sp.

C. sp. præcedenti similis, sed paulo major, elytris minus rotundatis (magis obovato-quadratis), nigrescentioribus, striis evidentius punctatis; antennis pedibusque brevioribus, paulo magis obscurioribus, funiculi articulis (præsertim 1mo et 2do) necnon tarsorum basali conspicue minus elongatis.

Mas adhuc latet.

Fœm. tibiis omnibus ad apicem internum simplicibus.—Long. corp. lin. vix $1\frac{1}{2}$.

Habitat in ins. Hierro; ad rupes aquosas herbidas excelsas in regione El Golfo dictâ exemplar unum, Februario A.D. 1858, deprehendi.

* In affinity the *C. phytobioides* is evidently very close to the Madeiran *lineato-tessellatus*, agreeing with that insect almost exactly in its outline and sculpture and in the general plan of its ornamentation; nevertheless specifically it is abundantly distinct from it, being scarcely more than half the size and of a different colour, with the basal joint of its feet *relatively* more elongated and with the tooth of its front tibiæ much more developed.

From my having obtained but a single specimen, and that a female, of the present insect, and in like manner only a male of the preceding one, I had at first imagined, from their near resemblance to each other, that they might perhaps be but the sexes of one species; nevertheless a closer examination shows an abundance of differences which, I think, cannot possibly be sexual. Thus, the *C. hesperus* is rather the larger of the two; its elytra are blacker, and less rounded at the sides (being somewhat broader and more quadrate), and have their striæ more evidently punctured; and its limbs, particularly the antennæ, are shorter and (although pale) of an obscurer tint. My unique example was captured from amongst vegetation on some wet rocks, at a high elevation, on the descent from the Cumbre into the region of El Golfo, on the west of Hierro.

From the fact of the *C. hesperus* and *phytobioides* having so strong an affinity with the (nevertheless comparatively gigantic) *lineato-tessellatus* of Madeira, and since the last insect appears to be attached exclusively to the foliage of the flat *Sempervivum patina*, Lowe, which studs the rocks in the damper spots of that island, I have little doubt that both of these Canarian species will be found to have a similar habit, and that they must consequently be searched for on the succulent leaves of the *Semperviva* and *Seda* within the sylvan districts.

Genus 190. ACALLES.

Schönherr, *Curc. Disp. Meth.* 295 (1826).

In describing the following twelve species of *Acalles* I do not think it necessary to give their sexual distinctions, which are the same (or very nearly so) in all of them. In the males the rostrum is opake and coarsely sculptured; whilst in the females it is a trifle longer, narrower, and more arcuate, as also more piceous and shining, and much more lightly sculptured.

457. Acalles argillosus.

A. squamis argillosis et brunneo-albidis densissime nebulosus; rostro subrecto, ad basin ipsissimam minus conspicue exciso; prothorace postice leviter angustato, ante medium setoso-bituberculato; elytris profunde punctato-striatis, postice valde productis coarctatis, ad apicem ipsissimum obtuse subbisinuato-truncatis, carinis interruptis nodulisque (præsertim post medium) instructis, ante apicem fasciâ hastatâ pallidiore plus minus obscurâ ornatis; tarsis latis, valde squamosis.—Long. corp. lin. $3\frac{1}{2}$–4.

Acalles argillosus, *Schön., Gen. et Spec. Curc.* iv. 327 (1837).
Tylodes scaber, *Brullé, in Webb et Berth.* (*Col.*) 72. pl. 1. f. 14 (1838).

Habitat Teneriffam, intra caules *Kleiniæ neriifoliæ*?, DC., degens.

In their gigantic size the present *Acalles* and the following one differ widely from the other species enumerated. *Inter se*, however, they are very nearly related; nevertheless the *argillosus* is perhaps, on the average, a little larger than the *œonii*, and the scales with which it is thickly clothed are altogether of a paler, or more silvery, hue; its rostrum (at any rate of the females) is a trifle shorter and straighter, more densely squamose posteriorly, less perceptibly incised on either side at its *extreme* base (though this is partly due to the scales being more numerous in that region), and *in both sexes* less deeply sculptured; its prothorax is rather less narrowed behind; its elytra (which have their immense punctures more evidently arranged in longitudinal striæ) have their extreme apex (although equally constricted) less regularly rounded, or somewhat more obtuse and subbisinuate; its tarsi are, if anything, a little shorter and broader; and its tibial hook is a trifle shorter and more acute.

Hitherto the *A. argillosus* has been observed only in Teneriffe, where I obtained several examples, during May of 1859, at Taganana. It is an insect of eminently musical powers, being able to create a loud jarring noise by the friction of the *inner* apical portion of its elytra (which is roughened, or reticulated) against the setose surface of its pygidium. Indeed this curious capability (which appears, however, to exist, more or less, in *all* the members of the present genus, as well as in certain other* Curculionids) formed the subject of a short Paper which I contributed to the 'Ann. of Nat. Hist.' in July 1860. In fact the specimens were actually discovered on account of this very fact, by my Portuguese attendant, who, while shaking the hollow stem of a maritime shrub, was diverted by a concert of no less than eleven musicians within! And it would consequently appear (since additional examples moreover were in the pupa state) that the creature undergoes its transformations within the branches of that particular plant, whatsoever it may have been, and which, from the description given me at the time, I concluded was *probably* the *Kleinia neriifolia*, DC. And that this conclusion was correct seems now pretty evident, since, on examining M. Brullé's figure of his *Tylodes scaber* (for his "description," so called, is positively worthless, and applies equally to the whole twelve

* In my Paper above alluded to, I described two large *Plinthi* which are similarly musical; and Mr. F. Smith has tested the British species of *Acalles*, and finds them to be gifted with a like power. Mr. Bewicke, who made most careful observations in Madeira, heard the various *Acalles* of that island stridulate most audibly; and he has lately informed me that he has detected the same noise in the *Ceuthorhynchus echii*, "which sings beautifully—working its pygidium against the elytra, which are curiously thickened."

species of the genus), I have not the slightest doubt that that insect is identical with the *Acalles argillosus*, and he expressly states (though, as usual, without any reference to the island in which it was found) that MM. Webb and Berthelot record its capture "dans les branches et les vieux troncs du *Cacalia Kleinia*"—which is the *same* plant as DeCandolle's *K. neriifolia*.

M. Chevrolat has kindly communicated to me, from his collection, a type of Schönherr's *A. argillosus*, which appears to differ in no respect from my Teneriffan specimens except that its scales are a little paler still, or more silvery. I have, therefore, no doubt as to the synonymy of the species.

458. **Acalles æonii**, n. sp.

A. squamis brunneis et albido-brunneis densissime nebulosus; rostro subarcuato, longiusculo, ad basin ipsissimam conspicue utrinque exciso; prothorace postice angustato, ante medium setoso-bituberculato; elytris profunde substriato-punctatis, postice valde productis coarctatis, ad apicem ipsissimum conjunctim subrotundatis, carinis interruptis nodulisque subsetosis (præsertim post medium) instructis, ante apicem fasciâ hastatâ pallidiore plus minus obscurâ ornatis; tarsis longiusculis, piceis, articulo primo subgracili.—Long. corp. lin. 3½–vix 4.

Acalles æonii, *Chevrolat, in litt.*

Habitat Teneriffam, intra caules *Sempervivi* latens, a Dom. Chevrolat communicatus.

As already implied, the distinctly darker, or browner, scales with which this species is clothed, and its slightly longer and more arcuated rostrum (at any rate of the females), which in both sexes is more roughly punctured and is also more naked posteriorly, which causes it to appear more conspicuously incised on either side of its *extreme* base, in conjunction with its prothorax being somewhat narrower behind, the termination of its elytra rather more pointed and entire (or less obtusely bisinuated), and its feet just perceptibly longer and less squamose, will serve to separate it from its near ally the *A. argillosus*.

The specimens (eight in number) from which the above diagnosis has been compiled have been communicated by M. Chevrolat, who purchased them from the material of a French naturalist who collected plants (and a few insects) at the Canaries and elsewhere. And I think that the note which accompanied them, as to their habits, is sufficiently special to vouch for its accuracy; so that even if no other evidence had existed I believe that I should have been

justified in admitting the insect into the present Catalogue. But since, in point of fact, I myself captured a single individual (crawling on the outside of a house at the Puerto Orotava) in Teneriffe, of a species which is *so* near to M. Chevrolat's that I imagine it cannot be regarded as more than a variety of it, I further conceive that it may safely be recorded (not merely as Canarian but) as *Teneriffan*; and I have consequently entered it as such.

The note above alluded to was to the effect that the insect underwent its transformations within the stems of the *Æonium frutescens* (*Æonium* being, as I am informed by the Rev. R. T. Lowe, "a needless genus of Webb's made out of *Sempervivum*, Linn., and embracing about twelve out of the numerous Canarian *Semperviva*"). And as this accords well with my own observations on the mode of life of the *A. argillosus*, to which it is most nearly allied, I accept it unreservedly, and have adopted the name proposed for it by M. Chevrolat.

459. **Acalles fortunatus**, n. sp.

A. sp. præcedente minor et magis variegatus, rostro fœmineo angustiore, magis tereti, rufescentiore et multo subtilius punctato; rostro masculo sensim breviore; elytris postice magis subito et breviter coarctatis.—Long. corp. lin. $2\frac{1}{2}$–$3\frac{1}{4}$.

Obs. Species *A. acuto* major, minus setosa et postice minus acuta; rostro fœmineo longiore et sensim profundius punctulato; rostro masculo latiore grossiusque punctato; tarsis robustioribus.

Habitat Gomeram, supra "Hermigua" a Dom. Crotch lectus.

The six specimens from which the present diagnosis has been compiled were taken by Dr. Crotch at Hermigua, in Gomera, during the spring of 1862. They have no very decided distinguishing specific character, and appear in some measure to be intermediate between the *A. œonii* and *acutus*, being smaller and more variegated than the former, more suddenly (and shortly) constricted behind, with their male rostrum rather more abbreviated, and their female one slenderer, more cylindric, more rufescent, and more lightly punctured,—but larger than the latter, less acute posteriorly, and altogether a little less setose, with their rostrum in both sexes somewhat more coarsely punctured—the male one moreover being broader, and the female one longer, than is the case in the *A. acutus*.

To what extent the characters of *all* these Canarian *Acalles* are liable to vary, it is most difficult to ascertain; and further material must decide whether any of those here enumerated are due to either local influences or isolation.

460. **Acalles xerampelinus.**

A. elongato-suboblongus, angustulus, squamis flavo- (vel etiam rufo-) brunneis densissime tectus; prothorace postice vix angustato, ante medium leviter setoso-bituberculato; elytris postice longissime productis anguste coarctatis, carinis vix interruptis nodulisque duobus parvis nigrosetosis pone medium instructis, longe ante apicem fasciâ angustâ hastatâ albidâ (ad utrumque latus antrorsum recte productâ, intus argute nigro-terminatâ sed extus plus minus suffusâ) ornatis; pedibus robustis, squamoso-concoloribus.—Long. corp. lin. 2–3.

Habitat Teneriffam sylvaticam, in herbidis humidiusculis captus.

In its rather straightened body, which however is very much drawn out, or acuminated, behind, as well as in its more or less yellowish- (or even reddish-) brown surface, which (in unrubbed specimens) has merely the ordinary postmedial paler fascia of its elytra narrow and hastate but nevertheless *produced anteriorly* on either side in a straight line (it being, also, abruptly bounded *internally* by blacker scales, whilst *externally* it is more or less suffused, or gradually shaded off), this *Acalles* has such a singular appearance that it cannot possibly be confounded with any of the other species here enumerated. Although thickly coated with mud-like scales, it is less *setose* than perhaps any of its Canarian allies, some rigid bristles at the apex of its prothorax and two small darker fasciculi which clothe the minute nodules on the hinder disc of its elytra being almost the only conspicuous ones. Its ridges, or alternate interstices, are but very slightly raised, and hardly at all interrupted; and its legs, which are densely squamose, are concolorous with the rest of the surface—not being annulated with black.

The *A. xerampelinus* is extremely rare, and apparently confined to the sylvan districts of the intermediate elevations of Teneriffe. I have brushed it, sparingly, from out of the rank vegetation in damp spots, at the Agua Garcia, as well as in the laurel-woods on the mountains above Taganana.

461. **Acalles nubilosus,** n. sp.

A. squamis brunneis et albido-brunneis densissime variegatus; prothorace postice vix angustato, ante medium leviter setoso-bituberculato; elytris postice productis coarctatis, carinis interruptis nodulisque duobus parvis nigro-setosis pone medium instructis, ante apicem fasciâ hastatâ albidiore (intus in medio argute terminatâ, sed postice fere in apicem pallidiorem suffusâ) ornatis; pedibus squamoso-variegatis.—Long. corp. lin. $1\frac{3}{4}$–$2\frac{1}{3}$.

Habitat in lauretis editioribus Teneriffæ, rarissimus.

Known from the *A. xerampelinus* by its more ovate outline, and by the apex of its elytra being less drawn out, or produced; by its rather more variegated hue, the less rufescent colour of its darker scales, and by its paler ones being spread over a larger portion of its surface (including more or less of the basal region of its elytra); by its interrupted ridges being a little more developed; and by its postmedial fascia not being produced forward (in a straight line) on either side. Like that species, its surface is *comparatively* free from setæ, and its prothorax is but very slightly narrowed behind. The two specimens from which the above characters have been compiled were both taken in the sylvan districts of Teneriffe—one of them at Las Mercedes, and the other in the laurel-woods above Taganana.

462. **Acalles sigma,** n. sp.

A. squamis nigro-brunneis et (præcipue) nigrescentibus densissime tectus; prothorace postice angustato (ad latera rotundato), ante medium leviter setoso-bituberculato; elytris postice coarctatis, apice obtusis, carinis interruptis nodulisque duobus pone medium, omnibus setosis, instructis, pone medium fasciâ magnâ (postice in medio fasciculo elongato suturali nigrescente terminatâ) necnon ante medium utrinque maculâ parvâ albido-ornatis; pedibus elongatis, squamoso-variegatis.—Long. corp. lin. $2\frac{1}{2}$.

Habitat in lauretis editioribus Palmæ, rarissimus.

Judging from the two examples now before me, this *Acalles* is rather larger than any of the other species here enumerated except the *argillosus*, *œonii*, and *verrucosus*. They were both of them taken in the laurel-districts of Palma; and the species seems to be remarkable for the dark, or blackish-brown, scales with which it is densely clothed, and for the very thick and almost snowy-white postmedial fascia of its elytra, which (in addition to having their interrupted ridges, or nodules, a good deal developed and setose) have likewise a small spot of paler scales, on either side, *before* the middle. Its elytra (which have an elongate sutural fascicle of darker setæ adjoining the centre of the *hinder edge* of their fascia) have their punctures large and deep, and the extreme apex of their constricted portion obtuse.

463. **Acalles senilis,** n. sp.

A. squamis cinereis densissime nebulosus; prothorace postice angustato (ad latera valde rotundato), ante medium leviter setoso-bituberculato; elytris postice coarctatis, apice obtusis, carinis interruptis nodulisque duobus pone medium, omnibus setosis, instructis, pone medium fasciâ vix albidiore (antice in medio sat argute terminatâ, sed postice suffusâ) ornatis; pedibus breviusculis, squamoso-variegatis.—Long. corp. lin. 2.

Habitat in Hierro, haud procul ab oppido Valverde semel captus.

I do not think that the single specimen from which the above diagnosis has been drawn can safely be referred to any of the other species here enumerated, particularly when the remoteness of its *habitat* is taken into account. It was captured, by myself, near Valverde, in the island of Hierro, on the 11th of February 1858; and it may be known by the *cinereous* scales with which it is densely clouded, by its postmedial fascia being suffused behind almost into the apex of the elytra, but bounded anteriorly by three darker fascicles of setæ, and by its limbs being rather short.

464. **Acalles brevitarsis,** n. sp.

A. squamis brunneis et flavo-brunneis densissime nebulosus; prothorace postice angustato (ad latera valde rotundato), ante medium setoso-bi- (vel etiam quatuor-) tuberculato; elytris postice breviter et subito coarctatis, apice sat obtusis, carinis interruptis nodulisque duobus omnino elevatis et valde setosis pone medium instructis, ibidem vix fasciatis sed antice pone scutellum plus minus dilutioribus; pedibus crassis, squamoso-variegatis, tarsis posticis breviusculis.—Long. corp. lin. 2–2½.

Habitat Canariam Grandem, in subsylvaticis regionis El Monte tempore vernali A.D. 1858 repertus.

The present *Acalles*, which I have taken hitherto only in the region of El Monte in Grand Canary, may be known by the yellowish-brown scales with which it is thickly mottled, and by its much developed and greatly setose nodules. It is nearly allied to the *acutus*, but is rather larger and of a paler brown; with its *general* surface less setose, though with its nodules (which are altogether considerably elevated) more so; with its prothorax wider in the middle and considerably rounder at the sides; with its elytra (which have their fascia apparently obsolete) somewhat more *shortly* constricted posteriorly, and obtuser at their extreme apex; with its legs a trifle more robust; and with its two hinder tarsi more abbreviated.

465. **Acalles acutus,** n. sp.

A. fere ut *A. brevitarsis*, sed obscurior (minus brunneus) squamisque albidioribus irroratus, magis æqualiter setosus; prothorace angustiore, ad latera minus rotundato; elytris ad apicem coarctato-acutioribus, fasciâ postmediâ plerumque magis determinatâ sed nodulis minus elevatis; pedibus paulo minus incrassatis, tarsis gracilioribus et (præsertim posticis) sensim longioribus.—Long. corp. lin. 2–2½.

Habitat in sylvaticis Teneriffæ, passim.

This seems to be the least scarce of the Canarian *Acalles*, though I have hitherto observed it only in Teneriffe; but in the sylvan districts of that island, at intermediate and rather lofty elevations, it is apparently not very uncommon, occurring in the thickest parts of the forest. Although extremely variable in bulk, and difficult to procure in a perfect (or unrubbed) state, it may usually be recognized by the dark scales with which it is densely clothed, which are more or less besprinkled (especially behind the scutellum and across the disc of each elytron) with ashy ones and somewhat paler bristles; by its surface being more *equally* setose than in any of the other species (the setæ being longer, and more evidently developed, *between* the fascicles which stud the nodules); by its hastate fascia being (in clean and unabraded examples) rather well defined, both before and posteriorly; and by its legs and tarsi being somewhat slender.

The *A. acutus* may be regarded as the Canarian representative of the Madeiran *A. dispar*, which at first sight it a good deal resembles. It is, however, on the average, a little smaller and more setose than that insect; its elytra are less deeply sculptured, more pointed at their apex, and with less appearance of the elongate, darker, narrow sutural patch in front of the postmedial fascia; and its rostrum and feet are just perceptibly slenderer.

466. **Acalles instabilis**, n. sp.

A. fere ut *A. acutus*, sed minor, minus setosus; prothorace ad latera vix rectiore; elytris postice vix minus coarctatis, fasciâ postice plerumque magis suffusâ; rostro fœmineo paulo levius punctato.
Var. β. *mundus* [an species?]. Lætius coloratus, prothorace ad latera paulo magis rotundato, elytris squamis albidioribus adspersis. [*Ins.* Palma.]—Long. corp. lin. $1\frac{1}{2}$–3.

Habitat in sylvaticis subsylvaticisque Canariæ, Teneriffæ et Palmæ, hinc inde haud infrequens.

Owing to the excessive variability of these Canarian *Acalles*, both in size and in the arrangement of their scales, and (above all) to the great difficulty of procuring perfect, or unrubbed, specimens, the limits of the species are not always easy to define; and thus, judging from the numerous examples now before me, the present one and the *A. acutus* would seem *primâ facie* to merge into each other. Yet I believe that they are nevertheless really distinct, even though the unsatisfactory state of certain more or less abraded specimens may render it doubtful to which of the two they should be assigned. Typically, however, the *A. instabilis* is smaller and less setose than the *acutus*, its prothorax is not quite so much rounded at the sides,

its elytral fascia is usually more suffused behind, and its female rostrum is a trifle more finely punctured. Two examples (the "*var.* β") which I captured in Palma, and which possibly should be separated, are more highly coloured than the others, with their prothorax less straightened at the sides, and with their elytra besprinkled with a few more conspicuous snowy-white scales.

The *A. instabilis* is far from uncommon in the sylvan districts of Teneriffe (where I have taken it at the Agua Mansa, Las Mercedes, and in the laurel-woods above Taganana); and I have also a specimen (rubbed and somewhat unsatisfactory, but which I believe nevertheless to be conspecific with the remainder) captured in Grand Canary; as also the pair above alluded to from the sylvan regions of Palma. So that, if my conclusions be correct, it would seem to have a wide range throughout the archipelago.

If the last species be regarded as representing the Madeiran *A. dispar*, perhaps the present one may be looked upon as the analogue of the *A. lunulatus* of that Group.

467. **Acalles seticollis**, n. sp.

A. ovato-oblongus, angustulus, squamis brunneis et cinereis dense nebulosus; prothorace postice paulo angustato, utrinque obscure albidiore, in medio (præcipue ad basin) subnigrescente, ubique (sed præsertim antice et in medio) setis erectis obsito; elytris postice vix coarctatis, haud nodulosis sed setis erectis inter se distantibus obsitis, fasciâ postmediâ albidiore fere obsoletâ, versus basin plus minus indistincte albido-nebulosis; pedibus (præsertim posticis) brevibus, obscure squamoso-variegatis.—Long. corp. lin. $\frac{7}{8}$–1.

Habitat in Hierro, haud procul ab oppido Valverde parce repertus.

I am far from certain that this very minute *Acalles* may not be a modification, peculiar to the island in which I obtained it, of the Madeiran *A. Wollastoni*; nevertheless, since its surface is more setose, and its prothorax (which is rather less powerfully constricted behind the apex) will be seen, when denuded of its scales, to be *much* more deeply and closely punctured, whilst, on the other hand, the punctures of its elytral striæ are *less* developed, and with the interstices more rugulose, I think it would scarcely be safe to treat it absolutely as such. It may be known from all the other species here enumerated by its exceedingly diminutive bulk and rather narrower, or more oblong, outline; by its surface being free from both nodules and ridges, and most obscurely clouded with brown and ashy-brown scales; by its elytra being scarcely at all constricted posteriorly; and by its legs, especially the hinder pair, being somewhat abbre-

viated. It is evidently extremely rare,—the only four specimens which I have seen having been captured by myself, immediately to the westward of Valverde, in the island of Hierro, on the 11th of February 1858.

468. **Acalles pilula**, n. sp.

A. ovatus, lateraliter subcompressus, squamis brunneis vestitus et cinereis parce irroratus; prothorace subconico, subconvexo, postice vix angustato, in medio leviter nigro-setoso-bituberculato; scutello obsoleto; elytris convexis, postice vix coarctatis et ibidem valde decurvis, fasciâ postmediâ plerumque obsoletâ sed fasciculis parvis setosis nigris (præsertim pone medium) instructis; pedibus, præsertim posticis, brevibus, obscure squamoso-variegatis.

Var. β. *seminulum* [an species?]. Multo major, pedibus longioribus. —Long. corp. lin. 1–1¼; *var.* β, 1½.

Habitat in sylvaticis Teneriffæ et Palmæ, rarissimus.

In its general *facies*, outline, and obsolete scutellum, the present *Acalles* is very nearly allied to the Madeiran *A. globulipennis*, of which it is strictly the Canarian representative; though I believe that it cannot be absolutely referred to it. With the exception of the "*var.* β," which is perhaps specifically distinct, it is rather smaller than that insect; its rostrum (at all events in the female sex) is a little slenderer and more convex; its prothorax is relatively narrower and more conical, and when denuded of its scales will be seen to be less constricted behind the apex, as also more deeply and less closely punctured; its elytra are somewhat convexer still, especially at their base; and the arrangement of its scales is not quite the same.

The *A. pilula* seems, like most of the species, to be extremely rare, and confined to sylvan and subsylvan spots of intermediate elevations. I have taken it in Teneriffe and Palma,—namely, at Souzal, the Agua Garcia, and in the wood of La Esperanza, of the former, and in the Barranco de Galga of the latter.

469. **Acalles verrucosus.**

A. lateraliter compressus, supra valde arcuatus, squamis nigrescentibus densissime tectus et dilutioribus irroratus; prothorace postice paulo angustato, ad latera late albido-squamoso, ante medium setoso-4-tuberculato; elytris postice paulo coarctatis sed ibidem decurvis, nodulis plurimis setosis instructis, argute striato-punctatis, mox pone medium maculâ parvâ obluniformi utrinque valde abbreviatâ albido-ornatis; pedibus tarsorumque articulo primo elongatis, tibiarum squamis erectis elongatis.—Long. corp. lin. 2⅓–3.

Acalles verrucosus, *Woll., Ann. Nat. Hist.* (3rd series) xi. 219 (1863).

Habitat in elevatis sylvaticis Teneriffæ et Palmæ, rarissimus.

This large *Acalles* is one of the most distinct and remarkable of the species hitherto detected in these islands, though belonging to somewhat the same *type* as the (comparatively diminutive) *A. pilula*. It may readily be known by its *laterally compressed* outline and *greatly arcuated* upper surface, and by the dark scales (besprinkled nevertheless with browner, or more diluted, ones) with which it is clothed, —the sides of its prothorax, however, being broadly white, as also a very minute, lunulate sutural patch, placed at *about midway* between the base and (much decurved) apex of its elytra. Its nodules are extremely numerous, and (although not particularly large) sharply defined and setose, its legs and first tarsal joint are considerably elongated, and the scales of its tibiæ are setiform and erect.

The *A. verrucosus* appears to be excessively rare, and peculiar, so far at least as I have yet observed, to the sylvan districts of Teneriffe and Palma—where it occurs, beneath loosened bark and rotten wood, in humid spots of a rather lofty elevation. I have taken it in the laurel-forests overlooking Point Anaga, and towards Taganana, of the former; and in similar situations on the ascent to the Cumbre, above Buenavista, in the latter.

Genus 191. **ECHINODERA** (nov. gen.).

Corpus, et cæt., fere ut in *Acalles*, sed æquale, ubique subæqualiter setosum (nec nodosum nec costatum, et vix fasciculatum), postice minus (sc. vix) coarctatum atque ibidem magis decurvum; *oculis* minoribus (sc. minutis), regulariter ovalibus, valde demissis; *scutello* nullo; *funiculi articulo secundo* plus minus sensim longiore quam primo.

Ab Echinus, et δέρη, collum.

There can be no doubt that the six insects described below are very closely related to *Acalles*, though I think they possess, in common, sufficient features to render their generic detachment advisable; but, from the fact of the oral organs being universally ignored in the numerous members of the *Rhynchophora*, I am unable to say whether any more decided characters might be brought to light from an accurate examination of those organs in this group. They differ mainly from *Acalles*, so far as their external details are concerned, in their more *even*, and more *equally*-setose, surfaces—which are alike free from nodules and ridges, and have their squamose bristles more regularly distributed throughout (being scarcely at all collected into *fasciculi*, or bunches); by their elytra being much less constricted, and more decurved, behind; by their eyes being considerably smaller, more strictly oval, and so extremely sunken, or depressed, that they

do not project in the slightest degree beyond the curvature of the head; and by the second joint of their funiculus being more or less perceptibly longer than the first, whereas in the typical *Acalles* it is more or less distinctly shorter than the basal one.

In enunciating the following six species, the diagnoses of which have been drawn out from the careful survey of a large number* of individuals, I have been compelled to rely in a great measure upon their sculpture—which, unfortunately, is somewhat difficult of observation, since in order to be appreciated it requires the scales to be removed with which the insects are densely clothed. But, on the other hand, it should be borne in mind that a character is not the less real and important because it happens to be an inconvenient one to examine; and that, consequently, when other details are more or less unstable, it *must* be regarded as of primary significance. Next to the sculpture, I have found the most constant feature to consist in the precise outline of the elytra—modified, according to the species, by their more or less *de*curved apex, and the oblique lopping-off, in opposite directions, of their humeral region and terminal half (which occasions a more or less evident angle to be shaped-out at either side). Then the greater or less *erection*, and *length*, of the additional scale-like setæ seems to be the most satisfactory character. And last of all, as *least* to be depended upon (though varying, nevertheless, within limits pretty intelligible), is the exact colour, or markings, which the decumbent scales impart to the entire surface. Of course there are *some* other minutiæ, such as size, the relative dilatation of the feet, &c., which afford collateral aid in the determination of these closely allied insects; but they are of less consequence, and will be adverted to in the several descriptions.

470. **Echinodera hystrix**, n. sp.

E. squamis fusco-brunneis nigrescentibusque dense variegata et fusco-cinereis plus minus obscure maculata, setis longiusculis erectis sat

* No less than 173 specimens of *Echinodera* are now before me,—of which 40 belong to the *E. hystrix*, 36 to the *crenata*, 57 to the *angulipennis*, 38 to the *orbiculata*, one to the *compacta*, and one to the *picta*. And, bearing out the conclusions, as to the species, at which I have independently arrived, their topographical distribution seems extremely natural,—the *hystrix* occurring in Palma and Hierro (the two western islands of the Group), the *crenata* at the loftiest altitudes of Teneriffe (existing within the range of the "Retamas," from about 6000 to 9000 feet above the sea), the *angulipennis* in the sylvan and subsylvan districts of Teneriffe, at a distinctly lower (but nevertheless considerable) elevation, the *orbiculata* at the upper limits of the wooded regions of Teneriffe, and even ascending above them, the *compacta* in Grand Canary, and the *picta* in the dry and barren island of Fuerteventura.

dense obsita; prothorace valde profunde et densissime punctato, setis apicalibus sæpius distincte longioribus; elytris elongato-ovatis, ad humeros vix oblique truncatis, valde profunde punctato-striatis (punctis maximis), pone medium maculâ magnâ obluniformi (antice, sed vix postice, plus minus obscure nigro-terminatâ), necnon nebulâ parvâ indistinctâ (plus minus obsoletâ fractâ) versus humeros subcinereo-ornatis.

Variat fere immaculata, squamis pallidioribus plus minus obsoletis. —Long. corp. lin. $1\frac{1}{2}$–2.

Habitat in Palma et Hierro, locis intermediis passim.

In their somewhat elongate-ovate elytra, which are more *gradually* narrowed towards the base (or less truncated, obliquely, at the shoulders), the present species and the following one have much in common; nevertheless when denuded of their scales they will be seen to be abundantly distinct from each other; for whilst the latter has its striæ *comparatively* fine and merely crenated, the *E. hystrix* has them very deeply and regularly punctured—the punctures being of an enormous size. This difference in their sculpture causes the interstices of the *crenata* to be proportionally wide and flattened, whilst in the *hystrix* they are narrower and more costate. In minor details, the present insect is rather more obscurely coloured than its Teneriffan ally (the paler scales being usually less developed, and covering a smaller portion of the entire surface); the setæ with which it is studded are somewhat more numerous and erect; its rostrum is perhaps a trifle longer and slenderer; and the shape of its cloudy patches is not quite the same.

As yet I have observed the *E. hystrix* only in Palma and Hierro, in the sylvan districts of which I took it, sparingly, during the winter and spring of 1858.

471. Echinodera crenata.

E. squamis fuscis nigrescentibusque dense variegata et cinereis plus minus maculata, setis longiusculis suberectis obsita; prothorace profunde et dense punctato, setis apicalibus vix longioribus; elytris elongato-ovatis, ad humeros vix oblique truncatis, sat profunde crenato-striatis, pone medium maculâ magnâ obluniformi (antice et postice plus minus nigro-terminatâ), necnon nebulâ (plus minus magnâ suffusâ) versus humeros cinereo-ornatis.

Variat squamis pallidioribus minus distinctis.—Long. corp. lin. $1\frac{1}{2}$–2.

Echinodera crenata, *Woll., Ann. Nat. Hist.* (3rd series) xi. 219 (1863).

Habitat in montibus excelsis Teneriffæ, sub lapidibus inter 6000′ et 9000′ s. m., ultra regiones sylvaticas, occurrens.

The *E. crenata* appears to be confined to the higher elevations of

Teneriffe,—occurring, beneath stones, in the region of the *Spartium nubigena* (or "Retama"), from about 6000 to 9000 feet above the sea. In such situations I took it, not uncommonly, on the Cumbre adjoining the Cañadas, above Ycod el Alto, during May 1859; as well as on the opposite Cumbre, above the Agua Mansa. It is, on the average, a more variegated species than any of the others hitherto detected,—highly coloured and perfect examples (in which the scales are uninjured) having often their paler portions very distinctly and beautifully expressed. But in all instances it may be easily recognized (at any rate when sufficiently denuded to expose the sculpture) by its elytral striæ being *comparatively* fine and simply *crenated*, with the interstices broader and less costate than is the case in the other *Echinoderæ* here enumerated. Even small and dark specimens may always be known from correspondingly obscure ones of the *angulipennis* by this character; as also by the shape of the elytra, which are more regularly elongate-ovate, being less obliquely truncated both at the shoulders and along the margin of their *terminal half*.

472. **Echinodera angulipennis**, n. sp.

E. fere ut *E. crenata*, sed plerumque obscurior (minus variegata), setis paulo longioribus robustioribusque obsita; prothorace vix profundius densiusque punctato; elytris profundius crenato- (fere punctato-) striatis, interstitiis convexioribus, paulo magis convexis, subellipticis (minus elongato-ovatis), versus humeros necnon postice magis oblique truncatis, quare utrinque pone basin magis angulatis. —Long. corp. lin. $1\frac{1}{3}$-2.

Habitat in sylvaticis subsylvaticisque Teneriffæ, passim.

The present species seems to be the universal one throughout the sylvan (and even subsylvan) regions of Teneriffe, having a distinctly lower range than the *E. crenata*. Indeed it is emphatically an insect of *intermediate* elevations,—never ascending, apparently, above the wooded districts, and only occasionally to be met with (in subsylvan spots) a little below them. I have taken it at Ycod el Alto, the Agua Mansa, the Agua Garcia, at Las Mercedes, and on the laurel-clad slopes above Taganana.

The *E. angulipennis* is usually a dull or obscurely coloured species,—a more or less faintly expressed hinder fascia and a few scattered palish scales being the only relief to its mottled-brown surface. It is rather more deeply sculptured than the *crenata* (though much less so than the *hystrix*), and the erect scale-like bristles with which it is beset are a little longer and more robust; its elytra too are convexer, as also more *shortly elliptic* (or less oblong-ovate)—a struc-

ture which is caused by their humeral region and apical half being more obliquely truncated, or lopped-off, in opposite directions, so as to shape-out a more evident *angle* on either side at about a third of the distance behind their base.

473. **Echinodera orbiculata,** n. sp.

E. sp. præcedenti similis, sed paulo minor, squamis nigrescentibus brunneo-albidisque magis regulariter irrorata et setis multo brevioribus ac minus erectis obsita; prothorace valde profunde et densissime punctato; elytris profundius punctato-striatis, suborbiculatis, *i. e.* rotundatioribus et ad apicem magis incurvis, ergo postice obtusius rotundatis necnon ad humeros minus oblique truncatis; tarsis vix brevioribus et paulo minus dilatatis.—Long. corp. lin. 1–1⅔.

Habitat Teneriffam, præcipue in sylvaticis editioribus sed interdum etiam ultra regiones sylvaticas (usque ad 7000′ s. m.) ascendens.

The rather smaller size of this species, in conjunction with its much shorter and more decumbent setæ, its usually more *speckled* surface (which is more or less irrorated with blackish, brown, and whitey-brown scales), its more globose and deeply sculptured elytra (which are more *obtusely rounded* behind, with their apex more decurved, and less obliquely truncated at their shoulders), and its just perceptibly more abbreviated and less expanded feet, will serve to distinguish it from the *E. angulipennis*. It occupies, also, a somewhat higher range than its ally,—never descending (so far as I have yet observed) *below* the wooded districts, but ascending, not unfrequently, above them. Thus, in the sylvan region of the Agua Mansa, in Teneriffe, it is the dominant species; and I have likewise taken it, though more rarely, on the lofty Cumbre above it (in company with the *E. crenata*), at an elevation of from about 6000 to 7000 feet. I also found it on the densely laurel-clad mountains overlooking Taganana.

474. **Echinodera compacta,** n. sp.

E. præcedenti similis, sed paulo obscurior, setis minus abbreviatis obsita; elytris minus rotundatis (versus humeros sensim latioribus necnon ad latera rectioribus), profundius punctato-striatis, punctis maximis.—Long. corp. lin. 1⅔.

Habitat Canariam Grandem, in regione El Monte semel capta.

I have little doubt that the single specimen from which the above diagnosis has been compiled will form the type of a distinct species peculiar to Grand Canary—where I captured it, in the region of El Monte, during the spring of 1858. So far as I can judge from the individual before me, it differs from the *orbiculata* in being of a

rather obscurer hue and with its setæ less abbreviated, and in having its elytra *much* more deeply punctured (indeed quite as coarsely as in the *E. hystrix*), and considerably less rounded at the sides,—the basal region being relatively wider than is the case in that insect. Its feet, however, are but slightly expanded, and its elytra are a good deal decurved at their apex, as in the *orbiculata*.

475. **Echinodera picta**, n. sp.

E. fere ut *E. orbiculata*, sed minor, multo lætius picta et setis fere carens; elytris paulo minus rotundatis, levius punctato-striatis, interstitiis densissime rugulosis, versus basin (præsertim circa humeros) latius albido-ornatis, fasciâ postmediâ distinctâ; antennis pedibusque brevibus, tarsis brevissimis, vix dilatatis.—Long. corp. lin. $1\frac{1}{4}$.

Habitat Fuerteventuram, ad Rio Palmas Aprili ineunte A.D. 1859 lecta.

The unique example described above was taken by myself, from beneath a stone, in the Rio Palmas of Fuerteventura, at the beginning of April 1859; and, apart from the peculiarity of its *habitat* (amongst species which are either essentially sylvan in their modes of life or else found in spots of a very lofty elevation), it differs so remarkably from all the *Echinoderæ* above enumerated that I have no hesitation, even in the absence of further material, in treating it as distinct from the whole of them. Independently of the comparatively small size of the specimen before me, which may *possibly* be accidental, the *E. picta* may be easily recognized by its much more highly coloured (and indeed prettily variegated) surface, by its freedom from erect setæ, by its elytra having the punctures of their striæ rather shallow and their interstices *densely rugulose*, and by its limbs, especially the feet, being somewhat abbreviated—the latter of which, moreover, have their penultimate joint but very slightly expanded.

(Subfam. BARIDIIDES.)

Genus 192. **BARIDIUS.**

Schönherr, *Curc. Disp. Meth.* 274 (1826).

476. **Baridius sellatus.**

B. oblongus, niger, subopacus; capite minutissime et leviter punctulato, rostro valido profundius punctato et basi utrinque striolato; prothorace subquadrato, mox intra apicem subito constricto, densissime et profunde punctato, punctis longitudinaliter confluentibus, in medio carinato, ad latera squamis nonnullis albidis obsito; elytris striatis, interstitiis planis, squamis albidis atrisque læte mar-

moratis (albidis parcius adspersis, sed in maculâ communi mediâ transverso-subquadratâ, ante hanc per suturam, necnon versus basin, densius condensatis); antennis pedibusque breviusculis, robustis, illis rufo-piceis, his plus minus albido atroque squamosis. —Long. corp. lin. $3\frac{1}{2}$–4.

Baridius sellatus, *Schön., Gen. et Spec. Curc.* viii. 124 (1844).
—— ——, *Lucas, Col. de l'Algérie*, 452 (1849).

Habitat in aridis arenosis Fuerteventuræ, rarissimus.

This large and beautiful *Baridius* is at once remarkable for its coarsely punctured, longitudinally strigulose prothorax, and for its intensely black surface being prettily variegated with snowy-white scales, particularly on the elytra—where they are irregularly sprinkled towards the base, sides, and apex, but more densely concentrated along the anterior portion of the suture and in a large transverse-quadrate medial patch common to both. I cannot detect any real difference between the Canarian examples now before me and a North-African type of the *B. sellatus* which has been communicated by M. Chevrolat, though the latter has its prothorax a little more coarsely sculptured—caused by the punctures being more decidedly confluent, so as to make the oblique longitudinal *strigæ* better defined. It is apparently of the greatest rarity in these islands—the only two specimens which I have seen having been captured by myself, during the spring of 1859, on the hillocks of loose drifting sand in the barren region of Corralejo, at the extreme north of Fuerteventura.

(Subfam. CIONIDES.)

Genus 193. **NANOPHYES.**

Schönherr, *Gen. et Spec. Curc.* iv. 780 (1838).

§ I. *Antennæ ante medium rostri insertæ, clavâ laxâ. Rostrum pone antennas distincte striatum. Femora subtus bispinosa (spinâ interiore longiusculâ, acutâ).*

477. **Nanophyes longulus,** n. sp.

N. oblongo-ovalis, angustulus, rufo-ferrugineus, nitidus flavescenti-albido- et fulvescenti-pubescens; elytris sat profunde subpunctato-striatis, fasciis duabus dentatis (anticâ in medio profunde arcuatâ necnon ibidem parte suturali obscuriore terminatâ), plus minus obsoletis suffusis, pallido-ornatis; antennis pedibusque elongatis, gracilibus, illarum clavâ sæpius obscuriore; tarsorum articulo primo longiusculo, subgracili.—Long. corp. lin. 1–$1\frac{1}{4}$.

Habitat Canariam et Teneriffam, super folia plantarum in humidiusculis, rarissimus.

This distinct and beautiful *Nanophyes* may easily be known by its rather narrow and oblong-oval outline, rufo-ferruginous hue, and by the two zigzag (but more or less obscure or suffused) paler fasciæ with which its elytra are adorned. It is further remarkable for its antennæ being inserted *considerably before* the middle of its (basally striated) rostrum; for its femora being, all of them, *bi*spinulose underneath (the outer tooth being very minute, but the inner one comparatively large); and for its tarsi having their first joint longer and slenderer than is usually the case in the members of this genus. Its antennal clava is much more lax, or perfoliated, than that of the following species.

The *N. longulus* is apparently of great rarity, and occurs amongst rank vegetation in rather damp spots. I have observed it hitherto only in Grand Canary and Teneriffe,—namely at Mogan, and at the edges of a small watercourse in the region of El Monte, of the former; and at Souzal of the latter. In Teneriffe it was taken also (though only a single example) by Dr. Crotch.

§ II. *Antennæ vix ante medium rostri insertæ, clavâ compactâ. Rostrum pone antennas punctato-substriatum. Femora subtus spinâ minutissimâ armata.*

478. Nanophyes lunulatus.

N. ovatus, pallide testaceus, flavescenti-albido-pubescens; elytris profunde subpunctato-striatis, fasciâ mediâ parvâ subluniformi utrinque valde abbreviatâ (interdum per suturam fractâ), necnon in interstitio quinto sæpe maculis (unâ vel duabus) parvis, nigro-ornatis. *Variat* elytris omnino pallidis (fasciâ centrali obsoletâ).—Long. corp. lin. $\frac{2}{3}$–$\frac{3}{4}$.

Nanophyes lunulatus, *Woll., Ann. Nat. Hist.* (3rd series) xi. 218 (1863).

Habitat Canariam Grandem, in foliis arbuscularum *Tamaricis gallicæ* per margines rivuli ad Mogan crescentium deprehensus.

Known immediately from the preceding species by its smaller size, more ovate outline, and pale-testaceous hue,—the elytra being ornamented with only a minute, central, laterally-abbreviated, sublunate fascia, or patch, which is occasionally interrupted at the suture so as to form two detached spots, and in rare instances is altogether obsolete: and there are generally, moreover, two very obscure dashes, or abbreviated streaks, on the posterior portion of the fifth interstice. In other respects, the whole of its femora are furnished beneath with an extremely diminutive spine; and its antennæ are *more medially* inserted than is the case in the last species, and have their club shorter and more compact.

Although attached to the Tamarisk, the present insect is apparently quite distinct from the Mediterranean *N. tamarisci*, *pallidulus* (which has unarmed femora), *posticus*, and *stigmaticus*, of which the habits are similar. Indeed the first two of these are now before me; whilst the third is remarkable (*inter alia*) for its anterior femora being *bi*spinulose, and for its elytra having merely a short, obscure, darker line towards the apex of each. And judging from the description of the *stigmaticus*, I gather that that insect must have its rostrum free from basal sulci, and its elytra more finely striated, and with only a small speck on the third interval. I am, further, informed by M. Jekel that he believes this species to be new, and *perhaps* identical with an uncharacterized one from Egypt.

Hitherto I have observed the *N. lunulatus* only in Grand Canary —where, on the 16th of April 1858, I brushed it, somewhat abundantly, from off the shrubs of *Tamarix gallica*, L., growing at the edges of the stream at Mogan, in the south-western district of that island.

(Subfam. TYCHIIDES.)

Genus 194. **SIBYNES.**

Schönherr, *Curc. Disp. Meth.* 247 (1826).

Apart from minor distinctions, the genus *Sibynes* may be recognized by its 6-jointed funiculus, and by the apices of its elytra being separately rounded-off so as to expose a small portion of the pygidium. The species are for the most part rather thick and oblong-quadrate, though with their upper surface a little flattened; their prothorax is usually somewhat bisinuated along its hinder edge; and the scales with which they are densely clothed are more or less shining and sericeous.

479. **Sibynes sericeus,** n. sp.

S. piceo-niger, squamis angustis aureo-fuscis sericeis densissime tectus necnon paulo albidioribus parcissime irroratus; prothorace densissime punctato, utrinque et per lineam mediam vix albidius squamoso; elytris suberenato-striatis, interstitiis dense et profunde punctatis; antennis brevibus, ad basin, tibiis versus apicem tarsisque rufo-ferrugineis.

Variat elytris maculâ mediâ communi scutellari obsoletissimâ (postice, utrinque, parte obliquâ paulo obscuriore terminatâ) vix albidiore plus minus evidenter ornatis.—Long. corp. lin. $1\frac{1}{3}$–$1\frac{3}{4}$.

Habitat in Lanzarota, Fuerteventura, Canaria et Teneriffa, passim.

This fine *Sibynes* is at once remarkable for the sericeous golden-brown scales with which it is densely clothed, and which are be-

sprinkled with a few very obscurely whiter ones. Its elytra have a *tendency* to be marked with a very obsolete oblique line, or patch, extending from about the disc of each to (and becoming gradually wider at) the hinder portion of the suture—an arrangement which causes the scutellary region which it encloses to appear as though formed of somewhat paler scales. The species is decidedly rare, though widely spread over the group. I have taken it at Haria, in Lanzarote; in Grand Canary; and near S^ta^ Cruz, in Teneriffe: and it was captured by Mr. Gray in Fuerteventura.

Genus 195. TYCHIUS.

(Germar) Schön., *Curc. Disp. Meth.* 245 (1826).

480. Tychius aridicola, n. sp.

T. fusco-piceus, squamis subflavescenti-cinereis dense nebulosus; prothorace transverso, densissime punctato, ad latera rotundato; elytris cylindrico-oblongis, profunde crenato-striatis, interstitiis minutissime punctulatis; rostro antennisque rufo-piceis, illo lineari, tereti, arcuato, longitudinaliter punctato-sulcato; pedibus robustis; oculis magnis, reniformibus.—Long. corp. lin. 2–2⅔.

Habitat in calcariis Lanzarotæ, Fuerteventuræ et Canariæ, rarissimus.

Although the present gigantic *Tychius* is so nearly allied to the Madeiran *T. robustus* that, *primâ facie*, I had regarded it as actually identical with that insect, nevertheless a closer inspection has disclosed so many small differences (one of them even structural) that I believe it must be treated as specifically distinct. It differs mainly in its elytra being less inflated and convex, or more cylindric (the sides being considerably *straighter*), and in its feet being rather narrower—the bilobed third joint being perceptibly less dilated. Its scales, also, are whiter and more cinereous, or with less of a *yellowish* tinge. It appears to be exceedingly rare, and confined (so far as I have observed hitherto) to calcareous spots in Lanzarote, Fuerteventura, and Grand Canary. In the first of these I have taken it, from beneath stones, on the arid mountain-slopes between Los Valles (de S^ta^ Catalína) and San Miguel de Teguise; in the second, in a similar locality, close to the little town of S^ta^ Maria Betancuria; and, in the third, on the low sandy isthmus between Las Palmas and Puerto da Luz.

481. Tychius decoratus.

T. niger; rostro (antice, præsertim in fœmineis, sensim attenuato) ad apicem rufo-piceo nitido calvo, pone antennas densissime punctulato et nigro-squamoso, in fronte albido-squamoso; prothorace den-

sissime punctulato, nigro-squamoso, lineâ mediâ (in disco interruptâ et postice dilatatâ, maculam efformante) albidâ; elytris nigro-squamosis sed læte albido-squamoso-lineatis, lineis subsuturalibus plus minus obsoletis brunneis; antennis pedibusque (squamosis) rufo-ferrugineis, illis ad apicem et his ad basin obscurioribus; oculis rotundatis, prominulis.—Long. corp. lin. $1\frac{1}{2}$–2.

Tychius decoratus, *Rosenh., Die Thier. Andalus.* 271 (1856).

Habitat in intermediis Canariæ Grandis, foliis *Ononis natricis*, L., gaudens.

After comparing carefully this superb *Tychius* with an Andalusian type of the *T. decoratus* of Rosenhauer, communicated by Dr. Kraatz, and also with another specimen (clearly referable to the same species) which was taken by the Rev. Hamlet Clark at Granada, I cannot detect any difference, either in sculpture or coloration, of sufficient importance to warrant its separation from that insect. The only points in which the Canarian examples would seem to recede from the Spanish ones are, first, that perhaps they are a trifle larger (though, with only two individuals of the latter to judge from, I am scarcely in a position to affirm this positively), and, secondly, that the subsutural lines of their elytra are *browner* or more obscure, whilst the sublateral ones are (like the suture itself) quite pale, and more or less confluent—an arrangement of the scales which I do not see so decidedly expressed in either of the types of the *decoratus* now before me. Even if this, however, should be peculiar to the specimens from the Canaries (of which I feel by no means certain), still I do not imagine that such a character can be looked upon as indicating more than a mere geographical variety: nevertheless, should future material from the south of Spain prove the two to be really distinct species, I would in that case propose for the Canarian one (fully enunciated above) the trivial name of *gloriosus*. The only district in which I have hitherto observed it is the great Barranco in the south-west of Grand Canary in which the little town of Mogan is situated—where, on the 16th of April 1858, I captured it rather abundantly from off a beautiful yellow *Ononis* (the *O. natrix*, L.) which is common by the roadsides, and on the dry mountain-slopes, of that particular region.

482. **Tychius depauperatus**, n. sp.

T. piceo-niger, squamis fulvescenti-cinereis sericeis (hinc inde subæneo-micantibus) densissime tectus; rostro (antice, præsertim in fœmineis, sensim attenuato) ferrugineo, ad apicem nitido calvo, basi (unà cum fronte) densissime punctulato squamoso; prothorace densissime punctulato, squamis per lineam mediam albidioribus; elytris subcylindrico-oblongis, subcrenato-striatis, interstitiis obsolete

et leviter punctulatis, squamis per suturam et versus latera vix albidioribus; antennis (brevibus) pedibusque (squamosis) rufo-ferrugineis.—Long. corp. lin. $1\frac{1}{2}$.

Habitat Fuerteventuram: sub lapidibus in inferioribus arenosis maritimis die 9. Apr. A.D. 1859 specimina duo collegi.

Two specimens (a male and female) of this insignificant little *Tychius* were captured by myself, from beneath stones, in a flat sandy spot at the edges of the coast-road, in Fuerteventura, about three miles to the north of Puerto de Cabras, on the 9th of April 1859. They are about the size of the common European *T. flavicollis*, but are somewhat narrower and more parallel, with their scales a little browner and more metallic, and with their rostrum and antennæ (in both sexes) shorter. The last indeed are rather singular from the second joint of the funiculus being not at all longer than the third, whilst the basal one is (relatively) a trifle more swollen perhaps than is the case in the ordinary *Tychii*. In minor particulars, I may just mention that, when denuded of its scales, the forehead of the *T. depauperatus* will be seen to be much more opake and densely punctured than in the *flavicollis*, and its elytral striæ to be less distinctly crenulated.

(Subfam. RHINOMACERIDES.)

Genus 196. **AULETES.**

Schönherr, *Curc. Disp. Meth.* 46 (1826).

483. **Auletes cylindricollis**, n. sp.

A. rufo-ferrugineus elytris plus minus testaceis, subnitidus, pube fulvo-cinereâ subdemissâ sat dense vestitus; rostro elongato, utrinque punctato; capite prothoraceque profunde, dense et rugose punctatis, hôc elongato subcylindrico ad basin ipsam transversim constricto in disco breviter obsoleteque subcarinato; elytris nitidioribus, parce sed vix seriatim punctatis (punctis magnis, postice minoribus); antennis pedibusque testaceis.

Variat fronte, prothorace utrinque in disco, elytrorum suturâ femoribusque posterioribus plus minus infuscatis.—Long. corp. lin. $1\frac{3}{4}$–$2\frac{1}{4}$.

Habitat in intermediis Teneriffæ et Palmæ, ad flores varios in herbidis, rarissimus.

The three *Auletes* here enumerated are very closely allied *inter se*, and I do not feel altogether satisfied that they should be regarded as more than varieties of a single very plastic species. Nevertheless I think it is more probable that they are distinct, though nearly related, and therefore I consider it safer not to amalgamate them.

The *A. cylindricollis* appears to be widely distributed, though spa-

ringly so, throughout the intermediate elevations of Teneriffe and Palma—occurring amongst dense vegetation, in sylvan and subsylvan spots. It is remarkable for its rather elongate, subcylindrical prothorax (which is constricted at the extreme base, and but slightly widened *before* it), for its coarse punctation, which is also remote on the elytra (which are more shining than the rest of the surface), and for its longish rostrum and feet. Its colour would seem generally to be pale—merely the forehead and either side of the prothoracic disc being more or less infuscated; however, in one of my specimens, from the island of Palma, the suture, as well as the four hinder femora, are likewise darkened. My Teneriffan examples are from Las Mercedes, Souzal, and the Agua Garcia.

484. **Auletes anceps**, n. sp.

A. præcedenti affinis, sed prothorace minus cylindrico (postice sensim latiore nec ibidem transversim constricto); oculis subminoribus; punctură omnino paulo densiore ac magis grossâ; elytris paulo minus nitidis; antennarum articulo secundo vix minus inflato; tarsorum articulo primo subbreviore.—Long. corp. lin. 2.

Habitat in Hierro, Februario A.D. 1858 parce repertus.

In the shape of its prothorax, as well as in its dense punctation and its not very shining elytra, this *Auletes* is exceedingly near to the *A. maderensis* of the Madeiran Group; from which it appears mainly to differ (apart from its paler hue, on which I lay but little stress) in its slightly longer rostrum, and in the rather less abbreviated and somewhat less thickened second joint of its antennæ. From the *A. cylindricollis*, of Teneriffe and Palma, it may be known by its punctation being altogether rather closer and less coarse, by its prothorax being a little more expanded behind (or less cylindrical), by its elytra being somewhat less shining, by its eyes being a trifle smaller, by the second joint of its antennæ being just perceptibly less swollen, and the basal one of its feet being perhaps a little shorter. Nevertheless, considering the excessive variability of the *A. cylindricollis*, I cannot but feel doubtful whether it is more than a mere insular state of that species. As yet I have observed it only in Hierro, where I captured two examples during February of 1858.

485. **Auletes convexifrons**, n. sp.

A. speciebus præcedentibus affinis, sed minor, rostro paulo breviore nitidiore graciliore minus grosse sculpturato, antennis ad basin ejus ipsissimam insertis; fronte convexiore, oculis distincte minoribus; prothorace sensim breviore, ad latera subæqualiter rotundato; punctură omnino paulo læviore ac densiore; antennis gracilioribus, clavâ

tarsisque (præsertim versus apices) obscurioribus, horum articulo primo minus elongato quam in *A. conicicolli*.

Var. β. Rostro vix longiore; prothorace angustiore, magis cylindrico; tarsis omnino pallidis.—Long. corp. lin. $1\frac{1}{4}$–$1\frac{1}{2}$.

Habitat in Canaria Grandi, rarissimus: "var. β" ad Teneriffam pertinet.

This appears to be a smaller insect than the *A. cylindricollis*, and its punctation is both denser and less coarse; its rostrum is rather shorter, narrower, more shining and less sculptured, and has the antennæ (which are somewhat slenderer) inserted, if anything, even still more evidently into its extreme base; its forehead is convexer; its eyes smaller; and its prothorax is more abbreviated and less cylindric —being about *equally* rounded at either side. Its colour is variable; nevertheless its feet and antennal club would seem perhaps to be more evidently infuscated. The normal state I have observed hitherto only in Grand Canary (principally in the Barranco of Mogan); but a single example captured at the Agua Mansa in Teneriffe offers slight modifications in its features (indicated above), though, I think, of scarcely sufficient importance to warrant its specific separation from the Grand-Canarian ones.

(Subfam. APIONIDES.)

Genus 197. **APION.**

Herbst, *Käf.* vii. 100 (1797).

§ I. *Antennæ aut versus basin aut* (*rarius*) *pone medium rostri insertæ.*

486. **Apion senex,** n. sp.

A. testaceum, fronte (angustâ), prothorace elytrorumque suturâ nigrescentibus, opacum, squamis valde robustis albidis omnino depressis (nec piliformibus) dense (in disco elytrorum postico minus dense) tectum; rostro in fœmineis tenuissimo, tereti, arcuato, valde pallido, glabro, polito, minutissime et parce punctulato (fere, nisi oculo armato, impunctato); prothorace elytrisque ad basin inter se latitudine subæqualibus, his ovato-oblongis, subpunctato-striatis; pedibus brevibus, robustis, albido-squamosis; antennis gracilibus, pallidioribus.—Long. corp. lin. 1.

Habitat Palmam; mense Maio A.D. 1858 specimina duo (fœminea) in montibus supra Sanctam Crucem deprehendi.

In its general aspect and testaceous hue, this little *Apion* seems, at first sight, a good deal allied to the common European *A. malvæ*; nevertheless, when closely inspected, it will be perceived to be very distinct in all its details. Thus, it is not only smaller and narrower (the prothorax, however, being *relatively* broader—of about the

same breadth posteriorly as the base of the elytra), but it is also more opake, densely clothed, except on the hinder disc of its elytra, with large, robust, snowy-white scales (which moreover are flattened, and closely applied to the surface, instead of being narrow and piliform); the female rostrum is *very* much slenderer, brighter, paler, and comparatively unsculptured, as well as a little longer and more arcuated; its eyes are less widely separated, which causes the forehead to be narrower; its elytra are *entirely* pale, except the suture; its legs are shorter, robuster, and squamose; and its antennæ are considerably slenderer and of a more pallid hue. The only two specimens which I have seen were captured by myself on the mountains above S^ta^ Cruz, in the island of Palma, during May 1858.

487. **Apion vernale.**

Attelabus vernalis, *Fab., Ent. Syst.* i. ii. 392 (1792).
Apion vernale, *Schön., Gen. et Spec. Curc.* i. 273 (1833).
—— ——, *Woll., Ins. Mad.* 409 (1854).
—— ——, *Id., Cat. Mad. Col.* 120 (1857).

Habitat in Teneriffa et Hierro, præsertim super folia *Urticæ urentis*, passim.

This common European insect, which occurs also (though sparingly) in Madeira, appears to be extremely local at the Canaries. It was taken by Mr. Gray and myself, from off nettles, near the Puerto Orotava of Teneriffe, during January 1858; and during the following month, by myself, in Hierro.

488. **Apion delicatulum.**

Apion delicatulum, *Woll., Cat. Mad. Col.* 120 (1857).

Habitat in Teneriffa, Palma et Hierro, hinc inde haud infrequens.

The *A. delicatulum* (which I first detected in the north of Madeira, during August 1855) is widely spread, though apparently nowhere common, over the Canarian Group. I have taken it near the Puerto Orotava and Souzal, in Teneriffe (in the former of which localities it was also captured by Mr. Gray); as well as in the Barranco da Agua of Palma, and in Hierro. In Teneriffe it was likewise met with by Dr. Crotch. It may be known from the *A. vernale* by its rather longer and a little more arcuated rostrum (which is of the same breadth throughout, and is *not* widened at its extreme base, behind the insertion of the antennæ, and which, moreover, is minutely alutaceous when viewed beneath a high magnifying power, instead of shining and distinctly punctulated); by its elytra being a trifle more ovate (or more expanded behind the middle), and less evidently subrecurved,

and subdivaricated, at the apex; by its antennæ being slenderer, and with their funiculus-joints laxer; and by its legs being more infuscated—the femora (especially, however, the four hinder ones) being more or less picescent in the centre.

489. **Apion sagittiferum.**

A. fusco-piceum, subopacum, squamis subflavescenti-albidis adspersum; rostro in fœmineis glabro, polito, minutissime et parce punctulato; prothorace rugoso-punctato; elytris crenato-striatis, maculâ scutellari subsagittiformi et fasciâ postmediâ transversâ subrectâ, communibus, pallido-ornatis; antennis ad basin pedibusque obscure testaceis, illis versus apicem femoribusque (præsertim in medio) plus minus picescentioribus.

Var. β. Pedibus pallidioribus (an *A. Germari* melius referenda?). [*Ins.* Fuerteventura.]—Long. corp. lin. 1–1⅛.

Apion sagittiferum, *Woll., Ins. Mad.* 410 (1854).
—— ——, *Id., Cat. Mad. Col.* 121 (1857).

Habitat insulas Canarienses, in Lanzarota solâ adhuc haud observatum.

The *A. sagittiferum*, so abundant throughout the Madeiran Group, is almost equally common at the Canaries—where, although hitherto it does not happen to have been observed in Lanzarote (the specimens from that island, as well as the generality of those from Fuerteventura, pertaining apparently to the *A. Germari*), we may be pretty certain it is universal. In the central and western portions of the archipelago it is common; but as it seems to be less so in Grand Canary, and still less in Fuerteventura, it is certainly possible that it may not occur at all in Lanzarote—where its place is supplied by the *A. Germari* (if indeed the two be really distinct from each other). My Teneriffan specimens are principally from the mountains above S^ta^ Cruz, Taganana, and Orotava; in the last of which localities, as well as in Hierro, it was found also by Mr. Gray. In Gomera I did not myself capture it; but it has been taken there, lately, by Dr. Crotch (who also met with it in Teneriffe and Palma).

490. **Apion Germari.**

A. præcedenti simile sed vix minus opacum squamisque paulo albidioribus adspersum; rostro in fœmineis vix latiore et paulo minus evidentius punctulato; elytris vix minus distincte albido-pictis (fasciâ postmediâ sæpius magis suffusâ indeterminatâ); pedibus clarioribus, omnino pallidis.—Long. corp. lin. 1⅛.

Apion Germari, *Walton, Ann. Nat. Hist.* xiii. 456 (1844).
—— albopilosum, *Lucas, Col. de l'Algérie*, 408. pl. 35. f. 5 (1849).

Habitat in Lanzarota et Fuerteventura, præcipue (nisi fallor) super folia *Mercurialis annuæ* hinc inde degens.

It is with the greatest hesitation that I cite this *Apion* as more than a variety of the *A. sagittiferum*; and certainly I should not have ventured to do so had not my attention been lately directed to it by Mr. Haliday, who has captured examples in Italy, from off the *Mercurialis annua*, which he considers to be conspecific with a pair from Lanzarote which I sent him for comparison, but distinct from the Madeiran *A. sagittiferum* (which appears, also, to be universal, or nearly so, throughout the Canarian archipelago). And the difficulty of recognizing it as more than a phasis of the latter is not diminished by the consideration that certain individuals from Fuerteventura seem to me (though perhaps fallaciously) to be intermediate between the two. Still, it is by no means impossible that the species may be truly distinct, although so closely allied that they are occasionally difficult to separate,—a contingency which is rendered all the more probable by the fact that their habits are, I believe, different—the present one being attached, apparently, to the foliage of the *Mercurialis annua*, whilst the *A. sagittiferum* occurs indiscriminately on various plants, and is extremely common (in Madeira at any rate) even amongst the lichens which clothe the crevices of the weather-beaten rocks at intermediate (and even lofty) elevations. Backed, therefore, by this circumstance, as well as by the high authority of Mr. Haliday, I think it is not too much to register the two as distinct; but (if such be really the case) it is at least very remarkable that I should have met with the *A. sagittiferum* abundantly in six of the Canarian islands, whilst in the seventh it should be represented by a species which is so nearly akin to it as to be but just separable. Be this, however, as it may, the Lanzarotan (and *most*, also, of the Fuerteventuran) examples (which are certainly, according to Mr. Haliday, conspecific with the Algerian *albopilosus* of Lucas, and probably likewise with the ordinary European *A. Germari*) differ from the normal ones of the *sagittiferum* (found throughout the remainder of the Group) in being a trifle less opake and clothed with rather whiter scales; in the rostrum of their female sex being (if anything) just perceptibly broader and less evidently punctulated (being in fact nearly impunctate); in their elytral markings being more suffused, and consequently less defined; and in their legs being of a clearer, and altogether pallid, hue.

The *A. Germari* (if such be its true title) was taken both by Mr. Gray and myself around Haria in the north of Lanzarote, during January 1858, and by myself, at the beginning of April 1859, in the Rio Palmas of Fuerteventura,—I *believe*, in all instances, from off the common *Mercurialis annua*.

491. Apion chalybeipenne.

Apion chalybeipenne, *Schön., ined.* (teste *Boheman*).
—— ——, *Woll., Ins. Mad.* 413 (1854).
—— ——, *Id., Cat. Mad. Col.* 122 (1857).

Habitat in Fuerteventura, Teneriffa, Palma et Hierro, passim.

The *A. chalybeipenne*, so well distinguished by its rather large size, elliptic outline, and submetallic surface (especially, however, of the elytra), which is sparingly besprinkled all over with decumbent cinereous piliform scales, by its somewhat elongate deeply sculptured rostrum (which has the antennæ inserted into it at a considerable distance from the base), its regularly punctured prothorax, and its subarcuated anterior tibiæ, is widely distributed over the Canarian archipelago—where indeed in all probability it will be found to be universal. I have taken it near S^ta^ Cruz, Orotava, and at the Agua Mansa, in Teneriffe; in the Barranco da Agua, of Palma; and in Hierro. It was captured by Mr. Gray in Fuerteventura and Palma, and by Dr. Crotch in Teneriffe. In the Madeiran Group it is universal, occurring in Madeira proper, Porto Santo, and on the Desertas.

492. Apion calcaratum, n. sp.

A. subopacum, nigrum elytris obsoletissime subviolaceis vel subæneo-metallicis, pube minutâ cinereâ demissâ parce tectum; rostro elongato, tereti, arcuato, ad antennarum insertionem paulo incrassato et unà cum capite prothoraceque alutaceo; illo longitudinaliter striguloso; hôc subcylindrico, profunde rugoso-punctato et postice in medio foveâ impresso; elytris grosse crenato-striatis, utrinque juxta scutellum in plagâ minutissimâ albido-squamosis; antennis pedibusque robustis, nigris, parce cinereo-pubescentibus; tibiis anticis subarcuatis.

Mas tibiis anticis evidentius curvatis necnon ad angulum internum in spinam minutam acutissimam productis.—Long. corp. lin. $1\frac{1}{3}$–$1\frac{1}{2}$.

Habitat in Hierro, in regione "El Golfo" sylvaticâ repertum.

This species might perhaps be regarded as the representative in these islands of the common European *A. carduorum*; and its habits I *believe* are similar—the only four examples which I have seen having been brushed from off thistles, during February 1858, in the sylvan region of El Golfo, on the western side of Hierro. It is in fact about the same size as, and with much the general aspect of, the *A. carduorum*; nevertheless, when accurately inspected, it will be seen to be abundantly distinct. Thus, it is more thickly clothed with a decumbent cinereous pubescence; its elytra are a little more ovate, more coarsely crenate-striated, and furnished on either side of the scutellum with an exceedingly minute dash of paler scales; its pro-

thorax is somewhat shorter and more roughly punctured; its anterior tibiæ have an evident tendency, particularly in the males, to be subarcuated, and are also *in that sex* armed at their inner apical angle with an extremely diminutive spine*; and its rostrum is a trifle slenderer, and is but faintly thickened at the point where the antennæ are inserted into it—instead of being (as in that insect) conspicuously tubercled.

493. **Apion Westwoodii**, n. sp.

A. nigrum elytris æneo-micantibus, squamis pallide flavo-fuscis robustis demissis parce vestitum; rostro elongato, lineari, tereti, arcuato, polito, parce punctulato, ad basin, capite prothoraceque alutaceis, hôc profunde sed parce punctato, postice in medio lineâ tenui abbreviatâ impresso; elytris grosse subcrenato-striatis, interstitiis latis fere impunctatis, utrinque juxta scutellum in plagâ parvâ indistinctâ pallido-squamosis; antennis pedibusque nigris, flavo-fusco-squamosis.—Long. corp. lin. 1–1½.

Habitat in montibus Canariæ Grandis, rarissimum.

I have much pleasure in dedicating this the most distinct and beautiful of all the Canarian Apions to my friend Professor Westwood, of Oxford, whose long and varied labours in the cause of Entomological science have justly placed him in the foremost rank of the European naturalists. It may immediately be known by the robust, brownish-yellow or dirty yellowish-white, decumbent piliform scales with which it is sparingly clothed; by its otherwise dark hue, though more or less brassy and shining elytra (which have their striæ deep and coarse, though very obscurely crenated); by its alutaceous head and prothorax (the latter of which is also deeply, but not very closely, punctured); by its almost unsculptured interstices; and by its long, slender, linear, arcuated, bright, and finely punctulated rostrum.

The *A. Westwoodii* is peculiar, so far as I have observed hitherto, to the mountains of Grand Canary—where, during the spring of 1858, I captured it in the region of El Monte; and also (though more sparingly) on the lofty Pinal of Tarajana, above San Bartolomé.

§ II. *Antennæ aut versus aut ante medium rostri insertæ.*

494. **Apion tubiferum.**

Apion tubiferum (*Dej.*), *Schön., Gen. et Spec. Curc.* i. 284 (1833).

Habitat in Canaria et Hierro, in montibus, rarissimum.

* This character is, however, indicated (though less distinctly) in the *carduorum*; as well as in certain other European species,—as, for instance, in the *æneum* and *radiolus*, and *very* obscurely in the male of *onopordi*. It likewise exists in the *chalybeipenne*.

I can detect no specific difference between four examples of an *Apion* now before me and two of the *A. tubiferum*, Schön., from northern Africa. The Canarian ones are certainly more æneous, and the erect setæ with which they are clothed are not quite so white; also their prothoracic punctures are a trifle less coarse and less confluent: but none of these are characters of any real importance. The only point indeed in which the least approach to a structural difference seems to be indicated, is that the rostrum (of both sexes) may possibly be a little shorter in the Canarian specimens; but as the entire individuals happen to be a trifle smaller, and even the length of the rostrum is subject to slight variations in those species in which that organ is so largely developed, I do not lay much stress upon this fact. Nevertheless if further material should hereafter prove the two species (however nearly allied) to be really distinct, I would in that case propose the name of *tubuliferum* for the Canarian one, in order to express its evident affinity with the *tubiferum*.

Of the four Canarian examples which have as yet come beneath my notice, three were captured (I believe, from off a species of *Cistus*) in the sylvan district of El Golfo, on the western side of Hierro, during February 1858; and the remaining one, in the following April, on the lofty Pinal of Tarajana, above San Bartolomé, in the centre of Grand Canary. It would appear, consequently, to be of the greatest rarity in these islands.

495. **Apion austrinum**, n. sp.

A. angustum, nigrum elytris obsoletissime (vix perspicue) submetallicis, subopacum, squamis cinereis demissis piliformibus parce vestitum; rostro elongato, lineari, tereti, arcuato, polito, minutissime et parce punctulato; prothorace parvo, subcylindrico, punctato, foveâ centrali antice evanescente canaliculato; elytris ellipticis (postice acutiusculis), leviter punctato-striatis; antennis gracilibus, ad basin rufescentioribus.—Long. corp. lin. $1\frac{1}{3}$.

Habitat Gomeram, a Dom. W. D. Crotch semel captum.

The only specimen which I have seen of this insignificant little *Apion* was captured by Dr. Crotch, during the spring of 1862, in Gomera. In its small size, and narrow, elliptic outline, it has much the appearance of the common European *A. seniculus*; it is, however, rather more ovate (or less strictly elliptic) and less clothed with cinereous pubescence, its rostrum is apparently a little shorter and brighter (or less alutaceous), and its prothorax is a trifle more cylindric. The position of its antennæ (at any rate in the sex before me) is sufficiently equivocal to render it doubtful to which of my two Sections it should be referred—being implanted distinctly be-

hind the middle of the rostrum. I think, however, it is perhaps better placed in this situation than elsewhere.

496. **Apion fallax**, n. sp.

A. elongato-ovatum, subopacum, nigrum elytris plus minus obscure subæneo-viridi-micantibus, ubique subtilissime alutaceum et pube minutâ cinereâ demissâ parce vestitum; rostro elongato, lineari, tereti, dense punctato; capite prothoraceque profunde et dense punctatis, hôc conico, postice in medio foveâ punctiformi impresso; elytris subdepressis, crenato-striatis, interstitiis parce et subtilissime punctulatis; antennis pedibusque robustis, nigris.—Long. corp. lin. $1\frac{1}{2}$–2.

Habitat in Lanzarota, Canaria, Teneriffa, Palma et Hierro, sat frequens.

Apparently the representative in these islands of the common European *A. violaceum*. It is, however, on the average, larger than that insect; and the colour of its elytra is never cyaneous-blue, but of a more or less obscure brassy-green; its rostrum is rather longer, and, together with the head and prothorax, more thickly, though somewhat more finely, punctured; its prothorax is more conical, or less rounded at the sides; and its elytra are a trifle more depressed, and with their striæ much less coarsely crenated. In its general *primâ facie* aspect it is perhaps closer still to the (nearly allied) *A. hydrolapathi*; nevertheless its longer rostrum and somewhat robuster limbs, in conjunction with its entire freedom from a prothoracic channel (which, as in the *violaceum*, is replaced by a small central punctiform fovea) and its more flattened, differently coloured elytra, the interstices of which (though minutely so) are more evidently punctulated, will sufficiently distinguish it from that species also.

The *A. fallax* is probably universal throughout the archipelago, though as yet it has been observed only in Lanzarote, Grand Canary, Teneriffe, Palma, and Hierro. My Grand-Canarian examples are principally from the region of El Monte; the Teneriffan ones from the vicinity of S^{ta} Cruz, Souzal, and Orotava; and the Hierro ones from the hills to the westward of Valverde. In Teneriffe it was taken also by Mr. Gray and Dr. Crotch, the former of whom captured it likewise in Palma.

497. **Apion rotundipenne.**

Apion rotundipenne, *Woll., Ins. Mad.* 415. tab. viii. f. 6 (1854).
—— ——, *Id., Cat. Mad. Col.* 122 (1857).

Habitat in Canaria, Teneriffa, Palma et Hierro, præsertim in cultis vulgaris.

This *Apion*, which is most abundant, and universal, in the Madeiran Group (occurring in Madeira proper, Porto Santo, and on the Desertas), is equally common at the Canaries—where, although it does not happen as yet to have been observed in Gomera, it is doubtless universal throughout the central and western portions of the archipelago. Whether, however, it exists in the two eastern islands, Lanzarote and Fuerteventura, is perhaps questionable, as I have myself collected with great assiduity in both of them and have not detected it. But in Grand Canary, Teneriffe, Palma, and Hierro I have met with it in profusion—chiefly in semicultivated spots of intermediate elevations. My Teneriffan examples are principally from the vicinity of S^{ta} Cruz, Taganana, Las Mercedes, the Agua Garcia, and Orotava; and the Palman ones from the Barranco da Agua. In Teneriffe it was found also by Dr. Crotch, and in Palma and Hierro by Mr. Gray. Its anteriorly acute and posteriorly rounded outline, in conjunction with its small and narrow prothorax, dark hue but more or less metallic elytra (which are exceedingly convex, and have their striæ very coarsely crenate), and its slender rostrum and limbs, will at once distinguish it from the other species here enumerated.

498. **Apion ceuthorhynchoides**, n. sp.

A. curtulum, nigrum elytris obsoletissime subcyanescentibus, squamis cinereis demissis piliformibus parce vestitum; rostro breviusculo, crassiusculo, lineari, tereti, arcuato, parce punctulato; capite prothoraceque alutaceis, illo inter oculos magnos longitudinaliter striguloso, hôc brevi transverso convexo punctato foveâque centrali antice evanescente canaliculato; elytris nitidioribus, convexis, subquadrato-oblongis, punctato-striatis.—Long. corp. lin. 1.

Habitat Teneriffam, a Dom. Gray prope Portum Orotavæ Januario A.D. 1858 semel repertum.

Like the *A. austrinum*, this little *Apion* is hitherto unique,—a single example, captured by Mr. Gray near the Puerto Orotava, in the winter of 1858, being the only one which has as yet come beneath my notice. It may, however, be easily known from the other species here enumerated by its small size and thickish form, by its abbreviated and ventricose prothorax, convex, more shining, and obsoletely subcyaneous elytra (which are of a rather elongate-quadrate outline, and a good deal obliquely-truncated at the shoulders), and by its somewhat short and thick (though linear) rostrum. Altogether it is a little suggestive *primâ facie* of a minute, dark, elongate *Ceuthorhynchus* (particularly of those species allied to the common Eu-

ropean *C. contractus*)—a circumstance which has suggested its trivial name.

499. **Apion umbrinum**, n. sp.

A. nigro-plumbeum, subopacum, squamis cinereis demissis piliformibus parce vestitum; rostro elongato, lineari, tereti, arcuato, leviter punctulato; capite prothoraceque alutaceis, rugose punctatis, illo in fronte longitudinaliter strigoso, hôc subconico tenuiter canaliculato; elytris crenato-striatis; antennis pedibusque gracilibus, illis ad basin ipsissimam rufo-ferrugineis.—Long. corp. lin. $1\frac{1}{3}$–$1\frac{1}{2}$.

Habitat Canariam, Teneriffam et Palmam, in sylvaticis subsylvaticisque hinc inde vulgaris.

A species somewhat resembling the common European *A. ononis*, but rather larger and more pubescent, with the prothorax a little more closely and coarsely punctured, with the elytra wider at the shoulders, and with the limbs longer. This last character is particularly evident as regards the feet, the basal joint of which is very perceptibly more elongated. It appears to be a common insect throughout the sylvan and subsylvan regions of Grand Canary, Teneriffe, and Palma, occurring amongst thick vegetation in shady spots. My Grand-Canarian specimens are principally from the district of El Monte; and the Teneriffan ones from Las Mercedes, Souzal, and the Agua Garcia. In Teneriffe it was taken also by Dr. Crotch.

500. **Apion longipes**, n. sp.

A. plumbeum elytris magis cærulescentibus, squamis cinereis demissis piliformibus dense vestitum; rostro in fœmineis elongato, lineari, gracili, subnitido, impunctato; capite prothoraceque alutaceis, illo in fronte grosse longitudinaliter strigoso, hôc rugose punctato et postice canaliculato; elytris crenato-striatis; pedibus (præsertim in sexu masculo) elongatis.

Mas antennis sæpius fere ad clavam (minus abruptam) rufo-testaceis; tibiis anticis robustis, subbicurvatis.

Fœm. antennis ad basin solam rufo-testaceis (clavâ abruptiore); tibiis anticis gracilioribus, rectis.—Long. corp. lin. $1\frac{3}{4}$–2.

Obs.—Species *A. voraci* valde affinis, sed paulo major pubescentior, pedibus omnino longioribus, tarsorum articulo primo sensim longiore.

Habitat in sylvaticis subsylvaticisque Teneriffæ et Palmæ, sat vulgaris: in hac, à DD. Gray et W. D. Crotch parce repertum, mihi non obvium.

The present large *Apion* is so closely allied to the common European *A. vorax*, that I feel doubtful whether it should be treated as more than a slightly altered state (brought about perhaps by local influences) of that insect. It seems to possess all the distinctive

features of the *A. vorax*, only *exaggerated*; and mainly differs from it in being a little larger and more pubescent, and in having its legs still longer. This last peculiarity is very evident as regards the tarsi, the basal joint of which is very perceptibly more lengthened. It appears to be an abundant species in the intermediate districts of Teneriffe, occurring in sylvan and subsylvan spots: thus, I have taken it commonly at Taganana, Souzal, and the Agua Garcia. A single example was also captured by Dr. Crotch; and several more, during February 1858, by Mr. Gray, in the island of Palma.

(Subfam. ERIRHINIDES.)

Genus 198. **SMICRONYX.**

Schönherr, *Gen. et Spec. Curc.* iii. 423 [script. *Micronyx*] (1836).

The genus *Smicronyx* possesses most of the characters of *Tychius*; nevertheless its more sunken eyes and its basally approximated claws (those of the latter being distant, and furnished with a small appendage between them) will, apart from minor features, usually suffice to separate it therefrom. The species are, on the average, still smaller than the *Tychii*; their surfaces are more or less sparingly variegated with scales; their rostrum is long, filiform, arcuated, and slender; the punctation of their prothorax, instead of being deep and dense, is shallow and remote (the punctures moreover being of a rather peculiar kind, and often merging anteriorly into very minute granules); their elytral striæ are (at any rate, I believe, in most instances) almost simple, or uncrenulated; the joints of their funiculus are more closely compacted together; and the extreme apices of their tibiæ have the outer angle more prominent and spinulose, and the inner one also generally somewhat more powerfully armed with a small horizontally-directed spine.

501. **Smicronyx albosquamosus.**

S. niger, squamis maximis latis albidis et dilute albidis dense tectus; prothorace angustulo, leviter punctulato; elytris subparallelis, striatis; antennis pedibusque concoloribus, squamosis.

Var. β. vicinus. Multo parcius squamosus (squamis albidioribus præsertim perpaucis); prothorace alutaceo sed paulo remotius leviusque punctato.—Long. corp. lin. 1–1½.

Tychius albosquamosus, *Woll., Ins. Mad.* 345 (1854).
—— ——, *Id., Cat. Mad. Col.* 111 (1857).

Habitat Teneriffam, in sylvâ "Agua Garcia" semel tantum lectus: *varietatis β* specimina duo (sc. prope Orotavam Teneriffæ necnon in ins. Hierro, inter mare et oppidum Valverde) cepi.

A single specimen of this insect, captured (dead) from beneath a stone, in the wood of the Agua Garcia of Teneriffe, during March 1858, seems to agree precisely with the unique example of my "*Tychius albosquamosus*" which I found (likewise dead, and under a stone), in May 1850, on the Deserta Grande of the Madeiran Group. At least, after a very accurate comparison, I cannot detect a real difference between the two; and I have therefore regarded them as identical. The *S. albosquamosus* recedes from the *pauperculus* in being a little larger and more parallel; in the colour, both of its body and limbs, being (when denuded of the scales) completely black; in its prothorax being a trifle more sparingly and less roughly punctured; and in its scales being not only very much larger, wider, and more robust, but likewise of a more chalky white (though apparently with brownish ones intermixed).

The examples, four in number, which in the above diagnosis I have treated as the "*var.* β" may possibly prove to be specifically distinct from their supposed type. Two of them were taken by Mr. Gray near Orotava in Teneriffe, another was captured by myself in the same locality, and the remaining one I met with (on the 11th of February 1858) on the ascent from Port Hierro to Valverde, in the island of Hierro. They differ in being very much less densely squamose (the paler scales, more particularly, being few in number), and in their prothorax being a little more sparingly and finely punctured. Still, in the absence of further material (both of them and of their supposed type) to judge from, I think it would scarcely be safe to consider them as more than a variety of the *albosquamosus*.

502. **Smicronyx pauperculus**, n. sp.

S. niger, squamis elongatis dilute albidis et fuscis parce nebulosus; prothorace angusto, sat dense ruguloso-punctato; elytris fuscescentibus, striatis; femoribus tibiisque rufo-ferrugineis.—Long. corp. lin. $\frac{7}{8}$–$1\frac{1}{4}$.

Habitat in Canaria et Teneriffa, in locis inferioribus et intermediis, passim.

This insect, which seems to be one of the most minute of the Canarian *Curculionidæ*, will probably be found to be universal, throughout at all events the central and western islands of the archipelago. Hitherto, however, I have observed it only in Grand Canary and Teneriffe,—namely in the region of El Monte and at Teror of the former, and about S^{ta} Cruz and Orotava of the latter. It is apparently, on the average, a little smaller than the *S. albosquamosus*, its

elytra are not quite so parallel at the sides, its colour is less black (the elytra being more or less fuscescent, and the femora and tibiæ pale rufo-ferruginous), its prothorax is somewhat more roughly and closely punctured, its entire surface is much more sparingly clothed with scales, though proportionally perhaps a trifle more variegated, and the scales themselves, in which the brown ones preponderate, will be seen (when viewed beneath the microscope) to be narrower and less robust.

Genus 199. **PROCAS.**

Stephens, *Ill. Brit. Ent.* iv. 90 (1831).

503. **Procas Steveni.**

Curculio picipes ?, *Mshm, Ent. Brit.* 272 (1802).
Procas picipes ?, *Steph., Ill. Brit. Ent.* iv. 91 (1831).
Erirhinus Steveni, *Schön., Gen. et Spec. Curc.* iii. 287 (1836).
Procas Steveni, *Schön., Id.* vi. 387 (1842).

Habitat in Fuerteventura et Palma, rarissimus.

Although widely distributed over the Group, the present insect appears to be of the greatest rarity in these islands, the only two Canarian examples which I have seen having been captured in Palma and Fuerteventura respectively,—one by the Rev. R. T. Lowe, at the end of May 1858, high up in the Barranco de Nogales, near the village of Galga, in the former; and the other by myself, on the 31st of the following March, at Oliva, in the latter. It seems probable that the *P. Steveni* is not specifically distinct from Marsham's *picipes* (which of course is the prior name); nevertheless, since the former is at any rate the title under which the individuals from southern Europe are usually quoted, I have thought it safer, in the absence of further material for a more critical examination, to cite it accordingly.

(Subfam. CLEONIDES.)

Genus 200. **LIXUS.**

Fabricius, *Syst. Ent.* ii. 498 (1775).

504. **Lixus anguinus.**

Lixus anguinus, *Linn., Syst. Nat.* i. ii. 610 (1767).
—— ——, *Schön., Gen. et Spec. Curc.* iii. 11 (1836).
—— ——, *Brullé, in Webb et Berth.* (*Col.*) 72 (1838).

Habitat in Canaria et Teneriffa, rarissimus.

The only two Canarian examples which I have seen of the present *Lixus* are not very typical of the *anguinus* (of southern Europe and northern Africa), being not only smaller than specimens (from Sicily and Algeria) now before me, but having likewise the produced apices

of their elytra less divergent (indeed almost straight) and their prothorax rather more densely variolose. Still, in every other respect, particularly coloration, they agree with the *anguinus*; and I do not think therefore that it would be safe to treat them as more than small varieties of that insect. And moreover, as M. Brullé registers the species as Canarian, it is at least possible that Messrs. Webb and Berthelot's examples were more normal in their characters; or, at any rate, the fact of its having been thus recorded gives an additional *probability* to the correctness of my determination, and likewise (apart from this) an additional reason for the desirability of admitting the species, even independently of my own specimens, into this Catalogue. My own belief, however, is that the latter are truly referable to the *anguinus*, and that the slight peculiarities which they present indicate no more, at the utmost, than a mere geographical variety. One of these examples I captured in the south of Grand Canary, and the other near S^{ta} Cruz in Teneriffe.

505. **Lixus anguiculus.**

Lixus anguiculus et lineatus, *Schön., Gen. et Spec. Curc.* iii. 11, 12 (1836).

Habitat Fuerteventuram, a Barone "Castello de Paiva" nuper communicatus.

Of this *Lixus* also I have seen as yet but two Canarian examples, both of which have lately been communicated from Fuerteventura by the Barão do Castello de Paiva. Although not in a very satisfactory state of preservation, I can detect no traces whatever of paler lines down the disc of their elytra (though there is a broad and conspicuous one along either side), whilst their other differences from the *anguinus*, such as they are, accord so well with the diagnosis of the (Grecian and Egyptian) *anguiculus* that I have little hesitation in referring them to that species. Apart from their want of elytral lines, their rostrum is just perceptibly more shining and convex than is the case in the *anguinus*, their prothoracic keel is a trifle more evident, and the acuminated apices of their elytra are straighter, or less divergent. They are also perhaps a little narrower, though I think scarcely shorter; in which latter respect, consequently, they do not accord precisely with the *published diagnosis* of the *anguiculus*.

506. **Lixus Chawneri.**

Lixus Chawneri, *Woll., Ins. Mad.* 350 (1854).
—— ——, *Id., Cat. Mad. Col.* 112 (1857).

Habitat Fuerteventuram, Martio exeunte A.D. 1859 ad Olivam captus.

A single example only of this insect has hitherto come beneath my observation in these islands. It was captured by myself, on the 31st of March 1859, at Oliva in Fuerteventura, and seems to differ in no respect from the Madeiran specimens.

507. **Lixus guttiventris.**

Lixus guttiventris (*Germ.*), *Schön., Gen. et Spec. Curc.* vii. 469 (1843).

Habitat in Lanzarota et Fuerteventura, præsertim ad folia *Arundinis donacis*, rarior.

I am informed by M. Jekel, who examined carefully one of my Fuerteventuran specimens of this *Lixus*, that he believes it to be correctly referred to the *guttiventris* of Schönherr—a species which occurs in Sicily and the north of Africa; and it seems to accord sufficiently well with the diagnosis to leave little doubt in my own mind on the subject. Its comparatively thick and cylindric body (the elytra being conjointly rounded, or obtuse, at their apex), combined with its rufo-ferruginous antennæ and feet, its very *evenly* punctured striæ, and the fact of its upper surface being *uniformly* clothed with a minute cinereous pubescence and frequently with a yellowish pollinosity, there being no lateral band of whiter scales, will serve to distinguish it. It appears to be exceedingly rare, and confined (so far as I have observed hitherto) to Lanzarote and Fuerteventura,—in the former of which I captured a specimen between Haria and Magui, during January 1858; whilst, in the latter, I brushed four more from off some plants of the *Arundo donax*, in the Rio Palmas, early in April of the following year*.

Genus 201. **BOTHYNODERES.**

Schönherr, *Curc. Disp. Meth.* 147 (1826).

508. **Bothynoderes Jekelii.**

B. cylindricus, niger, minutissime cinereo-squamulosus; rostro tri-

* I should add that M. Brullé includes the *Lixus angustatus* in his list, compiled for MM. Webb and Berthelot's volume. It is far from impossible that it may occur at the Canaries; nevertheless I cannot admit it into the present Catalogue, seeing that it is common in Madeira, and that I have (as already stated) the most conclusive evidence of Mr. Webb's having mixed up his Madeiran and Canarian material in the most inaccurate manner. I feel, therefore, that it is exceedingly probable that the example (or examples) on which its admission into the fauna rests was in reality brought by Mr. Webb from Madeira—a supposition which is rendered the more reasonable when we consider that his excessively meagre collection (nominally Canarian) contained so many species (such as the *Scarites abbreviatus* and the *Harpalus consentaneus*), all of them abundant in Madeira, but which do not exist either amongst my own enormous amount of specimens amassed in the whole seven islands of the archipelago, or in the various smaller collections formed by others, which have been communicated to me.

angulari, densius albido-squamoso sed ad apicem nudo polito, tenuiter carinato; prothorace æquali, apice bisinuato, minutissime punctulato punctisque majoribus parcius adsperso, ad latera (subrecta) paulo densius pallidiore; elytris striato-punctatis, squamulis in interstitiis lineas obscuras necnon etiam in striâ suturali lineâ interruptâ efficientibus, utroque ad apicem minute divaricato necnon longe ante apicem maculâ parvâ mediâ ornato; antennis basi rufo-piceis.—Long. corp. lin. $3\frac{1}{2}$–$5\frac{1}{2}$.

Cleonus Jekelii, *Woll., Ann. Nat. Hist.* ix. 441 (1862).

Habitat Lanzarotam, Fuerteventuram et Canariam, in aridis inferioribus sub lapidibus degens.

In its short, conical rostrum and the elongate second joint of its funiculus this insect belongs to Schönherr's subgenus *Bothynoderes* (recently elevated to a genus by Lacordaire), of which the European *Cleonus brevirostris* is the type. I have named it after M. Jekel, who informs me that it is unquestionably new,—differing, *inter alia*, from its cognate species "in having its rostrum more deeply emarginated at the tip, so as to expose a larger portion of the mandibles." It occurs for the most part in low and sandy positions, particularly near the coast,—under which circumstances I have taken it, in profusion, in Lanzarote and Fuerteventura; as also, though more rarely, at San Juan, in the south-east of Grand Canary. In Lanzarote it was found likewise by Mr. Gray and M. Hartung; and from Fuerteventura it has been obtained by the Barão do Castello de Paiva.

The *B. Jekelii* is at once remarkable for its cylindrical outline, and for its surface being sparingly clothed with excessively minute cinereous scales, or pubescence; by its prothorax being subcylindrical and almost *even*, though densely sculptured with a double system of small and larger punctures, and considerably bisinuated along the anterior edge; and by its elytra (which are but very minutely divaricated at their apex) having the delicate pubescence of their interstices obscurely condensed into dull longitudinal lines, whilst even the *stria* of each next to the suture is likewise squamose, but at the same time *interrupted by the punctures* so as to form (in unrubbed specimens) a broken-up line.

Genus 202. **CLEONUS.**

Schönherr, *Curc. Disp. Meth.* 145 (1826).

509. **Cleonus Armitagii**, n. sp.

C. cylindrico-fusiformis, niger, subnitidus, parcissime albido-squamoso-pictus; rostro cylindrico, subarcuato, minute punctulato, postice utrinque longitudinaliter impresso; prothorace subæquali

(utrinque leviter impresso necnon apice in medio foveâ parvâ, ante carinulam tenuissimam brevissimam positâ, notato), scabroso-ruguloso (vix punctulato) et tuberculis magnis parcissime adsperso, albido trilineato (lineâ mediâ tenuiore, rectâ), per basin bisinuato; elytris convexis (versus scutellum depressioribus), leviter punctato-striatis et tuberculis magnis irregularibus remotis (præsertim antice necnon in limbo) asperatis, singulis (ad apicem vix productis) fasciis 4 valde obliquis albidis (longe ante suturam terminatis) ornatis; antennis (sensim pone apicem rostri insertis) basi piceis.—Long. corp. lin. 7.

Habitat Teneriffam, mihi non obvius: specimen unicum tempore vernali A.D. 1848 cepit Rev^dus Dom. W. J. Armitage, cujus in memoriam (heu! deflendam) nomen triviale proposui.

The unique example from which the above diagnosis has been compiled was captured in Teneriffe during the spring of 1848 by my lamented friend and associate, the late Rev. W. J. Armitage, the species having altogether escaped my own observation in these islands. Its general appearance is almost as much that of a *Lixus* as of a *Cleonus*, so that it is not entirely evident to which group it should be assigned*. It may easily be known from the other Canarian *Cleoni*, as yet detected, by its cylindric-fusiform outline; and by its dark and rather shining surface being roughened with large, remote tubercles (some of which are transversely subconfluent, so as to form *plicæ* on the anterior portion of the elytra) and sparingly ornamented with white scales. These last are condensed on the prothorax into three lines (the central one of which is straight and narrow, whilst the lateral ones are broad and irregular), and down the disc of each of the elytra into four very oblique fasciæ (which are greatly abbreviated both towards the suture and margin). Its antennæ are inserted somewhat further from the apex of its (cylindrical, subarcuated, minutely punctured, and on either side longitudinally-impressed) rostrum than is usual with the true *Cleoni*; its prothorax is *compa-*

* Of the close affinity of these two genera, although widely separated in Schönherr's most unnatural system, there cannot be the smallest doubt; and it is therefore satisfactory to find that Lacordaire has recently, in his admirable volume, placed them in juxtaposition. Indeed M. Jekel, who examined the present insect for me very critically, returned it with the following observation: "As a *Cleonus* nothing to my knowledge approaches it; but it is allied to some *Lixi* from continental Africa (from Senegal down to the Cape of Good Hope) in which the rostrum is short. It seems to me that nobody has yet been able to trace out a real line of demarcation between *Lixus* and *Cleonus*; and the transposition of many of the species, even by Schönherr himself, proves how difficult it is to do so, and how much the group requires revision. After a close inspection of the example which you have sent me, I have been much struck with its *Lixus-like* appearance; and (if a *Lixus* at all) I would place it near to the *L. vetula*, Fab., and other cognate forms."

ratively even (being but slightly impressed on either side, and with a small shallow fovea down the centre in front—immediately behind which there is a very minute, abbreviated, and slender discal keel); and its elytra, which are but finely punctate-striate, are hardly at all produced (separately) at their extreme apices.

The *C. Armitagii* may be presumed to be extremely rare; and it is, therefore, the more remarkable that it should have been accidentally met with by Mr. Armitage during his few days' sojourn in Teneriffe.

510. **Cleonus variolosus,** n. sp.

C. tabido et *excoriato* affinis, sed magis cylindricus, rostro minus alte carinato; prothorace longiore, subcylindrico, magis æquali sed profunde varioloso-punctato (variolis maximis, remotis, plus minus subconfluentibus), basi in medio multo minus ante scutellum producto (fere simpliciter rotundato); elytris subcylindricis, seriatim (vix striato-) punctatis (punctis maximis) sed fere absque lacunis, fasciis duabus brevibus transversis nigris minus oblique atque haud conicis ornatis, ante apicem minus constrictis necnon ad apicem ipsum singulatim obtusioribus (*i. e.* singulis minus acuminatis); pedibus sensim robustioribus.—Long. corp. lin. 5–6.

Habitat in arenosis inferioribus Fuerteventuræ, rarissimus: etiam in insulâ parvâ "Lobos" dictâ exemplar unicum collegi.

Of the present *Cleonus* I have seen but two examples,—one of which was taken by myself in a low sandy spot close to Puerto de Cabras in Fuerteventura, and the other on the little rock of Lobos off the extreme north of that island. It is allied to the *C. tabidus* and *excoriatus* *, but is more cylindrical, with its prothorax longer and less uneven (though *more* deeply pitted with enormous, but remote, punctures or varioles), and very much less produced in the centre behind, and with its elytra (which are obtuser, or less constricted, posteriorly, and very much less separately-acuminated at their extreme apices) more coarsely punctured though less deeply striated, with their two dark fasciæ more developed but less regular or defined, less conical and less oblique, and with the elongate longitudinal impressions (or *lacunæ*) which are so conspicuous in that species almost, or entirely, obsolete. Its legs, likewise, are a trifle more robust; and the keel of its rostrum is not quite so elevated.

* M. Jekel, after examining the present insect, wrote to me as follows: "It is a new *Cleonus* belonging to the group of *excoriatus, ericæ*, &c., much allied to an undescribed species from the south of Spain (*gaditanus*, Rambur, *in litt.*), and so closely related to another from Barbary (likewise unpublished), in Mr. Bowring's collection, that I am inclined to regard the two as but varieties of a single species."

511. Cleonus tabidus.

Lixus tabidus, *Oliv., Ent.* v. 83. 262 (1807).
Cleonus tabidus, *Schön., Gen. et Spec. Curc.* ii. 192 (1834).
Cleonis obliqua, *Hartung*[nec *Ill.*], *Geolog. Verhältn. Lanz. und Fuert.* 141.

Habitat Lanzarotam, Fuerteventuram, Canariam et Teneriffam, sub lapidibus in aridis, passim.

I believe that the Canarian *Cleonus* here referred to is correctly identified with the *tabidus* of Olivier, a species which is not uncommon in southern Europe. At any rate it accords precisely with the description given in Schönherr's work, and also with a Sicilian example which I have received from M. Jekel. Nevertheless I should add that it agrees almost equally with the diagnosis of the *excoriatus*, as well as with two specimens from northern Africa, thus named, which M. Jekel has likewise communicated to me. Indeed so exactly do these supposed types tally *inter se*, that I have not the slightest hesitation in regarding them as conspecific with each other; and as there is absolutely no character whatever, that I can detect, in Gyllenhal's long descriptions by which the two can be separated, I should doubt their being in reality distinct. Be this, however, as it may, I am inclined, on the whole, to refer the Canarian insect to the *tabidus* —which moreover, being prior in publication to the *excoriatus*, will be the name which must eventually be retained if the two should hereafter be acknowledged as identical.

The *C. tabidus* (as here determined) is often abundant in dry spots of low and intermediate elevations, in Lanzarote, Fuerteventura, Grand Canary, and Teneriffe; but I have not as yet observed it in the three western islands of the Group. My Lanzarotan examples are principally from Yaiza and the vicinity of Haria, the Fuerteventuran ones from Puerto de Cabras, the Grand Canarian ones from Las Palmas and Arguiniguin, and the Teneriffan ones from Laguna. In Lanzarote it was taken also by M. Hartung, and is evidently the *Cleonus* referred in his Catalogue (which was prepared for him by Dr. Heer) to the *obliquus*, Illiger—a species, however, from which it is totally removed, not merely in *facies* and markings but in several of even its structural details (amongst which the shape of the eyes should be especially noticed). From Fuerteventura and Teneriffe it has also been sent by the Barão do Castello de Paiva.

Genus 203. RHYTIDODERES.

Schönherr, *Curc. Disp. Meth.* 149 [script. *Rhytideres*] (1826).

I believe that the present group is truly distinct from *Cleonus*,

from which it differs, mainly, in its antennæ and (regularly sulcated) rostrum being longer; in its prothorax being smaller, narrower, squarish cylindric, simple at the base (or unsinuated), and deeply grooved above with numerous longitudinal more or less flexuose *sulci* (which are consequently separated *inter se* by more or less curved and elevated *plicæ*); by its scutellum being more conspicuous; by its elytra being almost parallel at the sides, with their shoulders subporrect (though obtuse), and with their alternate interstices obscurely raised; and by its claws being distant at their base, and free, instead of approximated and soldered. M. Duval has redescribed it under the name of *Diastochelus*.

512. Rhytidoderes siculus.

Cleonis plicata, *Brullé* [nec *Oliv.*], *in Webb et Berth.* (*Col.*) 72 (1838).
Cleonus siculus (*Dupont*), *Schön.*, *Gen. et Spec. Curc.* vi. 61 (1842).
—— plicatus, *Woll.*, *Ins. Mad.* 401 (1854).
—— ——, *Id.*, *Cat. Mad. Col.* 119 (1857).
Cleonis plicata, *Hartung*, *Geolog. Verhältn. Lanz. und Fuert.* 141.

Habitat in Lanzarota, Fuerteventura, Canaria et Hierro, rarissimus.

The present insect is very nearly allied to the *R. plicatus* of southern Europe, of which I had formerly regarded it as a mere geographical state; but, upon a closer inspection, it appears to me now to be truly distinct; and the more so since both the Canarian and Madeiran individuals agree in every respect with those from Sicily,—which at any rate indicates that it cannot be a *local* phasis peculiar to the last of those countries. It differs from the *plicatus* in being altogether a trifle narrower; in its prothorax having the outer sulci not quite so elevated and the two inner ones more strongly biflexuose (being bent inwards not merely posteriorly but also *in front*, somewhat after the fashion of a figure of 8) and wider apart, particularly behind (where the included space is obsoletely keeled); and by its elytra having the punctures of their striæ more numerous and considerably smaller (a fact which is very evident when the scales are removed), and their alternate interstices less conspicuously raised. Its rostrum, also, is just perceptibly slenderer.

The *R. siculus* is rare at the Canaries, though widely spread over the archipelago—where it will almost certainly be found to be universal. I have taken it in Grand Canary and Hierro, and it was found by the Rev. R. T. Lowe in Fuerteventura (from whence also it was obtained by the Barão do Castello de Paiva) and by M. Hartung in Lanzarote. In the Madeiran Group (though wrongly recorded by me as the *plicatus*) it is universal—occurring, sparingly, in Madeira proper, Porto Santo, and on the Desertas.

(Subfam. HYPERIDES.)

Genus 204. **ALOPHUS.**

Schönherr, *Curc. Disp. Meth.* 166 (1826).

513. **Alophus magnificus**, n. sp.

A. fusco-niger, squamis fuscis densissime tectus albidioribusque pictus, et setulis cinereis demissis parcissime irroratus; rostro elongato, indistincte punctulato, supra necnon ad latera longitudinaliter sulcato; prothorace parvo, subcylindrico-conico, profunde sed parce punctato (punctis maximis) et densissime interpunctulato (quasi granulato), canaliculâ mediâ profundâ (antice et postice evanescente) impresso, versus latera parce subalbido-squamoso; elytris inflatis, rotundato-ovalibus, prothorace multo latioribus, profunde substriato-punctatis (punctis maximis), interstitiis, præsertim alternis, paulo elevatis et minutissime punctulatis (quasi granulosis), ante apicem maculâ magnâ communi hastatâ, necnon in disco singulorum antico plagâ minore obscuriore irregulari, albidioribus, ornatis; funiculi articulo secundo primo sensim longiore.—Long. corp. lin. 5–5½.

Habitat in montibus Teneriffæ, rarissimus.

The superb Curculionid described above I believe to be a true *Alophus*, though its gigantic size (compared with the European 3-*guttatus*), in conjunction with its *relatively* narrower prothorax and broad inflated elytra, as well as the fact of the second joint of its funiculus being perceptibly longer than the first, would give it *primâ facie* a rather different appearance. Still, its essential details seem to be those of *Alophus*, whilst the form of its elytral fascia and spots (which are almost precisely those of the 3-*guttatus*) would tend to point out its affinities still more certainly. It is one of the rarest of the Canarian Coleoptera, the only locality in which I have observed it being at the base of the Organo Rocks in the lofty region of the Agua Mansa in Teneriffe—where, during May 1859, I obtained two specimens (and the mutilated remains of a third one) from beneath stones.

Genus 205. **HYPERA.**

Germar, *Mag. der Ent.* iv. 335 (1821).

514. **Hypera lunata.**

Phytonomus Dauci, *Brullé, in Webb et Berth.* (*Col.*) 72 (1838).
Hypera lunata, *Woll., Ins. Mad.* 398 (1854).
—— ——, *Id., Cat. Mad. Col.* 118 (1857).

Habitat insulas Canarienses, sub lapidibus, passim,—in Gomera solâ adhuc haud detecta.

That this is the insect referred to by M. Brullé under the name of

"*Phytonomus Dauci*" I am enabled to state for certain, having examined his specimens in the Collection at the Jardin des Plantes. But as he gives neither any *authority* for the specific title nor so much as a single word of description or diagnosis (merely adding "Espèce du midi de l'Europe"), it has of course no claim for consideration. Indeed I can find no notice, in any work to which I have access, of a *Phytonomus* which has ever been published under that name. The *H. lunata*, which is universal in the Madeiran Group (occurring in Madeira proper, Porto Santo, and on the Desertas), there can be no doubt is also universal at the Canaries,—Gomera being the only one out of the seven islands in which, hitherto, I have not met with it. Nevertheless we may feel pretty certain that it exists in Gomera likewise. In Fuerteventura and Palma it was taken also by Mr. Gray. It is usually found beneath stones, in the driest and most arid spots; particularly in calcareous ones of a rather low elevation.

515. **Hypera irrorata**, n. sp.

H. squamis fuscis, albidis et albido-fuscis densissime irrorata et setulis brevibus subdemissis obsita; rostro gracili, subcylindrico; prothorace parvo, angusto, postice vix angustiore, plus minus indistincte trilineato (lineâ mediâ tenui); elytris latis, subquadrato-oblongis, punctato-striatis, interstitiis (præsertim alternis) plus minus irrorato-tessellatis, in limbo albidioribus, per suturam (ad apicem nigro-terminatam) latius fulvo-tinctis; antennis pedibusque gracilibus, his albido-variegatis, tarsorum articulis primo, secundo et præsertim tertio (vix dilatato-bilobo) sat parvis.—Long. corp. lin. $3\frac{1}{2}$–4.

Habitat Lanzarotam et Fuerteventuram, in arenosis et calcariis degens.

Although in its large size and general (though, at the same time, more variegated) hue this fine *Hypera* is a little suggestive at first sight of the common European *H. punctata*, it does nevertheless, in reality, belong to a totally different Section (of which the *H. isabellina*, from Egypt, may perhaps be regarded as the type); its narrower and more cylindrical rostrum, in conjunction with its much slenderer antennæ and legs (the latter of which have their feet *very considerably* narrower, with the third articulation hardly at all enlarged) and the less developed second joint of its funiculus, will at once serve, apart from other conspicuous characters, to remove it from that insect. In minor details, I may just mention that its rather small and subcylindrical prothorax, combined with its somewhat broad and squarish-oblong elytra, which have their interstices (especially the alternate ones) more or less sprinkled, or tessellated,

with dark and whitish scales (the latter of which preponderate towards the sides and apex, as also on the hinder disc of each), should be particularly noticed.

So far as I have observed hitherto, the *H. irrorata* is confined to Lanzarote and Fuerteventura, and is extremely local even in those islands, occurring principally in sandy and calcareous spots of a low elevation. In the former I took it, from beneath stones, during March and April of 1859, in the flat, arid district immediately to the south of Arrecife; as also on the calcareous slopes adjoining the town of Betancuria in the latter.

516. **Hypera variabilis.**

Curculio variabilis, *Herbst, Käf.* vi. 263 (1795).
Phytonomus variabilis, *Schön., Gen. et Spec. Curc.* ii. 384 (1834).
Hypera variabilis, *Woll., Ins. Mad.* 400 (1854).
—— ——, *Id., Cat. Mad. Col.* 119 (1857).

Habitat insulas omnes Canarienses, vulgaris; forsan introducta.

This common European weevil is universal at the Canaries, in the whole seven islands of which I have myself captured it (more or less abundantly). In Lanzarote, Fuerteventura, and Teneriffe it was taken by Mr. Gray also; and in the last of those islands by Dr. Crotch and the Barão do Castello de Paiva. It occurs principally about cultivated grounds and corn-fields, and in all probability is a mere importation from more northern latitudes. It is equally abundant in the Madeiran Group, being found in Madeira proper, Porto Santo, and on the Desertas. It is a variable insect; and I believe that the Canarian examples certainly include amongst them the form which I have recorded (perhaps erroneously) in my 'Ins. Mad.' as the *H. murina*, but which I now suspect cannot be specifically distinct from the remainder; though whether it be really coincident with the true *murina* of Fabricius I will not undertake to pronounce for certain.

Genus 206. **CONIATUS.**

Germar, *Mag. der Ent.* ii. 340 (1817).

517. **Coniatus tamarisci.**

Curculio tamarisci, *Fab., Mant. Ins.* 113 (1787).
Hypera tamarisci, *Germ., Mag. der Ent.* iv. 337 (1821).
Coniatus tamarisci, *Schön., Gen. et Spec. Curc.* ii. 406 (1834).

Habitat Canariam Grandem, in foliis *Tamaricis gallicæ*, haud frequens.

The only examples of *Coniatus* from these islands (and which were captured by myself, from off Tamarisks, in the Barranco of Mogan

and at El Charco—in the south-west and the extreme south, respectively, of Grand Canary) are, I think, referable to the common *C. tamarisci* of Mediterranean latitudes, though they are certainly of a darker, or more cinereous-coppery, hue than the bright metallic-green types now before me, from Italy and the south of France. In spite, however, of their obscurer colour, I believe that they cannot be identified with the *C. repandus*—which is a darker insect still, with its rostrum nearly black, and with its prothorax almost always conspicuously *trilineated* (the central line particularly being well defined by a blackish portion on either side of it).

(Subfam. MOLYTIDES.)

Genus 207. **PLINTHUS.**

Germar, *Ins. Spec.* 327 (1824).

518. **Plinthus musicus.**

Plinthus musicus, *Woll., Ann. Nat. Hist.* vi. 18 (1860).

Habitat in humidis sylvaticis Teneriffæ, hinc inde haud infrequens.

This superb *Plinthus*, a full description of which I published in the 'Ann. of Nat. Hist.' for July 1860 (where also is added a notice of its stridulating capabilities, and of the anal apparatus by the vibration of which the noise is generated), appears to be peculiar to the intermediate and lofty altitudes of Teneriffe, occurring more particularly in the damp laurel-woods from about 2000 to 3000 feet above the sea. In such situations I have taken it at the Agua Garcia, at Las Mercedes, on the sylvan mountains above Taganana, near Ycod el Alto, at the Agua Mansa, and even (in the "Retama"-district) on the elevated Cumbre above it. The species may be known by its large size and dark-brown surface, which (in fresh and *unrubbed* examples) is more or less ornamented with paler scales at the sides of its prothorax, as well as about the humeral region and apex of its elytra—which last have likewise a small patch on the fore disc of each, and a much broken postmedial fascia.

519. **Plinthus velutinus.**

Plinthus velutinus, *Woll., Ann. Nat. Hist.* vi. 19 (1860).

Habitat in montibus excelsis Teneriffæ, usque ad 8000's.m. ascendens.

Like the *P. musicus*, the present species seems to be confined to Teneriffe, though to a higher altitude than that insect. Indeed most (if not all) of the few examples of it which I have yet seen were captured on the two lofty Cumbres—above the Agua Mansa, and adjoin-

ing the Cañadas; whereas the *musicus*, although ranging to an equal elevation, descends to about 2000 feet above the sea. In my Paper on these two *Plinthi*, I have stated that the *P. velutinus* "nearly resembles the *musicus*; nevertheless its much darker surface and almost total freedom from additional decumbent setæ, as well as its nearly obsolete elytral patches (which, *when not obliterated*, are reduced to four small punctures, or spots), in conjunction with its slightly shorter and broader rostrum (which is rather more distinctly widened at the base, immediately in front of the eyes), its nearly *unpunctured* prothorax, and the *entire* and less laterally-constricted apex of its more feebly sculptured elytra, will readily separate it from that species." And I may further add that its prothorax is a trifle more rounded and produced, or less straightly truncated, at the apex (though not so much so as is the case in the *P. cucullus*); and that its elytral interstices (when denuded of their scales) will be seen to be rather more shining—being a little less roughened, and consequently less opake.

520. **Plinthus cucullus**, n. sp.

P. inter *musicum* et *velutinum* aliquo modo situs, sed minor, rostro ad apicem vix magis subito dilatato, prothorace (in disco minus evidenter biimpresso) densius punctato necnon antice in medio magis rotundato-producto (nec truncato), elytris ad humeros paulo minus porrectis (*i. e.* vix magis oblique truncatis).

Cum *musico* colore generali elytrorumque interstitiis subopacis rugulosis necnon femoribus anticis fortiter spinosis congruit; sed rostro breviusculo crassiusculo elytrisque ad apicem obtusis integris *velutinum* potius simulat.—Long. corp. lin. $5\frac{1}{4}$.

Habitat in montibus humidis Canariæ Grandis; die 21. Apr. A.D. 1858 exemplar unicum cepi.

Having but a single example of this *Plinthus* to judge from, I should have been disinclined to believe that the few peculiarities which it presents were indicative of an additional species did not its *habitat* (in the laurel-districts of Grand Canary) render such *à priori* probable. Although with many characters in common with them both, it certainly does not accord with either of those just enumerated, being in many respects indeed intermediate between the two. If the individual now before me be a normal one, the *P. cucullus* seems to differ from both of its Teneriffan allies in being a little smaller, with its rostrum perhaps somewhat more *suddenly* dilated at its apex, with its prothorax (which is less evidently impressed on its disc, on either side of the keel) more thickly besprinkled with large punctures, and more produced (or rounded) in the centre at its apex, and in its

elytra being a trifle less porrect, or more drawn in, at the shoulders. In its general colouring, as well as in the interstices of its elytra being (when the scales are removed) opake and rugulose, and in its more acutely spined femora, it agrees best with the *P. musicus*; but in its somewhat shorter and thicker rostrum, as well as in its elytra being obtuse and entire at their extremity (instead of separately pointed), it accords better with the *velutinus*.

The unique specimen I captured between Guia and Osorio, on the mountains of Grand Canary—in the laurel-region (fast decreasing) which represents the ancient forest of El Dorames.

Genus 208. **XENOMICRUS** (nov. gen.).

Genus affinitate cum *Liosomate* Steph., conjunctum atque illud primâ facie simulans, sed corpore parce pubescente (nec glabro), antennis ad (nec pone) apicem (sensim dilatatum) rostri brevioris crassioris et minus arcuati insertis, oculis majoribus, prothorace cylindrico, scutello conspicue observando pedibusque longioribus gracilioribus certe distinctum videtur.

A ξένος, mirabilis, et μικρὸς, parvus.

The little Curculionid from which the above structural diagnosis has been drawn out is closely related to *Liosomus*, with which indeed, until critically examining it, I had supposed it to be congeneric; nevertheless when accurately inspected it will be seen to differ in most of its details from the members of that group. Thus, it is *pubescent* (even though minutely and sparingly so), instead of being glabrous; its rostrum is shorter, thicker, and less arcuated, and is much more expanded at the apex—*where the antennæ are inserted* (instead of at some distance behind it); its eyes (although equally sunken) are larger; its prothorax is cylindrical; its scutellum is conspicuous and rounded; its elytra are inflated and elliptic (being acute, and constricted, at their apex); and its legs are rather longer and slenderer.

521. **Xenomicrus apionides,** n. sp.

X. piceo-niger elytris subænescentibus, pube brevi demissâ cinereâ parcissime vestitus; capite prothoraceque (leviter punctato) subopacis, subtilissime alutaceis, rostro longitudinaliter rugoso; elytris ellipticis (antice angustatis, postice acute subconstrictis), convexis, ad basin singulatim oblique subrotundatis, nitidis, sat profunde punctato-striatis, interstitiis uniseriatim punctatis; antennis rufo-ferrugineis, ad apicem piceis; pedibus piceis, tarsis (et interdum tibiis) clarioribus; femoribus simplicibus.

Variat (immaturus) capite prothoraceque rufo-ferrugineis.—Long. corp. lin. 1–1½.

Habitat in sylvaticis intermediis Teneriffæ et Palmæ, rarissimus.

Apparently extremely rare, and confined (so far as I have observed hitherto) to the moist sylvan regions in Teneriffe and Palma, of a rather lofty elevation. Thus, during May of 1858, I captured it in the latter—from amongst damp herbage in the Barranco da Agua; and, exactly a year afterwards, in the former—on the densely wooded mountains above Taganana. Its elytra are more or less obscurely brassy (occasionally with even a greenish tinge); and, when immature, its head and prothorax are sometimes rufescent.

(Subfam. BYRSOPSIDES.)

Genus 209. **GRONOPS.**

Schönherr, *Curc. Disp. Meth.* 157 (1826).

Although placed so widely apart from each other in Schönherr's most artificial classification, that they are treated as members of different *Subfamilies*, I am nevertheless persuaded that the present genus and *Rhytidorhinus* are intimately related. Indeed it appears to me that they are but just separable; for after the most careful comparison of the various details of their structure, the only real differential features which I can detect are, that, whilst *Gronops* is winged and has only the basal joint of its funiculus enlarged, *Rhytidorhinus*, on the contrary, is apterous and has its first and *second* funiculus-joints elongated. Nearly all the other details of the genera, although made to *sound* different in the respective diagnoses, are, when actually examined, found to be identical,—those characters of *Rhytidorhinus* which are based upon the larger size and more uneven surfaces of the several representatives being merely in degree, and not in kind. My own belief is that they should be regarded as Sections of a single group; nevertheless, since the smallness, in *Gronops*, of the second articulation of the funiculus, which is quite as short and transverse as the third, and its developed wings are real and structural differences (whatever value may be attached to them), it will perhaps be desirable to consider the genus, however nearly allied to *Rhytidorhinus*, as at any rate distinct from it, and, *thus far at least*, to endorse the ordinary ideas on the subject*.

522. **Gronops lunatus.**

Curculio lunatus, *Fab., Syst. Ent.* 148 (1775).
Rhynchænus costatus, *Gyll., Ins. Suec.* iii. 89 (1813).
Gronops lunatus, *Schön., Gen. et Spec. Curc.* ii. 253 (1834).

* Since the above remarks were written, I am happy to perceive that they have been fully borne out by Lacordaire, who places the two genera referred to in juxtaposition.

Habitat in Lanzarota et Fuerteventura, sub lapidibus in arenosis vulgaris: etiam in Teneriffa (in ipsâ urbe Sanctæ Crucis) specimen unum deprehendi.

I cannot detect any real difference between the Canarian specimens which I refer to the above insect and the ordinary British ones,—though, since the species is so exceedingly variable both in the colour of its scales and in the greater or less development of its fasciæ, certain extreme individuals *if taken alone* might almost have been regarded as distinct. Nevertheless out of 58 examples now before me (hardly two of which are precisely alike) I seem to have all the varieties which are indicated amongst my English specimens; and I have therefore no hesitation in identifying the whole of them with the European *G. lunatus*. It is an insect which has exactly the same habits as the *Rhytidorhinus brevitarsis*, with which indeed it is usually found in company. I have captured it in similar spots both in Lanzarote and Fuerteventura, namely beneath scoriæ—within the holes and inequalities of which it is apt to secrete itself, and out of which it is often difficult to extract it. It would appear to exist in Teneriffe also, for I once met with a single example of it in S^ta^ Cruz.

Genus 210. **RHYTIDORHINUS.**

Schönherr, *Curc. Disp. Meth.* 162 [script. *Rhytirhinus*] (1826).

523. **Rhytidorhinus brevitarsis**, n. sp.

R. subovato-oblongus, squamis fuscis et albido-fuscis densissime nebulosus; rostro profunde canaliculato, ad basin bituberculato; prothorace valde inæquali, in dorso late canaliculato, utrinque profunde longitudinaliter impresso, apice in medio elevato, antice rotundato-ampliato, postice angustiore; elytris obsolete nigro-irroratis, profunde punctato-striatis (punctis magnis), suturâ interstitiisque alternis costato-elevatis, præsertim ante apicem (desilientem) nodos efficientibus; antennis pedibusque brevibus, illis rufo-piceis, his squamosis, femoribus plus minus nigro-annulatis, tarsis brevibus. *Variat* elytris in medio obsoletissime transversim subpallido-fasciatis. —Long. corp. lin. 2½–3.

Habitat Lanzarotam et Fuerteventuram, in iisdem locis ac *Gronops lunatus* degens: sub scoriis in arenosis aridis hinc inde abundat.

The present *Rhytidorhinus* is very closely allied to two species now before me, which were taken by the Rev. Hamlet Clark in the south of Spain, particularly however to one of them (which may perhaps be the *crispatus*, Schön.). Nevertheless from both it may immediately be recognized by its shorter antennæ and legs, the tarsi especially having the basal and apical joints *much* more abbreviated—a struc-

tural character of considerable importance. In minor particulars, the Canarian insect has its elytra perhaps a trifle more expanded behind the middle than is the case in the Spanish species which it most nearly resembles; and their nodules, formed by the interrupted alternate ridges, at that particular point, are, if anything, somewhat more developed; whilst their apex itself is a little more drawn in, or suddenly shortened.

The *R. brevitarsis* seems to be confined to Lanzarote and Fuerteventura, where it is far from uncommon—occurring beneath stones and scoriæ in arid places, particularly sandy ones of a low elevation. Under such circumstances it was taken sparingly by Mr. Gray and myself in Lanzarote, during January 1858; in which island, however, I captured it much more plentifully during March of the following year—in submaritime spots between Arrecife and Yaiza, as well as at Papagayo in the extreme south: and I likewise met with it a few weeks later, in equal abundance, at the edges of the coast-road, to the north of Puerto de Cabras, in Fuerteventura; and, more sparingly, in the little island of Lobos in the Bocayna Strait. It is very gregarious, often congregating in clusters beneath a single stone.

(Subfam. BRACHYCERIDES.)

Genus 211. **BRACHYCERUS.**

Fabricius, *Syst. Eleu.* ii. 412 (1801).

524. **Brachycerus opacus,** n. sp.

B. niger, opacus, valde inæqualis; capite prothoraceque parcissime punctatis variolisque maximis notatis, illo supra oculos singulos altissime lobato (lobo alterum, minorem sed sat magnum, retrorsum productum, ad basin rostri situm, attingente), hôc ad latera in medio acute angulato necnon per discum plicis duabus maximis altis longitudinaliter instructo, postice inter plicas obsolete carinato, antice utrinque late impresso; elytris subquadratis, grosse transversim plicato-nodosis, in disco singulorum necnon in limbo plicâ altiore grosse dentatâ serrato-rugatis.—Long. corp. lin. 7.

Habitat in montibus Lanzarotæ borealis, semel tantum captus.

The unique specimen from which the above diagnosis has been compiled, and which was captured, during March 1859, on the hills above Haria, in the north of Lanzarote, differs from every *Brachycerus* with which I am acquainted in its entirely opake body (even when denuded of the mud-like scales with which it is a good deal clothed); by its excessively *uneven* surface (the elytra being densely beset with very elevated transversely-subconfluent nodules, or undulated *plicæ*,

and with a zigzag line of still larger prominences down the disc, as well as along the outer margins of each); by its immense occipital humps (which constitute a ridge above either eye) *almost touching* anteriorly the smaller, *though sufficiently large,* backwardly-produced one on each side of the base of the rostrum; and by the two longitudinal folds of its (laterally angulated) prothorax being considerably raised, and comparatively well defined. Its elytra, although thus fringed with enormous notches, or remote, unequally shaped teeth, are nearly *square* in outline.

(Subfam. OTIORHYNCHIDES.)

Genus 212. **ATLANTIS.**

Wollaston, *Ins. Mad.* 361 (1854).

Whether the five insects described below be strictly referable to the same genus as the ordinary Madeiran *Atlantides* I will not undertake, in my present doubt as to the actual value of certain structural characters in this immediate department of the *Curculionidæ,* to pronounce for certain. But that they cannot be assigned to *Laparocerus proper* (of which the *L. morio* was Schönherr's acknowledged type) I am satisfied,—seeing that their *much thicker* antennæ (the scape of which is rather less *abruptly* clavated at its tip) and the different proportions of their more obconical funiculus-joints (of which the second is conspicuously longer than the first) will of themselves, I think, more than suffice to prevent such an amalgamation. It is, however, no less true that in several particulars they do not tally with the normal members of *Atlantis*; nevertheless the features in which they agree with the latter, I am inclined to believe, are *more* important than those which would tend to affiliate them with *Laparocerus* (and, *à fortiori,* with *Eremnus,* of southern Africa); so that I prefer, for the present, treating them as *Atlantides* to the risk of erecting a new genus (or—which would rather be necessary—two new genera) for their reception in this extensive and obscure division of the *Rhynchophora.*

§ I. *Corpus parvum; scrobe valde profundâ, brevi, auriculiformi, sursum (supra marginem oculi superiorem) ascendente; oculis minutis, oblique subconicis, postice alte prominentibus. Facies sexualis valde dissimilis, sed pedibus in utroque sexu fere similibus.* (Subg. *Amphora,* Woll.)

525. **Atlantis canariensis.**

A. piceo- vel fusco-nigra, subnitida, subcinereo- (vix submetallico-) squamoso-tessellata setisque suberectis in elytris obsita; rostro

crasso, subtriangulari, sat rugose subpunctato, canaliculâ valde profundâ (inter oculos parvos, oblique subconicos, postice alte prominentes, latiore, foveæformi) impresso; prothorace dense et profunde punctato, carinato; elytris profunde crenato-striatis, suturâ postice interstitiisque alternis plus minus obscure subcinereo-tessellatis; antennis pedibusque robustis, fusco-ferrugineis.

Mas paulo minor, angustior; rostro vix graciliore; prothorace crebrius et rugosius punctato, minus carinato (carinâ tamen rarius omnino obsoletâ); elytris anguste et regulariter ovalibus, paulo levius crenato-striatis, setulis superadditis brevibus.

Fœm. paulo major, latior; rostro vix crassiore; prothorace minus crebre et magis æqualiter punctato, in disco valde carinato (carinâ interdum altissime elevatâ); elytris subobtriangularibus (basin versus latiusculis), vix profundius crenato-striatis, setis superadditis longioribus.—*Long.* corp. lin. $2\frac{1}{3}$–3.

Laparocerus canariensis (*Chevr.*), *Schön., Gen. et Sp. Curc.* vii. 228 (1843).

Habitat supra regionem sylvaticam in montibus valde excelsis Teneriffæ, usque ad 9000′ s. m. ascendens: sub lapidibus scoriisque inter arbusculas *Spartii nubigenæ* congregat.

As indicated in my *Sectional* diagnosis, this insect is so peculiar in many respects that I believe it will eventually be found desirable to erect a separate genus for its reception: nevertheless, as this may possibly be necessary for the four succeeding species likewise, and I am anxious not to establish additional groups amongst these obscure Rhynchophorous forms, I have thought it better to refer them all to *Atlantis* (since "*Laparoceri*" they clearly are *not*); and I have consequently given merely a subgeneric name to each of the Divisions, in the anticipation of further data rendering their isolation absolutely unavoidable. Thus, the *A. canariensis* is more especially remarkable for its deep, short, and upwardly-directed scrobs, for its excessively prominent, minute, and *obliquely-conical* eyes (which are consequently greatly elevated *behind*, instead of at their middle point), and for the curious dissimilarity of its sexes—the females being not only larger and wider than the males (which is of very common occurrence amongst the *Curculionidæ*), but also with their prothorax less closely and more regularly punctured, and with the central keel (which is always much smaller, and sometimes nearly obsolete, in the opposite sex) more or less greatly elevated; whilst the suberect setæ with which the elytra are beset are considerably longer.

Through the kindness of M. Chevrolat I have been enabled to examine the type of Schönherr's *Laparocerus canariensis*, which was furnished originally by his collection, and there can be no doubt that

it is identical with our present species. It is, however, a rather small, *rubbed*, and not quite mature (male) example, in which the prothoracic keel is but slightly developed. These facts may account in some measure for the excessive badness of Boheman's description, though they cannot justify absolute misstatements, in which the diagnosis and description are made to contradict each other.

The *A. canariensis* appears to be confined to very lofty altitudes in Teneriffe, never descending (so far as I have observed hitherto) even into the wooded districts, but occupying the elevated regions which are specially characterized by the presence of the *Spartium nubigena*, or "Retama"—the superb Broom peculiar to those upland tracts. In such situations I took it abundantly, during May 1859, from beneath stones and scoriæ, on the Cumbre adjoining the Cañadas, above Ycod el Alto (from about 8000 to 9000 feet above the sea); as well as on the *opposite* Cumbre, above the Agua Mansa. In the former of those localities it has been also found, more recently, by Dr. Crotch.

§ II. *Corpus sat magnum; scrobe postice latâ divaricatâ; oculis modice prominentibus. Facies sexualis haud valde dissimilis, sed pedibus secundum sexum plus minus diversis.* (Subg. *Canopus*, Woll.)

526. **Atlantis subnebulosa**, n. sp.

A. fusco-nigra, subopaca, parce et minute submetallico-squamoso-tessellata; rostro parallelo, minute et leviter subpunctato, late concavo, canaliculâ (antice tenui sed postice inter oculos parvos prominentes profundâ foveæformi) impresso; prothorace angustulo, profunde et dense ruguloso-punctato, carinâ antice evanescente instructo; scutello parvo; elytris profunde punctato-striatis, interstitiis exterioribus postice subelevatis; antennis pedibusque vix dilutioribus.

Mas adhuc latet.

Fœm. tibiis posticis simplicibus.—Long. corp. lin. 5.

Habitat Canariam Grandem, tempore vernali A.D. 1858 semel tantum lecta.

Judging from the unique example (a female one) of this insect now before me, I think it will be impossible to regard it as an insular modification of the *A. tibialis*, though in size and general proportions it has certainly much in common with it. Nevertheless its rather browner and more opake surface, *which is sparingly tessellated all over* (though particularly on the elytra) *with minute palish-metallic scales*, in conjunction with its more rugose prothorax (on which there is a distinct central keel, which vanishes in front), its rather less diminutive scutellum, the somewhat smaller punctures of its striæ, and

the fact of its outer elytral interstices being perceptibly (though but a little) raised behind, will all tend to remove it from that species. The single individual described from was captured by myself, during the spring of 1858, in Grand Canary; but whether in the district of El Monte or in the Isleta I cannot now exactly recall.

527. Atlantis tibialis, n. sp.

A. nigra, subnitida, (oculo fortissime armato) subtilissime et brevissime pubescens; rostro minute et leviter striguloso-subpunctato, late concavo, canaliculâ (antice tenui sed postice inter oculos parvos prominentes profundâ foveæformi) impresso; prothorace profunde et dense punctato; scutello minutissimo; elytris basi conjunctim subemarginatis, ad humeros oblique rotundatis, profunde punctato-striatis (punctis magnis); antennis tarsisque piceo-ferrugineis; femoribus tibiisque nigro-piceis.

Mas vix angustior, tibiis posticis intus ante apicem subito sed leviter rotundato-ampliatis.

Fœm. vix latior, tibiis posticis simplicibus.—Long. corp. lin. 4–5.

Habitat Teneriffam et Palmam, in inferioribus sub lapidibus, passim.

This large and black species, so well distinguished by its dull and only slightly shining surface, deeply punctured prothorax, excessively minute scutellum, the enormous punctures of its elytral striæ, and by the two hinder tibiæ of its male sex being increased, a little before their inner apex, by a slight flattened amplification, or as it were by a small portion suddenly rounded outwards, is apparently not uncommon at low elevations in Teneriffe and Palma. In the former of those islands I have taken it frequently, from beneath stones, in the dry cindery region around the Puerto of Orotava—a locality in which it was likewise found by Mr. Gray; whilst in the latter I met with it, in similar situations, in the Barranco immediately above S^{ta} Cruz.

528. Atlantis tetrica.

A. speciei præcedenti similis, sed vix minor, angustior, nitidior, magis atra et paulo magis glabra; prothorace sensim convexiore, in disco minus profunde et minus dense punctato (punctis minoribus subobsoletis); scutello in utroque sexu majore (sed parvo); elytris ad basin paulo rectius truncatis, striarum punctis vix minoribus.

Mas vix angustior, tibiis posticis intus ante apicem latiusculum leviter excavatis.

Fœm. vix latior, tibiis posticis fere simplicibus.—Long. corp. lin. 4–4½.

Eremnus tetricus, *Schön., Gen. et Spec. Curc.* ii. 542 (1834).
Otiorhynchus simplex, *Brullé, in Webb et Berth. (Col.)* 71 (1838).
Laparocerus tetricus, *Schön., Gen. et Spec. Curc.* vii. 228 (1843).

Habitat Teneriffam, in inferioribus prope Sanctam Crucem sub lapidibus necnon in plantarum bifurcationibus haud infrequens.

From types which have been communicated to me by M. Chevrolat, I am enabled to state for certain that Schönherr's *Laparocerus tetricus* is the Curculionid which I would desire now to characterize —and not the preceding one: indeed the published diagnosis of it, though far from accurate, is sufficiently clear on several points (particularly the punctation of the prothorax) to prevent its being confounded with that insect. Nevertheless it is unquestionably very nearly allied to it—so much so, in fact, that until I had overhauled the two critically I had regarded them as the sexes of a single species. But finding, on closer examination, that I possess males and females of both of them, and which present features which I had at first overlooked, I now perceive that such cannot be the case. It may be known easily from the *A. tibialis* by being, on the average, a trifle smaller and narrower, as well as rather more shining and of a deeper black; by its prothorax being a little convexer and more lightly, finely, and distantly punctured *on the disc*; by its scutellum (although minute) being perceptibly larger than is the case in that insect; by its elytra being a trifle less conjointly-emarginated (or more *straightly* truncated) at their base, and with the punctures of their striæ perhaps less immense; and by the two hinder tibiæ of its male sex being rather scooped-out internally at a short distance from their apex, causing them to appear curved inwards (and rather enlarged) at the tip.

I have observed the *A. tetrica* only in Teneriffe, and hitherto merely at low elevations near S^ta^ Cruz, where it would seem to occupy much the same sort of position as the *tibialis* does around Orotava. It was also found in the vicinity of S^ta^ Cruz by the late Rev. W. J. Armitage; and it has recently been sent therefrom by the Barão do Castello de Paiva, who captured it "in *Cacaliæ* bifurcationibus" in the Barranco Santo.

The *Otiorhynchus simplex* of M. Brullé appeared to me, from the type which I examined in Paris, to be founded on nothing more than an immature example of this species; and indeed his description (such as it is) would, I think, imply that it cannot be referable to the *A. tibialis*, since he expressly states of the prothorax, "sa surface inférieure et latérale est fortement ponctuée; sa surface dorsale est au contraire presque dépourvue de points."

529. **Atlantis angustula.**

A. angustulo-subcylindrica, atra, subnitida, subtiliter pubescens pi-

lisque elongatis erectis in elytris obsita; rostro crassiusculo, punctato, supra haud concavo, oculis rotundatis, prominentibus; prothorace convexo, per basin ipsissimam subsinuato et distincte marginato, sat profunde subruguloso-punctato punctulisque minutis intermediis valde distinctis parum crebre irrorato; elytris subcylindricis, profunde punctato-striatis; antennis tarsisque piceis; femoribus tibiisque nigris.

In utroque sexu fere similis.—Long. corp. lin. 3–4½.

Atlantis angustula, *Woll., Ann. Nat. Hist.* xi. 219 (1863).

Habitat Canariam Grandem, sub lapidibus in inferioribus et intermediis late diffusa.

This well-defined species appears to be peculiar to Grand Canary, where it is probably universal at low and intermediate elevations. During the spring of 1858 I took it throughout the region of El Monte, particularly on the Bandama mountain; as also, in tolerable abundance, at Arguiniguin, in the south-west of the island; and it was captured by the Rev. R. T. Lowe in the Isleta (to the north of Las Palmas). It may be known immediately by its rather narrow and subcylindric outline, intensely black hue, and minutely pubescent surface (which is studded on the elytra with long, erect additional hairs), by its rather thick rostrum (which is *not* concave above, as is the case with the three preceding species), by its prominent eyes, by its roughly punctured and somewhat convex prothorax (which is strongly margined along its posterior edge), and by its sexes being almost identical in their external features.

Genus 213. **LAPAROCERUS.**

Schönherr, *Gen. et Spec. Curc.* ii. 530 (1834).

As may be gathered from a glance at the following pages, *Laparocerus* plays a most significant part amongst the Canarian *Curculionidæ*—no less than thirty well-defined species having already been detected throughout the archipelago. It is intimately allied to the genus *Atlantis*, which is so strongly expressed at the Madeiras, but which seems to have but few representatives (and those somewhat aberrant ones) in these islands. It would appear indeed that, whilst both genera are found in the two Groups, *Laparocerus* is as essentially Canarian as *Atlantis* is Madeiran—since but three exponents of the former have hitherto been observed in Madeira, whilst of the latter only five *abnormal* ones have yet been brought to light at the Canaries. Apart from minor distinctions, the *Laparoceri* may be known immediately from the *Atlantides* by the construction of their scape—which is excessively slender but *suddenly* clubbed at its extreme

apex, whilst in *Atlantis* that portion of the antennæ is robust and thick throughout, it being *gradually* incrassated from its base.

530. **Laparocerus morio.**

Laparocerus morio, *Schön., Gen. et Spec. Curc.* ii. 531 (1834).
—— ——, *Woll., Ins. Mad.* 360. tab. vii. f. 1 (1854).
—— ——, *Id., Cat. Mad. Col.* 113 (1857).

Habitat in Teneriffa et Gomera, mihi haud obvius, a Barone "Castello de Paiva" benigne communicatus.

The *L. morio*, which absolutely swarms throughout every portion of the Madeiran Group, has not yet come beneath my own observation in these islands. Nevertheless three specimens of it have been communicated by the Barão do Castello de Paiva which I can have no doubt are (as they profess to be) truly Canarian, so that I have not any hesitation in admitting the species into this Catalogue. Two of these, he informs me, were captured by himself on a dry cindery hill near Orotava in Teneriffe, whilst the other was sent to him by a Spanish correspondent from Gomera.

The *L. morio* may be known from all the other *Laparoceri* here enumerated by its dark hue and dull, most minutely pubescent (but often obscurely subtessellated) surface; by its convex, subglobose prothorax (which is regularly punctured and densely beset with extremely diminutive punctules between the larger ones); and by the structure of its tibiæ—the anterior four of which are more evidently armed with a minute horizontal spine at their inner apex, whilst the hinder pair of the males have their internal angle largely scooped out, or emarginated, so as to form an obtuse and slightly prominent heel at a considerable distance behind the extremity.

531. **Laparocerus sculptus.**

L. brunneo-niger (immaturus rufo-brunneus), subopacus, minute et densissime sculpturatus necnon pube minutissimâ brevissimâ demissâ ubique confertim obsitus; prothorace angustulo, minute et densissime punctulato; elytris convexis, basi subrecte truncatis, callo humerali incrassato, crenato-striatis, interstitiis minutissime et densissime transversim substriguloso-rugatis; antennis pedibusque rufo-ferrugineis.—Long. corp. lin. $5\frac{1}{2}$.

Otiorhynchus sculptus, *Brullé, in Webb et Berth.* (*Col.*) 71 (1838).

Habitat Palmam, in lauretis editioribus humidis, rarissimus.

The nearly opake and very minutely pubescent surface of this large *Laparocerus*, in conjunction with its exceedingly dense but extremely fine sculpture (the head and prothorax being most closely and deli-

cately punctulated, whilst the elytra are roughened by diminutive, transversely-confluent punctules which form as it were irregular *strigæ*), will sufficiently characterize it. Its prothorax, like that of the *L. undatus*, is rather narrow and slightly conical; and its entire colour when immature is of a more or less reddish brown—except the limbs, which are pale rufo-ferruginous. Hitherto I have met with it only in the laurel-districts of the island of Palma, where it would seem to be extremely rare in damp spots of intermediate and rather lofty elevations. I captured the four specimens (female ones) from which the diagnosis has been compiled towards the upper extremity of the Barranco de Galga, and on the ascent of the Cumbre above Buenavista*.

532. **Laparocerus undatus**, n. sp.

L. subellipticus, niger, obsoletissime subænescens, subnitidus; rostro longiusculo; prothorace angustulo, inæqualiter subpunctulato-ruguloso et punctis majoribus levibus parce adsperso; elytris basi subrecte truncatis, postice subproducto-acutiusculis, callo humerali incrassato, punctato-striatis, interstitiis undulato-inæqualibus, subrugulosis, punctis perpaucis magnis sed valde levibus notatis et pilis brevibus suberectis cinereis valde remotis obsitis; antennis tarsisque ferrugineis; femoribus tibiisque nigro-piceis.—Long. corp. lin. $5\frac{1}{2}$–$5\frac{2}{3}$.

Habitat in humidis sylvaticis Teneriffæ, supra Taganana captus.

This is perhaps, on the average, the largest of the Canarian *Laparoceri* as yet detected; and it may at once be known by its somewhat elliptic outline (it being rather acute both before and behind); by its only slightly shining, dull-black surface, which has a just perceptible ænescent tinge; and by its elytral interstices being waved (or undulated), less evidently transversely-strigulose than in the *L. sculptus*, but with a few very large though extremely shallow punctures, as well as a few exceedingly distant, suberect hairs, down each. Like the *L. sculptus* it is of the greatest rarity, being attached to similar spots as that insect, though in Teneriffe instead of Palma. Indeed the only region in which I have observed it hitherto is, at a high elevation, on the damp laurel-clad mountains above Taganana —where during May of 1859 I met with the four specimens (all females) from which my diagnosis has been drawn out.

* Although M. Brullé's "description" does not indicate a single character by which his *Otiorhynchus sculptus* could by any possibility be identified, I am nevertheless enabled to state for certain that the present *Laparocerus* is the species to which he referred, having myself examined his type, which still exists at Paris, in the collection at the Jardin des Plantes.

533. Laparocerus excavatus.

L. niger, nitidus, fere calvus; prothorace convexo, minutissime, dense et levissime punctulato punctisque majoribus sed vix profundis parce (in disco antico sæpius parcissime) notato, fere simplici (*i. e.* in medio vix lineato); elytris basi subbisinuato-truncatis, callo humerali valde incrassato, profunde punctato-striatis, interstitiis minutissime transversim substriguloso-rugatis et punctis (versus suturam parvis) remote obsitis; antennis rufo-ferrugineis, pedibus rufo-piceis.

Mas sæpius subnitidior, tibiis anticis intus versus apicem profunde excavatis, posticis fortiter sed parce serratis.

Fœm. sæpius subopacior, tibiis fere simplicibus.

Var. β. lugubris [an species?]. Paulo major, opacior et fere omnino (etiam oculo fortissime armato) calvus; prothorace densius punctato; elytrorum interstitiis magis æqualibus punctulisque minoribus adspersis.—Long. corp. lin. 4–5½.

Laparocerus excavatus, *Woll., Ann. Nat. Hist.* xi. 219 (1863).

Habitat in montibus sylvaticis Teneriffæ, præsertim inter muscos et lichenes ad truncos arborum crescentes, necnon sub ligno marcido latens.

The present insect, which has been observed hitherto only in Teneriffe, is essentially a sylvan one,—the few examples which I have met with in more barren spots being, as I should imagine, the result of an accidental transportation, either through the instrumentality of floods or other contingencies. Thus, for instance, it is rather common on the damp laurel-clad mountains at Las Mercedes (beneath stones, pieces of wood, and under moss and lichen growing upon the trunks of trees); and on one occasion I captured a stray specimen, at an altitude only slightly higher than that of S^ta^ Cruz, even towards the entrance of the Barranco do Passo Alto—*which, however, takes its rise in the Las Mercedes range.* But in the forest districts of intermediate and rather lofty elevations it appears to be pretty widely spread over the island. On the sylvan slopes above Taganana and Point Anaga, as well as at the Agua Garcia, it is by no means scarce.

The *L. excavatus* may be recognized by its dark, shining, and (except under a high magnifying power) almost glabrous surface—there being only a few *longer* hairs at the apex of its elytra; by its convex prothorax, which is a good deal rounded at the sides, most minutely, finely, and densely punctulated, and with larger and deeper punctures (which are usually more or less obsolete on the anterior disc) sparingly intermixed; by the front tibiæ of its male sex being deeply scooped out internally, whilst the hinder pair are powerfully crenulated; and by its elytra being somewhat bisinuated along their basal edge, with

their humeral callus a good deal developed, and with their interstices rather coarsely transversely-substrigulose and studded with remote, shallow punctures—which are tolerably large towards either side, but smaller and less impressed towards the suture.

The few specimens which I have treated, in my diagnosis, as a "var. β" of the present species, and which I hardly imagine can be truly distinct, are a little larger and less shining than the ordinary type, with their prothorax more closely sculptured, with their elytral interstices more *even* (caused partially by the few scattered punctures being smaller), and with their entire surface even balder still,—the minute hairs with which the species is sparingly beset being so diminutive as to be scarcely traceable even beneath the microscope. One of them was taken by Dr. Crotch on the subsylvan mountains above Ycod el Alto; and the remainder by myself at the Agua Garcia.

534. **Laparocerus grossepunctatus**, n. sp.

L. subellipticus, niger (vix obsoletissime subænescens), parum nitidus, parce metallico-squamosus; rostro subgracili, grosse punctato, profunde canaliculato; prothorace parvo, profunde punctato punctulisque minutis intermediis sat dense irrorato, in medio simplici (*i. e.* haud lineato); elytris apice acutiusculis, callo humerali fere obsoleto, profunde punctato-striatis, interstitiis inæqualibus, punctis perpaucis maximis profundis notatis et pilis suberectis valde remotis præsertim postice obsitis; antennis rufo-ferrugineis, pedibus piceis.

Mas tibiis anticis intus versus apicem leviter sinuato-excavatis, posticis intus rectis et minutissime subcrenulatis.

Fœm. tibiis fere simplicibus.—Long. corp. lin. 4.

Habitat in lauretis humidis Teneriffæ, rarissimus.

The only two examples of this *Laparocerus* which I have yet seen were captured by myself in Teneriffe, on the damp laurel-clad mountains above Taganana, during May of 1859. The species may easily be known by its rather narrow and deeply channeled rostrum, by its somewhat small and coarsely punctured prothorax, by its surface being more or less sparingly tessellated with metallic scales, and by the immense punctures of its elytral interstices. It is the last of these characters, in conjunction with its somewhat narrower rostrum and its *totally* unkeeled and rather less basally-margined prothorax, which appears to distinguish it *principally* from the *L. squamosus*.

535. **Laparocerus squamosus.**

L. niger vel piceo-niger, parum nitidus, parce metallico-squamosus; rostro crassiusculo, grosse longitudinaliter striguloso-punctato, pro-

funde canaliculato; prothorace angustulo, profunde punctato punctulisque minutis intermediis irrorato, in medio obsolete carinato, per basin anguste sensim marginato; elytris callo humerali fere obsoleto, profunde punctato-striatis, interstitiis punctis valde perpaucis levibus notatis et pilis brevibus suberectis remotis præsertim postice obsitis; antennis rufo-ferrugineis, pedibus rufo-piceis.

Mas tibiis anticis intus versus apicem vix sinuato-excavatis, posticis intus rectis et minutissime subcrenulatis.

Fœm. tibiis fere simplicibus.—Long. corp. lin. $3\frac{1}{2}$–4.

Otiorhynchus squamosus, *Brullé, in Webb et Berth.* (*Col.*) 71 (1838).

Habitat in sylvaticis intermediis Teneriffæ, rarissimus.

The rather small, deeply and somewhat densely punctured prothorax of this species, which is obsoletely keeled down the middle and narrowly (but conspicuously) margined along its basal edge, combined with its roughly longitudinally-sculptured, rather deeply channeled rostrum, and its coarsely punctate-striated elytra, which (even in unrubbed examples) seem to be but sparingly squamose and studded (particularly on their posterior half) with a few short, very distant, and suberect hairs, will serve to distinguish it from its allies. Its interstices are most remotely besprinkled with a very few shallow punctures, which are nearly evanescent towards the suture; and its posterior male tibiæ are rather sharp and straightened along their inner edge, where they are very minutely and obscurely crenulated. I have little hesitation in identifying it with M. Brullé's *Otiorhynchus squamosus*, since the type of that insect, which I examined in Paris, although a very unsatisfactory one, appeared to agree sufficiently well with the few examples (captured by myself in the intermediate elevations of Teneriffe, namely at the Agua Garcia, the Agua Mansa, and Ycod el Alto) from which the above diagnosis has been drawn out. M. Brullé's *description* applies equally to the whole of these immediate species, containing no allusion to any single feature which could possibly be regarded as diagnostic.

536. **Laparocerus crassirostris**, n. sp.

L. angustulo-elongatus, subdepressus, fusco-piceus, subnitidus, parce metallico-squamoso-tessellatus sed pilis superadditis fere carens; capite crasso, minutissime et dense punctulato, rostro brevi crasso subquadrato vix canaliculato sed postice inter oculos foveâ magnâ profundâ impresso; prothorace brevi, apice subsinuato-truncato, minute et dense punctulato punctisque majoribus (sed haud magnis) sat crebre obsito; elytris elongato-suboblongis, punctato-striatis; antennis rufo-ferrugineis; pedibus rufo-piceis.

Mas (nisi fallor) tibiis (etiam posticis) intus simplicibus.

Fœm. adhuc latet.—Long. corp. lin. $3\frac{2}{3}$.

Habitat in montibus Canariæ Grandis; mense Aprili A.D. 1858 exemplar unicum in pineto quodam excelso regionis "Tarajana" dictæ deprehendi.

In its narrow, elongate outline, its short, thick rostrum, and its apically truncated prothorax, the specimen from which the above diagnosis has been compiled somewhat resembles at first sight a *Brachyderes*; nevertheless its longer antennæ and differently formed *scrobs*, in conjunction with the deeply excavated tip of its rostrum and the excessively minute subhorizontal spine with which the inner angle of its tibiæ is armed, will of themselves at once remove it from the members of that group. Amongst the *Laparoceri* it (or at any rate the sex which I have examined) is remarkable for its slender, elongate form and comparatively depressed, brownish-piceous surface; for its rostrum being short, thick, subquadrate, and densely and minutely punctulated, but only slightly channeled; by its thick forehead having a very deep longitudinal fovea between the eyes; and by its prothorax being rather abbreviated, much truncated (and faintly subsinuate) along its anterior edge, and with the double system of punctures comparatively dense and well defined. The individual described from was taken by myself, during April 1858, in the lofty Pinal of Tarajana, above San Bartolomé, in the centre of Grand Canary.

537. Laparocerus crassifrons.

L. niger vel piceo-niger, parum nitidus, plus minus dense et grosse submetallico-squamoso-tessellatus; capite convexo, crasso, rostro crasso subtriangulari grosse denseque punctato et profunde canaliculato, oculis sat parvis rotundatis; prothorace convexo, punctato punctulisque minutis intermediis dense irrorato; elytris oblongo-subovalibus, callo humerali obsoleto, punctato-striatis, interstitiis vix punctulatis et pilis brevibus suberectis remotis præsertim postice obsitis; antennis rufo-ferrugineis; pedibus rufo-piceis.

Mas angustior, nitidior, elytris profundius striatis.

Fœm. latior, paulo opacior, elytris minus profunde striatis.—Long. corp. lin. $3\frac{1}{2}$–5.

Laparocerus crassifrons, *Woll., Ann. Nat. Hist.* xi. 220 (1863).

Habitat sub lapidibus scoriisque in regionibus valde elevatis Teneriffæ, usque ad 9000′ s. m. ascendens.

The present *Laparocerus*, which is most variable in stature, seems to be peculiar to the lofty altitudes of Teneriffe which are characterized by the presence of the *Spartium nubigena* (or "Retama"), above the sylvan districts, and embracing from about 6000 to 9000 feet above the sea. In such situations it abounds, beneath scoriæ, on the elevated Cumbre adjoining the Cañadas, above Ycod el Alto; as well

as on the *opposite* Cumbre, above the Agua Mansa,—on both of which I met with it in profusion during May 1859, and on the former of which it has lately been captured by Dr. Crotch.

The *L. crassifrons* may be known by its convex head and thick, subtriangular, coarsely punctured rostrum; by its convex and rather densely punctured prothorax (on which the larger and smaller systems of punctures are strongly expressed); by its somewhat oblong-oval elytra (which have their humeral callus and the punctures of their interstices obsolete); and by its surface being more or less clothed with robust, yellowish-brown, and but faintly metallic, piliform scales.

538. **Laparocerus scapularis**, n. sp.

L. fere ut *L. crassifrons*, sed multo minor, rostro graciliore (vix longiore) et minus triangulari, oculis minoribus rotundatioribus et paulo magis prominentibus, prothorace minus profunde sed magis confertim punctato, elytris vix magis pilosis necnon ad apicem ipsum sensim magis deflexis, antennis pedibusque brevioribus et sæpius pallidioribus, illarum scapo magis curvato, horum tarsis sensim angustioribus.—Long. corp. lin. $2\frac{1}{2}$–3.

Habitat Teneriffam excelsam, in iisdem locis ac præcedens: sub lapidibus et scoriis inter arbusculas *Spartii nubigenæ* humi jacentibus etiam ultra 9000′ s. m. ascendit.

In habits the *L. scapularis* does not differ from the *L. crassifrons*, with which indeed it is found in company—on the elevated Cumbres of Teneriffe, from about 6000 to at least 9000 feet above the sea. It may, however, be easily recognized from it by its considerably smaller bulk; by its rostrum being slenderer, and (though scarcely longer) rather *straighter* at the sides, or less triangular; by its eyes being smaller, rounder, and more prominent; by its prothorax being less deeply and more closely punctured; by its elytra being usually perhaps a trifle more pilose, and just perceptibly more decurved at their apex; and by its antennæ and legs being shorter and generally paler, with the scape of the former more curved, and the feet of the latter distinctly narrower. I took it less abundantly than the *L. crassifrons*; and I have three specimens now before me which were captured on the Cañadas by Dr. Crotch.

539. **Laparocerus æthiops**, n. sp.

L. ater, nitidus, calvus; rostro subconcavo, sat profunde longitudinaliter punctato, leviter canaliculato; prothorace subconvexo, ad latera rotundato, æqualiter et sat profunde punctato punctulisque minutissimis intermediis indistinctis irrorato; elytris punctato-striatis, interstitiis punctulis perpaucis minutissimis notatis; an-

tennis tarsisque ferrugineis; femoribus tibiisque piceo-nigris, genibus rufescentioribus.—Long. corp. lin. $3\frac{1}{2}$–4.

Habitat in montibus ins. Hierro, sub lapidibus in graminosis apertis degens.

The bald, shining, and intensely black surface of this species, combined with its rather excavated, or concave, rostrum, its evenly punctured and laterally-rounded prothorax and the excessively minute punctules of its interstices, will serve to separate it from all the other *Laparoceri* here enumerated. So far as I have observed hitherto, it is confined to the lofty elevations of Hierro—where, on the 21st of February 1858, I met with it, beneath stones, on the open grassy Cumbre immediately above the district of El Golfo, whilst crossing the (comparatively flat) mountain-region which constitutes the central ridge, or backbone, of that remote island.

540. **Laparocerus hirtus**, n. sp.

L. niger, vix subænescens, nitidus, parce submetallico-squamoso-tessellatus pilisque longissimis mollibus erectis præsertim in elytris obsitus; prothorace parvo, breviusculo, subconvexo, grosse punctato sed punctulis intermediis minutissimis fere obsoletis; elytris oblongis, profunde punctato-striatis, interstitiis alternis (præsertim postice et ad latera) tuberculato-inæqualibus, tuberculis paulo squamoso-fasciculatis; antennis tarsisque ferrugineis, femoribus tibiisque ferrugineo-piceis.—Long. corp. lin. vix 4.

Habitat in montibus Canariæ Grandis, semel tantum lectus.

The exceedingly elongate, soft, and erect hairs with which this *Laparocerus* is rather densely studded (particularly on its elytra), in conjunction with the large but not very deep punctures of its small and transverse prothorax (on which the intermediate punctules appear to be almost obsolete), and its oblong and deeply punctate-striated elytra, which have their alternate interstices (at any rate towards the sides and behind) undulated with large and slightly squamose tubercles, will sufficiently characterize it. It is barely possible that it may be but an insular modification (peculiar to Grand Canary) of the following species,—a question, however, which can be decided only by the inspection of further material. The *unique* example from which the above diagnosis has been drawn out was captured by myself on the mountains of Grand Canary (I believe, in the lofty Pinal above San Bartolomé, in the district of Tarajana), during the spring of 1858.

541. **Laparocerus inæqualis.**

L. ænescenti-niger, nitidus, parce submetallico-squamoso-tessellatus

pilisque plus minus elongatis erectis fulvescentibus præsertim in elytris parce obsitus; prothorace parvo, angusto, subcylindrico-conico, sat grosse sed vix profunde punctato punctulisque minutissimis intermediis dense irrorato; elytris latiusculis, subquadrato-oblongis, punctato-striatis, interstitiis alternis valde tuberculato-inæqualibus, tuberculis paulo fulvescenti-squamoso-fasciculatis; antennis, tibiis tarsisque ferrugineis, femoribus ferrugineo-piceis. —Long. corp. lin. 3–4.

Laparocerus inæqualis, *Woll., Ann. Nat. Hist.* xi. 220 (1863).

Habitat Teneriffam sylvaticam, in lauretis editioribus supra Taganam Maio exeunte A.D. 1859 sat copiose deprehensus.

This distinct and beautiful *Laparocerus* appears to be confined to the damp laurel-clad regions of a high elevation in Teneriffe. It may readily be known by its distinctly ænescent tinge; by its surface being more or less sparingly clothed with dull metallic-yellow, or brownish-golden, scales, as well as studded (particularly on the elytra) with distant and suberect fulvescent hairs; by its narrow, subcylindric-conical prothorax being beset with rather large but not very deep punctures, and with the intermediate punctules close and apparent; and by its wide, squarish-oblong elytra having their alternate interstices more powerfully undulated (and fasciculated) with large squamose tubercles than is the case in the *L. hirtus*—an arrangement which causes them to be, also, for the most part, more conspicuously *tessellated* with small tufts of fulvescent, or brownish-golden, scales.

The specimens (34 in number) which I have examined hitherto of the *L. inæqualis* were all brushed from out of the rank fern, and other vegetation, at the edges of the Vueltas leading down to Taganana, through the dense forest of laurels, from the Cumbre above it, during May 1859.

542. **Laparocerus globulipennis,** n. sp.

L. speciei præcedenti similis, sed colore squamisque omnino obscurioribus, elytris sensim rotundatioribus (*i. e.* paulo minus oblongis), ad humeros vix magis prominentibus, profundius punctato-striatis, pilis paulo longioribus, magis mollibus ac minus fulvescentibus obsitis, necnon in interstitiis alternis minus conspicue fasciculato-tuberculatis.—Long. corp. lin. 4.

Habitat in locis similibus ac præcedens, sed in Palma (nec Teneriffa).

The only two examples of this species which I have seen were taken by myself, during May 1858, in the damp laurel-woods towards the upper extremity of the Barranco de Galga, in Palma. It would

seem, therefore, to be the *representative* in that island of the Teneriffan *L. inæqualis*; for I think it would certainly be unsafe to treat it as an insular modification of the same. It may be known from its ally by the altogether darker colour both of its surface and clothing; and by its elytra being a little rounder or more ventricose, with the punctures of their striæ considerably larger, the hairs with which they are studded somewhat longer, softer, and less fulvescent, and with their alternate interstices less conspicuously undulated with obtuse tubercles—the tubercles themselves being not only less elevated, or defined, but also less clothed (and more darkly so) with decumbent scales.

543. **Laparocerus occidentalis**, n. sp.

L. niger vel fusco-niger, subnitidus, parce et obscure submetallico-squamoso-tessellatus sed pilis superadditis carens (tantum setulis minutissimis brevissimis demissis obsitus); rostro subplano; prothorace angustulo, subconvexo, ad latera rotundato, profunde et æqualiter punctato punctulisque minutissimis intermediis distinctis crebre irrorato; elytris ovalibus, latiusculis, crassis, convexis, punctato-striatis; antennis pedibusque breviusculis, robustis, illis tarsisque ferrugineis, scapo curvato; femoribus tibiisque piceis; pedibus posticis præsertim brevibus.—Long. corp. lin. $4\frac{1}{2}$.

Habitat in ins. Hierro, ad rupes humidas sylvaticas excelsas in regione "El Golfo" dictâ mense Februario A.D. 1858 a meipso repertus.

The unique example from which the above diagnosis has been compiled was captured by myself, during February 1858, from amongst vegetation on some wet rocks at a lofty elevation in the island of Hierro—namely, on the wooded mountains above the district of El Golfo. It may readily be known by its large size and only slightly shining, obscure- (though scarcely brownish-) black surface; by its rostrum being somewhat flattened, and with the channel not much impressed; by its prothorax being regularly, evenly, and deeply punctured, with the minute intermediate punctules close and distinct; by its elytra being thick, oval, and convex (the alternate interstices *not* being tubercled as in the three preceding species); by its antennæ and legs (particularly the posterior pair) being rather short and robust (the former, also, having their scape a good deal curved); by its scales being of a dull brownish-metallic hue; and by its surface being free from additional erect hairs, though beset on the elytra (especially behind) with excessively abbreviated and minute decumbent setæ. The *L. occidentalis*, *globulipennis*, *inæqualis*, and *hirtus*, although most distinct *inter se*, belong to much the same *type*; and perhaps the *obtriangularis* might be included with them.

544. Laparocerus obtriangularis, n. sp.

L. niger, vix subænescens, subnitidus, parce metallico-squamoso-tessellatus pilisque longiusculis suberectis robustis nigrescentibus in elytris parce obsitus; rostro angustulo, longiusculo, oculis subdemissis; prothorace subcylindrico, grosse et profunde rugoso-punctato, in disco antico leviter canaliculato; elytris obtriangularibus (basi latis truncatis, ad humeros subporrectis, apicem versus gradatim acutioribus), profunde punctato-striatis; antennis tarsisque ferrugineis; femoribus tibiisque fusco-piceis.—Long. corp. lin. 3.

Habitat Teneriffam sylvaticam, semel tantum lectus.

The only example (a female) which I have yet seen of this *Laparocerus* was taken by myself in the sylvan regions of Teneriffe—I believe, at the Agua Mansa. It may immediately be recognized by its rather elongate rostrum and its subcylindrical, rugosely punctured prothorax, by the obtriangular outline of its sparingly setose elytra (which are wide and truncated at the base, with the shoulders slightly porrect, and gradually acuter to the apex), and by its surface being tessellated with robust, greenish-metallic scales. It is probable, however, that the peculiarity in the shape of its elytra would (as in the case of the *Atlantis canariensis*) be less expressed in the male sex.

545. Laparocerus ellipticus.

L. vel ferrugineus vel piceus, subnitidus, dense et grosse sericeo-metallico-squamoso-tessellatus pilisque elongatis suberectis versus elytrorum apicem obsitus; rostro crasso, leviter canaliculato, oculis magnis; prothorace parvo, angusto, subcylindrico, ruguloso-subalutaceo, parce et leviter punctato, per basin subemarginato; elytris convexis, ovato-ellipticis (versus humeros angustis, inde pone medium gradatim latioribus, sed ad apicem parum subito acutis), basi conjunctim trisinuatis, leviter punctato-striatis, interstitiis alternis plus minus læte tessellatis; antennis subrobustis pedibusque rufo-ferrugineis (femoribus tibiisque sæpe obscurioribus).

Mas vix minor, angustior, tibiis paulo magis curvatis necnon ad apicem internum distinctius uncinatis.

Fœm. vix major, latior, tibiis paulo rectioribus, ad apicem internum fere simplicibus.—Long. corp. lin. 4–5.

Laparocerus ellipticus, *Woll., Ann. Nat. Hist.* xi. 220 (1863).

Habitat in sylvaticis excelsis Teneriffæ et Palmæ, vel inter muscos lichenesque ad truncos arborum crescentes, vel sub cortice laxo latitans.

This large and beautiful *Laparocerus*, which I have observed hitherto only at a rather high elevation within the sylvan districts of Teneriffe and Palma, is at once conspicuous by its sericeous, densely squamose surface (the preponderating colour of the scales being either an obscure metallic green or a pale coppery or golden brown) and

by its peculiar outline,—the prothorax being extremely small and narrow, whilst the elytra are inflated and convex (being much rounded-off at the shoulders, gradually widened to behind the middle, and then suddenly contracted so as to cause the apex to be pointed and acute). In minor respects, it may be known by its large (but not particularly prominent) eyes; by its prothorax (which is subemarginated along its posterior edge) having its punctures rather fine and tolerably distant; by its elytra (which are somewhat trisinuated at their base) having their alternate interstices more or less conspicuously tessellated, and their apical portion beset with a few long and suberect hairs; and by its antennæ being a trifle thicker than is the case in the ordinary *Laparoceri*.

Although by no means common, the *L. ellipticus* appears to be universal throughout the wooded regions of Teneriffe, particularly in the laurel-forests of a rather high elevation. I have taken it by brushing the dense herbage in the rankest and dampest spots, and also from amongst the moss and lichen growing on the trunks of trees, as well as from beneath dead, loosened bark (where it delights to secrete itself). In such situations I have frequently met with it at Las Mercedes, Taganana, the Agua Garcia, &c. It was also captured by the Rev. R. T. Lowe at a lofty altitude on the mountains above the Agua Mansa; and it has recently been communicated by the Barão do Castello de Paiva. During May of 1858 I obtained it, in similar situations, in the island of Palma.

546. **Laparocerus lepidopterus**, n. sp.

L. niger vel piceo-niger, subopacus, dense submetallico-squamoso-tessellatus pilisque plus minus elongatis mollibus erectis in elytris obsitus; rostro crassiusculo, subdepresso, leviter canaliculato, oculis magnis, oblongis, haud valde prominentibus; prothorace ad latera rotundato, in disco leviter sed utrinque profundius subremote punctato punctulisque intermediis valde distinctis dense irrorato, obsolete carinato; elytris oblongo-ovalibus, punctato-striatis; antennis tarsisque rufo-ferrugineis; femoribus tibiisque sæpius obscurioribus.

Var. β [an species?]. Vix minor, colore obscuriore, nitidior, prothorace paulo levius punctato, elytrorum pilis brevioribus. [*Ins.* Canaria Grandis.]—Long. corp. lin. 4–4½.

Habitat in Teneriffa, Palma et Hierro, in sylvaticis rarissimus: "var. β" ad Canariam Grandem pertinet.

The four examples from which the above diagnosis has been compiled, collected in widely distant localities (indeed, each of them, in different *islands*), have perhaps fewer distinguishing characteristics

than is the case with any of the other *Laparoceri* here enumerated; and I feel therefore that further material must be obtained before we are able to pronounce satisfactorily on the limits of the species, and to decide whether or not what I have now regarded as the "var. β" (from Grand Canary) should rank as a separate though nearly allied form. The *L. lepidopterus* appears to be a sylvan insect; and its most marked features seem to consist in its surface being somewhat opake, of a dull piceous-black, and densely tessellated with brownish- or fulvo-metallic scales, whilst its elytra are additionally beset with fine, erect, elongate hairs; in its rostrum being thickish and flattened, and with the central channel but lightly impressed anteriorly; in its eyes being large and oblong, but not very prominent; in its prothorax being rather sparingly punctured (finely so *on the disc*), but with the intermediate punctules dense and conspicuous; and in its oblong-ovate elytra not being very coarsely punctate-striated. Whether the males present any tibial modifications I am unable to state, the female sex only having come hitherto beneath my notice.

Of the specimens now before me, the first ("var. β") was taken in the lofty Pinal of Grand Canary above San Bartolomé (in the district of Tarajana); the second at the Agua Garcia in Teneriffe; the third in Palma (I believe, in one of the wooded Barrancos in the east of the island); and the fourth in the forest-region of El Golfo, on the western slopes of Hierro. The last one has the additional erect pile of its elytra rather shorter than is the case with the second and third; but it does not appear to differ from them in anything essential. The Grand-Canarian one, however, is a trifle smaller, darker, and more shining than the rest, with its prothorax a little more finely punctured and the hairs of its elytra less developed; and it is possible therefore (as already intimated) that *it*, at all events, may be specifically distinct.

547. **Laparocerus seniculus**, n. sp.

L. niger vel piceo-niger, subopacus, sat dense cinereo-metallico-squamoso-tessellatus pilisque longiusculis erectis ad elytrorum apicem solum obsitus; prothorace dense et minutissime punctulato punctisque majoribus sed levissimis, valde remotis (in disco antico fere obsoletis) parce adsperso, carinâ lævi tenui sensim (præsertim postice) instructo, per basin distincte marginato; elytris oblongis, valde profunde punctato-striatis (punctis magnis); pedibus rufo-piceis.—Long. corp. lin. 4.

Habitat in Canaria Grandi, haud procul ab urbe Las Palmas captus.

Although I have but two, imperfect examples of this *Laparocerus*

to judge from, nevertheless, since they certainly cannot be referred to any of the other species here enumerated, I have ventured to treat them as distinct—believing, in addition, that their mere *habitat* alone would of itself tend to that conclusion. They were captured near Las Palmas, in Grand Canary; but whether in the sandy region immediately to the north of the town or on the Isleta, I cannot now exactly recall. Judging therefore from the specimens before me, I may add that the *L. seniculus* appears to be mainly characterized by the *cinereous*-metallic scales with which it is tessellated, and by its surface being free from erect hairs except at the apex of its (oblong and very deeply punctate-striated) elytra. Its prothorax is most densely covered with minute but rather coarse punctules, and has some larger but extremely shallow and distant ones intermixed; whilst a fine and obscure polished keel is traceable down its disc—more especially behind.

548. **Laparocerus rasus**, n. sp.

L. piceo-niger vel piceus, parum nitidus, sericeo-metallico-squamoso-tessellatus sed pilis erectis carens; rostro sæpius rufescentiore, subtereti, supra planiusculo, vix canaliculato sed postice inter oculos foveâ impresso, minute et leviter punctulato; prothorace parvo, minute et leviter punctulato punctisque paulo majoribus sed levibus irrorato, antice sæpius obsoletissime subcarinato; elytris ovalibus, punctato-striatis, interstitiis alternis plus minus distincte tessellatis; antennis pedibusque rufo-ferrugineis; funiculi art° 2^do^ primo sensim longiore.

Mas paulo nitidior, tibiis ad apicem internum distinctius horizontaliter uncinatis, anticis intus vix minutissime subcrenulatis.

Fœm. paulo opacior, tibiis fere simplicibus.

Var. β. Elytris profundius punctato-striatis, pedibus paulo obscurioribus (et vix brevioribus?). [*Ins.* Fuerteventura.]—Long. corp. lin. $3\frac{1}{3}$–$4\frac{1}{3}$.

Habitat in montibus Lanzarotæ et Fuerteventuræ, sat rarus.

The present *Laparocerus* appears to be peculiar to Lanzarote and Fuerteventura—though it is more particularly the former in which I have hitherto observed it, since the single example which I have yet seen from the latter has a few trifling characters of its own in which it differs from the Lanzarotan type; nevertheless I cannot regard them as indicative, at the utmost, of more than a mere insular variety, or phasis, of the species. On the hills above Haria, in the north of Lanzarote, it was taken by Mr. Gray and myself, during January 1858; and I subsequently met with it in the same locality during March of the following year. It was likewise captured, by

the Rev. R. T. Lowe, on the summit of the Monte Famara, more than 2000 feet above the sea.

The *L. rasus* may be known by (*inter alia*) its surface being densely tessellated with fine and sericeous (though metallic) scales, but altogether free from additional erect hairs; by its rostrum (which is only minutely and lightly punctulated, and usually subrufescent) being *comparatively* subcylindric, though flattish above and but obscurely channeled; by its (small) prothorax being delicately and faintly punctured (though with a few somewhat larger, but shallow, punctures intermixed); and by the oval outline of its elytra.

549. **Laparocerus mendicus**, n. sp.

L. fusco-niger, subnitidus, parce cinereo- (vix submetallico-) squamoso-tessellatus setulisque brevissimis suberectis in elytris obsitus; rostro nitidiore, angustulo, concavo-canaliculato, parce et leviter punctato, oculis rotundatis, prominentibus; prothorace parce et profunde punctato punctulisque minutissimis levibus intermediis dense irrorato; elytris ovalibus, profunde punctato-striatis; antennis pedibusque rufo-ferrugineis, his plus minus obscurioribus; funiculi art° 2^do^ primo sensim longiore.

Mas tibiis anticis vix magis sinuatis; posticis intus versus apicem obsolete subserratis.

Fœm. tibiis simplicibus.—Long. corp. lin. 3–3½.

Habitat in ins. Hierro, sub lapidibus in montibus haud infrequens.

The brownish-black surface of this *Laparocerus*, which is sparingly clouded with dull-cinereous scales (which are almost free from any metallic tinge), and has its elytra beset with very short and rather stiff hairs, which are extremely abbreviated, and subdecumbent, anteriorly, in conjunction with its narrowish, concave, somewhat polished and remotely sculptured rostrum, its prominent eyes, its deep and distantly punctured prothorax, and its coarsely punctate-striated elytra, will sufficiently characterize it. As in the case of the last species and the four following ones, the second joint of its funiculus is very distinctly longer than the first. The *L. mendicus* appears to be peculiar to the mountains of Hierro; in which island I captured it, during February 1858, from beneath stones, on the hills around Valverde, as well as on the open grassy Cumbre to the south of S. André.

550. **Laparocerus obscurus**, n. sp.

L. niger, subopacus, minute et parce cinereo-squamoso-irroratus sed pilis erectis carens (versus apicem elytrorum setulis brevibus subdemissis parce obsitus); rostro minute et leviter punctato, concavo-canaliculato, oculis sat parvis, rotundatis; prothorace subconvexo, parum profunde punctato punctulisque minutissimis intermediis

levibus irrorato; elytris subtilissime subalutaceo-rugulosis, punctato-striatis, per basin trisinuatis; antennis pedibusque rufo-piceis; funiculi art° 2^do^ primo multo longiore.

Mas gracilis, tibiis anticis intus versus apicem sat distincte subexcavato-sinuatis.

Fœm. adhuc latet.—Long. corp. lin. 3.

Habitat Teneriffam, a meipso semel tantum repertus.

The unique example from which the above diagnosis has been compiled was captured by myself in Teneriffe; but I have unfortunately no recollection as to its precise locality. I believe, however, that it was probably found either in the vicinity of Orotava or else of S^ta^ Cruz. Luckily the species has such decided characters of its own that a single individual is abundantly sufficient for distinguishing it. Perhaps its most remarkable feature is the comparatively immense length of its second funiculus-joint, which is almost (if not indeed quite) twice as long as the basal one. But apart from this, the *L. obscurus* may be further recognized by its black surface, which is sparingly clothed with minute cinereous scales, or pubescence, but which is free from additional erect hairs; and by its rather opake, subalutaceous, and basally-trisinuated elytra. Its eyes are somewhat small and round; and its prothorax (which is a little convex) is deeply and sharply punctured, but with the diminutive intermediate punctules shallow and not very dense. Its male sex (of which I can alone speak) is slender in outline; but in all probability the females would be broader and more ovate.

551. **Laparocerus gracilis,** n. sp.

L. gracilis, piceus vel fusco-piceus, subnitidus, parce cinereo-squamoso-nebulosus; rostro subconcavo-canaliculato, minute et leviter punctato, oculis rotundatis, prominentibus; prothorace parce punctato punctulisque minutissimis intermediis obsoletis irrorato; elytris elongato-ovalibus, leviter punctato-striatis; antennis pedibusque rufo-ferrugineis; funiculi art° 2^do^ primo sensim longiore.

Mas gracilior (interdum valde gracilis), pilis carens, tibiis anticis intus versus apicem sat profunde excavatis.

Fœm. elytris versus apicem pilis perpaucis suberectis obsitis, tibiis simplicibus.—Long. corp. lin. $2\frac{1}{2}$–$3\frac{1}{2}$.

Habitat Gomeram, in clivis mox supra oppidum Sanctum Sebastianum, Februario ineunte A.D. 1858, captus; in foliis *Chrysanthemi frutescentis* Linn. præcipue gaudet.

This is one of the most distinct *Laparoceri* hitherto detected, and apparently peculiar (so far at least as observed hitherto) to Gomera —where, at the beginning of February 1858, I brushed it from off

the plants of the *Chrysanthemum frutescens*, Linn. (known locally as the "Magarza"), upon the slopes of the low mountain-ridge immediately outside (and to the north of) San Sebastian. It was in tolerable profusion, and many of the specimens were *in coitu*. It was captured also by Mr. Gray, though more sparingly, in the same locality. The *L. gracilis* may be known by its slender outline (particularly of the male sex), by its remotely (but not deeply) punctured prothorax, by its elongate-oval (or elliptic) elytra, which fall away a good deal at the shoulders, and by its surface being more or less clothed, and tessellated, with cinereous scales, which have scarcely any metallic tinge. Its males (which are often extremely narrow) have their front tibiæ a good deal scooped-out towards their apex internally, and are free from additional erect pile; but in the opposite sex there are a few tolerably robust hairs scattered over the apical portion of the elytra.

552. **Laparocerus dispar**, n. sp.

L. fusco-piceus, subnitidus, parce cinereo- (vix submetallico-) squamoso-nebulosus sed pilis erectis carens; rostro nitidiore, subtereti, supra planiusculo vix canaliculato, minute punctulato, oculis rotundatis, prominentibus; prothorace parcissime sed profunde punctato; elytris convexis, punctato-striatis; antennis robustis pedibusque rufo-ferrugineis; funiculi art° 2^do^ primo sensim longiore.

Mas minor, multo angustior, prothoracis punctulis minutissimis intermediis obsoletis, tibiis anticis vix sinuatis.

Fœm. major, multo crassior, prothoracis punctulis minutissimis intermediis distinctis, tibiis simplicibus.—Long. corp. lin. 2–2$\frac{1}{3}$.

Habitat Lanzarotam borealem, sub lapidibus in aridis vix supra "Salinas" captus.

The only four examples which I have yet seen of the present insect were captured on the rocky ground at the base of the lofty cliffs known as the "Risco," immediately behind the Salinas, in the extreme north of Lanzarote. One of them was taken by Mr. Gray, and the other three by myself. The species is remarkable, *inter alia*, for the unusual dissimilarity of its sexes—the females being more decidedly broader and inflated, as compared with the males, than is the case in the generality of the *Laparoceri* hitherto detected. It may be further recognized by its small size and brownish-piceous hue; by its surface being sparingly clouded with cinereous, or fulvo-cinereous, scales, but destitute of erect hairs; by its prothorax being very remotely, but rather deeply, punctured (and with the minute intermediate punctules obsolete in the male sex, but sufficiently conspicuous in the female); and by its antennæ, particularly of the

males, being robuster than in the ordinary *Laparoceri*, and with their scape more *gradually* clavated,—though I think, nevertheless, from its manifest affinity with the species with which I have associated it, that it is better referred to *Laparocerus* than to *Atlantis*.

553. **Laparocerus vestitus**, n. sp.

L. niger vel piceus, nitidus, parce cinereo-squamoso-nebulosus pilisque elongatis erectis mollibus obsitus; rostro leviter punctato, concavo-canaliculato; prothorace minutissime et dense punctulato punctisque majoribus (præsertim versus latera) parce irrorato; elytris oblongo-ovalibus, profunde punctato-striatis, interstitiis densissime sed obsoletissime et levissime subpunctulatis punctulisque paulo majoribus (sed minutis) parcissime irroratis; antennis pedibusque piceo-ferrugineis; funiculi art° 2^do^ primo distincte longiore.

In utroque sexu tibiis inter se fere similibus.

Var. β. affinis. Elytris vix subconvexioribus, minus profunde punctato-striatis sed punctulis minutissimis paulo distinctioribus.—Long. corp. lin. $2\frac{2}{3}$–3.

Habitat Teneriffam, sub lapidibus in inferioribus, passim.

This appears to be the common *Laparocerus* throughout the dry cindery region around the Puerto Orotava, in Teneriffe; and I think I may also add, around S^ta^ Cruz,—for the very slight differences which the examples from that district present, as contrasted with those from Orotava, cannot, I imagine, be regarded, at the utmost, as indicative of more than a local phasis of the species. The *L. vestitus* may easily be known by its surface being sparingly clouded with rather robust subcinereous scales, and beset all over (though particularly on the elytra) with soft, erect, elongate hairs; by its prothorax being densely covered with minute punctules, and remotely studded with larger punctures; by the second joint of its funiculus being considerably longer than the first; and by its sexes being *almost* similar both in outline and tibiæ.

It is possible that what I have treated as the "*var. β*" may be specifically distinct, though (as just mentioned) I do not believe such to be the case. It seems to be the form which obtains around S^ta^ Cruz, and differs from that from the vicinity of Orotava in having its elytra just perceptibly more inflated or convex, and less coarsely punctate-striated, though with their minute and closely-set punctules perhaps more evident.

Around Orotava and the Puerto the state which I have assumed to be the typical one of the *L. vestitus* is universal; in which district it was found also by Mr. Gray. The *var. β* is equally common

in the neighbourhood of S^ta^ Cruz—where I have frequently taken it, and whence it has also been communicated by the Barão do Castello de Paiva.

554. **Laparocerus sulcirostris**, n. sp.

L. niger, subopacus, compactus, parce et obscure subfulvescenti-squamoso-nebulosus sed pilis carens (sc. setulis brevissimis pubiformibus subdemissis ægre observandis obsitus); rostro brevi, subtriangulari, crasso, minutissime punctulato, profunde et argute sulcato, oculis parvis, subdemissis; prothorace subconico, minute et parce punctato punctulisque minutissimis intermediis levibus densissime obsito; elytris parallelo-oblongis, per basin conjunctim subemarginato-truncatis, ad humeros subporrectis, punctato-striatis, interstitiis subtilissime et densissime subalutaceo-rugulosis; antennis pedibusque piceo-ferrugineis; funiculi art^is^ 1^mo^ et 2^do^ elongato-obconicis, subæqualibus.

In utroque sexu (nisi fallor) tibiis fere simplicibus.—Long. corp. lin. $2\frac{1}{2}$.

Habitat in montibus Canariæ Grandis, semel tantum lectus.

The present *Laparocerus* and the following one, in their curiously compact and rather parallel outline and basally subemarginated elytra (causing the shoulders to be comparatively, though slightly, porrect), in conjunction with their thick, subtriangular, sharply channeled rostra, and their small and less prominent eyes, would seem, at first sight, almost to merit *generic* isolation from the species with which I have associated them; nevertheless I cannot detect any structural characters of sufficient importance to warrant their removal from the remainder,—particularly since, in external contour, they (especially, however, the *L. sulcirostris*) are singularly suggestive, albeit on an absurdly diminutive scale, even of the *L. morio*, which is the actual *type* of the group—indeed far more so than is the case with most of the *Laparoceri* here described. And yet, in spite of this, their minute size, and most of their other features, would certainly tend rather to affiliate them with the *L. tessellatus* and its allies than with the comparatively gigantic insects with which I have commenced the genus.

Unluckily I have but a single individual of the *L. sulcirostris* to judge from; nevertheless I believe it to be truly distinct from the following species. It was taken by myself on the mountains above San Mateo, in Grand Canary, during the spring of 1858.

555. **Laparocerus compactus**, n. sp.

L. præcedenti similis, sed minor, subpicescentior, paulo densius squamosus setulisque sensim longioribus (sed brevibus) piliformibus sub-

erectis dense obsitus; oculis etiam subminoribus; prothorace vix densius profundiusque punctulato; elytris per basin vix minus conjunctim emarginatis, interstitiis paulo minus rugulosis (quare minus opacis); tarsis sensim angustioribus, brevioribus; funiculi art^{is} 1mo et 2do (subæqualibus) distincte brevioribus et (præsertim illo) magis obovatioribus (*i. e.* minus elongato-obconicis).—Long. corp. lin. 1¾–2.

Habitat Canariam Grandem, in iisdem locis ac præcedens.

I believe that the four specimens from which the above diagnosis has been compiled cannot be referred to the *L. sulcirostris*, though (as already stated) they have much in common, both in outline and general aspect, with that insect. They are, however, considerably smaller and more densely clothed—both with dull fulvescent scales and short suberect setæ (the latter being very evidently longer than is the case in that species); their eyes are, if anything, even still more minute; their prothorax is a trifle more thickly and coarsely punctulated; their elytra are perhaps somewhat less conjointly scooped out (or more straightly truncated) at the extreme base, and with the interstices less perceptibly rugulose (and therefore rather less opake); their tarsi are narrower and more abbreviated; and the first and second joints of their funiculus (although subequal) are manifestly shorter—the former being *relatively* a little thicker and less obconical (or more obovate).

Like the *L. sulcirostris*, the present species was captured, during the spring of 1858, on the mountains of Grand Canary.

556. Laparocerus tessellatus.

L. ovatus, piceo- vel fusco-niger, subnitidus, interdum obsolete subænescens, cinereo-fulvescenti-submetallico-squamoso-tessellatus sed pilis superadditis fere carens; rostro planiusculo, leviter canaliculato, minute et parce punctulato; prothorace profunde et plus minus dense punctato; elytris convexis, punctato-striatis; antennis pedibusque vel rufo- vel piceo-ferrugineis.

In utroque sexu tibiis inter se fere similibus.—Long. corp. lin. 2–2⅔.

Omias tessellatus?, *Brullé, in Webb et Berth.* (*Col.*) 72. pl. 1. f. 15 (1838).

Habitat in Teneriffa, Palma et Hierro, in intermediis editioribusque hinc inde vulgaris.

This appears to be rather a common insect in certain districts of intermediate and lofty elevations in Teneriffe; and it was taken by Mr. Gray in Palma also, and by myself in Hierro. In Teneriffe (where it was likewise captured by Dr. Crotch) it seems to be widely spread over the island; thus, I have met with it in the laurel-woods above Taganana, at Las Mercedes, La Esperanza, Souzal, the Agua

Garcia, Ycod el Alto, and at the Agua Mansa; as well as, in profusion, on the ascent to the Cumbre above the last of these localities. Although M. Brullé's description and figure are alike absolutely worthless, I am induced to refer his *Omias tessellatus* to the present species through the simple fact of the small *size* which he records for it; for I know of no Canarian *Laparoceri* which would so well tally with it in that respect as this common Teneriffan one and the *L. obsitus*; whilst if it had been the latter to which he wished to allude, he could scarcely have failed to notice the suberect setæ with which that insect is densely studded.

The *L. tessellatus* varies a little according to the region in which it occurs,—being, on the average, somewhat larger, and with the limbs correspondingly a little more developed, within the sylvan districts than elsewhere; though I believe I am able to connect its two extremes of form most completely. As compared with the other *Laparoceri* here described, it may be known by its small size and ovate outline; by its more or less strongly punctured prothorax; and by its (frequently subænescent) surface being obscurely tessellated with cinereous-brown scales (which have often a yellowish, as well as slightly submetallic, tinge), but free from additional erect hairs—it being merely beset with short and subdecumbent setæ which are only traceable beneath a lens.

557. **Laparocerus obsitus**, n. sp.

L. præcedenti similis, sed plerumque paulo minor, setulis suberectis in elytris obsitus; prothorace minus profunde punctato, postice ad latera vix magis rotundato; elytris sensim oblongioribus, ergo ad latera subrectioribus necnon ad humeros paulo minus rotundatis.—Long. corp. lin. $1\frac{3}{4}$–$2\frac{1}{4}$.

Habitat in montibus Canariæ Grandis, hinc inde parum vulgaris.

I am not altogether satisfied that this *Laparocerus* is more than an extreme insular state of the last one; nevertheless, since the *L. tessellatus* seems to remain sufficiently constant in the *three* islands of Teneriffe, Palma, and Hierro, I can scarcely assume that the decided (even though not very important) differences which the Grand-Canarian insect presents can be in any way the result of mere isolation. The main points, however, in which the *L. obsitus* appears to recede from its ally are in its elytra being rather more oblong (or straighter at the sides, and with the shoulders less falling away), and densely beset with suberect setæ, or short stiffish hairs. Its prothorax is a little more finely punctured, and, if anything, perhaps a trifle rounder laterally. It is widely spread over, and somewhat abundant in, the

intermediate and lofty elevations of Grand Canary—where, during the spring of 1858, I captured it throughout the region of El Monte, and also on the mountain-slopes above San Mateo (on the ascent to the Roca del Soucilho), as well as on the ascent to the old Pinal of Tarajana above San Bartolomé.

558. **Laparocerus tenellus**, n. sp.

L. ovatus, niger, subopacus, subtilissime fulvescenti-cinereo-squamoso-tessellatus sed pilis superadditis carens; rostro gracili, grosse punctato-rugoso, canaliculato, oculis minutis, rotundatis, prominentibus; prothorace densissime et argute rugoso-punctato; elytris leviter punctato-striatis, ad apicem subito decurvis; antennis pedibusque brevibus; illis rufo-piceis, ad basin necnon in funiculo clarioribus; his piceo-nigris, tarsis rufescentioribus.

Mas tibiis (præsertim anterioribus) spinâ horizontali armatis.

Fœm. adhuc latet.—Long. corp. lin. $1\frac{1}{2}$–$1\frac{3}{4}$.

Habitat in sylvaticis editioribus Teneriffæ, rarissimus.

Apparently of the greatest rarity,—the only two specimens which I have seen having been captured by myself, from beneath small stones, at the base of the Organo Rocks, above the Agua Mansa, in Teneriffe. It is the smallest of the *Laparoceri* hitherto detected, and one which may immediately be known by its ovate outline and short, slender limbs (of which the legs are blackish-piceous, though with their tarsi, like the base and funiculus of the antennæ, more rufescent); by its rostrum, which is narrow, being closely and coarsely roughened; by its prothorax being very densely and sharply punctured (the punctures being deep and exceedingly closely packed, but not particularly large); by its eyes being minute, rounded, and prominent; by its elytra being finely punctate-striated, and rather suddenly decurved towards their apex; and by its (black and subopake) surface being obscurely tessellated with extremely minute fulvo-cinereous scales, but free from additional erect hairs.

559. **Laparocerus puncticollis**, n. sp.

L. piceo-niger, subnitidus, parce sed grosse cinereo- (vix submetallico-) squamoso-nebulosus pilisque elongatis suberectis mollibus in elytris obsitus; rostro prothoraceque profunde, dense et argute punctatis, illo planiusculo vix canaliculato, hôc sat magno subovali; oculis rotundatis, valde prominentibus; elytris nigrescentioribus (sæpius nigris), suboblongis, punctato-striatis; antennis tarsisque rufo-ferrugineis; femoribus tibiisque rufo-piceis.

Mas tibiis anticis intus versus apicem sat profunde excavatis.

Fœm. tibiis fere simplicibus.—Long. corp. lin. 2.

Habitat in ins. Hierro, die 16. Feb. A.D. 1858 in intermediis parce captus.

This very distinct little species I have observed hitherto only in Hierro—where, on the 16th of February 1858, I brushed five examples of it from off vegetation at the edges of the road about midway between Valverde and the district of El Golfo (at an elevation, I should imagine, of not more than perhaps 1000 feet above the sea). It may at once be known by its deeply, closely, and regularly punctured head and prothorax (the latter of which is *proportionally* a little larger, and more oval, than is the case in the generality of the *Laparoceri*), by its extremely prominent eyes, and by its (oblong) elytra being studded all over with soft, elongate, suberect hairs. Its surface is either black or piceous-black (the head and prothorax being rather more picescent than the elytra), and more or less sparingly tessellated with robust cinereous or fulvo-cinereous (and but slightly metallic) scales. The front tibiæ of its male sex have their inner apical half somewhat conspicuously scooped out.

Genus 214. **TRACHYPHLŒUS.**

Germar, *Ins. Spec.* i. 403 (1824).

560. **Trachyphlœus scaber.**

Curculio scaber, *Linn., Fna Suec.* 176 (1761).
Trachyphlœus scaber, *Schön., Gen. et Spec. Curc.* ii. 490 (1834).
—— ——, *Woll., Ins. Mad.* 394 (1854).
—— ——, *Id., Cat. Mad. Col.* 118 (1857).

Habitat in intermediis Teneriffæ, sub lapidibus, rarissimus.

The common European *T. scaber*, which is universal in Madeira, appears to be extremely rare at the Canaries. Hitherto indeed I have observed it only in the intermediate elevations of Teneriffe—where, at the end of April 1859, I captured a single specimen from beneath a stone on the open Sierra above the Agua Garcia, and, a week later, four more, on a lofty, grassy headland, at the edge of the deep Barranco immediately below Ycod el Alto.

Genus 215. **LICHENOPHAGUS.**

Wollaston, *Ins. Mad.* 389. tab. viii. f. 1 (1854).

561. **Lichenophagus auctus,** n. sp.

L. squamulis minutissimis fusco-nigris et submetallico-fusco-cinereis densissime et obscure tessellatus sed setulis fere carens (sc. brevissimis, ægre observandis); rostro late concavo, argute angusteque canaliculato, antice obscure pallidiore; oculis minutis, demissis; prothorace breviusculo, ad latera fortiter rotundato, argute sed vix grosse punctato, obscure et irregulariter pallido-trilineato, postice

carinâ mediâ brevissimâ lævi instructo; elytris elongato-subovatis (ad humeros gradatim paulo deficientibus, per basin singulatim subrotundatis et postice subito decurvis), suturâ interstitiisque obscure pallido-tessellatis; antennis brevibus, scapo crasso robusto, funiculi artº 2dº aucto (primo sensim majore), reliquis brevissimis subæqualibus moniliformibus.—Long. corp. lin. $2\frac{1}{4}$–$2\frac{1}{2}$.

Habitat ins. Hierro, in clivis inter mare et oppidum Valverde, mense Februario A.D. 1858, sub lapidibus parce repertus.

Of the present *Lichenophagus* I have seen hitherto but five examples, all of which were taken by myself in the island of Hierro, about midway up the ascent from Port Hierro to Valverde, during February 1858; and it is a curious fact that they are totally distinct specifically from others (the *L. subnodosus*, described below) which I captured at a slightly higher elevation, near to Valverde itself. Apart from minor features, the *L. auctus* is remarkable for its comparatively swollen second funiculus-joint—which, if anything, is *altogether* a trifle larger than the first (not merely in length, but even in *breadth*), whilst the remaining articulations are exceedingly short, subequal, and moniliform. In less important particulars, it may be known by its (rather abbreviated) prothorax being a good deal rounded at the sides, with the punctures well defined but not very large, and with the rudiments of a glabrous central keel at the extreme base; by its elytra (which are not very coarsely punctate-striated) being subovate in outline (that is, a little narrowed anteriorly, with the shoulders a good deal falling away, rather suddenly decurved at the apex, and separately rounded along their base); by the setæ of its entire surface being so minute as to be traceable only under a high magnifying power; and by its antennæ being altogether shortish, and with their scape not very much curved.

562. **Lichenophagus tesserula**, n. sp.

L. præcedenti similis sed plerumque lætius tessellatus et setulis sensim longioribus (sed brevibus) obsitus; rostro obscure (nec solum antice) pallidiore; prothorace paulo longiore, ad latera minus rotundato, profundius punctato (punctis magnis), simplici (postice in medio haud carinato); elytris paulo magis oblongis (ad latera sensim rectioribus, per basin conjunctim subemarginatis, ad humeros oblique truncatos vix magis porrectis, et postice minus subito decurvis); antennis vix longioribus, scapo sensim magis curvato et ad basin etiam robustiore, funiculi gracilioris artº 2dº primo angustiore, reliquis brevibus (sed vix brevissimis).—Long. corp. lin. $2\frac{1}{4}$–$2\frac{2}{3}$.

Habitat in inferioribus intermediisque Teneriffæ, hinc inde vulgaris.

This species appears to be widely spread, at low and intermediate elevations, in the north of Teneriffe—where it occurs, during the

winter and (more particularly) the spring months, from the sea-level to an altitude of about 3000 feet. On the rocky ground along the shore, between the Puerto Orotava and the Lazaretto, I have captured it sparingly, from beneath stones; but a little below the altitude of the Villa it becomes more common—being at times, and in certain spots, extremely abundant. It differs from the *L. auctus* in being, on the average, more brightly tessellated, and beset all over with very evident and rigid (though at the same time short) setæ; in its prothorax being more coarsely punctured, a trifle longer, less rounded at the sides, and free from the glabrous abbreviated keel which is there so evident in the centre behind; in its elytra being more oblong (or a little straighter at the sides, with the shoulders more porrect but obliquely truncate, and slightly scooped-out conjointly along the basal edge), as well as more deeply punctate-striated and more drawn-out towards the apex; and in its antennæ being perhaps a trifle longer, with their scape even thicker still (at any rate at the base) and more flexuose, and with their funiculus slenderer—the second joint being distinctly narrower than the first, and the remaining ones somewhat less moniliform.

563. **Lichenophagus persimilis**, n. sp.

L. species *L. tesserulam* simulans, sed plerumque paulo major et squamulis subpallidioribus nebulosus, antennis sensim longioribus et (præsertim in scapo) gracilioribus.

Var. β. seriesetosa. Elytris paulo evidentius setulis subpallidioribus seriatim obsitis. [*Ins.* Palma.]—Long. corp. lin. $2\frac{1}{2}$–vix 3.

Habitat in intermediis Teneriffæ et Palmæ, *var. β* ad hanc solam pertinente.

So very closely does the present *Lichenophagus* resemble the *L. tesserula* that until lately I had regarded it as a variety of that insect; nevertheless, after a careful examination of a very extensive series of them both, I find that (however slightly so) the antennæ of the *L. persimilis* are so *invariably* longer than those of its ally, and with their scape so conspicuously slenderer, that I cannot but believe it to be specifically distinct; and more particularly so since it is not confined to merely a single district, or even island (which would probably be the case were it but a phasis of the other), but is found equally in both Teneriffe and Palma. In minor respects it is, *on the average*, a trifle larger and paler than the *tesserula*; and the Palman examples have the longitudinal rows of short setæ with which the elytra are beset somewhat longer and paler (and therefore more perceptible).

I took the *L. persimilis* in profusion, during May of 1859, from beneath stones, in the Barranco at Ycod el Alto, in Teneriffe—immediately above the bridge; and I also met with the *var. β*, though more sparingly, in the Barranco above S^ta^ Cruz, of Palma, early in June of the preceding year.

564. **Lichenophagus subnodosus**, n. sp.

L. species a *L. persimili* haud valde remota, sed prothorace magis cylindrico (*i. e.* ad latera paulo minus rotundato), elytris setis longioribus crassis robustissimis parce obsitis, interstitiis plus minus elevatis interruptis nodos plus minus distinctos efficientibus, antennarum scapo ad basin sensim graciliore.

Variat squamulis vel fusco-, vel (rarius) etiam submetallico-fusco-cinereis, vel (sæpius) omnino brunneis.

Var. β. subcalva. Elytrorum setis brevioribus. [*Ins.* Hierro.]—Long. corp. lin. 2½–3.

Habitat Teneriffam sylvaticam, in intermediis degens: *var. β* ad insulam Hierro solam pertinet.

The present *Lichenophagus* seems to occur, on the average, at a rather higher elevation than the last one, and to attain its maximum within the sylvan districts of intermediate altitudes. It will probably be found to be universal throughout the central and western portions of the Group, though hitherto I have observed it only in Teneriffe and Hierro. It may be known by its elytra being sparingly studded with rather elongate and very robust (often indeed almost subclavate) setæ, and in having their interstices more or less raised and interrupted, so as to form (greater or less) nodules—in both of which respects it agrees with the *L. impressicollis*; though that insect has those characters not only much exaggerated, but also, apart from the *sexual* peculiarities of its tibiæ, others in addition. In the colour of its scales it is extremely variable; for although the generality of specimens are of a dull uniform brown, more highly developed ones, on the contrary, have often a fusco-cinereous (and occasionally even a yellowish, or slightly metallic) tinge—with sometimes the sutural and sometimes the lateral region paler than the rest of the surface. The only individuals which I have yet seen from Hierro (five in number, and which were captured by myself on the hills immediately outside the town of Valverde) have their bristles considerably shorter than is the case in the Teneriffan ones; but I can perceive nothing about them to warrant the suspicion that they are specifically distinct. I have not been able to detect any appreciable difference in the tibiæ of its two sexes.

The *L. subnodosus* is widely spread over the wooded districts of Teneriffe. I have taken it on the laurel-clad mountains above Taganana, at Las Mercedes, La Esperanza, the Agua Garcia, and the Agua Mansa.

565. **Lichenophagus sculptipennis,** n. sp.

L. species inter *L. subnodosum* et *impressicollem* aliquo modo sita sed (nisi fallor) vere distincta; præsertim elytris multo grossius sculpturatis (punctis striarum maximis, inter se fere subconfluentibus quasi arcte adpressis) bene dignoscitur. Formâ generali et colore, fronte minus profunde excavatâ, prothorace æquali necnon elytrorum setis haud longissimis cum illo congruit, sed antennis rostroque sublongioribus, sculpturâ omnino grossiore et nodis elevatioribus differt.

Var. β [an species distincta?—forsan *L. subnodosi* mera varietas]. Minor, elytris paulo minus profunde sculpturatis.—Long. corp. lin. (*var.* β exceptâ) $2\frac{2}{3}$–3.

Habitat Palmam, in intermediis (præsertim sylvaticis) rarior.

In certain respects the present *Lichenophagus* is intermediate between the *L. subnodosus* and *impressicollis*; nevertheless, apart from minor distinctions, the enormous size of its elytral punctures, which are consequently (even whilst somewhat fewer in number) more closely packed together, will serve, *primâ facie*, to separate it from them both. In the majority of its details, however (as, for instance, its general outline and hue, its less deeply excavated forehead, its unimpressed prothorax, and its shorter setæ), it agrees better with the former of those species than it does with the latter; yet its very much coarser sculpture, in conjunction with its just perceptibly longer antennæ and rostrum and its more developed nodes, would seem to imply that it cannot be referred to it. But what I have regarded as the "*var.* β" I am more doubtful about, being far from sure that at any rate the few specimens of *it* which I have examined are more than the exponents of a mere insular state of the *subnodosus*—from which they seem mainly to differ in the rather more coarsely punctured striæ of their elytra. Until, however, further material has been obtained, I prefer keeping them in their present position—though their smaller size and less deeply sculptured surface do apparently tend to remove them from their assumed type.

The *L. sculptipennis* (both in its normal state and the "*var.* β") I have met with hitherto only in the intermediate elevations of Palma—in which island I captured it sparingly, during June of 1858, in the Barranco above S^ta^ Cruz, as well as in the laurel-woods on the ascent to the Cumbre above Buenavista.

566. **Lichenophagus impressicollis**, n. sp.

L. species *L. subnodoso* et *sculptipenni* affinitate proxima, sed plerumque paulo major, nigrescentior; elytris quadratioribus, multo magis nodosis setisque multo longioribus obsitis; rostro et fronte valde profunde excavato-concavis; prothorace basi sensim angustato, profundius punctato, conspicue inæquali (sc. in disco late longeque impresso necnon utrinque foveâ mediâ laterali subrotundatâ obscuriore notato).

Variat elytris ad humeros necnon in fasciâ postmediâ valde fractâ plus minus obsoletâ niveo-squamosis.

Mas tibiis anticis intus minutissime serratis necnon ante apicem sat distincte subexcavato-sinuatis.

Fœm. tibiis anticis sensim latioribus, intus glabris rufo-ferrugineis simplicibus et ante apicem minus (tamen evidenter) subexcavato-sinuatis.—Long. corp. lin. $2\frac{1}{2}$–3.

Habitat Teneriffam sylvaticam, in lauretis ad Las Mercedes et supra Tagananam haud infrequens.

This is the only *Lichenophagus* in which I have been able to detect any sexual modifications (at all appreciable) in the anterior tibiæ. Even in this one indeed the characters, however decided, are rather small; nevertheless, when carefully inspected, it will be seen that the males have their front tibiæ very minutely serrated internally, and rather conspicuously sinuated (or subemarginate) before the apex, whereas in the opposite sex the tibiæ are not only a trifle broader and less evidently scooped out, but likewise with their inner surface *glabrous*, rufo-ferruginous, and shining, and perfectly simple along the edge. But, apart from this sexual peculiarity, the *L. impressicollis* is well distinguished by its somewhat dark surface (which in fresh and highly coloured examples is often ornamented with a few small dashes of snowy-white scales—particularly at the shoulders and across the hinder disc of the elytra, in which latter position they occasionally assume the form of a broken, transverse fascia); by its forehead (or perhaps, more properly, the base of its rostrum) being *very* widely and deeply concave; by its prothorax (which is perceptibly narrowed at the base and most coarsely punctured) being *uneven* (that is, with a broad but rather shallow impression along the fore disc, which is gradually contracted posteriorly, as well as with an obscurer and rounded one on either side about the middle); and by its elytra being comparatively square, considerably wider at the shoulders than the prothorax, with their nodes greatly developed and sparingly beset with extremely elongate setæ. It is, on the average, a trifle larger than any of the *Lichenophagi* as yet detected.

The *L. impressicollis* is eminently a sylvan insect. Indeed hitherto

I have observed it only in the laurel-forests on the north-eastern mountains of Teneriffe—at Las Mercedes, Taganana, and towards Point Anaga—where (like the *Tarphii*) it occurs beneath stones and pieces of rotten wood in damp, shady spots.

(Subfam. BRACHYDERIDES.)*

Genus 216. HERPYSTICUS.

Germar, *Ins. Spec.* i. 413 (1824).

The genus *Herpysticus* (which seems to be peculiarly Canarian) is remarkable for the large and apterous insects which compose it, and which reside under stones in the most dry and barren places,—the only instance in which I have ever observed them elsewhere being on one occasion, at the Banda, in Palma, where they were tolerably common on the flowers of the *Opuntia tuna*, or Prickly Pear. Their antennæ are exceedingly short; and the funiculus appears at first sight to be only 6-articulate, but this merely arises from the fact of

* I may insert here, as its probable right location, a reputed Teneriffan weevil, the original type of which has been lent me by M. Chevrolat (in whose collection it exists)—the *Curculio cribrarius* of Olivier. Schönherr, who (by his own admission) never examined it at all, followed Dejean and placed it in *Geonemus*—to which, however, it clearly does *not* belong; and I think it is far more likely that M. Jekel's conjecture is nearer the truth, that it should be assigned to the South-African genus *Catamonus* [Schön., Mant. Curc. 422]. It does not, however, accord precisely with the published *diagnosis* even of *Catamonus*; nevertheless, in the absence of a type to judge from, I am content to cede it to that group provisionally,—the following short description being sufficient, I think, to determine at any rate the *species* (with which more particularly I am now concerned). Although recorded by Olivier as a Teneriffan insect, I do not apologize for refusing it a place in this Catalogue *except in a foot-note*, because I suspect that some mistake may have arisen as to the country from whence it was obtained, and I am loth to admit anything into the body of the work which rests upon doubtful evidence. Considering the enormous mass of Canarian material which has passed under my eye, I am at least in a position to offer an opinion as to the *probability*, or otherwise, of its supposed *habitat* being correct; and I am bound to add that it recedes so entirely from all the *Rhynchophorous types* which I have yet seen from these islands, that I cannot but believe that it must have been erroneously referred to them.

Catamonus? cribrarius.

C. elongato-ovatus, squamulis submetallico-fuscis et submetallico-cinereis densissime tectus; rostro longiusculo, obsolete tricarinato, apice subdilatato; oculis oblongis, demissis; prothorace parvo, subtriangulari, rugoso-punctato, angulis posticis subrectis, obsolete canaliculato; elytris profunde punctato-striatis, apice singulatim acuminatis sed haud divaricatis, singulis intra apicem subgibbosis, puncto discali medio albido ornatis necnon ad marginem obsolete subalbido-irroratis, interstitiis alternis obsoletissime subelevatis; antennis pedibusque longiusculis, subgracilibus.—Long. corp. lin. 6.

Curculio cribrarius, *Oliv., Ent.* v. 83. 348. tab. 24. f. 344 (1807).
Geonemus cribrarius, *Dej., Cat.* (edit. 3) 284 (1837).
—— ——, *Schön., Gen. et Spec. Curc.* vi. 214 (1842).

Habitat "in Teneriffa" (sec. cl. Olivier), mihi non obvius; forsan ex Africâ australi deportatus.

the seventh joint being much enlarged, and so closely applied to the club that it seems to (and in fact, in some measure, does) form a portion of it. Their tibiæ are minutely serrated along their inner edge; and their prothoraces are rather uneven, having a tendency (more or less expressed in the several races and species) to be branded with a transverse irregular fovea, or flexuose line, on either side in the middle, and two small rounded impressions (which are often nearly obsolete, and always a good deal concealed beneath the minute, hardened, granuliform scales with which the surface is covered) on each side of the central line on the disc. I have constantly captured them *in coitu*; but after a most careful comparison of the two sexes, I can detect no external differences between them, either in outline or structure, unless it be that the males are occasionally just perceptibly narrower and with their legs a trifle more robust.

The *Herpystici* are essentially variable, both in stature and clothing, assuming slightly different phases according to the region which they inhabit, but which pass so imperceptibly into each other (however opposite in the two extremes) that it is impossible to regard any of them as of specific importance. Thus, what I have treated as the type of the *H. eremita* (mainly from the fact of the insect having been originally described from an individual of that particular state), although sometimes small, ascends to a large size and has its elytra usually entirely free from erect hairs—with the exception of a very few towards their apex. This is the form which seems to obtain (subject to trifling modifications) throughout Teneriffe, Gomera, and Palma. But in certain districts of Grand Canary the examples have the additional pile not confined merely to the apex, but more or less developed over the entire surface of the elytra,—the hairs being sometimes short, decumbent, and but faintly traceable (at any rate anteriorly), sometimes considerably longer and more erect, whilst at others they are exceedingly elongated, fine, and thickly set together. Nevertheless I have observed so many instances in which this development of the pubescence is unmistakeably a mere topographical character and not a specific one—as in the *Piotes inconstans* of the *Ptinidæ*, and the *Sitones latipennis* of the present family—that I do not consider it so significant as it might at first sight appear to be.

§ I. *Funiculi articuli primus et secundus inter se longitudine subæquales* (i. e. *secundo primo vix longiore*).

567. Herpysticus eremita.

H. elongatus, niger, squamis minutis duris granuliformibus (vel fusco-

cinereis vel submetallico-fuscis) nebulosus; capite prothoraceque leviter rugose subpunctatis, rostro longitudinaliter canaliculato, hôc subinæquali (utrinque foveâ irregulari transversâ mediâ laterali necnon punctis duobus sæpe obsoletis juxta canaliculam discalem impresso), mox intra apicem anguste constricto; elytris elongato-ovatis, striato-punctatis; antennis brevibus; pedibus elongatis, crassis.

α (*status typicus*). Elytris sat profunde striato-punctatis, pilis erectis (etiam versus apicem) fere carentibus.

β. subvestita. Elytris, præsertim postice, pilis erectis mollibus sed haud dense obsitis.

γ. lanata. Paulo magis rugulosa squamisque pallidioribus vestita, elytris pilis erectis mollibus elongatis cinereis densissime obsitis et minus profunde striato-punctatis.—Long. corp. lin. 5–8.

Curculio eremita, *Oliv., Ent.* v. 85. 321. tab. 24. f. 383 (1807).
Herpysticus læsicollis, *Germ., Ins. Spec.* i. 413. tab. 2. f. 3 (1824).
—— ——, *Schön., Gen. et Spec. Curc.* i. 556 (1833).
—— eremita, *Brullé, in Webb et Berth.* (*Col.*) 72 (1838).

Habitat Canariam, Teneriffam, Gomeram et Palmam, sub lapidibus in aridis degens.

With the exception of the typical one (or that from which the insect was originally described), I have given names to the states indicated above of this variable Curculionid, in case that either the *β* or *γ* should prove eventually to be specifically distinct. My belief, however, is, as before expressed, that they cannot be so regarded; for I think that I am able to complete the passages between the whole of them, and that it is impossible therefore to look upon them as more than topographical varieties—brought about by surrounding circumstances and the more or less calcareous nature of the regions in which they occur. Indeed the *tendency* which many insects possess of having their clothing more developed in sandy and calcareous districts than elsewhere I have more than once had occasion to comment upon, though for what purpose they should be thus additionally pubescent I am quite unable to conjecture. Certainly, however, it appears to be a fact,—no less than that *scaly* species are apt to have their scales perceptibly whiter, or more cinereous, in such localities.

In accordance with the above remarks, it appears to me that this unstable insect is, on the average, rather darker and larger in the more western islands of the Group—Teneriffe, Gomera, and Palma (and doubtless Hierro also, though I did not happen to meet with it there)—than it is in Grand Canary,—and that its elytra are usually almost entirely free from additional erect hairs, with the exception of a very few towards their apex. It was from a Teneriffan specimen that it was originally described—as I am able to vouch for cer-

tain, since M. Chevrolat has kindly communicated to me an Olivierian *type* from his collection. In Grand Canary, however, the examples show a more evident *tendency* to become pubescent,—even the comparatively bald ones being seldom free from traces of a slight additional pile; whilst some (as those from the arid neighbourhood of Las Palmas) have the hairs much more developed, and others (as is the case in the sandy region of Maspalomas, in the extreme south of the island) are excessively pilose and of a paler hue—being densely beset with very fine, woolly, elongate cinereous hairs. These last I have indicated as the "γ. *lanata*." Assuming therefore that I am correct in regarding these states as conspecific with each other, the *H. eremita* may be said to be universal throughout the low and intermediate elevations of (at all events) Grand Canary, Teneriffe, Gomera, and Palma—in each of which I have taken it, more or less abundantly. From Teneriffe it has likewise been communicated by the Barão do Castello de Paiva; where, as well as in Gomera, it was captured by Dr. Crotch.

§ II. *Funiculi articulus secundus primo distincte longior.*

568. **Herpysticus calvus,** n. sp.

H. præcedenti similis sed paulo minor; capite prothoraceque minus sculpturatis, illo sæpius canaliculâ longiore impresso et plagâ parvâ obscurâ frontali albidiore distinctius ornato, oculis paulo magis prominentibus, hôc minus inæquali; elytris vix magis ovatis, plus minus brunneo-subtessellatis, fere calvis, profunde striato-punctatis, interstitiis minus rugulosis; antennis pedibusque paulo gracilioribus et sæpius minus pilosis.—Long. corp. lin. 4½–6.

Herpysticus eremita, *Hartung* [nec *Oliv.*], *Geolog. Verhältn. Lanz. und Fuert.* 141 & 142.

Habitat in Lanzarota et Fuerteventura, sub lapidibus, passim.

After allowing so wide a range for variation in the *H. eremita*, it may perhaps appear inconsistent, *primâ facie*, that I should regard the present insect as distinct from it; nevertheless, not to mention its many other features, I believe that the fact of the second joint of its funiculus being so much more evidently longer than the basal one is a *structural* character which would of itself suffice to establish its specific claims. Apart from this, however, it has many peculiarities essentially its own. Thus, it is on the average a trifle smaller than the *eremita*; its head and prothorax (when deprived of their scales) are less sculptured, and the former of these has the rostral channel usually somewhat longer, the eyes more prominent, and (in unrubbed specimens) a more decided (though small) paler frontal patch, whilst

the latter is less *uneven* (or with the inequalities shallower); its elytra are generally more ovate (or a little rounder behind the middle), perfectly free from erect pile, and with the interstices less rugulose; and its antennæ and legs are both slenderer and less hairy.

In addition to the above particulars, the *H. calvus* seems to be restricted to Lanzarote and Fuerteventura, where it takes the place of the *eremita* which is so universal throughout the remainder of the archipelago. In the latter of those islands it was found also by Mr. Gray, and examples have likewise been communicated from them by the Barão do Castello de Paiva. That it is the species which M. Hartung registers as the "*H. eremita*, Oliv." there can be no doubt, for I have received one of his specimens, thus named, from Dr. Heer who compiled the Catalogue.

569. **Herpysticus oculatus,** n. sp.

H. calvo similis, sed paulo minor squamisque albidioribus tectus; oculis subminoribus, multo magis prominentibus; prothorace variolis profundis parce impresso; elytris pilis brevibus albicantibus subdemissis distinctius obsitis; antennis (paulo brevioribus et picescentioribus) pedibusque vix gracilioribus ac paulo magis pilosis.—Long. corp. lin. 4–5.

Habitat in calcariis intermediis Lanzarotæ, rarior.

Although very closely allied to the preceding one, the present *Herpysticus* must, I think, be regarded as distinct. It appears to be, on the average, a trifle smaller than the *calvus*, and altogether whiter or more cinereous; its eyes are somewhat rounder and very much more prominent; its prothorax, when deprived of its scales, will be seen to be pitted with large and deep varioles; its elytra are rather more evidently beset with a short, silvery, subdecumbent pile; and its limbs are perhaps a trifle slenderer,—the antennæ being, also, perceptibly shorter and more picescent, whilst the legs are rather more hairy. Hitherto I have observed it only in calcareous districts of Lanzarote, but it will probably occur in Fuerteventura likewise. My specimens were taken, on the 22nd of January 1858, from beneath stones, on the arid hills between Haria and San Miguel de Teguise; and I have a single Lanzarotan example which was captured by M. Hartung.

Genus 217. **THYLACITES.**

Germar, *Ins. Spec.* i. 410 (1824).

The only member of this genus which I have detected hitherto at the Canaries belongs to a small and rounded type which has much the appearance, *primâ facie*, of a *Cneorhinus*; and which further re-

cedes from the ordinary *Thylacites* in having its funiculus-joints free from rigid setæ, its prothorax comparatively narrow and cylindric, and its third tarsal joint very much less expanded or bilobed. From the *Cneorhini*, however, it may immediately be known by, *inter alia*, its rostrum being less deeply excavated at the tip, by its scutellum not being visible, and by its surface being studded with long and erect hairs. Its legs also are slenderer than is the case in the representatives of that group,—the tibiæ, particularly however the anterior ones, being (although *more* evidently fringed with minute spinules) less dilated at their extreme apices.

570. **Thylacites obesulus**, n. sp.

T. densissime albido-squamosus et pilis longissimis suberectis mollibus parce obsitus; capite prothoraceque vix subochraceo-tinctis, hôc angusto, subcylindrico, mox ante basin transversim constricto, longitudinaliter vix sublineato-maculato; elytris valde convexis, rotundato-subquadratis, irregulariter nigro-maculatis, maculis valde irregularibus plus minus confluentibus et versus suturam longitudinaliter dispositis; antennis pedibusque rufo-ferrugineis, illis subcalvis, his albo-squamosis; tarsorum articulo tertio vix dilatato.—Long. corp. lin. $2\frac{1}{2}$.

Habitat Lanzarotam; in aridis maritimis arenosis prope oppidum Arrecife, mense Aprili A.D. 1859, exemplar unicum cepi.

A single specimen only of this very distinct *Thylacites* has hitherto come beneath my notice. It was captured, during April 1859, at the roots of sand-plants, on a sandy slope behind the sea-beach of Lanzarote, about a mile to the south of Arrecife.

Genus 218. **SITONES.**

Germar, *Ins. Spec.* i. 414 (1824).

571. **Sitones gressorius.**

Curculio gressorius, *Fab., Ent. Syst.* i. ii. 465 (1792).
Sitones gressorius, *Schön., Gen. et Spec. Curc.* ii. 97 (1834).
Sitona gressoria, *Brullé, in Webb et Berth. (Col.)* 72 (1838).
—— ——, *Woll., Ins. Mad.* 403 (1854).
—— ——, *Id., Cat. Mad. Col.* 119 (1857).

Habitat in Teneriffa, Gomera, Palma et Hierro, super folia *Lupini termis* Forsk. hinc inde sat abundans.

As in Madeira, the *S. gressorius* of Mediterranean latitudes appears to be attached in these islands to the Lupines (*Lupinus termes*, Forsk.), which are often cultivated at intermediate elevations. Under such circumstances I have captured it near Las Mercedes and about Orotava in Teneriffe; in the Barranco above S^ta^ Cruz of Palma;

and near Valverde in Hierro—in the last of which islands, as well as in Gomera, it was found likewise by Mr. Gray. In Teneriffe it was met with also by Dr. Crotch, who informs me that it is called "San Pedro" by the inhabitants.

572. Sitones latipennis.

Sitones latipennis, *Schön., Gen. et Spec. Curc.* ii. 99 (1834).
Sitona verrucosa*?, *Brullé, in Webb et Berth. (Col.)* 72 (1838).
—— latipennis, *Woll., Ins. Mad.* 404 (1854).
—— ——, *Id., Cat. Mad. Col.* 119 (1857).

Habitat in intermediis Canariæ et Teneriffæ, ad folia *Genistæ* degens.

This insect, which is common on the *Genista scoparia* in Madeira, occurs likewise, though less abundantly, at the Canaries—where it is found on the same shrub, as also on the Spanish Broom, at intermediate elevations. I have taken it on the hills at Osorio in Grand Canary, and outside the wood of Las Mercedes in Teneriffe. The specimens from these islands differ from the Madeiran ones in being rather more densely and *whitely* scaly, and in the pile with which their elytra are additionally studded being both longer and much more erect. I am satisfied, however, that this peculiarity of their clothing is merely a geographical one, and does not indicate a separate, closely allied, species; for although the *generality* of the Canarian examples are furnished on their elytra with these erect elongate hairs, still the length of the pubescence *varies considerably* (even in the same locality), so that in some individuals it is as short as in those from Madeira. Moreover I have already shown, in several instances, how variable a character the pilosity is apt to become, under particular circumstances—as in the case of the *Piotes inconstans* of the *Ptinidæ*, and as in the genus *Herpysticus* (already noticed) of the present family. I conclude therefore that, all other particulars being the same, this *tendency* of the pubescence to be more developed in the Canaries than at Madeira is a fact of some local interest but without any specific signification.

573. Sitones punctiger.

S. oblongus, niger, squamis griseis et cinereis variegatus setisque piliformibus demissis obsitus; capite prothoraceque profunde rugoso-

* I have little doubt that M. Brullé's *S. verrucosa* was established on a small example of this variable insect. At any rate the few and unimportant particulars to which he calls attention are, *all* of them, those which belong to the *S. latipennis*, except the one in which he says "le troisième intervalle des stries est petit de sa nature et un peu plus élevé que les autres"; but since the whole of his descriptions which I have yet had an opportunity of testing are wanting in accuracy, I am not disposed to lay much stress upon this character.

punctatis, illo postice punctis duobus cinereis ornato oculis oblongo-rotundatis valde prominentibus, hôc ad latera pallidiore rotundato, lineâ mediâ et punctis 2 vel 3 utrinque annexis pallidioribus ornato; elytris cylindricis, per suturam obscure albidis, interstitiis alternis læte fulvo nigroque tessellatis; antennis ad basin pedibusque (squamosis) clarioribus.—Long. corp. lin. $2\frac{1}{2}$–3.

Sitones punctiger, *Woll., Ann. Nat. Hist.* xi. 220 (1863).

Habitat Lanzarotam et Fuerteventuram, sub lapidibus in aridis arenosis et calcariis degens.

This large *Sitones* is at once remarkable for its deeply sculptured, rounded prothorax (which, in addition to a few scattered and sometimes obsolete ones, has two or three small cinereous punctiform spots on either side of its paler central line); for its cylindric, prettily tessellated elytra (the suture of which is of a more or less obscure chalky white); for its extremely prominent eyes; and for the two subapproximated cinereous specks (similar to those on the prothorax) with which the hinder portion of its head is ornamented. It appears to be very rare (or, at all events, extremely local), and confined to the two eastern islands of Lanzarote and Fuerteventura—in the former of which I took it, not uncommonly, during March and April of 1859, from beneath stones, in the flat sandy district to the south of (and adjoining) Arrecife; whilst, in the latter, I met with it, though more sparingly, a few weeks later, on the calcareous hill immediately outside the little town of S^{ta} Maria Betancuria.

574. Sitones cambricus.

Sitona cambrica (*Kby*), *Steph., Ill. Brit. Ent.* iv. 140 (1831).
Sitones cribricollis, *Schön., Gen. et Spec. Curc.* ii. 101 (1834).
Sitona cambrica, *Woll., Ins. Mad.* 405 (1854).
—— ——, *Id., Cat. Mad. Col.* 120 (1857).

Habitat in Canaria et Teneriffa, rarior.

The European *S. cambricus*, which is common in the east of Madeira and in Porto Santo, is decidedly scarce in these islands—where hitherto I have met with it only in Grand Canary and Teneriffe. In the latter, however, it is widely spread, my specimens being from the vicinity of Orotava, the mountains above S^{ta} Cruz, the Agua Garcia, and the Agua Mansa.

575. Sitones lineatus.

Curculio lineatus, *Linn., Fna Suec.* 183 (1761).
Sitones lineatus, *Schön., Gen. et Spec. Curc.* ii. 109 (1834).
Sitona lineata, *Woll., Ins. Mad.* 406 (1854).
—— ——, *Id., Cat. Mad. Col.* 120 (1857).

Habitat Canariam, Teneriffam et Palmam, præcipue in cultis degens.

This common insect, which is universal throughout Europe, and which occurs also in Madeira, and is recorded by M. Morelet at the Azores, is by no means abundant at the Canaries—where (as in Madeira) it may very probably have been introduced from more northern latitudes. I have, however, taken it about Las Palmas in Grand Canary, around Orotava, &c. in Teneriffe, and in Palma. From Teneriffe it has likewise been communicated by Dr. Crotch and the Barão do Castello de Paiva*.

576. Sitones humeralis.

Sitona humeralis (*Kby*), *Steph., Ill. Brit. Ent.* iv. 138 (1831).
Sitones promptus, *Schön., Gen. et Spec. Curc.* ii. 113 (1834).
Sitona humeralis, *Woll., Ins. Mad.* 407 (1854).
—— ——, *Id., Cat. Mad. Col.* 120 (1857).

Habitat ins. omnes Canarienses, passim, præsertim in aridis calcariis.

* Evidently akin to the *S. lineatus* is a reputed Teneriffan species, which I would briefly describe as follows:—

Sitones setuliferus.

S. oblongus, niger, squamis cinereo-albidis densissime tectus setulisque brevissimis adspersus; capite prothoraceque ad latera obsolete subochraceo-tinctis, illo oculis oblongo-rotundatis, hôc lineâ mediâ albidiore ornato; elytris leviter punctato-striatis, interstitio quarto per discum posticum ochraceo-tincto; pedibus clarioribus, albo-squamosis.—Long. corp. lin. 2¼.

Sitones setuliferus, *Schön., Gen. et Spec. Curc.* vi. 273 (1840).

Habitat (sec. Dom. Chevrolat) in Teneriffa, mihi non obvius.

The above diagnosis has been compiled from a unique specimen which M. Chevrolat has been kind enough to lend me, and which is the actual type described in Schönherr's work. It is somewhat singular that I have met with no other example of the species either amongst the enormous amount of material amassed by myself in these islands, or in the smaller collections formed by others; and I cannot but feel a little doubtful, therefore, whether some mistake may not have arisen as to its *habitat*—more particularly since *another* Curculionid, likewise registered as Teneriffan, from the collection of M. Chevrolat, namely the *Catamonus cribrarius*, and which is so large and conspicuous that it seems scarcely possible that it should have escaped our combined observations (and which, I may further add, has nothing in common with any of the known Canarian *types*), is in exactly the same predicament. My impression is that *both* of them may have come from some other country, and may perhaps have been accidentally mixed up afterwards with insects from Teneriffe. Nevertheless since their published *habitat* cannot be disallowed *until the species have been redetected elsewhere*, and since it is of course *possible* that they may, after all, be truly Canarian, I have thought it desirable to include their diagnoses, at any rate as foot-notes, in this Catalogue, though I cannot without further evidence admit them into the body of the work.

Judging from the specimen before me, the *S. setuliferus* is of about the size of the common *lineatus*, but is much more densely clothed with robust cinereous-white scales, and closely besprinkled with coarser, but very abbreviated, setæ; its eyes are a trifle smaller and less rounded; its prothorax has a most distinct white line down the centre; and its elytra are scarcely ornamented with longitudinal lines. Their third interstice, however, is curiously (though obscurely) *ochraceous* down the hinder disc of each elytron—a colour which is likewise faintly expressed about the shoulders, as also along either side of the head and prothorax. Altogether it appears to me as though it might be a *small* and rather highly-coloured variety of a species which I have received from Dr. Schaum under the name of *S. alternans*; though, with only a solitary example (of *both*) to judge from, it is of course impossible to say this for certain.

The European *S. humeralis*, which is scattered sparingly over the Madeiran Group, is *universal*, though by no means common, at the Canaries—in the whole seven islands of which I have myself captured it. In Palma it was likewise found by Mr. Gray, and from Teneriffe it has been communicated by Dr. Crotch and the Barão do Castello de Paiva. It occurs more particularly in dry, calcareous spots.

577. Sitones setiger.

S. oblongus, niger, squamis griseis inæqualiter vestitus; capite prothoraceque densissime et profunde rugoso-punctatis, illo oculis oblongo-rotundatis prominentibus, hôc subcylindrico, intra apicem (subelevatum) constricto, ad utrumque latus lineâ paulo albidiore ornato; elytris profunde punctato-striatis, vel obscure variegatis (interstitiis alternis obsolete tessellatis) vel dense fusco aut ochraceo-fusco squamosis, sæpius versus latera squamis albidioribus obscure plagiatis, interstitiis setosis (setis nigrescentibus sed in interstitiis alternis setis albidioribus distantibus commixtis); antennis (brevibus) pedibusque rufo-ferrugineis, capitulo femoribusque obscurioribus.—Long. corp. lin. $1\frac{1}{2}$–2.

Sitones setiger, *Woll., Ann. Nat. Hist.* xi. 221 (1863).

Habitat in aridis insularum Canariensium, in Palma solâ hactenus haud detectus.

Judging from the diagnosis, this little *Sitones* is probably allied to the *S. seriesetosus*, Schön., from Egypt. Unless, however, the published description of that insect is so inaccurate as to be absolutely worthless, the two species cannot possibly be identical; for the prothorax of the *seriesetosus* is said to be *remotely* and *lightly* punctured, and with two *approximated* paler lines down its disc, whereas that of the *setiger* is most densely and coarsely so, with the longitudinal lines extremely wide apart (being in fact completely lateral); then, its elytra are described as "*tenuissime* punctato-striata" and with the interstices alutaceous, whereas in the Canarian insect they are deeply punctate-striated, and the interstices (which are shining) have not the slightest tendency to be alutaceous; and, lastly, the eyes of the Egyptian species are stated to be round, whereas (although a little variable in outline) they are never quite round in the *setiger*, being more frequently oblong.

There can be little doubt that the *S. setiger* is universal throughout the archipelago, though it does not happen to have been observed in Palma; but in Lanzarote, Fuerteventura, Grand Canary, Teneriffe, and Hierro I have taken it, more or less abundantly; and in Gomera it was captured by Dr. Crotch (who also met with it in Grand Canary and Teneriffe). In Lanzarote, Fuerteventura, and Teneriffe it was

found likewise by Mr. Gray. It occurs principally in dry spots at low and intermediate elevations—often abounding around S^ta^ Cruz and Orotava in Teneriffe; as also near Las Palmas and throughout the region of El Monte in Grand Canary.

Genus 219. **BRACHYDERES.**

Schönherr, *Curc. Disp. Meth.* 102 (1826).

578. **Brachyderes rugatus,** n. sp.

B. elongatus, niger, nitidus, pube subcinereâ demissâ parce tectus; capite prothoraceque punctatis, hôc in disco obsolete canaliculato et ibidem levius punctato; elytris ellipticis, levissime substriato-punctatis, interstitiis minutissime subasperato-punctulatis et transversim rugulosis; antennis pedibusque rufo-piceis.

Mas elytris angustis, vix profundius striato-punctatis, apice obtuse rotundatis.

Fœm. elytris multo latioribus, apice lateraliter subcompressis acutiusculis.—Long. corp. lin. $4\frac{1}{2}$–6.

Habitat Palmam, super folia floresque *Pini canariensis* in elevatis degens.

Both of the *Brachyderes* here described are attached to the foliage and flowers of the *Pinus canariensis*, at lofty altitudes; and although they are certainly very closely related *inter se*, I can hardly suppose them to be insular modifications of the same species. The *B. rugatus* abounds in the old Pinals of Palma—where I observed it in considerable numbers, during June 1858, in that extensive one which clothes the region from the elevated plains known as "Los Llanos" up to the edges of the great Caldeira. It is, on the average, a trifle larger than the *sculpturatus*, and is more thickly beset with a somewhat paler and more decumbent pile; and its elytra are much more finely punctate-striated, with their interstices rather more densely transversely-rugulose.

579. **Brachyderes sculpturatus,** n. sp.

B. præcedenti similis, sed vix minor, pube paulo magis robustâ et erectâ parcius obsitus (pube præsertim ad apicem necnon per suturam sæpius submetallicâ); elytris in utroque sexu multo profundius striato-punctatis, interstitiis minus dense transversim-rugulosis, in sexu fœmineo ad apicem ipsissimum vix minus acutis. —Long. corp. lin. 4–$5\frac{1}{2}$.

Habitat in locis similibus ac præcedens, sed in montibus Canariæ et Teneriffæ (nec Palmæ).

Whilst the last species occurs in the ancient Pinals of Palma, the present one I have observed in those of Grand Canary and Teneriffe

—where it is found in similar spots at a high altitude. On the lofty mountains of the former, above San Bartolomé, in the district of Tarajana, I brushed it, not uncommonly, during April 1858, from off the foliage of the gigantic pine-trees which clothe those elevated slopes; and a month later I met with it in the great Pinal above Ycod de los Vinhos of Teneriffe. It differs from the *B. rugatus* in being perhaps a trifle smaller; in the pubescence with which it is beset being more sparing, but nevertheless a little robuster and more erect, as well as (at any rate posteriorly and along the suture) of a more decidedly metallic tinge; and in its elytra (which are just perceptibly less acute at their extreme apex) being much more deeply punctate-striated, though with their interstices a little *less* closely rugulose.

Fam. 46. BRUCHIDÆ.

Genus 220. BRUCHUS.

Geoffroy, *Ins. de Paris*, i. 163 (1762).

580. Bruchus pisi.

Bruchus pisi, *Linn., Syst. Nat.* i. ii. 604 (1767).
—— ——, *Schön., Gen. et Spec. Curc.* i. 57 (1833).
—— Fabræ ?, *Brullé, in Webb et Berth.* (*Col.*) 71 (1838).
—— pisi, *Lucas, Col. de l'Algérie*, 401 (1849).

Habitat insulas omnes Canarienses, in cultis et granariis vulgaris.

The European *B. pisi* (which occurs sparingly in Madeira) is universal at the Canaries, in the whole seven islands of which, except Gomera, I have myself captured it; and in Gomera it was taken, during the spring of 1862, by Dr. Crotch. In Palma and Hierro it was found likewise by Mr. Gray; and from Teneriffe it has been communicated by the Barão do Castello de Paiva. It is closely allied, at first sight, to the *B. rufimanus*; though, when carefully inspected, it will be seen to be abundantly distinct. Thus, apart from minor characters, it is not only, on the average, a trifle larger and more oblong (seldom, if ever, descending to so small a size as certain examples of that insect), but its antennæ are a little shorter and thicker, its prothorax is somewhat broader, with the lateral angle more prominent and spiniform, its elytral interstices are rather more coarsely punctured, its pygidium (and indeed its entire surface) is more brightly variegated with black and white scales (the two black patches at the apex being larger and more conspicuous), its anterior pair of legs have their femora always darker than the (rufescent) tibiæ and feet, whilst the intermediate tibiæ are more or less rufo-ferruginous at their apex,

its hinder femora are armed beneath with a much longer and more powerful spine, and its third tarsal joint is perceptibly more expanded.

581. **Bruchus rufimanus.**

Bruchus rufimanus, *Schön., Gen. et Spec. Curc.* i. 58 (1833).
—— ——, *Woll., Ins. Mad.* 419 (1854).
—— ——, *Id., Cat. Mad. Col.* 123 (1857).

Habitat insulas omnes Canarienses, in iisdem locis ac præcedens, vulgaris.

This common European *Bruchus*, which occurs also in Madeira (and which has probably been imported into both Groups from more northern latitudes), is, like the *B. pisi*, universal at the Canaries, in the whole seven islands of which, except Gomera, I have myself captured it; whilst in Gomera it was found by Dr. Crotch (who also met with it in Palma). In Lanzarote, Palma, and Hierro it was taken likewise by Mr. Gray; and in Teneriffe by the Barão do Castello de Paiva and M. Hartung. As in the case of its ally, it abounds principally in houses, granaries, and about cultivated grounds.

582. **Bruchus terminatus**, n. sp.

B. fere *rufimanum* simulans, sed paulo minus ovatus; antennis brevioribus, crassioribus, articulis inter se magis transversis; oculis sensim minus profunde excavatis; prothorace ad latera argutius angulato; elytris oblongioribus; tibiis anticis crassioribus, intermediis angustioribus rectioribus necnon ad angulum internum spinâ valde obtusâ subbifidâ terminatis; tarsis intermediis (ut pedibus anticis) læte rufo-testaceis.—Long. corp. lin. $1\frac{3}{4}$.

Habitat Teneriffam, in montibus supra Sanctam Crucem repertus.

Two examples only of this *Bruchus*, captured by myself in Teneriffe (on the mountains above S^ta^ Cruz), have as yet come beneath my notice. The species is very closely allied to the *B. rufimanus*, for which at first sight it might be mistaken; nevertheless, judging from the individuals before me, it is a trifle smaller and more oblong; its antennæ are shorter and thicker, the subclaval joints being more transverse; the excavation of its eyes is not quite so deep (a structure which causes the eye itself to be slightly broader, or less scooped out); its prothorax is more angulated on either side in the centre; its pubescence is browner; its elytra are a little less ovate; its front tibiæ are thicker; its intermediate pair are slenderer and straighter, and are terminated at their inner apical angle by a robust, blunt, upwardly-directed, subbifid spine, or process (which is best seen when the insect is viewed with its abdomen foremost); and its middle feet are, like the whole anterior legs, of a bright rufo-testaceous hue.

583. Bruchus Teneriffæ.

B. ovatus, niger, subtus dense cinereo-, supra inæqualiter cinereo- et fusco-squamosus, antennarum basi pedibusque rufo-testaceis; femoribus (præsertim posticis, subtus denticulo minutissimo interdum ægre observando armatis) tibiisque posticis basi nigris; capite prothoraceque subconico punctatis; elytris tenuiter subcrenato-striatis; antennis versus apicem vel rufo- vel nigro-brunneis.

Mas elytris vix quadratioribus; antennis pedibusque (præsertim tibiis tarsisque posterioribus) longioribus; tibiis posticis sensim gracilioribus, extus minus evidenter subserratis; pygidio æqualiter cinereo-tomentoso (nec nigro-subbimaculato).—Long. corp. lin. $1\frac{1}{4}$–$1\frac{1}{2}$.

Bruchus Teneriffæ (*Steven*), *Schön., Gen. et Spec. Curc.* v. 105 (1839).

Habitat in montibus Canariæ, Teneriffæ et Palmæ, floribus *Spartii* et *Cytisi* gaudens.

Were it not for the *habitat* "insula Teneriffa, in Spartio," it would scarcely have been possible to recognize the present *Bruchus* in the long but inaccurate description given in the 'Gen. et Spec. Curc.'; but as it is, I feel perfectly satisfied that it is the species there referred to. It abounds in certain districts, chiefly of a high elevation, on the mountains of Grand Canary, Teneriffe, and Palma; and on the lofty Cumbre of Teneriffe, above Ycod el Alto and adjoining the Cañadas, as well as on the opposite Cumbre above the Agua Mansa, it absolutely teems—occurring on the flowers of the *Spartium nubigena* (or "Retama"), and being most common from about 7000 to 9000 feet above the sea. Nevertheless it is also found, though less profusely, at lower altitudes: thus, in Grand Canary I have taken it, from off the blossoms of *Cytisus proliferus*, throughout the region of El Monte, as well as on the mountain-slopes above San Mateo (towards the Roca del Soucilho), and on the ascent to the Pinal of Tarajana, above San Bartolomé. And whilst in Palma, during June 1858, I met with it in the great Pinal of the Banda above the plains known as "Los Llanos," on the western side of that island. In Teneriffe it was likewise captured by Dr. Crotch, though sparingly, on the Cañadas.

The *B. Teneriffæ* is remarkable, *inter alia*, for a certain, though not very considerable, sexual dissimilarity which it presents (for I think I can scarcely be mistaken in regarding the two forms now before me as sexes of a single species). Thus, the male (which would seem to be rather the rarer of the two) is, on the average, a little larger and squarer in outline, and has its pygidium more uniformly cinereous (there being no indication of the obscure, ill-defined darker

patches towards the apex which are seldom absent in the opposite sex), and its antennæ and legs are longer;—added to which, the two hinder tibiæ are perceptibly slenderer, and perhaps a trifle less evidently subserrated along their outer edge, than is the case in the females.

584. **Bruchus floricola,** n. sp.

B. minutus, ovatus, niger, subtus dense cinereo-, supra inæqualiter cinereo- et fusco-squamosus, antennarum (robustarum) basi pedibusque rufo-testaceis; femoribus (præsertim posticis, subtus denticulo minutissimo vix observando armatis) tibiisque posticis basi nigris; capite prothoraceque subconico dense punctulatis; elytris striatis, interstitiis subnitidis, leviter subreticulato-rugulosis; tibiis posticis robustis.

Variat antennis vel omnino rufo-testaceis, vel versus apicem obscurioribus.—Long. corp. lin. $\frac{2}{3}$–1.

Habitat insulas Canarienses, in Gomera et Palma solis haud observatus.

This excessively minute *Bruchus* would seem to be the representative in these islands of the Madeiran *B. lichenicola*, which at first sight it very closely resembles. Nevertheless, when accurately inspected, it will be seen to differ from that insect in many particulars. Thus, its antennæ and legs are a little longer and thicker; its femora and two hinder tibiæ are black at their respective bases; the latter are very perceptibly broader and rather less straightened; and the third joint of its four anterior feet is somewhat more expanded. Its elytra, also, are a trifle convexer and less opake; and its prothorax perhaps is a little more deeply sinuated posteriorly.

The *B. floricola* is probably universal throughout the Group, though I did not happen to observe it in either Gomera or Palma; but in Lanzarote, Fuerteventura, Grand Canary, Teneriffe, and Hierro I have captured it, more or less abundantly. It occurs more especially, on flowers, in calcareous spots of intermediate elevations. My Fuerteventuran examples are from Agua Bueyes and the Rio Palmas; the Canarian ones from the vicinity of Tafira (adjoining the region of El Monte); and the Teneriffan ones from the mountains above S^ta^ Cruz. Those from Lanzarote were, I think, taken at Haria, and the Hierro ones in the neighbourhood of Valverde.

585. **Bruchus antennatus,** n. sp.

B. ater sed minute subflavescenti-pubescens, subopacus; capite prothoraceque conico densissime ruguloso-punctulatis; elytris subcrenato-striatis, interstitiis densissime et minute subpunctulato-rugulosis; antennis pedibusque vix dilutioribus; illis in maribus

longissimis serratis, his in utroque sexu elongatis gracilibus; femoribus posticis vix edenticulatis.—Long. corp. lin. $1\frac{1}{3}$–$1\frac{2}{3}$.

Habitat in montibus Canariæ, Teneriffæ et Palmæ, in pinetis parce degens.

This most interesting *Bruchus*, so remarkable for its deep-black hue (the surface, however, being more or less clothed with a very minute, short, decumbent, yellowish- or whitish-brown pubescence), its excessively conical prothorax, slender legs, and the enormous length of its male antennæ, would seem to be extremely rare, though widely spread over the archipelago, and confined (so far at least as I have observed hitherto) to those regions of a high elevation occupied by the ancient Pinals; though, at the same time, I am not absolutely certain that it is in any way actually dependent upon the fir-trees. I have taken it in Grand Canary, Teneriffe, and Palma; in the first of these in the Pinal of Tarajana (above San Bartolomé), in the second at the Agua Mansa (close to a *Pinus canariensis*), and in the third in the great Pinal of the Banda (above the plains of Los Llanos) towards the Caldeira. It will probably be found in all the islands of the Group except Lanzarote and Fuerteventura.

Fam. 47. AGLYCYDERIDÆ.

Genus 221. AGLYCYDERES.

Westwood, *in Proc. Ent. Soc. Lond.* (1863).

Corpus oblongum, subdepressum, rugosum, valde subsquamoso-setosum; *capite* deplanato, *oculis* minutis rotundatis alte prominentibus, in fœmineis triangulari apice truncato, in maribus latissimo necnon ante oculos in cornu utrinque producto et mox pone oculos rigide setoso-penicillato. *Antennæ* rectæ, graciles, filiformes, 11-articulatæ; art° 1mo longiusculo crassiusculo, ultimo elongato-ovali. *Mandibulæ* validæ, breves, crassæ, subtriangulares, obtuse tridentatæ. *Maxillæ* lobis singulis subtriangularibus, intus spinis rigidis curvatis ciliatis, instructæ. *Palpi maxillares* brevissimi, crassi, conici, articulis 1mo, 2do 3^{tio}que brevissimis; *labiales* minuti, conici. *Pedes* breves, crassi, ad basin (præsertim *postici*) parum distantes; *tarsis* brevissimis, 4-articulatis, articulis 1mo et 2do subbilobatis, 3^{tio} minuto, ultimo longiore late clavato *unguiculis* simplicibus munito.

The affinities of this most anomalous genus, which Prof. Westwood has not discussed, are extremely difficult; and whilst placing it in the present position, I do so with the utmost hesitation; for although in many respects it certainly approaches the *Anthribidæ*, yet the structure of its oral organs (as evinced by its triangular mandibles and maxillæ, and its short, thick, conical palpi) is unmistakeably that

of the sub-Rhynchophorous Xylophagous groups (such as *Hylastes*, &c.) at the *opposite* extremity of the *Curculionidæ*. Yet its entire external conformation, particularly of the antennæ, removes it completely from all such forms; whilst its 4-jointed (or "pseudotrimerous") feet (the third articulation being excessively minute) render its relationship still more dubious. Upon the whole, it seems to me to combine *the two opposite extremes* of the *Rhynchophora* (as represented by the *Hylesinidæ* and *Anthribidæ*) with certain setose genera of the *Colydiadæ* (such as *Sarrotrium* and *Diodesma*) in which the body is hispid and the tarsi quadriarticulate. Nevertheless, not venturing to assign it positively to the *Anthribidæ*, I have been compelled to place it in a separate Family.

586. Aglycyderes setifer.

A. niger vel piceo-niger, opacus, valde asperato-rugosus setisque robustis squamiformibus fusco-albidis (in capite prothoraceque subdemissis, sed in elytris erectis) obsitus; prothorace subquadrato, ad latera rotundato, profunde canaliculato; elytris dense et rugose punctato-striatis, interstitiis subelevatis; antennis (gracilibus) pedibusque (robustis) paulo picescentioribus, squamosis.—Long. corp. lin. 1–1½.

Aglycyderes setifer, *Westw., loc. cit.* (1863).

Habitat in inferioribus intermediisque Lanzarotæ, Fuerteventuræ, Canariæ, Teneriffæ et Palmæ, vel in caulibus *Euphorbiarum* putridis vel sub cortice *Ficorum* arido laxo, hinc inde congregans.

This curious little insect, so remarkable (even *primâ facie*) for its dark, brownish-black, opake, setose surface, thick, abbreviated legs, slender antennæ, and for its (flattened) head being in the female sex triangular, whilst in the male it is dilated in front of either eye into a lateral lobe, or horn, will almost certainly be found universally throughout the Group, though hitherto it does not happen to have been observed in either Gomera or Hierro; but in Lanzarote, Fuerteventura (or rather on the little island of Lobos, off the extreme north of it), Grand Canary, Teneriffe, and Palma I have taken it (more or less abundantly). I first detected it congregating beneath the dry loosened bark of a fig-tree in the waste ground above the Puerto Orotava of Teneriffe; and I subsequently met with it under similar circumstances in the Banda of Palma. Nevertheless even in those instances it was in the immediate vicinity of Euphorbias; and since I have also actually captured it (on the mountains of Teneriffe, above Laguna, as well as in Lobos, and elsewhere) within the rotten stalks of the *Euphorbia canariensis*, I suspect that it is, at any rate in its earlier stages, of *Euphorbia*-infesting habits.

Fam. 48. CERAMBICIDÆ.

Genus 222. HYLOTRYPES.

Serville, *Ann. de la Soc. Ent. de France*, iii. 77 [script. *Hylotrupes*] (1834).

587. Hylotrypes bajulus.

Cerambyx Bajulus, *Linn., Fna Suec.* 489 (1746).
Callidium Bajulus, *Brullé, in Webb et Berth. (Col.)* 62 (1838).
Hylotrupes Bajulus, *Muls., Longic. de France*, 55 (1840).
—— ——, *Woll., Cat. Mad. Col.* 125 (1857).

Habitat Teneriffam, in urbe Sanctæ Crucis haud infrequens; certe introductus.

This common European insect has been introduced into the Canaries, in like manner as it has into Madeira and at the Azores. It appears, however, to be scarce. I have taken it occasionally in Teneriffe, in the streets and houses of S^ta^ Cruz; and it has likewise been communicated from the same island by the Barão do Castello de Paiva.

Genus 223. BLABINOTUS.

Wollaston, *Ins. Mad.* 426 (1854).

588. Blabinotus spinicollis.

Blabinotus spinicollis, *Woll., Ins. Mad.* 426. tab. ix. f. 1 (1854).
—— ——, *Id., Cat. Mad. Col.* 126 (1857).

Habitat Teneriffam et Palmam, sub cortice laxo in lauretis parum excelsis parcissime degens.

The *B. spinicollis*, so generally (though sparingly) distributed over the laurel-districts of Madeira, occurs in similar situations at the Canaries—where, however, it would seem to be of the utmost rarity. At the end of May 1858 I captured a single example of it in the island of Palma (high up in the Barranco de Galga); and a few weeks later I met with a second, in Teneriffe—under the dry, loosened bark of an old laurel in the wood of Las Mercedes.

Genus 224. OXYPLEURUS.

Mulsant, *Longic. de France*, 57 (1840).

589. Oxypleurus pinicola.

Oxypleurus pinicola, *Woll., Journ. of Ent.* ii. 102 (1863).

Habitat Palmam; exemplar unicum (mortuum) in cono quodam *Pini canariensis* arido, tempore vernali A.D. 1858, collegi.

The *generic* distinctions between *Oxypleurus* and *Blabinotus* have been fully pointed out in my Paper "on the Canarian Longicorns."

But, apart from minor characters, I may just add that the present insect may at once be recognized from the *B. spinicollis* by its paler or more reddish-brown hue and less hairy (though pubescent) surface, by its convexer and more *even* head and prothorax, larger and more emarginated eyes, and by its antennæ being more distant at their base and with their third joint a trifle shorter (instead of longer) than the fourth. Its prothorax, also, is more abbreviated—being truncated at the apex, where its edge is drawn in and subsinuated (instead of being slightly raised and, if anything, somewhat produced).

The only example of the *O. pinicola* which I have seen was taken by myself, during the spring of 1858, from within a dried cone of a *Pinus canariensis* in the island of Palma—high up in the Barranco above S^{ta} Cruz. It will probably be found, therefore, to occur generally (though perhaps sparingly) in the Pinals of intermediate elevations. It is closely allied to the *O. Nodieri* of southern Europe; but is a little less pubescent; with its prothorax altogether a trifle narrower, more contracted behind (where the sides are rather straighter, though very oblique), and with the lateral spine shorter and more *anguliform*; and with its elytra *almost* free from the small, rounded, punctiform, subglabrous spaces which are tolerably evident (and have somewhat the appearance, *primâ facie*, of tubercles) in that species. From the Madeiran *O. Bewickii* it may be known by its prothorax being more coarsely punctured, less conspicuously margined along the anterior edge, and with the lateral spine very much shorter and more anguliform, and by its elytra being comparatively free from subglabrous spaces.

Genus 225. **CRIOCEPHALUS.**

Mulsant, *Longic. de France*, 63 (1840).

590. **Criocephalus rusticus.**

Cerambyx rusticus, *Linn.*, *Fna Suec.* 492 (1746).
Callidium rusticum, *Brullé, in Webb et Berth.* (*Col.*) 62 (1838).
Criocephalus rusticus, *Muls.*, *Longic. de France*, 63 (1840).
—— ——, *Woll.*, *Cat. Mad. Col.* 124 (1857).

Habitat in intermediis Teneriffæ et Palmæ, rarissimus.

The European *C. rusticus*, which occurs in the pine-woods of comparatively recent introduction on the mountains of Madeira, is apparently rare at the Canaries—though perhaps it might be found more abundantly if the ancient Pinals were diligently searched. Hitherto, however, I have myself met with it only in Palma—where, during June of 1858, I obtained a few specimens at the Banda, on the western side of that island. Nevertheless a Teneriffan example, pur-

porting to have been taken at the Agua Garcia, has been communicated by the Barão do Castello de Paiva.

The Canarian examples have the tubercles on either side of their prothorax a trifle more developed than is the case in specimens which I have examined from the south of Europe, and the posterior edge of their pronotum is somewhat less thickened and more sinuated; but I can detect no difference about them of sufficient importance to warrant the suspicion that they are specifically distinct.

591. Criocephalus pinetorum.

Criocephalus pinetorum, *Woll., Journ. of Ent.* ii. 103 (1863).

Habitat Palmam, in trunco vetusto *Pini canariensis*, in pineto quodam antiquo elevato crescentis, Junio ineunte A.D. 1858 repertus.

The example from which this *Criocephalus* was described was captured by myself, in the pupa state, from the dead stump of a *Pinus canariensis*, in the old Pinal of the island of Palma between the plains of Los Llanos (of the Banda) and the great Caldeira. Unfortunately it is scarcely mature; but I believe that it is truly the exponent of a separate species, and cannot be regarded as a depauperated individual of the *C. rusticus*. Nevertheless, until further specimens have been obtained, I can hardly consider that its differential characters have been satisfactorily defined.

Assuming, however, the example above alluded to to be typical, I may add that the *C. pinetorum* would appear to be smaller and paler than the *rusticus*—being of a reddish-brown, with the limbs bright rufo-ferruginous; its forehead is more triangularly-impressed between the eyes, but less deeply foveolated in the centre; its prothorax, on which the lateral tubercles are fewer, has its anterior and posterior margins straighter (or less sinuated); and its elytra are rather more abbreviated behind, and have their longitudinal costæ less evident.

Whether distinct or not from the *C. rusticus*, the present *Criocephalus* is decidedly common in the Pinal of Palma already referred to (and perhaps, therefore, throughout the Pinals generally); but as my visit there happened to be at the wrong season of the year for the perfect insect, I could only obtain larvæ and pupæ—both of which, however, were abundant in the decaying trunks of the pine-trees.

Genus 226. HESPEROPHANES.

Mulsant, *Longic. de France*, 66 (1840).

592. Hesperophanes senex.

Trichoferus senex, *Woll., Ins. Mad.* 428. tab. ix. f. 3 (1854).
Hesperophanes senex, *Id., Cat. Mad. Col.* 127 (1857).

Habitat Teneriffam, a Barone "Castello de Paiva" communicatus; mihi non obvius.

Apparently extremely rare at the Canaries, the only specimen which I have seen having been communicated by the Barão do Castello de Paiva—by whom it was obtained from an old (but very accurate) collection which was formed many years ago in Teneriffe. At Madeira it occurs sparingly, principally at low elevations around Funchal.

593. Hesperophanes roridus.

Callidium (Hesperophanes) roridum, *Brullé, in Webb et Berth.* (*Col.*) 62. pl. 1. f. 6 (1838).

Habitat?

I can give no information about this insect, though I think that even M. Brullé's description will prevent its being assigned to any of the Longicorns enumerated in the present Catalogue. It must at any rate, therefore, have been included amongst the scanty material collected by MM. Webb and Berthelot, and which M. Brullé undertook to describe for their gigantic work; but as the latter never inserted a single critical remark upon any of the species—pertaining to their structure, habits, or *habitat*—I am unable, *inter alia*, to state even the island in which it was found.

Genus 227. CLYTUS.

Fabricius, *Syst. Eleu.* ii. 345 (1801).

594. Clytus Webbii.

Leptura 4-punctata (var.) ?, *Geoffr., Hist. des Ins.* 213 (1762).
Clytus 4-punctatus (var.) ?, *Fab., Ent. Syst.* i. ii. 337 (1792).
—— Webbii, *Brullé, in Webb et Berth.* (*Col.*) 63 (1838).
—— Webbei, *Gory, Mon. des Clytus*, 80 (1841).

Habitat Teneriffam (sec. Dom. Gory), mihi non obvius.

In my Paper "on the Canarian Longicorns," I stated my reasons for suspecting that this insect (which M. Brullé considered to be a mere variety of the European *C. 4-punctatus*) is not properly a Canarian one—or, at any rate, that its *habitat* appears to have been so confused by Mr. Webb, who would seem to have reported it *both for Madeira and the Canaries*, that nothing certain can be affirmed respecting it. It is far from unlikely that Mr. Webb (whose excessive inaccuracy in mixing up his Madeiran and Canarian material has been more than once commented upon, and of which I possess the most conclusive evidence) may have obtained it in Funchal (perhaps introduced with foreign timber), then taken it (as he undoubtedly did many of his

species—both of insects and shells) to Teneriffe, and finally reported it for both Groups—when in reality it pertained to neither of them! At least, taking all things into account, some such solution as this seems to be highly probable. Nevertheless, since it is cited (even though on Mr. Webb's authority) for Teneriffe by M. Gory, and admitted (on the same authority) by M. Brullé as *Canarian* (for it was not the habit of the latter to record the particular island in which *any* of Mr. Webb's species were taken), I have no choice but to include it in the present Catalogue*.

Genus 228. GRACILIA.

Serville, *Ann. de la Soc. Ent. de France*, iii. 81 (1834).

595. Gracilia pygmæa.

Callidium pygmæum, *Fab.*, *Ent. Syst.* i. ii. 323 (1792).
Obrium minutum, *Steph.*, *Ill. Brit. Ent.* iv. 250 (1831).
Gracilia pygmæa, *Muls.*, *Longic. de France*, 103 (1840).

Habitat Fuerteventuram, Gomeram et Palmam, præsertim in vimineis circa domos, hinc inde parum vulgaris.

This common European insect has doubtless been naturalized at the Canaries from more northern latitudes. It seems to be attached principally to the different kinds of wicker- and basket-work, and to occur consequently in (or about) houses more frequently than elsewhere. Thus, at the Souces, in the island of Palma, I took it abundantly, in May 1858, emerging from its perforations on the sides of the light open trays in which silkworms were fed; and during April 1859 I met with it in the Rio Palmas of Fuerteventura. More recently a single example has been communicated by Dr. Crotch, captured by himself in Gomera. It is found, though sparingly, in similar situations at Madeira†.

* A (supposed) second *Clytus* (the *C. griseus*) is indeed quoted by M. Gory as Teneriffan, and by M. Brullé as Canarian, in both cases on the authority of a specimen in the collection of Mr. Webb; but I really cannot conscientiously include it *also* in the body of this work,—first, because the evidence for its admission is quite *as* unsatisfactory as in the case of the *C. Webbii*; and, secondly, because the *C. griseus* is allowed in the European Catalogues to be a mere variety of the common 4-*punctatus*, Fab.—*to which species it is probable that even the C. Webbii equally pertains*! Hence, apart from all consideration of the *reasons* (alluded to above) for which I would expunge them *both* from the Canarian fauna, I think that if *one* of the two is admitted (on the unsatisfactory evidence of Mr. Webb) it is as much as should be ventured upon; seeing that the utmost that can be conjectured is that some slightly erratic state (or states) of the *C.* 4-*punctatus* may *perhaps* have been obtained by Mr. Webb in (either Madeira or) Teneriffe!

† In a Paper on "Additions to the Madeiran Coleoptera" published in the 'Ann. of Nat. Hist.' for December 1858, I inadvertently quoted the above insect as the *Obrium brunneum*, Fab.—from which, however, it is totally distinct.

Fam. 49. LAMIADÆ.

Genus 229. LEPROSOMA.

(Dejean) Thoms., *Essai Classif. Céramb.* 23 (1860).

596. Leprosoma gibbum.

Leprosoma asperatum, *Dej., Cat.* 372 (1837).
Lamia gibba, *Brullé, in Webb et Berth. (Col.)* 62. pl. 1. f. 5 (1838).
Leprosoma asperatum, *Thoms., Essai*, 23 (1860).
—— gibbum, *Woll., Trans. Ent. Soc. Lond.* i. 178 (1862).

Habitat Fuerteventuram et Teneriffam, in truncis Euphorbiarum emortuis degens.

Of this singular insect, which is attached exclusively to the decaying stems and branches of the various Euphorbias (within which it undergoes its transformations), I gave a full description in my Paper "on the *Euphorbia*-infesting Coleoptera of the Canary Islands." At the beginning of April 1859 I took it, both in the imago and pupa state (though particularly the latter), on the hills above S^ta^ Maria Betancuria, in the Rio Palmas of Fuerteventura; and during the following month (as well as in the preceding February) I met with it on the mountain-slopes of Teneriffe between S^ta^ Cruz and Las Mercedes, and towards Laguna. Teneriffan examples (obtained from an old collection) have also been communicated by the Barão do Castello de Paiva.

Genus 230. STENIDEA.

Mulsant, *Coléopt. de France (Lamell. Suppl.)* (1842).

The insects enumerated below I carelessly referred, in my Paper "on the *Euphorbia*-infesting Coleoptera of the Canary Islands," to *Blabinotus*. In reality, however, they belong to a totally different Section of the *Eucerata* (as has been recently pointed out by Mr. Pascoe),—their deflexed head, more deeply emarginate and less prominent eyes, the apically-acute (instead of securiform) last joint of their palpi, and their much longer antennæ, all tending to remove them from the *Callidium*-forms of the *Cerambicidæ* into the Saperdideous ones of the *Lamiadæ*—the position, in fact, which is ordinarily conceded to the genus which must undoubtedly receive them.

597. Stenidea annulicornis.

Cerambyx annulicornis, *Brullé, in Webb et Berth. (Col.)* 62. pl. 1. f. 3 (1838).
Blabinotus annulicornis, *Woll., Trans. Ent. Soc. Lond.* i. 179 (1862).
Stenidea annulicornis, *Id., Journ. of Ent.* ii. 108 (1863).

Habitat in Teneriffa et Hierro, sub cortice *Euphorbiarum* emortuarum laxo latitans.

The *S. annulicornis*, the distinctive characters of which I have fully pointed out in my Paper "on the *Euphorbia*-infesting Coleoptera of the Canary Islands," occurs beneath the bark, and within the branches, of dead Euphorbias—in which situations I have taken it on the mountains above S^ta^ Cruz of Teneriffe, and in the lower regions of El Golfo on the western side of Hierro. A Teneriffan specimen has also been communicated by Dr. Crotch.

598. Stenidea albida.

Cerambyx albidus, *Brullé, in Webb et Berth. (Col.)* 62. pl. 1. f. 4 (1838).
Blabinotus albidus, *Woll., Trans. Ent. Soc. Lond.* i. 180 (1862).
Stenidea albida, *Id., Journ. of Ent.* ii. 109 (1863).

Habitat Lanzarotam, Fuerteventuram et Teneriffam, in iisdem locis ac præcedens.

The whiter and less dense pubescence of the *S. albida*, in conjunction with its nearly concolorous prothorax (which is free from a broad pale band down the centre, and has the lateral spine still more powerfully developed), its less evident and more broken elytral lines, and its usually more conspicuous elytral (punctiform) spots, will readily suffice to distinguish it from the *S. annulicornis*. Like that species, it is found (I believe exclusively) beneath the loose outer fibre of the various Euphorbias—under which circumstances I have captured it in Lanzarote and Fuerteventura, as well as at Taganana and on the mountains above S^ta^ Cruz in Teneriffe.

599. Stenidea pilosa.

Blabinotus pilosus, *Woll., Trans. Ent. Soc. Lond.* i. 181 (1862).
Stenidea pilosa, *Id., Journ of Ent.* ii. 109 (1863).

Habitat Lanzarotam, in *Euphorbiis* emortuis, rarissima.

The present *Stenidea* would appear to be of the greatest rarity—three specimens only, all of them from Lanzarote, having as yet come beneath my notice. The first of them was captured by Mr. Gray, during January 1858, near Haria, in the north of that island; and the other two by myself, in the same region, exactly twelve months afterwards. Like the two preceding species, I believe it is strictly of *Euphorbia*-infesting habits.

600. Stenidea Hesperus.

Stenidea Hesperus, *Woll., Journ. of Ent.* ii. 110 (1863).

Habitat ins. Hierro; die 11. Feb. A.D. 1858, exemplar unicum supra folia *Rumicis lunariæ* deprehendi.

The present *Stenidea* is hitherto unique, the specimen described

from in my Paper on the Canarian Longicorns having been beaten off a bush of the *Rumex lunaria*, on the 11th of February 1858, in the island of Hierro—at a low elevation (scarcely indeed above the sea-level) on the ascent from Port Hierro to Valverde. *Primâ facie* it somewhat resembles a minute example of the *S. pilosa*; nevertheless it is much smaller than that insect, and its antennæ are considerably longer; its pubescence is more cinereous (or of a less yellowish white); its surface is entirely free (except at the apex of the elytra and on the prothorax) from additional erect hairs; its prothorax is concolorous, rather less constricted behind, and has its lateral spine (although small) more defined, or less anguliform; and its elytra are more rounded-off separately at their tip, and are more perceptibly ornamented with broken longitudinal darker lines.

Genus 231. **AGAPANTHIA.**

Serville, *Ann. de la Soc. Ent. de France*, iv. 35 (1835).

601. **Agapanthia cardui.**

Cerambyx cardui, *Linn., Syst. Nat.* (ed. 12) i. 632 (1767).
Saperda suturalis, *Fab., Syst. Eleu.* ii. 326 (1801).
Leptura suturalis, *Brullé, in Webb et Berth.* (*Col.*) 63 (1838).
Agapanthia suturalis, *Muls., Longic. de France*, 178 (1840).

Habitat in Canaria, Teneriffa et Palma, ad flores carduorum, tempore vernali haud infrequens.

The *A. cardui*, which is pretty general throughout the south of Europe and the north of Africa, is widely spread over these islands —where it occurs, principally on the flowers of thistles, at intermediate elevations. I have taken it in the region of El Monte in Grand Canary, at Las Mercedes in Teneriffe, and in Palma.

Fam. 50. CRIOCERIDÆ.

Genus 232. **LEMA.**

Fabricius, *Ent. Syst.* v., *Suppl.* 90 (1798).

602. **Lema melanopa.**

Chrysomela melanopa, *Linn., Fna Suec.* 573 (1761).
Lema melanopa, *Brullé, in Webb et Berth.* (*Col.*) 74 (1838).
—— ——, *Woll., Ins. Mad.* 436 (1854).
—— ——, *Id., Cat. Mad. Col.* 129 (1857).
—— ——, *Hartung, Geolog. Verhältn. Lanz. und Fuert.* 141.

Habitat insulas omnes Canarienses, vulgaris, præsertim in cultis degens.

This common European insect (which is universal also at the Madeiras—being found in Madeira proper, Porto Santo, and on the Desertas) abounds in the Canarian Group, in the whole seven islands of which I have myself captured it except in Gomera—where, however, it was taken by Dr. Crotch. In Lanzarote it was met with likewise by M. Hartung; in Teneriffe by the Barão do Castello de Paiva and Dr. Crotch; and in Palma by Dr. Crotch and Mr. Gray. It occurs chiefly in cultivated spots, particularly corn-fields, and has probably been introduced from more northern latitudes.

Genus 233. CRIOCERIS.

Geoffroy, *Ins. des Env. de Paris*, i. 237 (1764).

603. Crioceris nigropicta, n. sp.

C. pallide flava, nitida; capite, prothoracis disco scutelloque æneo-nigrescentioribus; illo trapeziformi, latiusculo, intra oculos integros depresso, grosse substriguloso-ruguloso et ibidem profunde canaliculato; hôc breviter cylindrico (ad basin vix constricto), parce punctato; elytris profunde seriatim punctatis, læte nigro-pictis (sc. in suturâ, humeris, plagis parvis mediis subconfluentibus subbasalibus, fasciisque duabus abbreviatis subobluniformibus pone medium positis, nigris); antennis pedibusque robustis, illis testaceo-ferrugineis, his testaceis, tibiis (præsertim anticis) extus in medio plus minus evidenter nigro-plagiatis.—Long. corp. lin. $2\frac{1}{3}$.

Habitat Canariam Grandem, rarissima; mense Aprili A.D. 1858 in foliis *Arundinis donacis* ad Mogan parcissime capta.

This beautiful *Crioceris*, so remarkable for its light-yellow elytra being prettily ornamented with black spots and broken fasciæ, and which has the head and (though more palely so) the prothoracic disc of a brassy-black, appears to be one of the rarest of all the Coleoptera of this archipelago. Indeed the only four specimens which I have seen were collected by myself in Grand Canary—brushed from off some plants of *Arundo donax*, on the 16th of April 1858, at Mogan, in the south-western district of that island.

Fam. 51. EUMOLPIDÆ.

Genus 234. PSEUDOCOLASPIS.

Laporte, *Hist. Nat. des Ins. Col.* ii. 514 (1840).

§ I. *Scutellum subsemicirculare.*

604. Pseudocolaspis divisa, n. sp.

P. obscure ænea, grosse sed breviter argenteo-pubescens, dense et parum minute punctulata; prothorace longiusculo, convexo, ad

latera rotundato-ampliato; elytris breviusculis, convexis, ad latera rotundatis, vix subseriatim pubescentibus; antennis rufescentibus, apicem versus obscurioribus; pedibus infuscato-rufescentibus, femoribus obscurioribus.—Long. corp. lin. $1\frac{1}{2}$–$1\frac{2}{3}$.

Habitat Lanzarotam borealem, sub lapidibus in aridis, rarissima.

The present *Pseudocolaspis*, which appears to be of the greatest rarity, and confined (so far as I have observed hitherto) to Lanzarote, may be known from the other species here enumerated by its prothorax and elytra being, both of them, more convex and more rounded at the sides, and by the former being a little longer, whilst the latter are very evidently shorter, than is the case in any of its allies; by its scutellum being more semicircular (instead of subquadrate), and less truncated behind; and by its surface being more regularly *brassy*, and somewhat less densely clothed with short silvery pile. The few specimens which I have seen were taken in the extreme north of Lanzarote—from beneath stones on the dry rocky ground at the base of the Risco, and immediately behind the Salinas.

§ II. *Scutellum subquadratum.*

605. **Pseudocolaspis dubia**, n. sp.

P. præcedenti fere similis, sed paulo minus ænea; prothorace elytrisque minus convexis necnon ad latera minus rotundatis, illo breviore, his longioribus, magis oblongis; antennis pedibusque subgracilioribus.—Long. corp. lin. $1\frac{1}{2}$–$1\frac{2}{3}$.

Habitat Fuerteventuram, Aprili ineunte A.D. 1859 in Rio Palmas capta.

In its subquadrate scutellum and oblong outline, this species has more in common with the following two than it has with the preceding one; nevertheless in some respects it is intermediate between the latter and them. It may be known from the *splendidula* and *obscuripes* (with which alone, from the shape of its scutellum, it need be compared) by its somewhat shorter prothorax (which is obscurely ferruginous along its anterior edge), by its rather convexer and more rounded elytra, slenderer limbs, and altogether slightly different hue. The only three examples which I have seen were captured by myself in the Rio Palmas of Fuerteventura, at the beginning of April 1859.

606. **Pseudocolaspis splendidula.**

P. læte æneo-cuprea, grosse sed breviter argenteo-pubescens, dense et minute punctulata; elytris plus minus obsolete subseriatim pubescentibus; antennis rufescentibus, apicem versus plus minus obscurioribus; pedibus rufescentibus.

Variat femoribus plus minus obscure nigro-maculatis.—Long. corp. lin. $1\frac{1}{2}$–$2\frac{1}{4}$.

Pseudocolaspis splendidula, *Woll., Ann. Nat. Hist.* ix. 442 (1862).

Habitat in Canaria, Palma et Hierro, in locis inferioribus et intermediis (præsertim illis) degens.

This is certainly the most beautiful of the four species of *Pseudocolaspis* here enumerated; and it would seem likewise to be more widely spread over the archipelago, having been observed in Grand Canary, Palma, and Hierro—occurring principally in low and sunny spots, and becoming gradually rarer to an elevation of about 1000 feet above the sea. Thus, in the low sandy region around Maspalomas, in the extreme south of Grand Canary, it abounds, on various shrubs which stud that arid tract; and extends also to a certain distance on the mountains which rise gradually to the north of it. In Palma I took it sparingly in the Barranco above S^{ta} Cruz. And in Hierro a single example was captured by Mr. Gray—at a low altitude (scarcely indeed above the sea-level) on the ascent from Port Hierro to Valverde, on the 11th of February 1858.

The *P. splendidula* may easily be recognized by its more beautifully metallic surface (which is generally of a coppery-brassy hue) and by its brightly rufo-ferruginous limbs (the club of the antennæ being alone obscured). The short silvery pubescence with which it is clothed is perhaps somewhat denser than is the case in the *obscuripes*, and is on the elytra rather less evidently disposed in longitudinal lines; nevertheless the individuals now before me from Palma and Hierro have this latter peculiarity a little less apparent than in the ordinary Grand-Canarian ones.

607. **Pseudocolaspis obscuripes.**

P. obscure ænea, grosse sed breviter argenteo-pubescens, dense et parum minute punctulata; elytris obsolete seriatim pubescentibus; antennis nigrescentibus, articulo secundo ad basin rufescentiore; pedibus submetallico-nigris.—Long. corp. lin. $1\frac{1}{2}$–2.

Pseudocolaspis obscuripes, *Woll., Ann. Nat. Hist.* ix. 441 (1862).

Habitat Canariam Grandem, ad flores *Cistorum* (sc. *C. monspeliensis* et *vagantis*) in montibus excelsis crescentium, deprehensa.

The altogether obscurer surface of this *Pseudocolaspis*, which is of a dull-brassy hue with the limbs (except the second antennal joint) of a metallic black, in conjunction with the short silvery pile with which it is clothed being on the elytra perhaps rather more perceptibly disposed in longitudinal rows, will serve to distinguish it from the *P. splendidula*. I have observed it hitherto only in Grand Canary,

where it would seem to be confined to lofty altitudes, and to be particularly attached to the flowers of the *Cisti*. Thus, in the elevated Pinal of Tarajana, above San Bartolomé, I captured it, during April 1858, on the blossoms of the *Cistus vagans* and *monspeliensis*, Linn., rather abundantly.

Fam. 52. CRYPTOCEPHALIDÆ.

Genus 235. CRYPTOCEPHALUS.

Geoffroy, *Hist. Abr. des Ins. de Paris*, i. 231 (1762).

608. **Cryptocephalus nitidicollis**, n. sp.

C. nitidus, flavo-testaceus; capite prothoraceque (convexo) nitidissimis, minute, parce et levissime punctatis (sæpe fere impunctatis), illo longitudinaliter in fronte et hôc utrinque in disco antico plus minus rufo-fulvescenti-obscurioribus; elytris profunde striato-punctatis, vel omnino pallidis vel per suturam necnon utrinque in plagâ longitudinali subobliquâ discali plus minus obscurioribus; antennis (gracilibus) pedibusque pallide testaceis, illis versus apicem obscurioribus.

Variat (præsertim in locis editioribus) maculis plagisque fere nigrescentibus; necnon, in locis valde elevatis, etiam pedibus obscurioribus.—Long. corp. lin. 1–1⅔.

Habitat insulas omnes Canarienses, longe lateque parce diffusus—ab orâ maritimâ usque ad 9000′ s. m. ascendens.

The present *Cryptocephalus* is universal throughout the Canarian archipelago, in the whole seven islands of which I have myself captured it except in Gomera—where, however, four examples (now before me) were taken by Dr. Crotch. In Lanzarote and Palma it was met with also by Mr. Gray, and in Teneriffe by the Barão do Castello de Paiva. Although nowhere very common, it occurs independently of elevation—from the level of the shore to about 9000 feet above the sea; and in the higher altitudes it is apt to vary a good deal in hue—the obscure portions of its surface (and occasionally even the limbs) becoming at times almost black. In this state I have brushed it off the blossoms of the "Retama" on the lofty Cumbre of Teneriffe above Ycod el Alto and adjoining the Cañadas (where it was likewise found, subsequently, by Dr. Crotch), as well as on the *opposite* Cumbre (above the Agua Mansa). My other Teneriffan specimens are principally from the Agua Mansa, Orotava, and the mountains above S^ta^ Cruz. In Grand Canary it is pretty general throughout the region of El Monte, as well as at Maspalomas (in the south of the island); whilst my Palman examples are chiefly

from the Barranco de Agua, and the Hierro ones from the region of El Golfo.

Both of these Canarian *Cryptocephali* are closely related to the *C. crenatus** of Madeira, and are also very nearly allied *inter se*; but that they are not sexual forms of a single species I am convinced, inasmuch as I possess males and females of them both. Apart, however, from the greater instability of its colour, and its apparently wider range (both horizontal and vertical), the *C. nitidicollis* may immediately be known by its bright and almost unpunctured prothorax, and by its elytral striæ being less impressed.

609. **Cryptocephalus puncticollis,** n. sp.

C. præcedenti similis et valde affinis, sed prothorace vix breviore minusque convexo necnon subopaco (haud nitido) et profunde denseque punctato; elytris ad apicem sensim minus singulatim rotundatis, striis (profunde punctatis) magis impressis, quare interstitiis paulo magis convexis; pedibus vix crassioribus.—Long. corp. lin. $1–1\frac{2}{3}$.

Habitat in Teneriffa, Palma et Hierro, sat rarus.

As may be gathered from what has already been said, the present *Cryptocephalus* may immediately be recognized from the last one by its prothorax being a trifle shorter and less convex, as also subopake and deeply and closely punctured (instead of being bright and nearly impunctate); by its elytra (which are rather less rounded off, separately, at their respective apices) having their coarsely punctured striæ more impressed, and therefore their interstices a little more convex; and by its legs being, on the average, perhaps somewhat thicker, or more robust. Moreover the sixteen specimens now before me are uniformly pale, there being no trace of the darker markings which *certain* examples of the *nitidicollis* (particularly those from the higher elevations) tend to assume; but whether this character is a constant one, I am of course unable to affirm.

The *C. puncticollis* appears to be rather scarcer, and less widely spread, than its ally, and may perhaps be confined to the central and western islands of the archipelago. At any rate I have observed it hitherto only in Teneriffe, Palma, and Hierro, in the first of which it has also been taken by Dr. Crotch. My Teneriffan examples are from Taganana, Souzal, and the Agua Garcia.

* The Madeiran *C. crenatus* differs, *inter alia*, from both of the Canarian species in having its elytral striæ finely and *closely crenated* (instead of deeply and remotely punctured). In the sculpture of its prothorax it is somewhat intermediate between the *nitidicollis* and *puncticollis*—though *nearer*, I think, to the former.

Genus 236. STYLOSOMUS.

Suffrian, *in Linn. Ent.* iii. 146 (1848).

610. Stylosomus biplagiatus, n. sp.

S. flavo-testaceus; capite prothoraceque sat grosse punctatis, hôc immaculato sed basin versus (elevatam) sæpius paulo infuscatiore; elytris profunde substriato-punctatis, oculo armato minute seriatim pubescentibus, pone scutellum obsoletissime et pone medium obsolete transversim nigro-fasciatis (fasciâ anticâ interdum omnino obsoletâ, et posticâ sæpius fractâ—vel plagam parvam singulam vel plagas duas disjunctas efficiente); antennis versus apicem tarsisque plus minus nigrescentibus.—Long. corp. lin. 1–1¼.

Obs.—Sp. *S. tamarisci* affinis, sed paulo major, pallidior et minus pubescens; capite prothoraceque immaculatis; elytris per suturam concoloribus sed transversim obsolete bifasciatis (fasciis sæpius obsoletis, posticâ plagam parvam solam postmediam in elytris singulis positam efformante).

Habitat Fuerteventuram, in foliis *Tamaricis gallicæ* infra oppidulum Betancuriam, Aprili ineunte A.D. 1859, sat copiose deprehensus.

Although with similar habits, the present *Stylosomus* is certainly distinct from the *S. tamarisci*; and, judging from the diagnoses, I think it can scarcely be referred to any of the few other members of the genus hitherto recorded. It was detected by myself in the Rio Palmas of Fuerteventura, at the beginning of April 1859—where I brushed it, not uncommonly, off the shrubs of *Tamaricæ gallica* at a short distance below the little town of S^{ta} Maria Betancuria.

Fam. 53. CHRYSOMELIDÆ.

Genus 237. CHRYSOMELA.

Linnæus, *Syst. Nat.* edit. 1 (1735).

611. Chrysomela sanguinolenta.

Chrysomela sanguinolenta, *Linn., Fna Suec.* 165 (1761).
—— lucidicollis ?, *Küst., Käf. Europ.* ii. 73 (1844).
—— sanguinolenta, *Hartung, Geolog. Verhältn. Lanz. und Fuert.* 141,142.

Habitat sub lapidibus in insulis Canariensibus, in Gomera et Hierro solis adhuc haud detecta.

The Canarian examples of this *Chrysomela* recede a little from the ordinary European ones, and may perhaps be referable to the *C. lucidicollis*, Küst.—which is admitted, however, to be a mere variety of the *sanguinolenta*. They differ in having their prothorax much more shining and almost impunctate (except at the sides), and in their enormous elytral punctures (or varioles) being perhaps a trifle

more distant *inter se*. Although undoubtedly constant, I cannot think that such small modifications of a *type so well marked*, both in colour and sculpture, as that embodied by the *C. sanguinolenta* can be indicative of more than a slight geographical phasis of that insect.

The *C. sanguinolenta* is common (particularly in low and sandy spots) in the eastern portion of the archipelago, but seems to become gradually rarer as we approach the west. In all probability it is universal, though hitherto it does not happen to have been observed in either Gomera or Hierro; but in Lanzarote, Fuerteventura, Grand Canary, Teneriffe, and Palma I have myself captured it, more or less abundantly. In Lanzarote and Fuerteventura it was found also by M. Hartung; in the former of those islands by Mr. Gray; and from Teneriffe it has been communicated by the Barão do Castello de Paiva.

612. **Chrysomela bicolor.**

Chrysomela bicolor, *Fab., Syst. Ent.* 95 (1775).
—— regalis, *Oliv., Ent.* v. 91. 538. tab. 7. f. 98 (1807).
—— canariensis, *Brullé, in Webb et Berth. (Col.)* 73 (1838).
—— regalis, *Hartung, Geolog. Verhältn. Lanz. und Fuert.* 141.

Habitat Lanzarotam, Fuerteventuram et Canariam, sub lapidibus haud infrequens.

This large and superb *Chrysomela*, so well distinguished by its oblong outline, shining, brassy-green surface, and by the immense punctures (or varioles) of its elytra being extremely wide apart, each of them encircled by (or, as it were, *set into*) a rounded purple spot, and, although irregularly disposed, having a *tendency* to arrange themselves in pairs (a peculiarity which causes certain of the spots to be either almost or entirely confluent), appears to be confined, so far as observed hitherto, to the eastern portion of the archipelago—occurring in Lanzarote, Fuerteventura, and Grand Canary. In the first of these (where it was found also by M. Hartung) I have taken it, from beneath stones, on the open grassy plain above Los Valles de S^{ta} Catalína, about two miles to the south of Haria; in the second (from whence it has likewise been communicated by the Barão do Castello de Paiva) near Port Cabras; and in the third it was tolerably abundant around Maspalomas, in the extreme south of that island, during April 1858. The specimens offer scarcely any appreciable difference from a Sicilian one in my collection, unless it be that the elytra have a less tendency to be obsoletely striated and to be sprinkled with minute and shallow punctules between the varioles.

I have adopted the specific name of *bicolor* (which is prior to that of *regalis*) for this insect on the authority of the 'Cat. Col. Europæ';

but it would certainly have been altogether impossible to recognize the present *Chrysomela* in the absurd "diagnosis" (so called) given of it by Fabricius.

613. Chrysomela obsoleta.

C. rotundato-oblonga, crassa, obscure viridi-æneo-micans, ubique (oculo fortiter armato) subtilissime alutacea; capite prothoraceque minutissime et levissime punctulatis, hôc utrinque versus latera postice impresso (impressione antice omnino evanescente); elytris vage, parce et irregulariter subseriatim suboblique punctatis et punctulis minutissimis intermediis parce irroratis; antennis tarsisque nigro-piceis; alis minutissimis, angustissimis, ad apicem fusco-maculatis.—Long. corp. lin. 4–6.

Chrysomela obsoleta, *Brullé, in Webb et Berth. (Col.)* 73 (1838).
—— ——, *Hartung, Geolog. Verhältn. Lanz. und Fuert.* 141.

Habitat in Teneriffa et Gomera, præsertim in regionibus parum elevatis sylvaticis, hinc inde haud infrequens.

The obscure brassy-green hue of this large and thick *Chrysomela* (which, however, is exceedingly variable in size), combined with its very minutely (sometimes scarcely perceptibly) punctulated head and prothorax (the latter of which is broadly margined, on either side, only behind,—the impression becoming evanescent anteriorly), and the small, distant, and widely scattered punctures of its elytra (the larger ones of which have a tendency to arrange themselves in suboblique longitudinal rows), will serve readily to distinguish it. In its general aspect it is a little suggestive, at first sight, of the common European *C. Banksii*, though abundantly distinct when closely examined. It is widely spread over Teneriffe, and in certain districts (particularly sylvan ones of a rather high elevation) tolerably common. Thus, I have taken it in considerable numbers from under the loose moss growing on the trunks of old trees on the summit of the Las Mercedes range; as also from beneath the outer fibre of dead Euphorbias on the mountains between S^ta^ Cruz and Laguna; as well as at Taganana, Souzal, the Agua Garcia, and the Agua Mansa. And I have met with it, at even a low altitude, in the Barranco do Passo Alto, near S^ta^ Cruz; in which locality, however, it had probably become naturalized (either through the medium of floods or human agency) from the heights above. It was also found by M. Hartung in Teneriffe, from whence additional specimens have been communicated by the Barão do Castello de Paiva. It seems to exist likewise in Gomera, for I have examined an individual which was captured by Dr. Crotch at Hermigua*.

* The *C. obsoleta* is cited by M. Hartung as coming even from Lanzarote:

614. Chrysomela fortunata, n. sp.

C. præcedenti similis, sed cyanescens (nec viridi-æneus), antennis pedibusque læte rufo-ferrugineis; prothorace distinctius (sed minute et levissime) punctulato, antice paulo magis æqualiter angustato, angulis anticis sensim acutioribus; elytrorum punctis minoribus. —Long. corp. lin. $4\frac{1}{2}$.

Habitat Palmam, in montibus supra Sanctam Crucem semel lecta.

Whether the single individual from which the present diagnosis has been compiled, and which was taken by myself in the Barranco above S^ta^ Cruz in the island of Palma, be indicative of a species truly distinct from the preceding one, or merely of a well-marked insular variety, it is scarcely possible, in the absence of further material, to decide; nevertheless, since the differential characters which separate it from that insect, although perhaps not very important in *kind*, are so extremely conspicuous, I think that it would scarcely be safe to treat it as a phasis of the *C. obsoleta*. If the example now before me be a normal one, the *C. fortunata* may be known from that species by its *bluish* (instead of brassy-green) hue and bright rufo-ferruginous limbs. Its prothorax, likewise (though very minutely and lightly so), is rather more evidently punctulated, and is a little more regularly attenuated in front (causing the anterior angles to be perceptibly acuter); and its elytral punctures are altogether smaller.

615. Chrysomela rutilans, n. sp.

C. similis *C. obsoletæ*, sed nitidissima (nec minute alutacea), lætissime æneo-micans; prothorace majore, longiore, transverso-subquadrato (antice minus angustato), paulo distinctius (sed minute et levissime) punctulato necnon utrinque ad latera multo profundius impresso (impressione fere ad marginem anticum ductâ); elytrorum punctis minoribus, sed magis numerosis; alis parvis, angustis (vix minutissimis angustissimis) et ad apicem fusco-maculatis.—Long. corp. lin. $4\frac{1}{2}$–5.

Habitat Gomeram, rarissima.

Hitherto three specimens only of this large and superb *Chrysomela* have come beneath my notice. They were all of them taken in the Barranco above San Sebastian in the island of Gomera,—one by Mr.

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but I have not the slightest hesitation in regarding this *habitat* as erroneous; and more particularly so since I have already had occasion to notice other instances in which a confusion has manifestly arisen through his having mixed up his material from the different islands—which was, in consequence, misquoted subsequently by Dr. Heer (who prepared the Catalogue for M. Hartung's volume). And this is all the more probable, inasmuch as I have received the species from Dr. Heer himself (from M. Hartung's collection) labelled as coming from "Teneriffe."

Gray, another by myself, and the third (more recently) by Dr. Crotch. It may readily be known from the *C. obsoleta* by its much more brilliant, unalutaceous, and bright-brassy surface; by its larger and squarer prothorax being perhaps a trifle more evidently punctulated, and *very* much more deeply impressed on either side (the impression, moreover, running from the extreme base to almost the anterior margin); by its elytral punctures being smaller and rather more numerous; and by its wings (although minute and narrow) being somewhat *less* narrowed than is there the case, and likewise infuscated more decidedly throughout their entire apical portion (whereas the wings of the *C. obsoleta* are more often maculated with a cloudy spot in the middle only).

616. Chrysomela gemina.

C. ovalis, nitidissima, vel æneo-cuprea, vel viridi-cuprea, vel ænea, vel viridi-ænea; capite parce punctulato; prothorace fere impunctato (oculo fortissime armato punctulis subtilissimis plus minus perspicuis adsperso), utrinque (punctis perpaucis notato) vel integro vel postice versus latera obsoletissime (plus minus perspicue) impresso; elytris parce subseriatim punctatis, seriebus alternis inter se paulo approximatis; antennis pedibusque picescentioribus.

Variat in ins. Palma elytrorum punctis paulo majoribus.—Long. corp. lin. 3–5.

Chrysomela gemina et nitens, *Brullé, in Webb et Berth.* (*Col.*) 73, 74 (1838).

Habitat in Teneriffa et Palma, hinc inde vulgaris.

Judging from the diagnoses, and taking into account the very scanty material of Messrs. Webb and Berthelot which M. Brullé appears in nearly all instances to have described from, I have little doubt that the *C. gemina* and *nitens* of the latter were founded on extreme individuals of this variable *Chrysomela*; for although he speaks of the former of them as having the thorax entire, and the other as furnished with "un demibourrelet sur les côtés du corselet," it seems to me, after the inspection of 213 examples, collected in many localities widely separated from each other, that the majority of them might be said to have the prothorax "entire," though there is a *tendency* in a certain number to possess a slight longitudinal depression on either side behind, which in rare instances becomes rather decidedly expressed. And I think it is more than probable, therefore, that M. Brullé may have drawn up his diagnoses from a large and small individual, in which these differences chanced to be more than usually appreciable, and in which also the colour was respectively æneous and coppery.

The *C. gemina* has been observed hitherto only in Teneriffe and Palma; in the former of which it is rather common—occurring in many districts and at various altitudes, and attaching itself to very opposite kinds of plants. Thus, in Teneriffe it was captured by Mr. Gray and myself, near the Puerto Orotava, during January 1858, almost exclusively on the *Lavandula abrotanoides*; whereas in the woods above Taganana it seems to prefer a species of *Bystropogon* (after the fashion of the curious *C. onychina* of Madeira), where I have seen bushes of that plant absolutely sparkling with it. And I have also met with it around the roots of Euphorbias on the mountain-slopes forming the northern side of the Barranco do Passo Alto, near S^ta^ Cruz, as well as at the Agua Garcia and the Agua Mansa. My Palman specimens are from the Barranco above S^ta^ Cruz of that island. Examples from Teneriffe have also been communicated by the Barão do Castello de Paiva and Dr. Crotch; in which island it was likewise met with by my friend the late Rev. W. J. Armitage.

Genus 238. **PHÆDON.**

(Megerle) *in Dahl, Cat.* 74 (1823).

617. **Phædon menthæ**, n. sp.

P. ovale, æneum, nitidum, ubique minute et levissime punctulatum; elytris leviter substriato-punctatis; antennis (longiusculis), tibiis ad apicem tarsisque plus minus pallide rufo-ferrugineis, femoribus tibiisque piceis; metasterno profunde sed parce punctato.—Long. corp. lin. $1\frac{3}{4}$–2.

Chrysomela rufipes ?, *Brullé* [nec *De Geer*], *in Webb et Berth.* (*Col.*) 74 (1838).

Habitat in intermediis humidis Canariæ Grandis, foliis *Menthæ* gaudens.

Although it does not entirely agree with his diagnosis, I think it is far from improbable that this insect is the *Chrysomela rufipes* of M. Brullé; nevertheless, since the specific title of *rufipes* was already preoccupied in the genus *Chrysomela* by De Geer, M. Brullé's name would of necessity have to be suppressed—which is the less to be regretted since I am by no means *certain* that the present *Phædon* is absolutely identical with his insect *.

The *P. menthæ* may readily be known by its bright-æneous, densely

* Thus, he speaks of "le corselet obscur," which does not in the least apply to the *P. menthæ*, where the entire surface is uniformly æneous and equally shining throughout. Then, he omits all allusion to the dense (though light) punctation of its whole upper surface; though, as it is his habit to avoid noticing the most distinctive features of his several species, citing those only which are common to all of the same group, I lay but little stress upon this latter circumstance.

punctulated surface, and by its antennæ (which are exceedingly elongate for a *Phædon*) and tarsi being of a more or less pallid rufo-testaceous hue. Its femora and tibiæ are piceous, though the extreme apices of the latter (and occasionally of the former also) are rather paler. I have observed it hitherto only in Grand Canary—where, during the spring of 1858, I took it abundantly from the foliage of a large *Mentha* growing in the stream at San Mateo (in the region of El Monte), and subsequently (under similar circumstances) at the edges of the small river at Teror.

Genus 239. **PHRATORA.**

(Chevrolat) Redt., *Fna Austr.* 554 (1849).

618. **Phratora vulgatissima.**

Chrysomela vulgatissima, *Linn., Syst. Nat.* i. ii. 589 (1767).
—— ——, *Dufts., Fna Austr.* iii. 210 (1825).
Phædon unicolor, *Steph., Ill. Brit. Ent.* iv. 336 (1831).

Habitat Palmam; exemplar unum deprehendit W. D. Crotch.

A single example only of this common European insect has hitherto come beneath my notice at the Canaries. It was captured by Dr. Crotch in the island of Palma, during the spring of 1862. I can detect in it no appreciable difference from the ordinary type; but it is an important addition to the fauna, seeing that we have no evidence of its existence in any other of the Atlantic Groups.

Fam. 54. GALLERUCIDÆ.

Genus 240. **CALOMICRUS.**

Stephens, *Ill. Brit. Ent.* iv. 293 (1831).

619. **Calomicrus Wollastoni.**

Calomicrus Wollastoni, *Paiva, Ann. Nat. Hist.* viii. 210 (1861).

Habitat in Teneriffa, Palma et Hierro, floribus *Cistorum* [sc. *vagantis* et *monspeliensis* Linn.] in intermediis præcipue gaudens.

This large and truly indigenous *Calomicrus*, so remarkable for its extremely pallid upper and dark under surfaces, I have captured in Teneriffe, Palma, and Hierro—where it would appear to delight especially in the flowers of the *Cistus vagans* and *monspeliensis*, between the limits of about 1500 and 3000 feet above the sea. In Teneriffe I have observed it only at the Agua Mansa; in Palma (where it was found also by Dr. Crotch) chiefly in the regions occupied by the Pinals; and in Hierro, in the sylvan district of El Golfo, on the western slopes of that island.

Fam. 55. HALTICIDÆ.

Genus 241. HALTICA.

Geoffroy, *Hist. Abr. des Ins.* i. 244 [script. *Altica*] (1762).

(Subgenus **Crepidodera,** *Chev.*)

620. Haltica Allardii.

Haltica Allardii, *Woll., Journ. of Ent.* i. 1 (1860).
Crepidodera Allardii, *Allard, Ann. de la Soc. Ent. de France,* 312 (1862).

Habitat Teneriffam, foliis *Physalidis aristatæ* circum Portum Orotavæ gaudens.

This interesting little *Haltica*, so remarkable for its pubescent surface, coarsely punctured, basally-impressed prothorax, deeply punctate-striated elytra, and pallid hue (the suture and an abbreviated medial elytral fascia being alone, in normally coloured specimens, more or less dark), is closely allied to the European *H. atropæ*. It is, however, a trifle smaller than that insect, and its head and prothorax are pale rufo-testaceous (instead of black); its limbs also are paler, its punctation (although coarse) is not *quite* so rugose, and the dark portions of its elytra are very much narrower and less developed. Hitherto I have observed it only in the district around the Puerto Orotava in Teneriffe, where it is tolerably common during the spring months on the foliage of the *Physalis aristata*—a shrub intimately related to the *Atropa belladonna*, on which its more northern ally exclusively subsists.

621. Haltica lubrica, n. sp.

H. subovalis, convexa, nitida, rufo-ferruginea, elytris paulo magis testaceis; capite prothoraceque minutissime et levissime punctulatis, hôc angusto angulis posticis obtusis, postice in medio levissime transversim impresso sed utrinque foveâ parvâ profundâ notato; elytris profunde striato-punctatis.—Long. corp. lin. 1¼.

Habitat Teneriffam; exemplar unicum tempore vernali A.D. 1862 deprehendit W. D. Crotch.

The present *Haltica* is a good deal allied, at first sight, to the European *H. ventralis*, Illig.; it is, however, a little larger, more shining, and convex, its colour is considerably darker, or more ferruginous, its prothorax is altogether narrower (especially in front), less deeply impressed at the base, and with its posterior angles more obtuse, and its elytra are somewhat more oval and more deeply punctate-striated. The unique example described from was taken by Dr. Crotch in Teneriffe, during the spring of 1862.

(Subgenus **Phyllotreta**, *Chev.*)

622. Haltica variipennis.

Haltica variipennis, *Boield., Ann. de la Soc. Ent. de France,* 477 (1859).
Phyllotreta varians, *Foudr., Altisides,* 248 (1860).
—— variipennis, *Allard, Ann. de la Soc. Ent. de France,* 385 (1860).

Habitat Teneriffam, a W. D. Crotch semel reperta; forsan ex alienis introducta.

A single specimen of a *Haltica* which was taken by Dr. Crotch, during the spring of 1862, in Teneriffe appears to me to present no differences of sufficient importance from the *H. variipennis* of Mediterranean latitudes to warrant its separation therefrom. Judging from two examples of that insect which have been communicated by M. Allard, the Canarian individual seems merely to be a little larger, and to have its two longitudinal testaceous elytral bands somewhat broader and more developed (so as to extend over a larger space, and to be less scooped out externally); but in its depressed, finely punctured surface and general colouring, as well as in the enlarged fifth joint of its antennæ, and in the apices of its elytra being, separately, a little rounded off, it agrees entirely with the *variipennis*.

(Subgenus **Aphthona**, *Chev.*)

623. Haltica Paivana.

Haltica Paivana, *Woll., Journ. of Ent.* i. 2 (1860).
Aphthona Paivana, *Allard, Ann. de la Soc. Ent. de France,* 333 (1862).

Habitat in Lanzarota, Canaria, Teneriffa et Hierro, foliis *Euphorbiarum* gaudens.

This beautifully metallic species (which, however, is very variable in tint, shading off from bright cyaneous-blue into golden-green, or even into coppery-brown, whilst the tibiæ and tarsi, and sometimes the four entire anterior legs, are testaceous) is peculiar to the foliage of the various Euphorbias—on which I have taken it abundantly in the north of Lanzarote (where it was found also by Mr. Gray), on the mountains above San Mateo in Grand Canary, near the Puerto Orotava in Teneriffe, and in the region of El Golfo on the western side of Hierro. From Teneriffe it has likewise been communicated by the Barão do Castello de Paiva, after whom the species was originally named. M. Allard states concerning it, "Cette espèce est très-facile à reconnaître à sa couleur d'un vert ou bleu clair, à sa ponctuation extrêmement forte et rugueuse, et à sa forme étroite et un peu aplatie qui la rapproche de l'*A. Poupillieri*, mihi."

624. Haltica plenifrons, n. sp.

H. oblongo-ovata, parum nitida, læte cyanea; capite omnino prothoraceque fere impunctatis, illo subrotundato convexo, hôc brevi transverso, postice in medio brevissime et obsolete carinato, angulis ipsissimis posticis acute et conspicue exstantibus, ad latera antice distincte sed postice (necnon per marginem posticum) vix marginato; elytris ovalibus, minute subpunctulato-rugulosis; antennis femoribusque posticis fusco-piceis, illis versus basin pedibusque anterioribus infuscato-testaceis.—Long. corp. lin. $1\frac{2}{3}$.

Habitat Palmam, mihi non obvia, a W. D. Crotch semel tantum lecta.

The single individual from which the above description has been compiled was taken by Dr. Crotch, during the spring of 1862, in the island of Palma. In its bright-cyaneous hue it is very similar to the majority of the examples of the *H. Paivana*; nevertheless it is larger and broader than that species, not quite so shining, and very much less coarsely punctured. Indeed its head and prothorax (particularly the former, which is rounded and convex) are almost unsculptured, and its elytra (although rather rugulose) are but very minutely punctulated. Its prothorax is relatively shorter and more transverse than in the *H. Paivana*, with its lateral edges distinctly margined anteriorly, but (like the basal one) scarcely at all so behind, and has its extreme posterior angles more conspicuously, though minutely, prominent; and the apices of its tarsi are less evidently darkened.

625. Haltica crassipes.

Haltica crassipes, *Woll., Journ. of Ent.* i. 3 (1860).
Aphthona crassipes, *Allard, Ann. de la Soc. Ent. de France*, 331 (1862).

Habitat Teneriffam et Palmam, præsertim in foliis plantarum (*Sempervivi*, et cæt.) ad rupes locorum editiorum crescentium.

The present insect and the *Longitarsus kleiniiperda* are *primâ facie* somewhat alike; nevertheless, apart from the *generic* characters (of the longer legs and hind feet, &c.) of the latter, the *H. crassipes* may be recognized by its more quadrate prothorax, stouter antennæ (which have four of their basal joints, instead of only three, more or less testaceous), and by its more finely punctured elytra. Its four anterior male tarsi have their basal joint greatly dilated, so as far to exceed the second—a structure which is more or less expressed in most of the *Halticidæ*, but which in the *H. crassipes* is peculiarly conspicuous. M. Allard says, "Cette espèce a beaucoup d'analogie avec l'*A. flaviceps*, mihi, cependant cette dernière est plus étroite, son prothorax et ses antennes sont plus courts et les tarses du ♂ sont moins dilatés." It is apparently rare; nevertheless I have taken it at the Agua Mansa

in Teneriffe; and from plants (I believe *Semperviva*) growing on the damp rocks in the deep sylvan ravines of Palma—especially the Barranco da Agua, towards the north-east of that island.

Genus 242. **LONGITARSUS.**

Latreille, *Fam. Nat. des Ins.* 405 [script. *Longitarse*] (1825).

626. **Longitarsus kleiniiperda.**

Longitarsus Kleiniiperda, *Woll., Journ. of Ent.* i. 4 (1860).
Teinodactyla Kleiniiperda, *Allard, Ann. de la Soc. Ent. de France,* 325 (1862).

Habitat in Teneriffa, Gomera, Palma et Hierro, folia *Kleiniæ neriifoliæ* destruens.

This large and pallid *Longitarsus* appears to be peculiar (or nearly so) to the foliage of the *Kleinia neriifolia*, DeCand., whole plants of which I have frequently observed to be destroyed by it entirely. I have taken it abundantly in the waste cindery district above the Puerto Orotava, as well as near S^ta^ Cruz and in the sylvan regions of Taganana and the Agua Garcia, in Teneriffe; in the Barranco above S^ta^ Cruz in Palma; and in the lower part of El Golfo on the western side of Hierro. In Teneriffe and Gomera it was found also by Dr. Crotch. At first sight it somewhat resembles the *L. tabidus* of more northern latitudes; it is, however, less convex and more strongly punctured than that species, its prothorax is less abbreviated and rather more narrowed in front, its limbs are longer, and the basal joint of its four front male feet is altogether larger and broader.

627. **Longitarsus persimilis.**

Longitarsus persimilis, *Woll., Journ. of Ent.* i. 4 (1860).
Teinodactyla persimilis, *Allard, Ann. de la Soc. Ent. de France,* 319 (1862).

Habitat in Teneriffa et Hierro, foliis *Echiorum* (præsertim *E. simplicis*) in subeditioribus crescentium gaudens.

This beautiful *Longitarsus* is at once remarkable for its testaceous prothorax and elytra, the latter of which have a large patch on the disc of each, a smaller dash at either shoulder, and their suture (except at the extreme apex) more or less black. Its head, together with the apical half of its two hinder femora, and its antennæ (except the two or three basal joints) are either piceous or piceous-black; and its elytra are densely and coarsely punctured, and longitudinally striated—especially towards either side. It appears to be peculiar to the foliage of the various *Echia*—particularly to a gigantic species allied to the Madeiran *E. candicans*, and which the Rev. R.

T. Lowe informs me is probably the *E. simplex*; on which plant I have taken it, rather abundantly, at the base of the Organo Rocks in the sylvan region of the Agua Mansa in Teneriffe. Whilst in the island of Hierro, however, during February 1858, I captured it sparingly from a smaller *Echium* (I believe the common *E. violaceum*) on the hills to the westward of Valverde. In Teneriffe it was met with also by Dr. Crotch*.

628. **Longitarsus messerschmidtiæ.**

Longitarsus messerschmidtiæ, *Woll., Journ. of Ent.* i. 6 (1860).
Teinodactyla messerschmidtiæ, *Allard, Ann. de la Soc. Ent. de France*, 319 (1862).

Habitat in Teneriffa, Palma et Hierro, ad folia *Messerschmidtiæ fruticosæ* hinc inde frequens.

In my Paper "on the Canarian *Halticidæ*," above referred to, I said, concerning this species, "It is not without some little hesitation I regard the present *Longitarsus* as distinct from the preceding one; nevertheless, since its normal *facies* is very dissimilar, and its habits different, I think it is scarcely safe to amalgamate the two. Indeed in its *general* aspect it is so unlike the *L. persimilis* that no one could ever suppose them to be identical, did not an occasional (though very rare) variety of the present insect make such a curious approach, in the arrangement of its colouring, to its ally, as to lead one to suspect that it may be but a phasis of the latter, gradually assumed through the adoption of a totally different plant for its subsistence. Still this is but conjecture, and I therefore prefer treating the two as separate. In its typical state, the *L. messerschmidtiæ* is, on the average, a trifle smaller and narrower than its ally, its sculpture is less deep, and it is of a uniformly pale, brownish-testaceous hue. Its elytra, however (in which case the apices of its posterior

* The *L. persimilis* very closely resembles at first sight the Madeiran *L. Masoni* (=*isoplexidis* olim); "nevertheless, on a nearer inspection," as I stated in my Paper on the Canarian *Halticidæ*, "it possesses such a number of minor characters peculiarly its own that I cannot feel justified, despite the many points of resemblance in the two insects, in regarding them as otherwise than truly distinct, though clearly members of the same geographical province. The Canarian species may be readily known from the Madeiran one by its uniformly smaller size, rather shorter and more lunulate prothorax (which is a little more truncated in front, and has the hinder angles more rounded off, and the sides somewhat more angulated in the middle), and by its entire sculpture, which is denser and very much more coarse, especially on the elytra (which are also more evidently striated than is the case in the *L. Masoni*). Its elytra, likewise, are slightly more truncated at their apex, its whole surface is much less opake, and its coloration is altogether a little different—its head being less black, or more piceous, its prothorax more evidently *rufo*-testaceous, its legs and elytra not quite so pale, and the dark portions of the latter smaller in size; *i. e.* the humeral and discal patches are reduced in dimensions, and the sutural line is *equal* throughout."

femora are also dark), have an occasional tendency to become clouded about their disc, suture, and shoulders; and in one or two highly coloured specimens (out of many hundreds which I possess) the discal cloud assumes the form of a well-defined patch (and even the humeral one is somewhat concentrated)—thus causing them to resemble very much the paler examples of the *L. persimilis*. Such individuals, however, are extremely scarce; and even in them the lighter sculpture prevails (as in the ordinary ones); and therefore, in spite of their *primâ facie* approach to the last species, I must regard their *connectiveness* as more apparent than real. So far as I have observed hitherto, the present *Longitarsus* is exclusively attached to the fragrant *Messerschmidtia fruticosa*—on which shrub, when carefully examined, I have scarcely ever failed to detect it. Its range is consequently somewhat lower than that of the *L. persimilis*, which feeds on the *Echia* of more lofty elevations. I have taken it abundantly in the waste grounds above the Puerto Orotava, as well as between Ycod de los Vinhos and Garachico, of Teneriffe; on the rocks between the plains of Los Llanos and the Pinal, in the Banda of Palma; and a little above the sea-coast, in the district of El Golfo, on the west of Hierro."

629. **Longitarsus ochroleucus.**

Chrysomela ochroleuca, *Mshm, Ent. Brit.* 202 (1802).
Thyamis ochroleuca, *Steph., Ill. Brit. Ent.* iv. 311 (1831).
Altica ochroleuca, *Lucas, Col. de l'Algérie,* 547 (1849).
Teinodactyla ochroleuca, *Allard, Ann. de la Soc. Ent. de France,* 131 (1860).
Longitarsus ochroleucus et cognatus, *Woll., Journ. of Ent.* i. 7 (1860).

Habitat in Fuerteventura, Canaria et Teneriffa, minus frequens.

The common European *L. ochroleucus*, so well distinguished by its small, laterally rounded, almost unsculptured prothorax, its very finely punctulated elytra, and its excessively pallid, whitish-testaceous upper surface (the antennæ alone, except the basal joints, and the apical half of the two hinder femora being dark), appears to be both local and rather scarce in these islands—into which it may very likely have been introduced from more northern latitudes. I have taken it in Grand Canary (on the mountain-slopes above San Mateo, on the ascent to the Roca del Soucilho), and also around Orotava and S^{ta} Cruz, as well as at the Agua Garcia, in Teneriffe—in the latter of which islands it was found also by Dr. Crotch.

After a more careful comparison of the specimen (captured by Mr. Gray in Fuerteventura) which I described, in 1860, under the spe-

cific name of *cognatus*, I believe that it cannot be regarded as more than a slightly infuscated individual of the *ochroleucus*, in which the elytral punctures are even less conspicuous than usual; and I have therefore treated it accordingly.

630. **Longitarsus brevipennis.**

Longitarsus brevipennis, *Woll., Journ. of Ent.* i. 8 (1860).
Teinodactyla brevipennis, *Allard, Ann. de la Soc. Ent. de France*, 320 (1862).

Habitat in Lanzarota, ad plantam *Heliophyti erosi* Lem., per litus arenosum crescentem prope oppidum Arrecife, Aprili A.D. 1859, captus.

Of the present *Longitarsus* I have seen but three or four examples —which were taken by myself, near Arrecife, in the island of Lanzarote, during April 1859. They were found on a plant of *Heliophytum erosum*, Lemann, growing on the loose sand behind the sea-beach; but I unfortunately lost all of them except one. The species (judging from the single type now before me) may be known by its rufo-piceous head, convex, rufo-testaceous prothorax, and short, testaceous elytra (the suture of which, particularly in the middle, is blackened). Its prothorax and elytra are finely but sharply punctulated; and its antennæ (which, like the two hinder femora, are darker towards their apex) are rather abbreviated. M. Allard, of Paris, to whom I formerly submitted it for inspection, returned it with the observation, "affinis *Teinodactylæ atricapillæ* Dufts., sed aliter colorata, capite et prothorace latioribus, antennis brevioribus, et cæt."

631. **Longitarsus strigicollis,** n. sp.

L. oblongo-ovalis, nitidus, alutaceus, infuscato-testaceus, capite prothoraceque paulo rufescentioribus, parvis; hôc punctato, punctis postice subconfluentibus, fere strigas obliquas efficientibus, ad latera rotundato et grosse marginato, angulis posticis rotundatis; elytris subovalibus, sat distincte punctulatis, singulis striâ suturali impressis; antennis brevibus, versus apicem infuscatis; pedibus testaceis, femoribus posticis nigro-piceis.—Long. corp. lin. $1\frac{1}{4}$.

Habitat Teneriffam, a cl. W. D. Crotch detectus.

The single specimen from which the above diagnosis has been compiled was captured by Dr. Crotch in Teneriffe, during the spring of 1862. It may be known by its oblong-oval outline, brownish-testaceous hue (the apex of the antennæ, and the two posterior femora, being alone darker), by its small head and prothorax, somewhat coarsely punctured surface, and short antennæ. Its punctures have a tendency to be subconfluent on the hinder region of its prothorax—an arrangement which causes them almost to form oblique (though

very obscure) strigæ. Its head is a little darker (or more rufescent) than the prothorax, and the prothorax (which is coarsely bordered at the sides) than the elytra—which last are impressed (particularly behind) with a rather evident sutural stria.

632. Longitarsus nubigena.

Longitarsus nubigena, *Woll., Ins. Mad.* 447 (1854).
—— ——, *Id., Cat. Mad. Col.* 133 (1857).
—— ——, *Id., loc. cit.* 8 (1860).
Teinodactyla nubigena, *Allard, Ann. de la Soc. Ent. de France,* 329 (1862).

Habitat in Teneriffa et Gomera, in illâ a Dom. Crotch sed in hac a Dom. Gray et meipso semel captus.

The brownish-testaceous hue and coarsely sculptured surface of this rather insignificant *Longitarsus*, which has its prothorax transverse-quadrate (the sides being nearly straight), and its elytral punctures somewhat large and closely packed together and with a slight tendency to be arranged in longitudinal rows, will sufficiently distinguish it from its allies. M. Allard states concerning it, "il a beaucoup d'analogie avec la *T. brunniceps*, mihi, dont il diffère principalement en ce qu'il est ferrugineux en dessous et non pas noir." A single specimen of it was taken by Mr. Gray, near San Sebastian, in Gomera, at the beginning of February 1858; a second (which differs, however, in being rather paler, and in having its prothorax perhaps a trifle less abbreviated and with the lateral margin less thickened, but which I believe to be an immature example of the *nubigena*) was found by Dr. Crotch in Teneriffe, during the spring of 1862; and I myself met with a third, in Teneriffe, during May of 1859*. It occurs likewise, though sparingly, in Madeira.

633. Longitarsus dorsalis.

Chrysomela dorsalis, *Fab., Mant. Ins.* i. 77 (1787).
Thyamis dorsalis, *Steph., Ill. Brit. Ent.* iv. 315 (1831).
Teinodactyla dorsalis, *Allard, Ann. de la Soc. Ent. de France,* 104 (1860).
Longitarsus dorsalis, *Woll., loc. cit.* 8 (1860).

Habitat Lanzarotam borealem, in graminosis herbidis circa oppidum Haria, tempore vernali haud infrequens.

The only region in these islands in which the European *L. dorsalis* has (so far as I am aware) been observed is the north of Lanzarote —where it was captured, during January 1858, by Mr. Gray and myself (and subsequently, by myself, in March of 1859), around Haria. The dark colour of its head, broad sutural stripe, and two

* The last of these is of a rather darker hue, and has the hinder disc of each elytron, as well as its two posterior femora, piceous.

hinder femora, whilst the prothorax and the remainder of the elytra and limbs are pale testaceous, will, apart from minor features, sufficiently distinguish it. It is recorded also from the north of Africa.

634. Longitarsus pusillus.

L. oblongo-ovalis, nitidus, capite prothoraceque rufo-piceis (hôc pallidiore), elytris pallide infuscato-testaceis; prothorace brevi, transverso, ad latera marginato, angulis posticis subrotundato-obtusis, obsoletissime et parce punctulato, tenuiter canaliculato necnon postice subinæquali; elytris distinctius et parum dense punctulatis; antennis pedibusque testaceis, illis versus apicem femoribusque posticis paulo obscurioribus.—Long. corp. lin. vix 1.

Haltica pusilla, *Gyll., Ins. Suec.* iii. 549 (1813).
Thyamis pusilla, *Steph., Ill. Brit. Ent.* iv. 313 (1831).
Teinodactyla pusilla, *Allard, Ann. de la Soc. Ent. de France,* 125 (1860).

Habitat Teneriffam, a W. D. Crotch semel deprehensus.

I cannot detect any differences of sufficient importance in the single (and rather immature) example from which the above diagnosis has been compiled (and which was captured by Dr. Crotch in Teneriffe) to warrant the supposition that it is specifically distinct from the common European *L. pusillus*; for although the punctation of its elytra is just perceptibly stronger, and that of its prothorax perhaps even somewhat still finer, than is the case in the ordinary northern type, yet such characters are so trifling in a group so essentially variable as *Longitarsus* that I cannot attach any weight to them at all. Moreover its prothorax is a little less convex (or more uneven), and has its central canal better expressed; but this likewise is very unimportant, and may possibly (as the specimen is ill-developed) be merely accidental; so that I have but little hesitation in identifying it as above.

635. Longitarsus inconspicuus.

Variat vel omnino vel fere infuscato-testaceus, vel dilute piceus elytris vix magis testaceis.—Long. corp. lin. ¾–vix 1.

Longitarsus inconspicuus, *Woll., loc. cit.* 9 (1860).
Teinodactyla inconspicua, *Allard, Ann. de la Soc. Ent. de France,* 317 (1862).

Habitat Teneriffam, in elevatis parce degens.

Four specimens only, captured by myself in Teneriffe, of this insignificant little *Longitarsus* have as yet come beneath my notice. Two of them were taken at the Agua Mansa, a third on the ascent to the Cumbre above it, and the remaining one on the mountains above Taganana. It would seem therefore to be an insect of inter-

mediate and lofty elevations. According to M. Allard, it is a good deal allied to the European *L. thoracicus*, Steph.; from which it appears, mainly, to recede in its smaller size, more elliptic outline, different colour, and coarser punctation.

636. **Longitarsus vilis**, n. sp.

L. fusco-piceus, nitidus, subdepressus; prothorace parvo, subconico-transverso, postice recte truncato, minute et levissime punctulato; elytris subovalibus, antice facile angustioribus, distinctius (sed minute) et parum dense punctatis; antennis (breviusculis) pedibusque plus minus piceo-testaceis, illis versus apicem et præsertim femoribus posticis picescentioribus.—Long. corp. lin. vix 1.

Habitat in Canaria et Teneriffa, parum rarus.

This ordinary-looking little species has much the (brownish-piceous) colour of the common European *L. luridus*; nevertheless it is considerably smaller and less convex than that insect; its prothorax is rather smaller, and a little more laterally-compressed in front (giving it a more conical appearance from above); its elytra are less dilated in the middle and more *regularly* narrowed towards the shoulders; and its entire punctation is both finer and denser. I took a single example of it in Grand Canary, during the spring of 1858; and four more were captured by Dr. Crotch in Teneriffe in 1862.

637. **Longitarsus fuscoæneus.**

Longitarsus fuscoæneus, *Redt., Fna Austr.* 535 (1849).
Teinodactyla fuscoænea, *Allard, Ann. de la Soc. Ent. de France*, 92 (1860).
Longitarsus fuscoæneus, *Woll., loc. cit.* 9 (1862).

Habitat Fuerteventuram et Teneriffam, in foliis *Echiorum* degens.

The European and North-African *L. fuscoæneus* occurs sparingly at the Canaries—on the leaves of the *Echium violaceum*, L. It was taken by Mr. Gray in Fuerteventura; and by myself on the mountains above S^ta^ Cruz, as well as at the Agua Garcia, in Teneriffe—in which latter island it was found subsequently by Dr. Crotch.

638. **Longitarsus echii.**

Haltica Echii, *Illig., Mag. für Ins.* vi. 171 (1807).
Longitarsus excurvus, *Woll., Cat. Mad. Col.* 133 (1857).
Teinodactyla Echii, *Allard, Ann. de la Soc. Ent. de France*, 90 (1860).
Longitarsus Echii, *Woll., loc. cit.* 9 (1860).

Habitat in Canaria, Teneriffa, Gomera et Palma, in locis similibus ac præcedens.

This *Longitarsus*, which is widely spread over central and southern

Europe, and which occurs also in the north of Africa and at the Madeiras, is found sparingly in these islands, chiefly in company with the last species. I have taken it from the *Echium violaceum*, near San Mateo, in Grand Canary, as well as at the Agua Garcia in Teneriffe; and it was found by Mr. Gray in Gomera and Palma. In Teneriffe it was met with likewise by Dr. Crotch. It has much the general aspect and colouring of the *L. fuscoæneus*, but is considerably larger and more coarsely punctured; it has often (in addition to the normal brassy one) a greenish or bluish tinge; and the extreme apices of its elytra are less obtuse (or separately rounded off).

Genus 243. **PSYLLIODES.**

Latreille, *Fam. Nat. des Ins.* 405 [script. *Psylliode*] (1825).

639. **Psylliodes hospes.**

Psylliodes hospes, *Woll., Ins. Mad.* 449 (1854).
—— ——, *Id., Cat. Mad. Col.* 134 (1857).
—— ——, *Allard, Ann. de la Soc. Ent. de France*, 340 (1860).
—— ——, *Woll., loc. cit.* 10 (1860).

Habitat insulas omnes Canarienses, in herbidis vulgaris.

The present *Psylliodes*, which is universal throughout the Madeiran archipelago, is equally universal at the Canaries—in the whole seven islands of which I have myself captured it, more or less abundantly. In Lanzarote, Gomera, and Hierro it was found also by Mr. Gray. Its brassy-green, densely punctured surface, less convex body, small prothorax, and testaceous legs (and base of antennæ), the two hinder femora being alone infuscated, will sufficiently distinguish it. It is particularly partial to the foliage of plants of the *Sinapis*-group; and would seem to be the representative of the *P. cuprea* of more northern latitudes. Indeed M. Allard observed concerning it, "*Psyll. cupreæ* Ill. affinis, et ut illa in elytris punctato-striata, sed differt interstitiis punctulatis, prothorace ad latera minus recto, et cæt."

640. **Psylliodes vehemens.**

Psylliodes vehemens, *Woll., Ins. Mad.* 451 (1854).
—— ——, *Id., Cat. Mad. Col.* 134 (1857).
—— ——, *Allard, Ann. de la Soc. Ent. de France*, 341 (1860).
—— ——, *Woll., loc. cit.* 10 (1860).

Habitat insulas omnes Canarienses, passim.

The *P. vehemens*, which, like the last species, is universal in the Madeiran Group, is likewise universal at the Canaries,—Gomera (where however it was taken by Dr. Crotch, during the spring of 1862) being the only island of the seven in which I have not myself

captured it. In Fuerteventura, Teneriffe, and Palma it was found also by Mr. Gray. As in the neighbouring archipelago, it is extremely variable in hue—being sometimes entirely testaceous, at others with the prothoracic disc and the suture dark, whilst in highly-coloured individuals nearly the whole of the prothorax and a large portion of the elytra are blackened. The *generality* of the Canarian specimens, however, are altogether pale, like the Porto-Santan ones,—the darker states, which are the rule rather than the exception in Madeira proper, being comparatively rare in these islands. M. Allard writes, of the *P. vehemens*, "Cette belle espèce ressemble beaucoup au *P. crassicollis*, Fairm., mais son corselet est un peu plus court et plus étroit, la ponctuation des élytres est plus forte, et la coloration est différente."

641. **Psylliodes stolida.**

Psylliodes stolida, *Woll., loc. cit.* 11 (1860).
—— ——, *Allard, Ann. de la Soc. Ent. de France*, 340 (1860).

Habitat Lanzarotam et Fuerteventuram, foliis *Mercurialis annuæ* gaudens.

This small *Psylliodes*, which is of a brownish-piceous hue with more or less of an obscure brassy or even greenish tinge, and the prothorax of which is convex, delicately alutaceous, and studded with very minute and shallow punctules, is peculiar, so far as observed hitherto, to Lanzarote and Fuerteventura—in the former of which it was captured by Mr. Gray and myself, on the common *Mercurialis annua*, during January 1858, around Haria (in which locality I again met with it in the spring of the following year); whilst, in the latter, I took it sparingly, at the end of March 1859, at Oliva.

Genus 244. **DIBOLIA.**

Latreille, *Règne Anim.* v. 139 (1829).

642. **Dibolia obtusa,** n. sp.

D. oblonga, nitida, ubique parce punctulata, nigra, capite prothoraceque (subconico) distincte sed elytris vix æneascentibus, punctis in elytris subseriatim dispositis; antennis ad basin, pedibus anterioribus et tibiis tarsisque posticis rufo-testaceis.—Long. corp. lin. vix $1\frac{1}{2}$.

Habitat Fuerteventuram; tempore vernali A.D. 1859 exemplar unicum collegi.

Of the present *Dibolia* a single example was captured by myself in Fuerteventura (I believe, in the Rio Palmas), during the spring of 1859. It is unquestionably distinct from *five* of the European species of which M. Allard has kindly communicated types, though per-

haps nearer in size and sculpture to the *D. occultans* than to any of the remainder. It is, however, a little larger and more oblong than that insect, its colour (instead of being cyaneous) is of an obscure brassy-black, and its four anterior legs and two hinder tibiæ and feet are bright rufo-testaceous.

Genus 245. CHÆTOCNEMA.

Stephens, *Ill. Brit. Ent.* iv. 325 (1831).

643. Chætocnema tarsalis.

Chætocnema tarsalis, *Woll., loc. cit.* 11 (1860).
Plectroscelis tarsalis, *Allard, Ann. de la Soc. Ent. de France,* 337 (1860).

Habitat Canariam Grandem, in graminosis ad Arguiniguin, per marginem paludis ejus juxta mare sitæ, Aprili A.D. 1858, reperta.

The *primâ facie* aspect of this *Chætocnema* is almost identical with that of the common European *C. aridella*, except that it is a little more æneous and shining, with its prothorax somewhat more truncated (or less produced) behind, and with the intermediate joints of its antennæ rather slenderer; and it was not until I had closely overhauled it that I detected a *structural* character which will at once separate it from its more northern ally. This consists in the formation of its tarsi, which are very much narrower and more elongated than those of the *aridella*, with their apical joint particularly (as compared with the corresponding one in that species) long and slender. The penultimate one, also, is less dilated than is there the case, and the whole foot has a different appearance. It was detected by myself, on the 14th of April 1858, at Arguiniguin, in the south of Grand Canary, where I obtained several specimens by brushing the short grass at the edges of the small freshwater lake immediately behind the sea-beach.

Fam. 56. HISPIDÆ.

Genus 246. HISPA.

Linnæus, *Syst. Nat.* (1766).

644. Hispa occator.

H. species *H. testaceæ* simillima, sed paulo major, elytris ad apicem minus truncato-decurvis, et aliter colorata. Supra pallidior, testacea (nec rufo-ferruginea) pilisque longioribus demissis magis aureis vestita, prothorace postice, scutello, suturâ tarsisque, necnon infra (in meso- et meta-sternis abdomineque) plus minus nigrescentibus (nec concoloribus); elytrorum spinis e nodulis submajoribus ac latius nigris singulatim surgentibus.—Long. corp. lin. 2–3.

Hispa occator, *Brullé, in Webb et Berth. (Col.)* 73. pl. i. f. 17 (1838).

Habitat in montibus excelsis Teneriffæ et Palmæ, præsertim ad folia *Cistorum* in pinetis crescentium, hinc inde vulgatissima.

Whether this insect should be regarded as a geographical modification of the *H. testacea* of southern Europe, I will not undertake to pronounce for certain; but as it has already been erected into a species by M. Brullé, and it does undoubtedly possess certain differential characters (though perhaps not very important ones) which essentially separate it therefrom, I do not think it desirable to treat it as a mere variety. It is, on the average, a little larger than the *H. testacea*; its elytra are less suddenly drawn in, or truncated, behind; and it is clothed with a rather coarser decumbent golden pile; the colour also of its upper surface is paler, or more testaceous (instead of being rufo-ferruginous), but nevertheless the posterior region of its prothorax, as well as its scutellum and suture, are more or less darkened. The tubercles, likewise, of its elytra, from which the spines arise, are blacker and (if anything) somewhat larger; and the under segments of its body—at least the meso- and meta-sterna and abdomen—are, together with the feet, also blackish.

The *H. occator* abounds in certain districts of a rather high elevation in Teneriffe and Palma, occurring more particularly in the various Pinals (which are frequently difficult of access), and attaching itself to the foliage of the shrubby *Cisti* (the *C. vagans* and *monspeliensis*) which characterize those altitudes. In such situations I have taken it at the Agua Mansa, and above Ycod el Alto, in Teneriffe; as well as throughout the immense Pinal, of Palma, extending down the western slopes of the mountain-range above S^{ta} Cruz and Buenavista, and occupying the extensive tract of country between the Banda and the edges of the Great Caldeira. Teneriffan specimens have also been communicated by the Barão do Castello de Paiva.

Fam. 57. CASSIDIDÆ.

Genus 247. CASSIDA.

Linnæus, *Syst. Nat.* i. (1735).

645. Cassida hemisphærica.

Cassida hemisphærica, *Hbst, Käf.* viii. 226 (1799).
—— ——, *Lucas, Col. de l'Algérie*, 514 (1849).
—— ——, *Woll., Ins. Mad.* 440 (1854).
—— ——, *Id., Cat. Mad. Col.* 130 (1857).

Habitat in Canaria, Teneriffa, Palma et Hierro, passim.

The European *C. hemisphærica*, which occurs sparingly at Madeira, is widely spread over these islands, where very probably it is universal.

Hitherto, however, I have observed it only in Grand Canary (throughout the region of El Monte), Teneriffe (at Souzal and about Orotava), Palma (at the Banda), and Hierro. In Teneriffe it was found also by the late Rev. W. J. Armitage, the Barão do Castello de Paiva, and Dr. Crotch; and in Palma by Dr. Crotch and Mr. Gray. I have once or twice met with it rather abundantly amongst the mulberry-leaves, in houses, on which silkworms are fed.

Fam. 58. EROTYLIDÆ.

Genus 248. **XESTUS** (nov. gen.).

Corpus sat parvum, ellipticum, calvum, *Throsci* formam primâ facie simulans: *capite* exserto: *prothorace* subconico, apice truncato, basi trisinuato, angulis posticis productis, *prosterno* apice truncato, postice inter coxas anticas parallelo et leviter producto necnon ad basin paulo emarginato: *scutello* sat magno, transverso-scutiformi: *abdomine* e segmentibus 5 composito. *Antennæ* 11-art^{æ}, robustæ, parum clavatæ, mox ante oculos sub margine capitis insertæ et inter otium sub margine prothoracis (sed haud in foveis) repositæ, art^{is} 1mo et 2do brevibus, 3^{tio} longiusculo, 4to ad 8^{vum} latitudine vix crescentibus, reliquis clavam laxam perfoliatam haud abruptam 3-articulatam efficientibus (9no poculiformi, 10mo magis transverso, ult^{mo} subgloboso). *Labrum* submembranaceum, transversum, apice vix emarginatum, angulis anticis rotundatis ciliatis. *Mandibulæ* apice valde incurvæ, uncinatæ, acutæ, infra uncum denticulo armatæ, et mox infra hunc valde pubescentes membranaceæ. *Maxillæ* bilobæ, lobis brevibus, pubescentibus: *interno* apice incurvo, uncinato. *Palpi maxillares* art^{o} 1mo elongato subcylindrico, 2do et 3^{tio} brevioribus crassioribus subpoculiformibus, ult^{mo} maximo securiformi: *labiales* art^{o} 1mo flexuoso, 2do multo latiore sed vix longiore, ult^{mo} magno subsecuriformi. *Mentum* elongato-quadratum, apice late sed leviter emarginatum et (nisi fallor) dente medio brevi instructum. *Ligula* membranacea, subquadrata, apice paulo emarginata, angulis anticis rotundatis ciliatis. *Pedes* crassi, ad basin leviter distantes: *tibiis* ad apicem externum oblique truncatis ciliatis, ad internum calcaribus minutis vix observandis terminatis: *tarsis* 5-art^{is}, subtus longe ciliatis, art^{is} 1mo, 2do et 3^{tio} longitudine subæqualibus, 3^{tio} supra excavato 4^{tum} minutum recipiente, ult^{mo} longiusculo *unguiculis* simplicibus munito.

A Ξεστὸς, calvus.

The affinities of the curious insect from which the above generic details have been compiled are by no means clear; nevertheless, after a careful consideration of its several parts, I am induced to think that it has perhaps more in common with the European *Aulacochilus* than with any other form with which I am acquainted—its oral organs and feet being not very dissimilar from those which obtain in that

group. Nevertheless, in its external *facies*, elliptic outline, and the produced hinder angles of its prothorax, it is so curiously suggestive of a gigantic *Throscus*, that at first I could scarcely resist the conviction that it must at least belong to the same *family* as the latter; though, in reality, its exposed head (consequent on the fact of its pronotum and prosternum being, both of them, truncated anteriorly), its freedom from under-grooves for the reception of its antennæ when laid back in a state of repose, not to mention innumerable differences, of primary signification, in its various structural *minutiæ*, will at once remove it, on a closer inspection, from the *Throscidæ*.

646. **Xestus throscoides**, n. sp.

X. ellipticus, nitidus, calvus, picco-niger; capite prothoraceque paulo obscurioribus (evidentius subtilissime alutaceis) et argute punctulatis, illo paulo rufescentiore, hôc (saltem in disco) convexo, ad latera et distinctius per marginem trisinuatum posticum (præsertim in lobo medio) marginato; elytris in disco convexis, mox pone basin obsolete subangulatim latioribus, inde ad apicem (rufo-ferrugineum) regulariter acuminatis, leviter striato-punctatis, interstitiis vage minutissime punctulatis; antennis pedibusque rufo-testaceis.—Long. corp. lin. 2-2½.

Habitat in lauretis humidis Teneriffæ, in montibus supra Taganaham ad fungos necnon etiam sub cortice arborum laxo putrido parcissime captus.

Not to mention its Throscoideous contour already alluded to, the piceous-black surface of this singular insect, which has its limbs and the apex of its elytra alone more or less rufo-ferruginous, in conjunction with its sharply punctulated head and prothorax (the latter of which is margined along its obliquely-straight sides and trisinuated basal edge—particularly in the centre), and its lightly striate-punctate, apically-acuminated elytra, will prevent its being confounded with anything else with which we have here to do. It appears to be of the greatest rarity and of fungivorous habits—the few specimens which I have seen (eleven in number) having been captured by myself, in Teneriffe, during May of 1859, from within *fungi*, in the damp and elevated laurel-woods which clothe the mountains above Taganana and Point Anaga; as well as from beneath the loosened putrid bark of trees, under which minute Cryptogams were more or less evident.

Fam. 59. COCCINELLIDÆ.

Genus 249. **COCCINELLA.**

Linnæus, *Syst. Nat.* edit. i. [script. *Coccionella*] (1735).

647. Coccinella 7-punctata.

Coccinella 7-punctata, *Linn., Fna Suec.* 477 (1761).
—— ——, *Brullé, in Webb et Berth.* (*Col.*) 74 (1838).
—— ——, *Woll., Ins. Mad.* 462 (1854).
—— ——, *Id., Cat. Mad. Col.* 136 (1857).
—— ——, *Hartung, Geolog. Verhältn. Lanz. und Fuert.* 141, 142.

Habitat insulas omnes Canarienses, vulgaris.

This common and widely spread insect, which is universal in the Madeiran Group, is universal also at the Canaries—in the whole seven islands of which I have myself captured it. In Lanzarote and Fuerteventura it was taken likewise by M. Hartung; in Teneriffe by the late Rev. W. J. Armitage, the Barão do Castello de Paiva, and Dr. Crotch; in Gomera by Dr. Crotch; and in Palma by Mr. Gray. It is called by the inhabitants "San Antonio."

648. Coccinella Miranda, n. sp.

C. rotundato-ovalis; capite prothoraceque nigris, illo maculis duabus frontalibus pallido-flavis ornato, hôc brevi lato transverso, antice et ad latera (grosse marginata) anguste sed ad angulos anticos profunde et quadrate pallido-flavo; elytris vel flavis, vel pallido-flavis, grosse marginatis, ad humeros obtuse rotundatis, lineâ suturali hastiformi (a scutello nigro fere ad apicem ductâ, sed gradatim angustiore) et singulis plagis duabus elongatis arcuatis [unâ sc. in disco antico, longitudinali, et alterâ breviore subtransversâ pone discum posticum] nigris; antennis pallido-testaceis; pedibus nigris, tarsis dilutioribus.

Variat elytrorum plagis plus minus latioribus, plagâ anticâ elongatâ vel antice vel postice in lineam suturalem continuatâ necnon interdum maculâ parvâ mediâ sublaterali auctâ.

Var. β [an species distincta?]. Elytra magis rufescentia, lineâ suturali ad scutellum vix sed in medio sensim latiore necnon usque ad apicem ipsissimum ductâ, plagâ longitudinali anticâ in maculas parvas late fractâ et alterâ laterali subrotundatâ (nec sublaterali elongatâ) auctâ, plagâ transversâ posticâ fere evanescente, i. e. in maculas minutas 3 vel 4 fractâ.—Long. corp. lin. $1\frac{3}{4}$–$2\frac{1}{3}$.

Coccinella hieroglyphica, *Brullé* [nec *Oliv.*], *in Webb et Berth.* (*Col.*) 74 (1838).

Habitat Canariam, Teneriffam, Gomeram et Palmam, in intermediis et elevatis degens, usque ad 9000′ s. m. ascendens.

The present *Coccinella* has much the *primâ facie* appearance of the European *C. hieroglyphica*; nevertheless, when closely inspected, it will be found to be abundantly distinct. Thus, in addition to its markings (both dark and light ones), which are differently shaped, it is rounder and broader in outline and its edges are more coarsely margined; its prothorax particularly is wider and more transverse; its humeral angles are rounder, or more obtuse; and its legs are

rather slenderer. In its markings it is, like most of the *Coccinellidæ*, extremely variable; but *normally* it may be described as having its prothorax (which is more constant than the elytra) narrowly edged along its front and lateral margins with pale straw-yellow, of which colour there is a larger subquadrate spot (confluent with the border) at each anterior angle. The elytra are yellow, with a long hastate stripe down the suture (reaching from the scutellum, where it is broad, and gradually narrowing to almost the extreme apex) and two arcuated ones on each elytron (one of which is longitudinal and down the fore disc, whilst the other is transverse and placed between the hinder disc and the apex) black. And there is frequently a small, additional, sublateral dash about the middle of the outer edge of the anterior curved band.

The *C. Miranda* is widely spread over the archipelago, where (though we did not happen to observe it in Hierro) it is almost certainly universal throughout at any rate the central and western islands. It occurs at intermediate and lofty elevations, and is perhaps more abundant in the latter than in the former—ascending to an altitude of at least 9000 feet above the sea. I have taken it on the hills above San Mateo, on the ascent to the Roca del Soucilho, in Grand Canary; from the blossoms of the Retama on the lofty Cumbre, of Teneriffe, above Ycod el Alto and adjoining the Cañadas, as well as on the opposite Cumbre above the Agua Mansa and at the Agua Mansa itself; and in the Barranco above S^{ta} Cruz in Palma. It was first detected by Mr. Gray, who met with three specimens of it in the valley above San Sebastian, in Gomera, during our short visit to that island in his yacht "the Miranda" early in February of 1858; and I am glad to commemorate our pleasant sojourn in that admirable little vessel by the adoption of the above specific name. Mr. Gray likewise captured it, a short time afterwards, in Palma; and it has subsequently been found in that island, Gomera, and Teneriffe by Dr. Crotch.

649. Coccinella Doublieri.

Harmonia Doublieri, *Muls., Sécurip. de France*, 118 (1846).

Habitat Fuerteventuram, in foliis *Tamaricis gallicæ* deprehensa.

Although I have no type for comparison, I have little doubt, judging from the description, that the present small *Coccinella* is conspecific with Mulsant's *C. Doublieri*, which is said to occur on Tamarisks in the south of France. The only Canarian examples (thirteen in number) which I have seen were captured by myself

from the bushes of *Tamarix gallica*, a short distance below the town of Betancuria, in the Rio Palmas of Fuerteventura, at the beginning of April 1859. The species may be known by its small size and pale yellow surface, which has often a slightly roseate hue, and which is ornamented with numerous black patches and spots, arranged as follows—two on the forehead, seven on the prothorax, and nine on each elytron. These last are placed somewhat thus: (1) subhumeral, and comparatively elongate, being produced obliquely in the direction of the suture; (2) rounded and subbasal, midway between the humeral one and the suture; (3) rounded, submedial, and sublateral; (4) close to, and a little larger than, the last, and likewise submedial, but further removed from the lateral margin; (5 and 6) a little further behind than the last two, but nearer the suture, and united so as to form a semicircle with its convexity turned towards the apex, and in highly coloured examples having a brownish line arising from the inner extremity of the curve and produced backwards for a considerable distance, almost parallel to the suture and towards the scutellum; (7, 8, and 9) subapical, and equidistant from each other, the central one being the longest of the three, and the inner one the roundest*.

Genus 250. **CHILOCORUS.**

Leach, *Edinb. Encycl.* xv. 116 (1815).

650. **Chilocorus renipustulatus.**

Coccinella renipustulata, *Scriba, Journ.* 276 (1790).
—— Cacti, *Mshm, Ent. Brit.* 163 (1802).
Chilocorus renipustulatus, *Steph., Ill. Brit. Ent.* iv. 374 (1831).
—— ——, *Muls., Sécurip. de France,* 168 (1846).

Habitat insulas omnes Canarienses, præsertim in apricis inferioribus, hinc inde vulgaris.

This common European insect is universal throughout the Canarian archipelago, where it occurs principally in low and hot situations, and is particularly partial to the *Opuntia tuna* (or Prickly Pear), as also to the *Plocama pendula*. I have taken it in Grand Canary, Teneriffe, Gomera, and Hierro; in which last island, as well as in Lanzarote and Palma, it was found by Mr. Gray. In Teneriffe it was likewise captured by the late Rev. W. J. Armitage and Dr. Crotch; and in Gomera by Dr. Crotch; whilst from Fuerteventura it has been com-

* There is a *Coccinella* included by M. Brullé in his short and inaccurate catalogue, in MM. Webb and Berthelot's gigantic work, under the title of "*C. semi-pustulata*, Oliv."; but to what it can possibly refer I have no means of ascertaining, inasmuch as he gives (as usual) no single observation concerning it —except indeed "Espèce du midi de l'Europe."

municated by the Barão do Castello de Paiva. My own Teneriffan specimens are principally from the vicinity of S^ta^ Cruz and the hills above it, Taganana, and Orotava.

Genus 251. **EPILACHNA.**

Chevrolat, *Dict. Univ. d'Hist. Nat.* iv. 43 (1844).

651. **Epilachna 4-plagiata,** n. sp.

E. nitida, oculo fortissime armato minutissime et parce punctulata necnon (saltem in prothorace elytrorumque limbo) subtilissime pubescens, rufo-testacea, capite, prothoracis disco (lineâ mediâ interdum exceptâ) elytrorumque marginibus angustissimis et maculis parvis duabus in singulis positis plus minus nigrescentioribus; elytris tenuiter marginatis, ad humeros rotundatos latis, prothorace multo latioribus.—Long. corp. lin. $1\frac{1}{3}$–$1\frac{1}{2}$.

Habitat in aridis arenosis Fuerteventuræ, rarissima.

The almost imperceptibly punctulated, rufo-testaceous surface of this species, which has its head and prothoracic disc more or less blackened, or infuscated, as well as two small spots, or dashes (one anterior, and the other posterior), on each of its elytra darker, will sufficiently distinguish it. The latter (which are considerably broader at their base than the prothorax) have their humeral angles porrect and very obtusely rounded, and their suture and outer margins are most narrowly black. The only three specimens which I have seen were captured by myself in the arid, sandy district at Corralejo, in the extreme north of Fuerteventura, during the spring of 1859.

652. **Epilachna bella,** n. sp.

E. nitidissima, paulo distinctius (sed tamen minutissime) punctulata necnon (saltem in prothorace elytrorumque limbo) subtilissime pubescens, nigra, prothoracis lateribus elytrorumque margine laterali ab humeris usque ad medium et maculis duabus magnis subconfluentibus in singulis positis, rufo-testaceis; elytris sat grosse marginatis, rotundatioribus, ad humeros rotundatos prothorace parum latioribus.—Long. corp. lin. vix $1\frac{1}{2}$.

Habitat Canariam Grandem, in arenosis ad Maspalomas capta.

The black and very shining upper surface of this *Epilachna*, which has the edges of its prothorax, and *half* of the lateral margins of its elytra (*i. e.* from either shoulder to about the middle), as well as two large subconfluent patches on the disc of each of the latter, rufo-testaceous, will serve to characterize it. Although very minutely so, it is rather more evidently punctulated than the *E.* 4-*plagiata*; and its elytra are more rounded at the sides (and therefore not so immensely wider at their extreme base than the prothorax), and are also more

coarsely margined. The unique example from which the above diagnosis has been compiled I captured in the sandy region at Maspalomas, in the extreme south of Grand Canary, during April 1858.

653. **Epilachna 10-plagiata.**

Scymnus 10-plagiatus, *Woll., Cat. Mad. Col.* 137 (1857).

Habitat in Teneriffa et Palma, rarissima.

The present little *Epilachna* may at once be known from both of the preceding species by the comparatively long and coarse silvery pile with which it is clothed, by the more porrect anterior angles of its prothorax, and by its surface being more deeply punctured, and *black*,—the elytra alone having five rufo-testaceous spots on each of them. It appears to be rare, occurring sparingly at low and intermediate elevations. I have taken it near S^{ta} Cruz and at Las Mercedes in Teneriffe, as also in the Barranco above S^{ta} Cruz in the island of Palma. It occurs likewise in Madeira, where, however, it is extremely scarce.

Genus 252. **SCYMNUS.**

Kugelann, *in Schneid. Mag.* 515 (1794).

654. **Scymnus canariensis,** n. sp.

S. rotundato-ovalis, nitidus, minutissime punctulatus, cinereo-pubescens, niger; elytris vel rufis vel rufo-testaceis, sed in parte magnâ triangulari basali, suturâ, maculâ centrali in disco postico singulorum positâ necnon in margine laterali ab humeris etiam ultra medium ductâ et dein in curvâ obscurâ (interdum obsoletâ) nebulosâ usque ad suturam, sed mox ante apicem ejus, oblique continuatâ, nigris; pedibus testaceis, plus minus infuscatis.

Mas capite et prothoracis lateribus plus minus testaceis.

Var. β. Elytris singulis in disco immaculatis.

Var. γ. *rufipennis* [an species?]. Sensim distinctius punctulata, elytris in parte basali triangulari, suturâ et in medio marginis lateralis solum nigris.—Long. corp. lin. 1–1$\frac{1}{3}$.

Habitat insulas omnes Canarienses, vulgaris.

This most inconstant *Scymnus* is abundant throughout the Canarian archipelago, in the whole seven islands of which I have myself captured it. In Lanzarote, Gomera, Palma, and Hierro it was found also by Mr. Gray; and in Teneriffe, Gomera, and Palma by Dr. Crotch. It varies a great deal in bulk, and is usually smaller in exposed arid districts than elsewhere. In its normal state it may be described as black with rufous elytra—the latter, however, being ornamented with a large triangular region at the base, their suture (to *almost* its extreme apex), a central spot on the hinder disc of each, and about

two-thirds of the lateral margin (namely, from either shoulder to *beyond* the middle—at which latter point the line curves inwards, nearly parallel to the elytral margin itself, and joins the sutural stripe at its extremity, *i. e.* immediately before the apex), all of which are black. One of its principal *aberrations* is that indicated above (var. β), in which merely the discal spot of each elytron is entirely absent (the apical fascia remaining, at the same time, strongly expressed). *All* the examples which I have as yet observed in Hierro belong to this particular state; and I may add that hitherto I have not detected it in any of the other islands of the Group. In Palma, on the contrary, the greater number of the specimens are highly decorated, the discal patch being frequently *enlarged* so as to coalesce with either the sutural or lateral stripe (or even with both of them). In the phasis var. γ its elytral markings are still further reduced—not merely the discal patch being absent but also the subapical cloud-like fascia, and the whole of the marginal line except a small portion of it about the middle. This variety is usually a trifle more coarsely punctulated, and may perhaps be universal throughout the archipelago—though the examples before me are merely from Fuerteventura, Grand Canary, Teneriffe, Gomera, and Palma.

The *S. canariensis* is most closely allied to the Madeiran *S. Durantæ*; nevertheless it descends to a very much smaller bulk, and the head, which in that species is pale in both sexes, is in the Canarian one testaceous in the males only. The *S. Durantæ*, also, is a trifle more densely and coarsely punctulated; and the dark patch on the posterior disc of each elytron is usually composed of *two, confluent* ones—thus assuming the form of a fascia, and breaking up the rufous space so as to cause the latter to have somewhat the *primâ facie* appearance of two detached reddish *spots*.

655. **Scymnus oblongior,** n. sp.

S. præcedenti similis, sed paulo minor, oblongior, sensim minus convexus minusque crebre punctulatus, elytris pallidioribus (testaceis), singulis maculâ parvâ obscurâ secundâ (in disco antico positâ) ornatis.—Long. corp. lin. 1.

Habitat in montibus excelsis Teneriffæ, usque ad 9000′ s. m. ascendens.

Considering the excessive variability of the *S. canariensis*, I feel a little doubtful whether I ought to regard the present *Scymnus* (of which I have but two examples to judge from) as a state of that insect peculiar to the loftiest elevations of Teneriffe, or as specifically distinct. I believe, however, that the latter will be the safer course;

for although in mere colouring it scarcely differs from certain pale (though spotted) individuals of the *canariensis* (such as are often met with in barren districts, in Fuerteventura and elsewhere), still its more oblong outline and rather less convex upper surface do not seem to be paralleled in any of the numerous phases of its ally which I possess from so many remote parts of the archipelago. So that when I consider the immense altitude at which the two examples now before me were taken (they having been captured by myself on the Cumbre, overlooking the Cañadas, above Ycod el Alto—upwards of 9000 feet above the sea), I am inclined to suspect that they may prove to be the exponents of a separate species having a very elevated range.

656. **Scymnus cercyonides**, n. sp.

S. species *S. canariensi* affinis, sed multo minor, paulo oblongior, paulo minus convexus, sensim brevius pubescens densiusque punctulatus; prothorace antice subangustiore; elytris rufis, in parte basali triangulari (per suturam, usque ad medium, obscure suffusis), et interdum obsoletissime mox ante apicem, nigrescentibus.

Mas prothorace ad latera paulo dilutiore; capite (nisi fallor), ut in sexu fœmineo, nigro.—Long. corp. lin. $\frac{3}{4}$.

Habitat in Teneriffa, Gomera et Palma, passim.

It is scarcely possible, I think, that this small *Scymnus* (which is curiously suggestive, at first sight, of a minute *Cercyon* with rufous elytra) can be any modification (even the most extreme one) of the *S. canariensis*; nevertheless it occurs often in company with that insect, though very much the rarer of the two. It differs from it in being considerably smaller and a little more oblong, somewhat less convex and more closely punctulated, and in its elytra being rufous, with only a triangular basal patch (which is generally prolonged a little, though in a diffused manner, along the suture) black. There is sometimes, however, a slight trace of an obsolete infuscated portion immediately before their extreme apex; and I *believe* that its head is black in both sexes,—merely the prothoracic edges being rather diluted in the males. I have taken it sparingly in Teneriffe and Palma, and it was found in Gomera by Dr. Crotch. My Teneriffan specimens are principally from S^{ta} Cruz and the mountains above it, and from the vicinity of the Puerto Orotava.

657. **Scymnus maculosus**, n. sp.

S. rotundato-ovalis, minute punctulatus, cinereo-pubescens, nitidus, piceo-niger; prothorace ad latera paulo dilutiore; elytris singulis ad apicem necnon in maculis sex (tribus sc. confluentibus in disco postico sitis, fasciam dentatam transversam efficientibus, unâ sub-

longitudinali intra discum anticum positâ, unâ subhumerali, et sextâ pone hanc sublaterali) rufo-testaceis ornatis; pedibus piceo-testaceis.

Variat elytrorum maculis plus minus confluentibus.—Long. corp. lin. $\frac{2}{3}$–vix 1.

Habitat in Lanzarota, Fuerteventura, Canaria, Teneriffa et Palma, parum rarus.

This beautiful little *Scymnus*, so well distinguished by its dark piceous-black hue, laterally-diluted prothorax, and maculated elytra, each of which is ornamented with six more or less confluent testaceous patches (the three postmedial ones being apparently *always* united, so as to form a transverse zigzag fascia), is widely spread over the archipelago, though nowhere common. I have taken it in Lanzarote and Fuerteventura; at Maspalomas in Grand Canary; at the Agua Garcia, the Agua Mansa, and near Orotava in Teneriffe; and likewise in Palma. In Lanzarote it was found also by Mr. Gray, and in Teneriffe by Dr. Crotch. It is closely allied to the Madeiran *S. flavopictus*, but is a trifle larger, and more obtuse anteriorly (its head and prothorax being perceptibly wider), and the colour both of its pale and dark portions is, in both instances, conspicuously darker.

658. **Scymnus arcuatus.**

Coccinella arcuata, *Rossi, Mant. Ins.* ii. 88 (1794).
Scymnus arcuatus, *Muls., Sécurip. de France*, 245 (1846).
—— ——, *Woll., Ins. Mad.* 468 (1854).
—— ——, *Id., Cat. Mad. Col.* 138 (1857).

Habitat in Teneriffa et Palma, rarissimus.

The *S. arcuatus* of Mediterranean latitudes, which is so excessively abundant around Funchal in Madeira, would appear to be extremely rare at the Canaries. Indeed the only three specimens which I have seen of it hitherto were taken by myself—one between the Puerto Orotava and Realejo in Teneriffe, and the other two in the Barranco da Agua of Palma. It may, however, be expected to occur (as in Madeira) about gardens and cultivated grounds.

659. **Scymnus minimus.**

Coccinella minima, *Rossi, Mant. Ins.* ii. 89 (1794).
Scymnus minimus, *Muls., Sécurip. de France*, 260 (1846).
—— ——, *Woll., Ins. Mad.* 470 (1854).
—— ——, *Id., Cat. Mad. Col.* 138 (1857).

Habitat insulas Canarienses, in Palma solâ hactenus haud observatus.

The minute size, rounded outline, and uniformly black, distinctly

punctulated surface of this European *Scymnus*, in conjunction with its pallid limbs, will sufficiently characterize it. It occurs in the Madeiran Group, and there can be little doubt that it is universal at the Canaries, though hitherto it does not happen to have been noticed in Palma. I have, however, myself taken it in Lanzarote; at Agua Bueyes and in the Rio Palmas of Fuerteventura; in Grand Canary; near the Puerto Orotava in Teneriffe; and close to Valverde in Hierro. In Gomera it was captured both by Mr. Gray and Dr. Crotch, the former of whom found it in the valley above San Sebastian.

Genus 253. **RHIZOBIUS.**

Stephens, *Ill. Brit. Ent.* iv. 396 [script. *Rhyzobius*] (1831).

660. **Rhizobius litura.**

Nitidula litura, *Fab., Mant. Ins.* i. 52 (1787).
Rhyzobius litura, *Steph., Ill. Brit. Ent.* iv. 396 (1831).
Cacidula litura, *Brullé, in Webb et Berth. (Col.)* 74 (1838).
Rhyzobius litura, *Woll., Ins. Mad.* 472 (1854).
—— ——, *Id., Cat. Mad. Col.* 139 (1857).

Habitat insulas Canarienses, in Gomera solâ adhuc haud detectus.

There can be little doubt that this common European insect, which is universal throughout the Madeiran Group, and which has been recorded from the Azores, is universal also at the Canaries—though hitherto it does not happen to have been observed in Gomera. But in Lanzarote, Fuerteventura, Grand Canary, Teneriffe, and Hierro I have myself captured it; and it was found in Palma and Hierro by Mr. Gray. In Teneriffe it was met with likewise by Dr. Crotch.

Genus 254. **LITHOPHILUS.**

Fröhlich, *Naturforsch.* xxviii. 11 (1799).

Corpus fere ut in *Coccidulâ* sed multo major; *prothorace* antice profundius excavato, postice magis contracto, ad latera late subrecurvo-explanato. *Antennæ* 10- (nec 11-) articulatæ, art° 1^mo^ sat magno robusto, 2^do^ minore, 3^tio^ ad 7^mum^ gracilioribus (3^tio^ elongato), reliquis clavam triarticulatam haud abruptam efficientibus (ult^mo^ intus oblique truncato). *Labrum* transversum, submembranaceum, apice integrum. *Mandibulæ* ad apicem acute bifidæ, intus membranâ breviter ciliatâ auctæ. *Maxillæ* bilobæ, breves, lobis pubescentibus, apice subito incurvis. *Palpi maxillares* elongati, art° 1^mo^ parvo, 2^do^ longissimo, 3^tio^ breviore, ult^mo^ maximo securiformi: *labiales* art° 1^mo^ parvo, 2^do^ et 3^tio^ longioribus, longitudine subæqualibus (3^tio^ fusiformi). *Mentum* parvum, corneum, subobtriangulare basi truncatum, apicem versus regulariter latius, apice integrum. *Ligula* elongata, apice membranacea integra. *Pedes* longiores et validiores quam in *Coccidulâ*: *tarsis* fere simili-

bus, sed longioribus ; *unguiculis* multo majoribus, intus (ut in illâ) denticulo minuto armatis.

The general aspect of the unique insect from which the above characters have been drawn, combined with its posteriorly narrowed prothorax, its bifid (or internally dentate) claws, and the *tendency* of its larger elytral punctures to arrange themselves in longitudinal rows, will at once, apart from the *minutiæ* of its oral organs, affiliate it with the European *Lithophilus* (a near ally of *Coccidula*); and as I have no access to any published details of that genus, I have thought it desirable to enunciate it formally. In its *ten*-jointed antennæ (with their elongated third articulation), its very much larger size, and its totally different prothorax (which is deeply excavated in front, greatly rounded, and flattened out, at the sides, and much more contracted behind), as well as in its longer and robuster legs and claws, it is at once separated from *Coccidula* proper.

661. **Lithophilus deserticola,** n. sp.

L. oblongus, latiusculus, grosse fulvo-pubescens, subopacus, rufo-ferrugineus ; prothorace minute punctato, ad latera rotundato-explanato, postice angustato ; elytris in disco late nigrescentioribus, minutissime punctulatis punctisque magnis (subseriatim dispositis) parce irroratis, interstitiis obsoletissime subelevatis.—Long. corp. lin. 2.

Habitat Fuerteventuram ; sub lapide in arenosis aridis ad Corralejo, Martio exeunte A.D. 1859, exemplar unum collegi.

The single specimen described above was captured by myself, from beneath a stone, in the dry sandy region at Corralejo, in the extreme north of Fuerteventura, at the end of March 1859.

Fam. 60. CORYLOPHIDÆ.

Genus 255. SERICODERUS.

Stephens, *Ill. Brit. Ent.* ii. 188 (1828).

662. **Sericoderus lateralis.**

Cossyphus lateralis (*Meg.*), *Gyll., Ins. Suec.* iv. 516 (1827).
Sericoderus thoracicus, *Steph., Ill. Brit. Ent.* ii. 188 (1828).
—— lateralis, *Woll., Ins. Mad.* 478 (1854).
—— ——, *Id., Cat. Mad. Col.* 142 (1857).

Habitat Fuerteventuram, Canariam, Teneriffam et Gomeram, passim.

This common European insect, which abounds beneath vegetable refuse in Madeira, and which was captured by Mr. Bewicke at even the Cape of Good Hope, appears to be scarce in these islands ; though

from its minute size it may perhaps merely have escaped, hitherto, more extensive observation. I have taken it in the Rio Palmas of Fuerteventura; in Grand Canary; and at Souzal, the Agua Garcia, and near the Puerto Orotava in Teneriffe; and six specimens are now before me which were found by Dr. Crotch, during the spring of 1862, in Gomera. In all probability it is universal throughout the archipelago.

Fam. 61. ENDOMYCHIDÆ.

Genus 256. LYCOPERDINA.

Latreille, *Gen. Crust. et Ins.* iii. 73 (1807).

663. **Lycoperdina humeralis**, n. sp.

L. elliptica, latiuscula, depressa, fere impunctata, fere calva, subnitida (minutissime alutacea), piceo-nigra; prothorace versus latera inæqualiter rufescentiore, transverso-quadrato, angulis posticis rectis, utrinque ad basin profunde longitudinaliter impresso; elytris pone basin rotundato-ampliatis, ad humeros læte rufis necnon ad apicem ipsum paulo rufescentibus, singulis striâ suturali tenui notatis; antennis tarsisque fusco-ferrugineis.—Long. corp. lin. 2.

Habitat Teneriffam, rarissima; in lauretis excelsis humidis supra Taganana, mense Maio A.D. 1859, specimen unicum cepi.

This beautiful *Lycoperdina* is a little larger, broader, more elliptical and more flattened than the European *L. bovistæ*; it is also less shining (being minutely alutaceous), and almost free from pubescence; its colour (at least of the prothorax) is of a more rufescent black, with the shoulders brightly rufous, and the extreme apex of its elytra diluted in hue; and its sutural stria is very much finer and less impressed. It would appear to be one of the rarest of the Canarian Coleoptera, the only specimen which I have seen having been captured by myself in Teneriffe, during May 1859, in the damp laurel-woods which clothe the mountain-range above Taganana.

Genus 257. DAPSA.

(Ziegler) Latreille, *Règne Anim.* (édit. 2) v. 159 (1829).

664. **Dapsa edentata**, n. sp.

D. rufo-ferruginea, fulvo-pubescens; capite prothoraceque sat profunde punctatis, hôc ad latera edentato, antice rotundato-ampliato, angulis anticis obtusis, posticis subrectis, in disco canaliculato, postice utrinque profunde longitudinaliter impresso; elytris ellipticis basi truncatis, postice acutiusculis, serrato-punctulatis, maculâ obliquâ postmediâ in singulis positâ (obscurâ, interdum obsoletâ) ni-

grescente; antennis pedibusque vix clarioribus; femoribus ad basin ipsam nigrescentibus.—Long. corp. lin. $1\frac{3}{4}$–vix 2.

Habitat in sylvaticis subsylvaticisque Canariæ, Teneriffæ et Palmæ, hinc inde parum vulgaris.

It is just possible that the present *Dapsa* may be identical with the *D. barbara* of northern Africa; nevertheless, judging from the diagnoses of the latter given both by Lucas and Gerstäcker, and from the figure published by the former, I hardly think that such is the case—for the *D. barbara* is described as having its prothoracic disc, as well as a mere postmedial "punctum" of its elytra, black. The *D. edentata* is remarkable for its very elliptic elytra (which are suddenly rounded-outwards at a short distance behind their base, and thence regularly narrowed, or acute, to their apex), and for the obscure (occasionally obsolete) darker dash which is placed so obliquely on the hinder disc of either elytron as to unite at the suture (in highly coloured examples) in somewhat the form of the letter V. It is rather a common insect in certain localities in these islands—occurring generally beneath dry fallen leaves in sylvan and subsylvan spots, under moss and rubbish at the base of old walls, and amongst dense herbage in semicultivated grounds. I have taken it in Grand Canary, Teneriffe, and Palma. My Teneriffan examples are principally from above Taganana, from Las Mercedes, Souzal, La Esperanza, the Agua Mansa, and the vicinity of the Puerto Orotava.

Fam. 62. ZOPHOSIDÆ.

Genus 258. ZOPHOSIS.

Latreille, *Gen. Crust. et Ins.* ii. 146 (1807).

665. Zophosis 4-carinata.

Z. oblongo-ovalis, subopaca, alutacea; capite prothoraceque distincte (epistomate dense et profunde) punctatis; elytris ante apicem truncato-desilientibus, parcius minutissime asperato-punctulatis (aut fere granulatis), leviter malleato-inæqualibus, singulis costis duabus elevatis (antice et præsertim postice evanescentibus), necnon tertiâ versus suturam minus distinctâ et multo magis abbreviatâ, longitudinaliter instructis.—Long. corp. lin. $2\frac{1}{2}$.

Zophosis 4-carinata, *Deyrolle* (*in hôc opusculo citata*).

Habitat Teneriffam, a Barone "Castello de Paiva" communicata.

The present *Zophosis*, which has been observed hitherto only in Teneriffe, may readily be known by each of its elytra being furnished with *two* very elevated longitudinal costæ, and a third one (nearer to

the suture) which is considerably shorter and less distinct; from which it would appear that one of the three lateral ones is entirely absent. It is more oblong, rather less convex, much less shining, and a little more coarsely punctured than the *Z. plicata*; it is also of a somewhat less intense black (being often just perceptibly subænescent); and its elytra, although without any tendency to be obscurely widened behind, are nevertheless rather more decidedly subtruncated, or *bent downwards*, before the apex. The few specimens of the *Z. 4-carinata* which I have seen were communicated from Teneriffe by the Barão do Castello de Paiva.

666. Zophosis plicata.

Z. subovalis, (præsertim postice) latiuscula, convexa, nitida, aterrima; capite prothoraceque minute (epistomate densius et distinctius) punctatis; elytris ante apicem subtruncato-desilientibus, parcius minute subasperato-punctulatis, grosse malleato-inæqualibus, singulis costis tribus latiusculis elevatis (antice et præsertim postice evanescentibus), necnon quartâ versus suturam minus distinctâ sed haud obsoletâ, longitudinaliter instructis.—Long. corp. lin. 2–3.

Zophosis plicata, *Brullé, in Webb et Berth. (Col.)* 64. pl. i. f. 8 (1838).
—— vagans, *Hartung** [nec *Br.*], *Geolog. Verhältn. Lanz. und Fuert.* 140, 141.

Habitat Lanzarotam et Fuerteventuram, necnon etiam in insulis parvis adjacentibus (sc. Graciosa et Lobos), ubique vulgaris.

This is the common *Zophosis* of Lanzarote and Fuerteventura, where it abounds at nearly all elevations, occurring likewise in the small adjacent islands of Graciosa and Lobos (off the extreme north of the former, and latter, respectively). It was taken also by Mr. Gray and M. Hartung, and has been communicated by the Barão do Castello de Paiva. I think there can be no doubt that it does not extend further westward in the archipelago, unless indeed the *Z. vagans*, from Grand Canary, should be regarded (which, however, is scarcely possible) as an insular modification of it.

The *Z. plicata* differs in being rather more shining than the other species here enumerated, and in having its elytra very uneven (or malleated) and furnished with broader and more elevated longitudinal plicæ—the three outer ones (on each elytron) being considerably raised, whilst even the more anteriorly-abbreviated one, nearer to the suture, is sufficiently conspicuous on the hinder disc. It is also,

* Dr. Heer having sent me a type of what he regarded (though erroneously) as the *Z. vagans*, in the list which he prepared for M. Hartung's volume, I can state for certain that his species there alluded to is in reality the *Z. plicata*. Indeed, that being apparently the *only Zophosis* found in Lanzarote and Fuerteventura, such a conclusion would in any case have been inevitable.

relatively, a *little* more convex and ovate than its allies, having a somewhat more evident tendency to be faintly widened behind the middle of the elytra; at which point it is also a trifle more suddenly curved downwards, or truncated—at any rate more so than is the case in any of the *following* species, though scarcely so much so as in the preceding one.

667. Zophosis vagans.

Z. præcedenti similis, sed plerumque paulo minor angustior oblongior (versus apicem nullo modo latior et ibidem paulo minus evidentius desilienti-subtruncata), sensim minus nitida (evidentius alutacea), minus convexa et minus aterrima (interdum obsoletissime subænescens); capite prothoraceque profundius punctatis; elytris densius, profundius ac magis asperato-punctatis, sat minus malleato-inæqualibus, singulis brevius ac minus alte 3-costatis, costâ quartâ (versus suturam) obsoletâ.—Long. corp. lin. $2\frac{1}{2}$–$2\frac{3}{4}$.

Zophosis vagans, *Brullé, in Webb et Berth. (Col.)* 64 (1838).

Habitat Canariam Grandem, præsertim in montibus interioris degens.

Whilst the last species is peculiar to Lanzarote and Fuerteventura, the present one seems to be found only in Grand Canary—occurring more particularly, I believe, in the central districts (as Tarajana, &c.) of that island. It differs from the *plicata* in being, on the average, a little smaller, narrower, and more oblong (it having apparently no tendency to be slightly widened behind the middle, where also it is just perceptibly less truncated, or with the apical region somewhat more *drawn out*); in its surface being less shining (or more coarsely alutaceous), a little more strongly punctured, and not quite so intensely black (there being often a barely traceable ænescent tinge); and in its elytra being less uneven, and with their costæ *very* much less raised—the three outer ones being also somewhat shorter, and the fourth one (towards the suture) *obsolete*. It agreed sufficiently well with the types of M. Brullé's *Z. vagans*, which I examined in Paris, to leave little doubt on my mind that it was conspecific with it.

668. Zophosis Clarkii.

Z. præcedenti (sc. *Z. vaganti*) valde affinis, sed paulo magis regulariter ovalis (antice vix sublatior) et obsoletissime subcyanescenti- (potius quam subænescenti-) atra; elytris vix minus malleato-inæqualibus, costis sensim angustioribus,-costâ secundâ in singulis antice magis abbreviatâ, tertiâ in disco sensim argutius et rectius determinatâ (sed haud magis elevatâ).—Long. corp. lin. 2–$2\frac{1}{2}$.

Zophosis Clarkii, *Deyrolle (in hôc opusculo citata)*.

Habitat in intermediis Canariæ Grandis, passim.

This *Zophosis* (which is likewise from Grand Canary) is excessively near to the last one, and is in some respects intermediate between it and the *bicarinata*; nevertheless it is certainly more closely related to the *vagans* than to the latter. It differs, however, from that species in being a little more regularly oval, or just perceptibly wider in front; in its colour being of a deeper black, with a slight *tendency* to a subcyaneous (rather than a subænescent) tinge; and in its elytra being a little more even, or less malleated, and with their costæ a trifle narrower—the second one of which is *more abbreviated anteriorly*, whilst the third is somewhat more straightly and sharply defined. Its less rounded outline and *very* much more developed *plicæ* will at once separate it from even the most costate phasis of the *bicarinata*. I have observed it hitherto only in the region of El Monte in Grand Canary; but it is probably elsewhere diffused.

669. **Zophosis bicarinata.**

Z. subrotundato-ovalis, subnitida, vel aterrima vel obsoletissime submetallico-tincta; capite prothoraceque minutissime et leviter (epistomate densius et distinctius) punctatis; elytris parcius minutissime granulatis, subæqualibus (rarius malleatis), singulis vel costis duabus valde indistinctis instructis vel simplicibus (costis obsoletis).

α. Sæpius obsoletissime subcyaneo-tincta, elytris singulis costis duabus (sc. laterali et discali) valde indistinctis instructis (costâ secundâ et quartâ obsoletis). [Ins. *Canaria Grandis* (borealis).]

β. Obsoletissime subcyaneo-tincta, elytris singulis costâ unâ (sc. discali) instructis (reliquis obsoletis). [Ins. *Gomera*.]

γ. [=*Z. minuta*?, Br.] Sæpius obsoletissime subænescenti-tincta, elytris simplicibus (costis omnibus obsoletis). [Ins. *Teneriffa*.]

δ. Obsoletissime subcyaneo-tincta, vix nitidior, capite prothoraceque paulo evidentius punctatis, elytris plus minus malleato-inæqualibus, vel simplicibus vel costâ laterali parum distinctâ instructis. [Ins. *Canaria Grandis* (australis).]—Long. corp. lin. 2–vix 3.

Erodius minutus?, *Fab.*, *Ent. Syst.* i. 93 (1792).
Zophosis bicarinata, *Sol.*, *Ann. de la Soc. Ent. de France*, iii. 617 (1834).
—— —— et minuta?, *Brullé*, *in Webb et Berth.* (*Col.*) 64 (1838).

Habitat in Canaria, Teneriffa et Gomera, hinc inde vulgaris.

If it be admitted that the four states which I have indicated above are but insular modifications of a single species (and I think it will scarcely be possible to regard them as otherwise), the present *Zophosis*, although extremely local, would appear to be more widely distributed over the archipelago than any of the others here enumerated. Its elytral costæ, even when traceable, are excessively indistinct; and it would seem as if their greater or less development was dependent in some way upon certain local influences which have served gradually

to establish races which are permanent, although included within exceedingly narrow limits. Thus, on the low sandy isthmus of Grand Canary, between Las Palmas and the Isleta, where the insect abounds, the specimens have usually their discal and lateral keels more or less traceable (though often very obscurely so), whilst occasionally there are faint indications of even the *second* one. The Gomeran examples, judging from a type now before me which was captured by Dr. Crotch, have the discal carina pretty evident, but the others hardly perceptible; whilst a large array of individuals from Teneriffe, which were met with by Mr. Gray and myself near S^ta^ Cruz, have *all* the ridges entirely effaced. This last state has likewise been communicated, from Teneriffe, by the Barão do Castello de Paiva.

Apart from this peculiarity of the elytral costæ, which are either very indistinct or else totally obsolete, the *Z. bicarinata* may be known by its rather rounded outline and light sculpture. In Grand Canary its surface is generally of an intenser black than in Teneriffe—having in the former case, more frequently, a just perceptible subcyaneous, and in the latter a subænescent tinge.

It is barely possible that what I have treated as the state "δ" may be specifically distinct, but I think that its few differential characters are not constant enough to render such probable. I captured it near to Maspalomas, in the south of Grand Canary; and it recedes from the state "α" (found in the north of that island) in having its head and prothorax a trifle less alutaceous and rather more evidently punctured, and in its elytra being more or less uneven, or *malleated*. This inequality of the surface makes it difficult to decide whether the obscure keels are developed, or not; but the lateral one in some examples appears to be well expressed, whilst in others it is scarcely traceable.

Fam. 63. ERODIADÆ.

Genus 259. ARTHRODES.

Solier, *Ann. de la Soc. Ent. de France*, iii. 513 [script. *Arthrodeis*] (1834).

Although M. Brullé consigns all the Canarian members of this family to *Erodius*, citing only one of them (his *E. subcostatus*) as referable to (what he would seem to regard as the *sub*genus) "*Arthrodeis*," nevertheless, after a most careful inspection of them, I am satisfied that they are all* exponents of a single group—differing mainly from

* Whilst asserting, however, that they are "all" exponents of a single group, I do not mean to include that particular species (whatsoever it may be) which M. Brullé cited (p. 63) as the "*Erodius europeus*, Fab.," and which (whether rightly

Erodius proper in its narrower and transversely-elongate eyes (a character, however, which varies slightly *according to the species*), in its epistome (which has a tendency to be more or less tridentate anteriorly) being separated from the forehead *by a keel* (for the most part exceedingly conspicuous, but occasionally subobsolete*), in its antennal club being a little broader or more transverse, and in its elytra having their longitudinal costæ either altogether or very nearly absent, and the angulated edge, or lateral *plica*, of their epipleuræ (which is uninterrupted in *Erodius*) either *entirely* or only *posteriorly* rounded and effaced. The admission, however, of so large a number of additional representatives into *Arthrodes* may possibly necessitate a slight readjustment of its generic formula. Indeed Lacordaire (simply following M. Brullé) quotes the *E. subcostatus only* (of all the Canarian species) as an *Arthrodes*; but had he inspected them himself he would have seen that they are all referable to the *same group*, and consequently that the "yeux médiocres, non transversaux" could not be maintained as a structural peculiarity of *Arthrodes*,—any more than the allusion to its members as "petits insectes," while some of them *exceed* in bulk the largest *Erodius* with which I am acquainted.

The species of *Arthrodes* are both numerous and local throughout the Canarian archipelago, almost every island having apparently some representative essentially its own. They reside principally beneath stones, burrowing into either the volcanic soil of the intermediate elevations, or else into the loose sand adjoining the sea-shore—a mode of life which their powerful and strongly palmated anterior tibiæ would clearly indicate. If it be thought that I have erected too many species amongst forms thus obscure, I can only say that the structural characters of their epipleural *plica* and epistome appear so little subject to variation that I cannot conscientiously reduce the number.

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identified or not) seemed to me, when I examined it hastily in Paris, to be at any rate an *Erodius*. Nevertheless, since I feel far from satisfied that the examples of MM. Webb and Berthelot may not have been accidentally imported into the islands (a possibility which is not diminished by the consideration that a true *Erodius* is now before me which was taken by Dr. Crotch on the Mole at S^ta^ Cruz in Teneriffe—escaped from the actual vessel in which he had himself arrived from Mogadore!), I cannot admit the genus *Erodius* into this Catalogue without at all events further evidence. Indeed, *Arthrodes* being so essentially the *representative* of *Erodius* at the Canaries, where moreover it is so universal, it might involve a serious geographical blunder to include the latter (which may perhaps have been a mere chance-introduction from the African coast).

* May not Solier's genus *Anodesis* have been erected on one of the larger species of *Arthrodes*, in which the frontal *carina* is subobsolete and the eyes much elongated?

§ I. *Epistoma apice plus minus evidenter tridentatum.*

a. *Epipleuræ plica humeralis obsoleta.*

670. **Arthrodes inflatus,** n. sp.

A. ater, convexissimus, subopacus; capite prothoraceque subtiliter et parce punctulatis, illius carinâ frontali arcuatâ distinctâ, hôc ad latera subrotundato et vix marginato; elytris subtilissime et parce granulatis, leviter subreticulato-malleatis, epipleuris valde rotundato-obtusis; pedibus brevibus, tarsis brevibus et unà cum antennis nigro-piceis.—Long. corp. lin. 5–5½.

Habitat in insulâ parvâ "Graciosa," juxta Lanzarotam borealem sitâ, d. 11. Mart. A.D. 1859 deprehensus.

The excessively convex and inflated body of this *Arthrodes*, which has its head and prothorax minutely and rather sparingly punctulated, whilst its elytra (which are slightly malleated) are beset with extremely diminutive, almost imperceptible granules, combined with its somewhat laterally rounded and very obscurely margined prothorax and its shortish limbs and feet, will sufficiently distinguish it. Its epipleuræ are greatly rounded and obtuse, and the humeral plica at their base is obsolete—a structure which causes the shoulders to appear a little drawn or *nipped* in, so that the base of the prothorax rather exceeds in width the base of the elytra. The only specimens which I have taken (five in number) were captured in the little island of Graciosa, off the extreme north of Lanzarote, on the 11th of March 1859.

671. **Arthrodes curtus.**

A. antice subangustior, subnitidus (interdum subopacus), subtilissime et parcissime punctulatus; carinâ frontali arcuatâ, distinctâ; prothorace ad latera et antice sat grosse marginato; elytris inæqualibus, i. e. plus minus malleatis necnon plus minus distincte longitudinaliter interrupte sulcatis; pedibus elongatis.—Long. corp. lin. 5–6.

Erodius curtus, *Brullé, in Webb et Berth.* (*Col.*) 63. pl. i. f. 7 (1838).

Habitat in montibus Canariæ Grandis, hinc inde vulgaris.

A most distinct species, which I have observed hitherto only in Grand Canary. It may readily be known by its large size and elongate legs, and by its elytra being usually extremely uneven and more or less evidently (though *irregularly* and *interruptedly*) longitudinally sulcate. This last character, however, is subject to considerable variation, according to the district in which the insect is found. And it is further remarkable for its outline being *comparatively* (though but slightly) narrowed anteriorly, for its surface being *usually* more shining than is the case in the other species here enumerated, and

likewise *most* minutely, remotely, and evenly punctulated all over, and for its prothorax being rather coarsely margined at the sides and (though less evidently so) in front. That it is correctly identified with M. Brullé's *E. curtus* I am enabled to vouch for certain, having examined his original types in Paris.

The *A. curtus* is locally abundant on the mountains of Grand Canary. I have taken it on the slopes above San Mateo, towards the Roca del Soucilho; and during April 1858 it occurred in profusion, crawling sluggishly across the pathway on the ascent to the Pinal of Tarajana, above San Bartolomé.

b. *Epipleuræ plica humeralis brevissima.*

672. Arthrodes obesus.

A. præcedenti paulo minor, subrotundatior; carinâ frontali sensim minus arcuatâ; prothorace ad latera et antice paulo minus grosse marginato, angulis anticis minus productis; elytris evidentius (sed minute) densiusque punctulatis et multo magis æqualibus (nec sulcatis), plus minus leviter malleatis; antennis picescentioribus.

Var. β. simillima [an species distincta?]. Elytris magis æqualibus, parcius et sensim etiam levius punctulatis; fronte interdum minute bifoveolatâ; pedibus picescentioribus. [*Ins.* Palma *et* Hierro.]—Long. corp. lin. 3–5.

Erodius obesus, *Brullé, in Webb et Berth.* (*Col.*) 63 (1838).

Habitat in Teneriffa, varietate β ad Palmam et Hierro pertinente.

The six examples now before me agree sufficiently well, I think, with M. Brullé's types, which I examined, and also with his "description," to leave little doubt that they are (at any rate the *Teneriffan* form, if not the "*var. β*" also) conspecific with his *Erodius obesus*. Apart from their possessing (at the humeral angles of the elytra) a very short epipleural plica, which does not exist in the *A. curtus*, the *A. obesus* may be known from that insect by its rather smaller size and perhaps somewhat rounder outline, by its frontal keel being perceptibly less curved, by its prothorax being a little more finely margined along the lateral and anterior edges, by its elytra being more coarsely and closely (though, at the same time, very minutely) punctulated, as well as *much* more *even* (being free from longitudinal sulci, and apparently only a little malleated), and by its antennæ being rather more picescent. These remarks apply more particularly to what I have regarded as the *normal* state of the species (represented by the Teneriffan individual described from, and which was communicated from S^ta^ Cruz by the Barão do Castello de Paiva): and I should perhaps add that the types which I inspected in Paris

had the surface of their elytra altogether a little more uneven; but the more or less malleated sculpture is so variable that I attach but slight importance to its development.

The "*var. β*," however, from Palma and Hierro may *possibly* be the exponent of a nearly allied species (in which the elytra are still *more* even, and a trifle more sparingly and finely punctulated); but I believe that it is a mere insular state of the *obesus*.

673. Arthrodes byrrhoides, n. sp.

A. convexus, subopacus, *A. inflato* primâ facie propinquans, sed paulo minus convexus, prothorace ad latera minus rotundato et etiam evidentius immarginato, elytris densius et multo subtilius granulatis (granulis minutissimis, nisi oculo fortissime armato observandis) et plicâ humerali distinctâ (nec obsoletâ), parum incrassatâ.—Long. corp. lin. $4\frac{1}{2}$.

Habitat Fuerteventuram, a meipso parce repertus.

The two specimens from which the above diagnosis has been compiled were taken by myself in Fuerteventura, but I am not quite certain as to the precise locality. In their very convex body and comparatively unsculptured surface (the head and prothorax being most minutely punctured, and the elytra, which are slightly malleated, beset with infinitesimal, scarcely distinguishable, granules), they have much the *primâ facie* appearance of the *A. inflatus*; nevertheless, judging from the examples before me, the species would appear to be rather smaller and less convex, and to have a conspicuous (though short) humeral plica—which causes the extreme base of the elytra to be a little wider than the extreme base of the prothorax. The latter, also, is even still more decidedly immarginate; and its elytral granules are denser and (if possible) smaller still, being barely traceable even beneath a high magnifying power. Its humeral costa is rather longer than in the *obesus*, but not so long as in the members of the following Section.

674. Arthrodes laticollis.

A. præcedenti similis, sed nitidus, vix minus convexus, carinâ frontali magis elevatâ; capite prothoraceque parcius minutissime punctulatis, hôc latiusculo, convexo, immarginato, ad angulos ipsissimos posticos elytrorum basin sensim superante et ibidem suturâ (inter prothoracem et elytra) quasi in fissuram desiliente; elytris multo parcius minutissime granulatis (granulis ægerrime observandis), paulo grossius sed parcius malleatis, plicâ humerali crassiore (sc. valde incrassatâ) sed, ut in illo, brevissimâ.—Long. corp. lin. $4–4\frac{1}{2}$.

Erodius laticollis, *Brullé, in Webb et Berth.* (*Col.*) 63 (1838).

Habitat Fuerteventuram, parum rarus.

I have little hesitation in identifying three specimens now before me (and which were captured by myself, either in Fuerteventura or else in the little adjacent island of Lobos) with M. Brullé's *Erodius laticollis*; for the notes which I took whilst in Paris, after an accurate inspection of his types, are in almost precise accordance with the *Arthrodes* now under consideration; whilst the fact of his examples being labelled as coming from "Fuerteventura" would tend still further to corroborate my conclusion. In the excessive shortness of its humeral plica the *A. laticollis* (as here defined) agrees with the *byrrhoides*, but although thus abbreviated the plait is very much thicker than in that species; and yet, in spite of this, the *extreme* base of the elytra does not surpass in width the base of the prothorax—but rather the reverse, inasmuch as the hinder prothoracic angles project perceptibly beyond the humeral ones. There is also a peculiarity in that *particular* region, from the surfaces of the elytra and prothorax *not* being, there, in a continuous curve,—both of them somewhat *falling away*, so as to produce a slight fissure, or *lacuna*, at either end of the sutural line which separates the two segments. In other respects, the *A. laticollis* is remarkable for being shining, and for having its head and prothorax (the latter of which is transverse and immarginate) *most* minutely and rather distantly punctulated; whilst the elytral granules are, in like manner, excessively diminutive and remote—indeed but just distinguishable even beneath a high magnifying power. Its frontal carina is considerably raised, and rather angulated in the centre.

c. *Epipleuræ plica humeralis longior* (*sed vix ad medium ducta*).

675. **Arthrodes Hartungii**, n. sp.

A. fere ut *A. punctatulus*, sed forsan major, punctură omnino multo subtiliore, multo leviore et multo remotiore (punctis in capite prothoraceque vix nisi oculo armato observandis), carinâ frontali paulo distinctiore ac minus curvatâ, prothorace ad latera minus grosse marginato.—Long. corp. lin. 6.

Erodius obesus?, *Hart.* [nec *Br.*], *Geolog. Verhältn. Lanz. und Fuert.* 141.

Habitat Fuerteventuram, a Dom. Hartung repertus.

Although very unwilling to erect a species, in a genus like the present one, from the evidence afforded by a single example, yet a large *Arthrodes* now before me (which was taken by M. Hartung in Fuerteventura) differs so widely in its sculpture from the *A. punctatulus* that I cannot believe it to be referable to any state of that insect. It differs mainly in the punctules of its entire surface being

very much smaller, lighter, and more remote (indeed those on the head and prothorax are but just perceptible even under a lens), and in its frontal keel being rather more evident and somewhat less curved.

676. **Arthrodes punctatulus**, n. sp.

A. speciebus præcedentibus affinis, sed ubique distincte, argute et sat dense punctulatus (punctis in elytris asperatis), carinâ frontali curvatâ indistinctâ (sæpe etiam subobsoletâ), prothorace ad latera (præsertim postice) parum grosse marginato et plicâ humerali (ut in speciebus sequentibus) longiusculâ.

Var. β. Punctură omnino paulo leviore, prothorace ad latera vix minus distincte marginato. [*Ins.* Fuerteventura.]—Long. corp. lin. 4–5½.

Habitat Lanzarotam et Fuerteventuram, haud infrequens.

The present species seems to be universal throughout Lanzarote, where, however, it is by no means abundant—occurring principally, beneath stones, at intermediate elevations. It may easily be recognized by its surface being distinctly and sharply punctured all over (the punctures on the elytra being rather obliquely impinged, and having therefore the appearance of granules when viewed in a particular direction), by the lateral edges of its prothorax being somewhat coarsely margined posteriorly but more lightly so in front, and by its frontal keel being indistinct and often obsolete. Its epipleural costa is well defined, and reaches (from the humeral angles) *almost* halfway to the apex—as in the other species of this Section. It was likewise taken in Lanzarote by Mr. Gray and M. Hartung.

I took two examples in Fuerteventura which differ only from the Lanzarotan ones in being altogether a little more lightly punctured, and in having the lateral edges of their prothorax rather less distinctly margined. They retain, however, the essential characters of the species, and I have therefore treated them as the exponents of a slight insular variety.

677. **Arthrodes parcepunctatus**, n. sp.

A. subnitidus, ubique distincte sed parce punctatus (punctis in elytris paulo majoribus); carinâ frontali distinctâ sed minus curvatâ; prothorace ad latera oblique subrecto et ibidem (necnon etiam antice, sed minus evidenter) sat grosse marginato; elytris parum malleatis, plicâ humerali postice subabrupte terminatâ.—Long. corp. lin. 3-3½.

Habitat Gomeram, a DD. Gray et Crotch lectus.

This and the following three species are considerably smaller than the other members of the genus here enumerated; and of the pre-

sent one I have seen as yet but two examples, both of which were captured in Gomera—one of them by Mr. Gray during February 1858, near San Sebastian, and the other during the spring of 1862 by Dr. Crotch. The *A. parcepunctatus* may be known by its surface being less opake than is the case in its allies, and *sparingly* but *distinctly* punctured all over—the elytral punctures, however, being a trifle larger than the remainder. Its frontal carina is conspicuous, but not greatly arcuated; its prothorax is somewhat obliquely-straight at the sides (or, if anything, even a little *in*curved behind the middle), and rather coarsely margined; its elytra are slightly malleated; and its epipleural costa is subabruptly terminated behind.

§ II. *Epistoma apice vel fere vel omnino simpliciter emarginatum.*

a. *Epipleurœ plica humeralis obsoleta.*

678. **Arthrodes subciliatus,** n. sp.

A. globoso-ovatus, subnitidus, in limbo (præsertim antice) parce fulvo-pilosus; capite prothoraceque dense et profunde punctatis, illius carinâ frontali rectâ valde elevatâ, epistomate antice obsoletissime subtridentato (interdum quasi simpliciter emarginato), hôc ad latera fere haud (sed antice sensim) marginato; elytris convexis, subtilius asperato-punctulatis, paulo malleatis; antennis pedibusque longiusculis, graciliusculis, illis unà cum tarsis rufo-piceis, tibiarum anticarum spinis duabus elongatis.—Long. corp. lin. $2\frac{1}{3}$–vix 3.

Habitat Fuerteventuram, ad radices plantarum in aridis arenosis submaritimis fodiens.

Apart from its small size and subglobose body, which has the edges (and the underside immediately beneath them) sparingly studded, as in many other sand-insects, with a few fulvescent hairs, and its epipleurœ greatly rounded and obtuse, with their lateral costa entirely obsolete, this remarkable little species may immediately be known by its rather shining surface, by its head and prothorax being densely and very coarsely punctured, whilst the elytral punctules are smaller and asperate, by its frontal keel being *straight* and much elevated, and by its antennæ and legs being comparatively rather long and slender. The two spines of its anterior tibiæ are acute and considerably developed, and its epistome is so obsoletely tridentate in front that even the rudiments of a central tooth (although sometimes apparent) seem often to be totally inappreciable—when, of course, there is merely an emargination.

The *A. subciliatus* is eminently a sand-burrowing insect, occurring at the roots of plants on the small hillocks of drifted sand adjoining the sea-coast in Fuerteventura. In such situations it was taken by

Mr. Gray and myself about a mile to the south of Puerto de Cabras, in January 1858; and by myself, during the spring of the following year, in the arid district of Corralejo, at the extreme north of that island.

679. **Arthrodes subcostatus.**

A. præcedenti similis, sed plerumque paulo minor et sensim minus convexus, punctură omnino densiore et subfortiore sed elytris singulis in lineis duabus vel tribus valde irregularibus indistinctis longitudinalibus lævioribus sensim minus punctatis; capite vix angustiore; prothorace immarginato, angulis anticis paulo magis porrectis.—Long. corp. lin. 2–2⅔.

Erodius (Arthrodeis) subcostatus, *Brullé, in Webb et Berth.* (*Col.*) 64 (1838).

Habitat Canariam Grandem, in locis similibus ac præcedens, in aridis arenosis juxta urbem Las Palmas deprehensus.

The present *Arthrodes* is very closely allied to the preceding one, and is apparently peculiar to Grand Canary, residing in much the same sort of localities—at the roots of sand-plants, where it burrows into the loose drifting sand. In such situations I took it, between Las Palmas and the Puerto da Luz, during the spring of 1858. It agrees with the *A. subciliatus* in its general outline and structure, as well as in its laterally-pilose body, rather slender, elongate limbs, and the greatly produced spines of its anterior tibiæ; but differs from it in being, on the average, a trifle smaller and less convex, in its punctation being altogether a little denser and perhaps somewhat coarser, but with two or three obscure *ill-defined* lines (or spaces) down each of its elytra, which are comparatively glabrous (or free from sculpture), by its head being perceptibly narrower, and by its prothorax being destitute of even an obscure margin along its anterior edge, and with its front angles a little more porrect. Having examined M. Brullé's types, I am enabled to state for certain that the species is correctly identified.

b. *Epipleuræ plica humeralis distincta* (*sed vix ad medium ducta*).

680. **Arthrodes costifrons,** n. sp.

A. affinis *A. subciliato*, sed paulo major, oblongior, minus convexus, minus nitidus et in limbo calvus (nec ciliatus); carinâ frontali ut in hôc valde elevatâ sed curvatâ (nec rectâ); epistomate antice fere simpliciter emarginato sed sub lente fortissimâ minutissime trisinuato (quasi dentes 4, internos obsoletissimos, efficiente); prothorace ad latera sensim (sed antice haud) marginato, unà cum capite densius (sc. densissime) et subtilius punctato; elytris subgrossius malleatis sed multo subtilius parciusque punctulatis (punctulis haud

asperatis et irregulariter dispersis); antennis tarsisque sensim obscurioribus.—Long. corp. lin. $2\frac{1}{2}$–3.

Habitat Lanzarotam et Fuerteventuram; in hac haud infrequens, unà cum *A. subciliato* in arenosis fodiens; sed ab illâ exemplar unum (a meipso captum) adhuc vidi.

The *A. costifrons* is a Fuerteventuran species, and appears, like the *A. subciliatus* (with which it is found in company), to be of sand-burrowing propensities; nevertheless it is *not* pilose at the edges of its body. Although small, it is a little larger, as well as more oblong and less convex, than that insect; its surface is more opake; its frontal keel (which is equally elevated) is considerably *curved*, instead of being straight; its head and prothorax (the latter of which is narrowly margined at the sides, but immarginate in front) are much more densely and finely punctured, whilst the punctules of its elytra are excessively diminutive and distant (being, also, irregularly dispersed); and its epipleural costa (instead of being obsolete) is developed, though not much incrassated. Its epistome appears at first sight to be simply emarginated at the apex; but when viewed beneath a very powerful glass it will be seen to be most minutely trisinuated, so as to shape out four points, the two inner ones of which are barely traceable and sometimes quite obsolete. The *A. costifrons* seems to occur also in Lanzarote, a single example now before me having been taken by myself in that island.

681. **Arthrodes malleatus**, n. sp.

A. præcedenti (*A. costifronti*) similis, sed paulo major, oblongior; capite prothoraceque vix profundius punctatis, hôc ad latera vix evidentius marginato; elytris multo magis malleatis punctulisque (irregulariter dispositis, i. e. in lacunis solis sitis) sensim majoribus; pedibus paulo minus gracilibus, tibiarum anticarum spinis duabus magis obtusis, apicali minus curvatâ.—Long. corp. lin. 2–$3\frac{1}{3}$.

Habitat Lanzarotam, sub lapidibus in intermediis degens.

Although closely allied to the *costifrons*, this *Arthrodes* is certainly distinct from it; occurring, apparently, in the intermediate districts of Lanzarote, where it was taken by Mr. Gray and myself, during the winter of 1858, in the extreme north of that island; and by myself, during the spring of the following year, in the little adjacent island of Graciosa. It differs from the *costifrons*, mainly, in being a little larger and more oblong; in its elytra being considerably more uneven, or *much* malleated, and in having their punctures (which are collected into merely the *depressions*, leaving the more elevated parts of the surface almost free from sculpture) a good deal larger; and

in its legs being rather less slender, with the two spines of their anterior tibiæ, the apical one of which is considerably less *curved*, both shorter and more obtuse.

682. **Arthrodes emarginatus**, n. sp.

A. species *A. costifronti* similis, et cum hôc structurâ tibiarum anticarum congruens, sed forsan paulo major obtusior; capite prothoraceque multo parcius punctulatis, illius carinâ frontali multo minus elevatâ ac paulo minus curvatâ, epistomate apice omnino simpliciter emarginato, hôc sensim latiore et omnino immarginato; elytris densius, æqualiter et minute asperato-punctulatis; tibiarum anticarum spinis elongatis, acutis, apicali curvatâ.—Long. corp. lin. 3.

Habitat Fuerteventuram, semel tantum repertus.

I have but a single example of this *Arthrodes*, captured by myself in Fuerteventura, to judge from; but it appears to be exceedingly distinct from both the *subciliatus* and *costifrons*, with which I *believe* that it was taken in company. Indeed the structure of the teeth of its anterior tibiæ is precisely the same as in those *sand-burrowing* species; and its general aspect is very much that of the *A. subciliatus*. It is, however, a little larger and more obtuse; its head and prothorax (the latter of which is not only perceptibly wider, but also *entirely* immarginate) are *much* more sparingly punctulated; its frontal keel is considerably less elevated, and not quite so curved; the emargination of its epistome is unmistakeably *simple*; and its elytra are more closely and *equally* punctulated, the punctures moreover being conspicuously asperate.

683. **Arthrodes geotrupoides**, n. sp.

A. præcedenti similis, sed multo major; carinâ frontali minus elevatâ, subobsoletâ; plicâ humerali magis incrassatâ, subcurvatâ; et spinis tibiarum anticarum obtusioribus, minus productis, apicali minus curvatâ.—Long. corp. lin. $3\frac{2}{3}$–5.

Habitat Fuerteventuram, parum rarus.

In its form, sculpture, and subopake surface, as well as in the *perfectly* simple emargination of its epistome, the present *Arthrodes* is coincident with the last one; and, like it, it was taken by myself, though more abundantly, in Fuerteventura. It is, however, considerably larger; its frontal keel is still less elevated, indeed almost obsolete; its humeral plica is thicker, and slightly arcuate; and the two teeth of its anterior tibiæ are blunter and less produced, the apical one moreover being less outwardly curved. This last character indeed is perhaps the most significant of them all—implying, I think, a rather different mode of life; for the spines of the anterior tibiæ

being comparatively elongated and acute, and the apical one of them somewhat curved, is a structure which appears to be more particularly indicative of the *sand-burrowing* species, which reside near the coast.

Fam. 64. TENTYRIADÆ.

Genus 260. TENTYRIA.

Latreille, *Hist. Nat. des Crust. et Ins.* x. 270 (1804).

684. Tentyria interrupta.

Tentyria interrupta [*Latr.* ?], *Brullé, in Webb et Berth.* (*Col.*) 66 (1838).

Habitat ?

I know nothing of this insect, except that I examined it hastily whilst in Paris, and that it is unquestionably distinct both from the *T. elongata* and the *Paivœa hispida*. As M. Brullé vouchsafes neither a description of it nor its *habitat*, I am of course perfectly unable to say even in what island it was found. Indeed his short notice of it is about as vague and unsatisfactory as it is well possible to be in a published Fauna; for he did not seem to have made up his mind whether it should be referred to the *interrupta* of Latreille, or the *maroccana*, or whether it is distinct from both of them; and, moreover, his *type* is likewise labelled with the name of "*marginicollis*"! Instead of inserting a diagnosis, by which at all events the species might be recognized, the following is his elaborate account of it:—"Tentyria interrupta, Latr., ou *Maroccana*. Du midi de la France et du nord de l'Afrique. Les individus que nous avons sous les yeux ne se rapportent exactement ni à l'une ni à l'autre de ces espèces, et ne semblent cependant pas devoir constituer une espèce nouvelle. Peut-être sont-ils le lien qui doit réunir les deux autres?" Considering the great liability of certain Coleoptera to become accidentally imported in trading vessels from the African coast, I feel a slight hesitation in admitting this *Tentyria* into the Catalogue at all.

(Subgenus **Eulipus**, *Woll.*)

Corpus angustum, gracile, sat profunde punctatum; *oculis* magnis, prominentibus, regulariter reniformibus (infra vix angustatis); *antennis pedibus*que longissimis, gracilibus, *unguiculis* valde elongatis.

685. Tentyria elongata.

T. gracilis, angusta, atra, nitida; capite prothoraceque (illo sat densius) punctatis, illius epistomate obtuse rotundato producto, hôc convexo postice gradatim angustiore, angulis posticis acutis sed argute determinatis necnon ad latera et basin grosse marginato; elytris ellipticis postice acuminatis, profunde et sat parce punctatis,

ad latera et basin grosse marginatis; antennis pedibusque (præsertim tarsis) picescentioribus.—Long. corp. lin. 4–7.

Tentyria (*Mesostena*) elongata*, *Brullé, in Webb et Berth.* (*Col.*) 66 (1838).

Habitat in arenosis submaritimis Fuerteventuræ et Canariæ, ad radices plantarum juxta mare crescentium latens.

This large and slender insect, with its greatly elongated limbs, would appear to reside amongst the loose sand which collects into small hillocks by drifting around the roots of shrubby plants, within a short distance of the sea-shore (though not upon the actual beach). In such situations it was taken by Mr. Gray and myself about a mile to the south of Puerto de Cabras in Fuerteventura during January 1858 (in which locality I again met with it in April of the following year); and by myself, and subsequently by Dr. Crotch, on the low sand-hills of Grand Canary between Las Palmas and the Isleta. The Grand-Canarian specimens are, on the average, larger than the Fuerteventuran ones.

Genus 261. **PAIVÆA** (nov. gen.).

Instrumenta cibaria fere ut in *Tentyriâ*, sed corpus aliter constructum pilisque elongatis erectis obsitum; *epistomate* ad apicem acute angulato-producto; *antennarum articulo ultimo* penultimo minore, oblique truncato; *prothorace* antice latiore, basi bisinuato, angulis posticis vix subrectis, argute determinatis; *scutello* multo breviore, sc. brevissimo, transverso, costiformi; *elytris* ad basin grossius marginatis, ad humeros magis angulatis; *antennis pedibus*que robustis, pilosis.

Obs.—In honorem amici mei periti, Baronis "Castello de Paiva" Lusitanici, qui scientiæ naturali deditus, solertissimus cultor ac observator acutus, per tot annos nomen Lusitanicum ornavit.

Although the oral organs of nearly the whole of these immediate groups are almost similar, there can be little doubt, I think, that

* M. Brullé cites this species as a member of (what he would appear to regard as, though very erroneously, the *sub*genus) *Mesostena*. It has, however (judging from the diagnosis), nothing whatever to do with that group—though, superficially, it certainly possesses the comparatively slender body of the *Mesostenæ*. But the form of the eyes and the greatly elongated third joint of its antennæ (even *more* so, perhaps, than in the true *Tentyriæ*) entirely remove it from *Mesostena*; whilst from *Axumia* it is as readily separated by its last antennal joint being as broad as the penultimate one, as well as by its perfectly distinct scutellum and its convex body. Nevertheless it is by no means a very normal *Tentyria*, and may perhaps constitute the type of a closely allied genus—its much narrower and slenderer outline and more deeply punctured surface, in combination with its larger and more prominent eyes (which are regularly reniform, and therefore but slightly contracted in their lower half), the more defined posterior angles of its prothorax, and its very much longer and thinner limbs and claws, all tending to remove it from the ordinary representatives of that group.

the insect from which the above characters have been drawn is truly distinct from *Tentyria*—its external peculiarities being more than sufficient to render its isolation therefrom not only desirable, but necessary. Its two main differential features consist in its scutellum being excessively short and transverse (constituting in fact, as in *Hegeter*, a mere portion of the *marginal rim* at the base of the elytra), and in its surface being sparingly studded with long and erect hairs. In other respects, its epistome is much produced, and acute, in the centre; the terminal joint of its antennæ is considerably smaller than the preceding one, and obliquely truncated at the apex; its prothorax (which is wide anteriorly and narrowed behind) is somewhat bisinuated along the basal edge, and has the posterior angles well defined and rather acute; the humeral angles also of its elytra are sharply defined by the greatly thickened marginal rim; its entire surface is *irregularly* punctured (the punctures, which are very variable in size, being composed of a double series—large and small); and its limbs are thickened and pilose.

686. **Paivæa hispida.**

P. atra, nitida, pilis elongatis erectis fulvescentibus (præsertim in elytris, sed vix in capite) parce obsita; capite sat profunde sed parce inæqualiter punctato; prothorace cordato-subquadrato, in disco convexo, ad latera et basin grosse marginato, angulis posticis acutiusculis, parcius leviusque inæqualiter punctato; elytris vix rugulosis, leviter, parce et inæqualiter punctatis (punctis majoribus obsolete subseriatim dispositis); antennis pedibusque robustis, pilosis, plus minus picescentioribus.

Variat punctis plus minus distinctis et inæqualibus, punctis majoribus in prothorace elytrisque interdum sat magnis; elytris sæpe obsoletissime subsulcatis.—Long. corp. lin. 4–5.

Tentyria hispida, *Brullé, in Webb et Berth.* (*Col.*) 66 (1838).
—— ——, *Hartung, Geolog. Verhältn. Lanz. und Fuert.* 140, 141.

Habitat Lanzarotam et Fuerteventuram, necnon in insulis parvis adjacentibus (sc. Graciosa et Lobos), sub lapidibus vulgaris.

A universal insect throughout Lanzarote and Fuerteventura (and the adjacent islands of Graciosa and Lobos), occurring beneath stones. I do not believe that it exists further westward in the archipelago; for although I have received it from Paris as Teneriffan, it was probably regarded as such through the mere fact of its having been *sent* from Teneriffe (even whilst obtained elsewhere in the Group). It was captured likewise by Mr. Gray and M. Hartung; and from Fuerteventura it has been communicated by the Barão do Castello de Paiva, to whom I have had much pleasure in dedicating the genus.

Genus 262. HEGETER.

Latreille, *Hist. Nat. des Crust. et Ins.* iii. 172 (1802).

Although it is possible that some few of the Hegeters enumerated below may be, in reality, but permanent varieties, rather than undoubted species, nevertheless, since I have been enabled to catch their true distinctions through the fact of my having worked them out from an enormous mass of material collected in the several islands of the Group, and since many of them have already been published by Messrs. Webb and Berthelot, I think it will be more convenient to acknowledge the whole of them as of specific importance—seeing that they are for the most part sufficiently well defined, and since the admission that any of them are mere phases peculiar to certain districts would involve considerable difficulty in dealing with the remainder. Nevertheless I am far from satisfied that the genus is not essentially a variable one, and consequently suspect that certain of these forms *may* be but races, gradually matured by the local influences to which, in their own particular regions, they may happen to have been long exposed: but as we have no actual proof to that effect, I do not think that it would be prudent to acknowledge them as of a lower rank than true, though at the same time nearly allied, *species*. Having taken some pains, whilst in Paris, to examine M. Brullé's types, I believe I may venture to say that his species (as re-enunciated below) are correctly identified*.

§ I. *Elytra elliptica* (i. e. antice et postice paulo magis angustata, quare in medio sensim magis rotundata).

687. Hegeter tristis.

Blaps tristis, *Fab., Ent. Syst.* i. 108 (1792) [sec. *Dom. Schaum*].
—— elongata, *Oliv., Ent.* iii. 60. pl. i. f. 7 (1795).
Hegeter striatus, *Lat., Hist. Nat. des Crust. et Ins.* x. 276 (1804).
—— ——, *Brullé, in Webb et Berth. (Col.)* 64 (1838).
—— elongatus, *Woll., Ins. Mad.* 510. tab. xi. f. 7 (1854).
—— ——, *Id., Cat. Mad. Col.* 157 (1857).

Habitat insulas omnes Canarienses, sub lapidibus in aridis, necnon in cavernis tufæ, vulgaris.

* In my 'Ins. Mad.' I stated the inner maxillary lobe of *Hegeter* to be *unarmed* at the apex—an opinion which has been reiterated by Lacordaire, who reports that he also dissected the *H. elongatus* (i. e. *tristis*) and found that my observation was correct. It certainly was from that species that my generic formula was compiled; but I can only say that I have just now taken out the maxillæ of no less than three members of the group (namely, the *tristis*, *amaroides*, and *impressus*), besides those of the *Thalpophila plicifrons* and *polita*, and I find that in all instances the inner lobe is powerfully uncinated at its tip, as in the allied genera. Both lobes, however, are very densely clothed with long pile, and it is probable therefore that I failed originally, no less than Lacordaire, to perceive the small but acute claw which terminates the inner one of the *H. tristis*, on account of its having been concealed in the mass of hairs.

This is not only the largest of all the known Hegeters, but by far the most widely spread. Indeed it is a remarkable fact that whilst nearly all the others are extremely local, partaking more (as it were) of the character of *races*, the present one occurs in the whole of these Atlantic Groups—having been detected in the Azores, Madeiras, Canaries, and the Cape de Verdes, as well as, also, on the northern and western coasts of Africa. Throughout the Canarian archipelago it is universal, in the whole seven islands of which I have myself captured it, except Fuerteventura and Gomera; but from the former it has been communicated, in profusion, by the Barão do Castello de Paiva, who obtained it sparingly from the latter also (where it was likewise met with, during the spring of 1862, by Dr. Crotch).

Apart from its much larger bulk, the *H. tristis* may be recognized by its comparatively sulcated, elliptic elytra, and by the hinder angles of its subquadrate prothorax being almost right angles. Its surface, particularly of the head and prothorax, is more or less opake, and so minutely punctulated that the punctules are often scarcely traceable even beneath a high magnifying power. In a living state it is frequently clothed with a dull bluish-white, or lead-coloured, bloom (which however is soon destroyed)—a peculiarity to which, although I had often noticed it, my attention has lately been directed by Mr. Bewicke, of Madeira.

688. **Hegeter Webbianus.**

H. præcedenti similis et ab illo (nisi fallor) vix distinctus, sed minor, punctulis etiam magis indistinctis (oculo etiam fortissime armato ægre-discernendis), ergo quasi impunctatus; prothorace per basin paulo magis bisinuato, angulis posticis sensim acutioribus (nec subrectis); antennis pedibusque (præsertim tarsis) subgracilioribus, tibiis anticis minus evidenter serratulis.—Long. corp. lin. 4–5.

Hegeter Webbianus, *Heineken, Zool. Journ.* v. 40 (1835).

Habitat montes Canariæ Grandis, in regione "Tarajana" captus: etiam Teneriffam apud cl. Heineken colere dicitur.

I scarcely think that this *Hegeter* is more than a race, or state, of the *tristis*; and certainly, had it been unpublished, I should not myself have treated it as anything more important; nevertheless, as I have little doubt that it is the particular form which Dr. Heineken described as the *H. Webbianus*, I am unwilling to cancel the name which he imposed upon it. It differs from the *tristis*, merely, in being smaller and (if anything) even more indistinctly punctulated still (the punctules being so barely traceable, even beneath a high magnifying power, that the surface might well be defined as "im-

punctate"); in its prothorax being a little more decidedly bisinuated along the basal edge, and consequently with the posterior angles somewhat acuter (or less evidently right angles); in its limbs (particularly the tarsi) being just perceptibly slenderer; and in its anterior tibiæ being a little less roughened, or serrated. The only region in which I have myself observed it is the mountains of Grand Canary, where, during April 1858, I took it, not uncommonly, on the ascent to the Pinal above San Bartolomé.

689. Hegeter glaber.

H. affinis *H. Webbiano*, quasi (etiam oculo fortissime armato) impunctatus, prothorace apice paulo minus profunde emarginato, per basin sensim grossius marginato; scutello etiam magis transverso; elytris subconvexioribus et minus evidenter subsulcatis (sæpe omnino simplicibus); antennis pedibusque vix minus gracilibus.

Variat interdum subnitidus.—Long. corp. lin. 4–6.

Hegeter glaber, *Brullé, in Webb et Berth.* (*Col.*) 65. pl. 1. f. 9 (1838).

Habitat Palmam, hinc inde sub lapidibus.

This *Hegeter*, which I have observed hitherto only in Palma, agrees with the two preceding ones in its comparatively elliptic elytra (which are rather more narrowed before and behind, and therefore somewhat more rounded in the middle), and it is of about the same size as the *H. Webbianus*; nevertheless its prothorax is a little less scooped-out at the apex and somewhat more broadly margined along the basal edge, its scutellum is just perceptibly more transverse, its elytra are less sulcated (indeed often *quite* simple) and if anything more convex, and its limbs (especially the anterior tibiæ) are perhaps a trifle less slender. Of M. Brullé's types, one pertained to this species, and the other was the large variety of the *H. amaroides*; I have therefore regarded the present one as the insect he intended to describe.

690. Hegeter amaroides.

H. parum similis *H. tristi*, sed minor (plerumque multo minor), punctură paulo distinctiore (sed tamen minutissimâ); prothorace subbreviore, antice vix angustiore; elytris sensim oblongioribus (vix ellipticis) et plerumque minus evidenter sulcatis; antennis pedibusque minus elongatis.

Variat elytris interdum (præsertim in speciminibus majoribus) paulo magis ellipticis et fere haud sulcatis [=*H. polito*, Br.], necnon in ins. *Hierro* punctură subdistinctiore: in *Gomera* prothorax ad basin est paulo magis bisinuatus, angulis anticis vix magis porrectis.

Var. β. subglabra [an species?]. Multo minor, elytris simplicibus (sulcis omnino obsoletis).—Long. corp. lin. 3–5½.

Hegeter amaroides, *Sol., Ann. de la Soc. Ent. de France*, iv. 378 (1835).

Hegeter amaroides, *Brullé, in Webb et Berth.* (*Col.*) 64 (1838).
—— politus, *Id., loc. cit.* 65 (1838).

Habitat in Teneriffa, Gomera et Hierro, sub lapidibus vulgaris.

This appears to be a very variable species, both in size and in its more or less evidently sulcated elytra. The larger form, which is abundant around the Puerto Orotava in Teneriffe, has the elytra sometimes a little more elliptic and shining than in the ordinary examples, and almost free from longitudinal furrows, thus manifestly approaching the *H. glaber*; but after comparing accurately an immense series of specimens, I am quite unable to separate it from the smaller and more typical state, into which it merges by imperceptible gradations. Nevertheless that particular race is clearly identical with M. Brullé's *H. politus*—as is evident both from his *description* and from *one* of his two types (for the other seemed to me to be specifically different). The examples from Hierro are a little more sharply punctulated than those from Teneriffe; and the Gomeran ones have their prothorax usually a trifle more bisinuated along the basal edge and with the anterior angles perhaps somewhat more porrect.

The *H. amaroides* may generally be known by its being considerably smaller than the *tristis*, by its punctation (although very minute) being a little more distinct, by its prothorax being a trifle shorter and less quadrate (being for the most part rather narrower in front than behind), by its elytra being perceptibly more oblong (or less elliptic) and somewhat less coarsely sulcated, and by its limbs being relatively shorter. I have taken it, in profusion, in Teneriffe, Gomera, and Hierro, in all three of which it was likewise found by Mr. Gray; whilst from the first it has also been communicated by the Rev. R. T. Lowe, the Barão do Castello de Paiva, M. Hartung, Dr. Crotch, and my late friend the Rev. W. J. Armitage. I believe that M. Solier's type is coincident with the smaller and more sulcated form, which is common about S^ta^ Cruz (and elsewhere) in Teneriffe. The *smallest* state of all, however, which I have regarded as the "var. β," is somewhat peculiar, and possibly should have been treated as a separate species. It is *very* much smaller than the ordinary phasis of the insect, and has its elytra quite simple (the sulci being obsolete). It has more the *primâ facie* aspect of the *H. brevicollis*; but is more elliptic in outline, and when closely inspected its prothorax will be seen to be differently shaped, and the third joint of its antennæ to be perceptibly longer. It was sent from Teneriffe by the Barão do Castello de Paiva, and was captured, I believe, either at Arona or at Las Mercedes (probably the former).

§ II. *Elytra plus minus oblongiora.*

691. Hegeter transversus.

H. oblongus, vel latus vel latiusculus, plus minus depressus, opacus; capite prothoraceque plus minus minute (sed semper evidenter) punctulatis, hujus angulis posticis subacutis; elytris basin versus plus minus latis parallelis, minutius (quasi haud) punctulatis sed plus minus irregulariter transversim subrimosis, sæpius simplicibus (rarissime obsolete subsulcatis); antennis pedibusque breviusculis, crassiusculis.

α. Major, latior, depressior, distinctius punctulatus; elytris antice sensim latioribus, rectioribus, ubique evidentius irregulariter rimulosis. [*Regionibus subelevatis proprius.*]

β. Minor, angustior, paulo minus depressus, minus evidenter punctulatus; elytris antice sæpius minus latis et omnino minus sculpturatis. [*In regionibus minus elevatis, et etiam inferioribus, occurrens.*]—Long. corp. lin. 3½–5.

Hegeter transversus, *Brullé, in Webb et Berth.* (*Col.*) 65 (1838).

Habitat Teneriffam* (præsertim borealem), ab orâ maritimâ usque ad 3000′ vel 4000′ s. m. ascendens. *α* et *β*, quamvis primâ facie dissimiles, nisi fallor haud distincti sunt, inter se gradatim facile mergentes.

This *Hegeter*, which seems to be peculiar to Teneriffe, is quite as variable as the last one; nevertheless its two extremes of form are very easily connected. In the higher regions it is large, broad, depressed, and evidently punctulated, and its elytra are wide and parallel in front and more or less coarsely (though irregularly) transversely-*scratched* (or -rimose); but as we descend in elevation all

* Dr. Heer, in the list which he prepared for M. Hartung's volume, has cited the *H. transversus* as found in Fuerteventura; but I am satisfied that it does not exist in either of the two eastern islands of the Group (probably indeed not beyond Teneriffe), and that the error has arisen (as in other instances already commented upon) from M. Hartung's having unintentionally transposed certain of his specimens from the different islands. Nevertheless the *species* was rightly identified by Dr. Heer; for he has himself sent me an example referred correctly to the *H. transversus*. It is, however, *communicated* as coming from "Lanzarote," even whilst he publishes the insect as a Fuerteventuran (and *not* as a Lanzarotan) one!—another instance of the excessive inaccuracy, displayed alike by himself and M. Hartung, as regards their meagre Catalogue. The different forms of *Hegeter* (whether species or not) are so unmistakeable, when accurately inspected, and so topographically restricted, that I am convinced that the specimen which he forwarded to me is strictly a Teneriffan one, and that it was probably taken in some part of the Vale of Orotava. In like manner he registers the *H. brevicollis* as found in *both* Lanzarote and Fuerteventura, whilst I will undertake to say that it never occurred in either of them. As in the other case, it is a *Teneriffan* species, with a slightly aberrant state peculiar to Gomera. But as he has not communicated a type *identified* with the *brevicollis*, it is certainly possible (in this instance) that he may have fallen into a mere mistake of *names*, and that he in reality alludes to a totally different *Hegeter*—or, more likely, to the *Thalpophila plicifrons* (which at any rate is found in *Fuerteventura*).

these characters are *gradually* diminished, until, in the lower districts, it is, on the average, comparatively small, and relatively not quite so broad, its sculpture is altogether finer (though never obsolete), and its elytra are not quite so parallel (or so widened) anteriorly: nevertheless, after inspecting carefully an immense series of specimens, I am satisfied that the two forms merge into each other by imperceptible gradations, and therefore cannot be retained as specifically distinct. The larger state (*α*) is common in the wooded region of the Agua Mansa and above Ycod el Alto; and the smaller one (*β*) is universal in the lower portions of the Vale of Orotava, around the Villa and Puerto, where it was also taken by Mr. Gray and the Rev. R. T. Lowe. From the *H. amaroides* its different outline and more transverse prothorax, in conjunction with its shorter and thicker limbs (the second joint of its antennæ being, *par excellence*, less elongated), will readily separate it.

692. **Hegeter brevicollis.**

H. affinis *H. transverso β*, sed paulo minor angustior subconvexior, vix minus opacus, punctură etiam subtiliore (quasi omnino obsoletâ); prothorace ad basin minus bisinuato, angulis posticis sensim obtusioribus, ad latera æqualiter subrotundato.

Var. β. gomerensis [an species?]. Subovatior, paulo nitidior, punctură (subtilissimâ sed) forsan subdistinctiore; prothoracis angulis posticis rectis, paulo magis argute determinatis; elytris apice vix minus acute productis; antennis pedibusque sensim crassioribus. [*Ins.* Gomera.]—Long. corp. lin. 3–4.

Hegeter brevicollis, *Brullé, in Webb et Berth.* (*Col.*) 65 (1838).

Habitat Teneriffam et Gomeram, varietate *β* huic propriâ.

The larger examples of this *Hegeter* approach very closely, at first sight, to the smaller ones of the "*β*"-state of the *transversus*; and whilst the latter appears to occur in the intermediate regions of the Vale of Orotava in Teneriffe, not often descending to the lowest elevations, the present species I have detected hitherto only around the Puerto, at but a slight distance above the sea-level. On a careful inspection it will be observed, always, to differ from even the smallest and most aberrant varieties of the *H. transversus* in being relatively a trifle narrower and more convex, in its punctation being so excessively fine as to be barely traceable (and, therefore, strictly *obsolete*), and in its prothorax being less bisinuated along the basal edge, with the posterior angles more obtuse, and with the sides a little more *equally* rounded. It is also, on the average, smaller than even the "*β*"-state of the *transversus*, and *if anything* a trifle less opake.

Whether the Gomeran insect, which I have treated as a "var. β" of the present one, and which was taken by Mr. Gray and myself (near San Sebastian), during February 1858, and subsequently by the Rev. R. T. Lowe (at Hermigua), should not rather be regarded as a distinct species, I am somewhat doubtful; but I believe that its differential characters are scarcely of sufficient importance to warrant the conclusion that it is more than a mere insular phasis of the *H. brevicollis*. It is, however, a little more convex and ovate in outline (occasioned by the elytra being a trifle more drawn downwards, or less acuminated, at their apex), very perceptibly more shining, and with the punctation perhaps not *quite* so "obsolete"; the basal angles of its prothorax, also, are better defined, and more strictly *right* angles; and its antennæ and legs are sensibly thicker.

693. **Hegeter abbreviatus.**

H. latus, curtus, breviter oblongo-ovalis; capite prothoraceque subopacis, dense et (præsertim illo) distincte punctatis, hôc transverso angulis posticis vix obtusis; elytris ad basin truncatis (vix bisinuatis), subnitidioribus, paulo subtilius punctulatis; antennis pedibusque subgracilibus, nigro-piceis.—Long. corp. lin. $2\frac{1}{2}$–3.

Hegeter abbreviatus, *Brullé, in Webb et Berth.* (*Col.*) 66 (1838).

Habitat in lauretis excelsioribus Canariæ Grandis, rarissimus.

This is one of the best-defined of all the Hegeters hitherto detected, its short and broad, oblong-oval outline, combined with its distinctly and densely punctulated surface (the head and prothorax being subopake, whilst the elytra, which are straightly truncated at their base, are rather more shining), being abundantly sufficient to characterize it. It would appear to be exceedingly scarce, or at any rate local, the only spot in which I have observed it being the laurel-district (which forms a portion of the ancient forest of El Dorames) between Guia and Osorio in Grand Canary—where, on the 21st of April 1858, I captured eight specimens, from beneath damp stones, at the edges of the mountain-road below the house of General Morales.

694. **Hegeter costipennis,** n. sp.

H. oblongo-ovatus, crassus, opacus; capite prothoraceque (præsertim hôc) impunctatis, hujus angulis posticis rectis; elytris granulatis, singulis longitudinaliter 3-costatis, costâ internâ minus elevatâ.

Variat (an potius distinctio sexualis?) subnitidus, elytrorum granulis minus distinctis.—Long. corp. lin. 4–5.

Habitat in montibus Canariæ Grandis, rarissimus, sub lapidibus.

A most remarkable *Hegeter*, readily known by its large and thick body, opake surface, and granulated elytra, which have three elevated

costæ (the inner one of which is less raised than the others) down each. One of my specimens, however, is comparatively shining, and has its elytral granules less distinct; but whether this is due to variation, or is merely a sexual peculiarity, I am unable to state. It would appear to be the rarest of all the species hitherto detected, the only examples which I have seen (five in number) having been captured by myself on the ascent to the Roca del Soucilho, above San Mateo, in Grand Canary, during the spring of 1858.

695. Hegeter impressus.

H. præcedenti similis, sed minus opacus, capitis prothoracisque punctulis sensim evidentioribus (sed tamen subtilissimis, ægre observandis); elytris singulis obsolete 3-costatis, minutius granulatis, et transversim irregulariter, sed valde, rimoso-corrugatis (vel -impressis).

Variat (præcipue in regionibus australibus) paulo convexior angustior nitidior, elytris minus evidenter granulatis et costis magis numerosis (i. e. alternis minus certe obsoletis) sed omnibus valde indistinctis (interdum vix discernendis) longitudinaliter instructis.—Long. corp. lin. 3½–vix 5.

Hegeter impressus, *Brullé, in Webb et Berth.* (*Col.*) 64 (1838).

Habitat Canariam Grandem, sub lapidibus vulgaris.

The present *Hegeter*, which seems to be almost universal in Grand Canary, and which abounds throughout the region of El Monte, is evidently nearly allied to the preceding one, whose elytral peculiarities, of minute granules and three longitudinal costæ, it possesses, but to a less extent—the diminution in degree being, as it were, compensated for by the addition of a transversely *crumpled* (or corrugated) surface. This last feature, which varies somewhat in intensity, is generally very conspicuous, being of itself sufficient to distinguish the species. The *H. impressus* is a little less opake than the *costipennis*; and the punctules of its head and prothorax, although excessively minute, are *traceable*—which is scarcely the case in its ally, except when viewed beneath the microscope. In certain districts, particularly towards the south and centre of the island (as at Arguiniguin and above San Bartolomé), it is a little narrower, convexer, and more shining; and its elytra are less evidently granuled, and have their obscure costæ (although perhaps still less apparent) rather more numerous,—the intermediate ones, which are obsolete in the normal specimens (and in the *H. costipennis*), being (however faint) *as* distinct as the remainder. But the two forms pass into each other by imperceptible gradations.

696. **Hegeter subrotundatus**, n. sp.

H. affinis *H. impresso*, sed brevior, paulo rotundatior (sc. subovalis) et sensim minus opacus; capite prothoraceque distinctius punctulatis, hôc subbreviore, magis transverso, ante medium sensim latiore, angulis omnibus paulo obtusioribus; elytris distincte granulatis, regulariter sed obsolete longitudinaliter sulcatis et paulo minus grosse transversim corrugatis; antennis breviusculis, robustioribus.

Variat [an distinctio sexualis?] prothorace antice ad latera subexplanato-marginato, aut potius juxta marginem longitudinaliter impresso (impressione ad angulos anticos oblique incurvâ).—Long. corp. lin. $3\frac{2}{3}$.

Habitat Canariam Grandem, ad Arguiniguin deprehensus.

Out of a large series of the *H. impressus* captured by myself at Arguiniguin, in the south of Grand Canary, I find three examples which recede so much from the remainder that I can scarcely regard them as a mere variety of that species—at all events not a *local* one, inasmuch as they were found in the same locality as the others. Judging from the types now before me, the *H. subrotundatus* would seem to differ from its ally in being of a shorter and rounder outline, and rather less opake; in its head and prothorax being very much more distinctly, and rather more remotely, punctured—the latter, also, being somewhat shorter and more transverse, more evidently widened before the middle, with the angles less acute, and not so deeply bisinuated along the basal edge; and in its antennæ being thicker, with their third joint perhaps a trifle less elongated. Its elytra are perceptibly granulate, and obsoletely sulcated—causing the interstices generally (and not merely the alternate ones), as in the *variety* indicated above of the *impressus*, to appear slightly elevated. If anything, however, they are perhaps a little less corrugated transversely than is the case in that insect.

697. **Hegeter tenuipunctatus.**

H. subopacus, subdepressus, ubique dense et minute, sed tamen distincte, punctulatus (punctulis in elytris minutissimis); prothorace transverso-subquadrato, ad latera æqualiter subrotundato, angulis posticis vix obtusis; elytris planiusculis, fere simplicibus.—Long. corp. lin. 3–4.

Hegeter tenuipunctatus?, *Brullé, in Webb et Berth.* (*Col.*) 65 (1838).

Habitat in montibus valde excelsis Teneriffæ, usque ad 9000′ vel 10,000′ s. m. ascendens: Maio ineunte A.D. 1859 sub lapidibus prope Cañadas abundabat.

M. Brullé's types of his *H. tenuipunctatus*, which I examined in Paris, do not *perfectly* accord with this *Hegeter*, but I thought them

sufficiently near to render it probable that the two are specifically identical; nevertheless, if they should prove hereafter to be distinct, I would then propose for the present one the title of *ascendens*. His examples are a trifle brighter, and have their prothorax rather narrower in front and more obliquely-straightened at the sides.

The *H. tenuipunctatus* (as here defined) is, like the *lateralis*, essentially an alpine insect—occurring on the mountains of Teneriffe, from about 7000 to at least 9000 (or perhaps 10,000) feet above the sea. On the lofty Cumbre above Ycod el Alto, and overlooking the Cañadas, I captured it in profusion, from beneath stones and scoriæ, at the beginning of May 1859; where it was taken afterwards, though more sparingly, by Dr. Crotch. The species may be known by its rather depressed body and opake surface, which is densely and minutely (but nevertheless very evidently) punctulated all over, the punctures of the elytra, however, being exceedingly minute; by its prothorax being transversely quadrate, *equally* (though not greatly) rounded at the sides, and with the posterior angles rather more obtuse than right angles; and by its elytra being almost simple, or with scarcely any traces whatsoever of longitudinal striæ.

698. **Hegeter lateralis.**

H. præcedenti similis, sed paulo convexior angustior nitidior, sensim magis subcylindrico-ovatus, punctură omnino fortiore et vix parciore; prothorace ad latera minus æqualiter rotundato (i. e. mox ante medium sensim latiore), ad basin minus evidenter bisinuato, angulis posticis subobtusioribus; elytris obsoletissime substriatis, ad latera paulo magis rotundatis, quare versus humeros minus parallelis.

Variat (forsan secundum sexum) plus minus nitidiusculus, punctură plus minus grossâ et elytris plus minus evidenter substriatis.—Long. corp. lin. 2½–4.

Hegeter lateralis, *Brullé, in Webb et Berth.* (*Col.*) 65 (1838).

Habitat in montibus excelsis Teneriffæ, unà cum specie præcedente degens.

This species occurs in company with the preceding one, in almost the loftiest elevations of Teneriffe, ascending, I believe, to about 10,000 feet above the sea. Indeed I at first thought that it might perhaps be the other sex of that insect, but on a closer inspection I perceive that its differences are too numerous to warrant that suspicion. It may be known from it by being, on the average, a little convexer, narrower, and more shining, having more of a *subcylindric-ovate* outline than an oblong one; by its punctation being altogether stronger, and perhaps a trifle less dense; by its prothorax being

rather less *equally* rounded at the sides (or somewhat wider *before* the middle than behind it), less bisinuated along the basal edge, and with the hinder angles therefore perceptibly more obtuse; and by its elytra being very obsoletely substriated (a character, however, which varies a little in intensity), and more evidently rounded at the sides, or less parallel towards their base.

Genus 263. **THALPOPHILA.**

Solier, *Ann. de la Soc. Ent. de France*, iv. 370 (1835).

Although I should not myself have regarded the four insects enumerated below as more than aberrant Hegeters, for the accommodation of which a separate Section might perhaps be desirable, nevertheless, since they all have their epistome armed in the centre with a minute tooth, and the first of them is likewise remarkable for the greatly developed longitudinal plait on either side of its forehead (adjoining the eye), I think that they may safely be referred to Solier's genus *Thalpophila*, of which these two characters appear, from the diagnosis, to constitute the essential features; and moreover as the only described member of that group (namely, the *Akis abbreviata* of Fabricius) is found in Senegal, it seems still further probable, even geographically, that these five natives of the *eastern* portion of the Canarian archipelago may be truly congeneric with the one from the African coast. If such, however, should be the case, the structural formula of *Thalpophila* will require a slight readjustment; for the lateral carinæ of the forehead, the "depressed" body, the "rounded" angles of the prothorax, the "cylindrical" antennal joints, and the "triangular" scutellum are not more expressed (except perhaps the first of them), or more *generic*, than they are in *Hegeter*. But the mucronated epistome is a character which seems to hold good in them all.

§ I. *Corpus sat magnum; oculis transversis, reniformibus.*

699. **Thalpophila plicifrons**, n. sp.

T. oblongo-ovata, crassa, subopaca, minute et sat dense punctulata; capite antice grosse subangulatim mucronato, utrinque juxta oculos alte longitudinaliter plicato; prothorace ad latera parum rotundato, angulis posticis subrectis, anticis acutis; antennis pedibusque robustis.—Long. corp. lin. $4\frac{1}{2}$–5.

Hegeter brevicollis?, *Hart.* [nec *Br.*], *Geolog. Verhältn. Lanz. und Fuert.* 140, 141.

Habitat Fuerteventuram, sub lapidibus parum vulgaris.

This species has been observed hitherto only in Fuerteventura, where it was taken by Mr. Gray and myself near Puerto de Cabras

during January 1858, and subsequently by myself at Oliva in March of the following year; and I possess a specimen which was captured in the same island by M. Hartung. It may readily be known by its rather large size and thick, oblong-ovate body, by its subopake, densely punctulated surface, and by its head having the longitudinal plait on either side (adjoining the eye) greatly raised or developed. Its epistome is produced in front into a robust subangulated point; and its prothorax has the sides slightly rounded, the basal angles scarcely more than right angles, and the anterior ones acute.

700. **Thalpophila Deyrollii**, n. sp.

T. oblonga, crassa, aterrima, polita; capite prothoraceque dense et (præsertim illo) sat profunde punctatis, epistomate antice minute sed acute mucronato; prothorace brevi, transverso, ad latera leviter rotundato, angulis posticis subrotundate subrectis; elytris minute punctulatis et postice plus minus evidenter sed parce tuberculatis, angulis humeralibus haud porrectis; antennis pedibusque brevius-culis.

Variat in insulâ parvâ "Lobos" dictâ (juxta Fuerteventuram borealem) elytris grossius asperato-tuberculatis; necnon in insulâ "Graciosa" (juxta Lanzarotam borealem) punctură omnino subtiliore et subparciore.—Long. corp. lin. 3–4.

Hegeter politus, *Hart.* [nec *Br.*], *Geolog. Verhältn. Lanz. und Fuert.* 141.

Habitat Lanzarotam et Fuerteventuram, sub lapidibus ubique vulgaris. Species in honorem Dom. A. Deyrolle, Parisii, Coleopterorum scrutatoris oculatissimi acuti, denominata.

Although *one* of M. Brullé's (two) types of his *Hegeter politus* appeared to me, when I examined them in Paris, to be *perhaps* referable to this insect, nevertheless, as the other was manifestly nothing but the large and subglabrous state of the *H. amaroides* (found in the Vale of Orotava), and since his *description* (if such indeed it may be called) *applies most evidently to the latter*, I cannot possibly identify the present species with his *Hegeter politus*. Moreover even that "one" example (and which has nothing in common with his "diagnosis") is labelled "Teneriffe"; which renders it more than probable that even *it* is in reality distinct from the *Thalpophila* now under consideration: but, be this as it may, M. Brullé's few words which take the place of a description are so decidedly applicable to the Teneriffan *Hegeter* which I have recorded as a larger and somewhat more shining form of the common *amaroides*, that no number of (so-called) "types," afterwards assigned to them, could make them tally with this well-marked *Thalpophila*, which is apparently quite peculiar to the eastern portion of the archipelago.

The *T. Deyrollii* is universal throughout Lanzarote and Fuerteventura, where it abounds, beneath stones, independently of elevation; and it occurs likewise in the small adjacent islands of Graciosa (off the extreme north of the former) and Lobos (off the extreme north of the latter). It was taken also by Mr. Gray and M. Hartung, and has been communicated by the Barão do Castello de Paiva. It will easily be recognized by its thick, oblong body and *shining*, intensely black surface, which is closely punctured all over and has the hinder elytral region sparingly studded with small tubercles or granules. Its epistome is sharply, but minutely, mucronated in the centre; its prothorax is short and transverse, and slightly rounded at the sides; its humeral angles (as in the two following species) are less porrect than is the case in the various allied forms above enumerated; and its limbs are short*.

§ II. *Corpus parvum; oculis minoribus, magis lateralibus (i. e. vix sub margine frontis laterali continuatis), postice oblique subcarinato-terminatis.*

701. Thalpophila fuscipes.

T. oblonga, subopaca, nigra vel subfusco-nigra; capite prothoraceque dense et profunde punctatis, punctis versus latera oblongis et plus minus longitudinaliter confluentibus, illius epistomate antice minutissime serrato et in medio mucronato, hôc subtransversim quadrato angulis posticis subobtusis; elytris subtilius (sed distincte) punctulatis; antennis pedibusque piceis.—Long. corp. lin. 2–2⅔.

Hegeter fuscipes, *Brullé, in Webb et Berth.* (*Col.*) 66 (1838).
—— ——, *Hart., Geolog. Verhältn. Lanz. und Fuert.* 140.

Habitat Lanzarotam et Fuerteventuram, sub lapidibus in intermediis vulgaris.

This and the following species are considerably smaller than the two preceding ones, and have their eyes *comparatively* minute, as well as less reniform and more lateral—being less *transverse*, or more confined to the upper portion of the forehead, and terminated posteriorly by an oblique angulated *rim* (or a kind of obscure keel). In all of these respects, no less than in their coarsely sculptured head and prothorax, the lateral punctures of which have an evident tendency (particularly in the *T. submetallica*) to become oblong and longitudinally confluent, they make a most decided approach to the *Gnophotæ* from Grand Canary, enumerated below; nevertheless the peculiarity of

* In its polished surface and general sculpture, the *T. Deyrollii* is a good deal allied, at first sight, to my *Hegeter latebricola*, from the Salvages; but that insect, which is considerably larger, is a true *Hegeter* (its epistome *not* being mucronated), and has its elytra free from tubercles, with the humeral angles, as in the Hegeters generally, much more porrect.

sculpture just referred to is very much less expressed, whilst at the same time their more mucronated epistome and the fact of their prosternal lobe being *horizontal* (or *not* curved downwards between the anterior coxæ) will certainly remove them from *Gnophota*.

The *T. fuscipes* is common in Lanzarote and Fuerteventura, where it occurs beneath stones at intermediate elevations. Around Haria, in the north of the former, it was taken abundantly by Mr. Gray and myself during January 1858; and it was likewise captured in the same island by M. Hartung. It may be known by its small size, oblong outline, and but very slightly shining (often nearly opake) surface, which is densely punctulated all over and of a less intense black than in the allied forms—having sometimes a just perceptibly brownish, or subpicescent, tinge: its prothorax has the hinder angles slightly obtuse; and its limbs are piceous. The Fuerteventuran examples have their head and prothorax a trifle more coarsely and densely punctured than the Lanzarotan ones; and, judging from M. Brullé's type, which I examined accurately when in Paris, the species was founded on a very *small* individual from Fuerteventura.

702. **Thalpophila submetallica**, n. sp.

T. præcedenti similis, sed minor, brevior, sensim nitidior, punctură fortiore, elytris obsolete submetallicis; capite prothoraceque parum densius rugosiusque punctatis, punctis versus latera longitudinaliter magis confluentibus, hôc ad latera et ad angulos posticos paulo magis rotundato; elytris vix parcius punctulatis, per basin subrectius truncatis; antennis pedibusque paulo clarius rufo-piceis. *Variat* in Fuerteventura sensim minus nitida.—Long. corp. lin. $1\frac{1}{2}$–2.

Habitat Lanzarotam et Fuerteventuram, unà cum præcedente degens.

This is the smallest of the *Thalpophilæ*, and one which occurs in company with the *T. fuscipes*, both in Lanzarote and Fuerteventura (where it was likewise taken by Mr. Gray, and in the latter by M. Hartung). At first sight it might almost be confounded with its ally; but, apart from its smaller size, it will be seen, when carefully inspected, to be more shining, and to have its elytra obscurely submetallic. Its head and prothorax are more densely and roughly sculptured, the punctures towards either side having a more evident tendency to become oblong and longitudinally confluent; the sides and hinder angles of the latter are more decidedly rounded; its elytra are somewhat more *straightly* truncate (or less bisinuated) at their base, and, *if anything*, more sparingly and sharply punctured; and its limbs are generally of a clearer hue. The Fuerteventuran examples are usually a trifle less shining than the Lanzarotan ones.

Genus 264. GNOPHOTA.

Erichson, *in Wieg. Archiv*, ix. 237 (1843).

The very remarkable sculpture of the head and prothorax of the three insects described below led me to suspect, even before I had accurately examined them, that they might perhaps be generically distinct from the allied forms; and I now perceive that the construction of their prosternal lobe, which is suddenly curved downwards between the anterior coxæ, and their somewhat smaller eyes, which are more or less bounded posteriorly by an oblique carina, or slightly elevated *rim*, will clearly refer them to *Gnophota* of Erichson—a group which I *believe* to be confined, so far as the hitherto acknowledged members of it are concerned, to the Cape de Verdes*. Indeed the two above-mentioned peculiarities seem to be almost the only ones, sanctioned by Erichson and Lacordaire, to separate it from *Hegeter*; but I think that the anteriorly serrated epistome (which is submucronated in the centre) should be added; and I also imagine that considerable stress ought to be laid upon the very singular sculpture of the head and prothorax—which are coarsely and closely punctured, the punctures having a greater or less tendency to become completely confluent longitudinally (especially on either side) so as to produce somewhat curved strigæ. In the *G. curta*, a type of which has been communicated to me by Schaum, this sculpture is carried to an absurd excess; but even in the Canarian representatives of the group it is conspicuously indicated.

§ I. *Oculi transversi, subreniformes, postice indistincte carinato-terminati.*

703. Gnophota cribricollis.

G. oblonga, subdepressa, subopaca; capite prothoraceque dense et valde profunde punctatis, punctis (in disco hujus exceptis) oblongis confluentibus strigas longitudinales plus minus efficientibus, hôc ad latera leviter rotundato, ad basin bisinuato, angulis posticis subobtusis; elytris minutissime et parce punctulatis; antennis pedibusque subgracilibus, piceis, illarum articulo 3^tio^ quarto multo longiore. *Variat* elytris vel simplicibus vel obsoletissime substriatis, rarius subimpresso-inæqualibus.—Long. corp. lin. 2–2½.

Hegeter cribricollis, *Brullé, in Webb et Berth.* (*Col.*) 66 (1838).

Habitat Canariam Grandem, præsertim in regionibus australibus degens.

* I say the Cape de Verdes, because it is now a known fact that the collector who was sent to Angola (and who died there) stopped at those islands *en passant*, and that his material from the two countries was amalgamated, and afterwards transmitted to Europe as *Angolan*—thus occasioning an amount of confusion which a further and more accurate knowledge of the respective faunas can alone dispel.

This *Gnophota* I have observed hitherto only in the central and southern districts of Grand Canary—from the region of Tarajana to Maspalomas and Arguiniguin; and although it possesses the generic peculiarity of sculpture, of its head and prothorax, which is perhaps even still more strongly expressed in the two following species, it may nevertheless be known from them by being, on the *average*, larger and less shining; by its prothorax being a little less transverse, not quite so rounded at the sides and hinder angles, and more bisinuated along its basal edge; by its elytra, which are either simple or very obsoletely substriate, being much more minutely punctulated; and by its limbs being longer—its antennal joints, particularly the third one, being conspicuously more elongated. Its eyes are a little larger and more transverse (or reniform) than those of the *G. punctipennis*, being less evidently terminated behind by a slightly elevated *rim*, or keel.

704. **Gnophota inæqualis**, n. sp.

G. inter *cribricollem* et *punctipennem* aliquo modo sita, sed in oculis haud conspicue carinato-terminatis cum illâ melius congruens; capite prothoraceque (ut in *punctipenni*) densissime et valde profunde strigoso-punctatis, sed hôc ad latera paulo magis rotundato, angulis posticis rotundatioribus; elytris subovatis (versus humeros sensim angustatis), subdepressis, grosse impresso-inæqualibus, argute sed parce punctulatis necnon obsoletissime (valde inconspicue) submetallico-tinctis; antennarum articulo 3^tio^ quarto parum longiore.—Long. corp. lin. 2⅛.

Habitat Canariam Grandem, tempore vernali A.D. 1858 detecta.

Three examples only of this *Gnophota*, which were captured by myself in Grand Canary (I have no note as to the precise spot), are, unfortunately, all that I possess to judge from; nevertheless, though to a certain extent intermediate between the *cribricollis* and *punctipennis*, I do not think that they can be regarded as a phasis of either of them. In the structure of their eyes, which are but very obscurely bounded behind by an oblique rim, as well as in their comparatively distinct scutellum, they have more in common with the former of those insects; whilst in their *very* densely and roughly sculptured head and prothorax, rather bright surface, and apparently smallish size they agree better with the latter—though the sides and hinder angles of their prothorax are still more rounded than is the case in that species. In their sharply punctured elytra, as well as in the length of their limbs, they are intermediate between the two; but in the outline of their elytra, which are perceptibly narrowed, or drawn in, at the shoulders, and which have a barely traceable sub-

metallic tinge, and which (as in the *Hegeter impressus*) are uneven, or pitted transversely with a few irregular depressions, they recede alike from both of them.

§ II. *Oculi laterales, minores, postice distincte carinato-terminati.*

705. **Gnophota punctipennis**, n. sp.

G. minor et brevior quam *G. cribricolli*, necnon subconvexior, nitidior, punctura omnino fortiore ac paulo densiore; prothorace magis transverso, ad latera sensim magis rotundato, per basin minus bisinuato, angulis posticis paulo obtusioribus; scutello vix minore; elytris per basin rectius truncatis, interdum leviter submalleato-inæqualibus; antennis pedibusque brevioribus, vix robustioribus, illarum articulis (præsertim 3^tio^) conspicue minus elongatis.—Long. corp. lin. $1\frac{3}{4}$–2.

Habitat Canariam Grandem, in regione El Monte vulgaris.

This little *Gnophota* appears to be universal throughout the region of El Monte, and around Las Palmas, in Grand Canary; and it may be known from the *cribricollis* by being, on the average, smaller, proportionally shorter and more convex, more shining, and more deeply and closely punctured (this last distinction being a very conspicuous one as regards the *elytra*); by its prothorax being relatively a little wider and more transverse, *straighter* (or less bisinuated) along the posterior edge, and with the hinder angles rather rounder, or more obtuse; by its scutellum being perceptibly smaller, its elytra more straightly truncated at their base, and its limbs shorter and somewhat more robust. The last of these characters is exceedingly evident so far as the antennal joints are concerned, the third one of which is much less decidedly elongated than in the *cribricollis*. M. Brullé manifestly alludes to this species as a mere state of his *Hegeter cribricollis*; but such could only have arisen from a most superficial inspection, and from his not having perceived its real distinctive features at all.

Genus 265. **MELANOCHRUS** (nov. gen.).

Corpus ovatum, curtum, convexum: *epistomate* minute serrato et in medio sensim mucronato; *oculis* parvis, subrotundatis, lateralibus: *prothorace* angustulo, transverso-subconico apice truncato; *prosterni lobo* inter coxas anticas terminato (nec producto), aut potius ibidem subito decurvo: *mesosterno* antice etiam convexo (nullo modo emarginato); *scutello* distincto, triangulari-transverso: *elytris* ovalibus basi truncatis, apice acuminatis, per basin marginatis; *epipleuris* subrotundatis, plicâ tenui, integrâ. *Antennæ* et *instrumenta cibaria* fere ut in *Gnophotâ* et *Hegeteri*, sed illæ longius densiusque pilosæ, art^o^ ult^mo^ parvo, ovali (nec oblique truncato). *Labrum* exsertum, valde pilosum, apice leviter emarginatum, angulis anticis rotundatis. *Maxillarum lobo interno* acute uncinato. *Pal-*

porum art ult^mo in *maxillaribus* securiformi-ovali, in *labialibus* elongato-ovali apice paulo acuminato. *Mentum* transversum, ad latera valde rotundatum, apice in medio emarginatum, angulis anticis obtusis. *Ligula* curta, pone mentum recondita, antice biloba et longe ciliata. *Pedes antici* fossorii, valde robusti, *tibiis* latis, compressis sed extus simplicibus, subincurvis, ad angulum internum fortiter bicalcaratis (calcari majore elongato, curvato); *posteriores* elongati, graciles, *tibiis* subexcurvis, *tarsis* elongatis, art° 1^mo longiusculo.

A *μελανόχρως* (*μέλας* et *χρόος*), atratus.

The curious insect from which the above structural characters have been compiled is at once remarkable amongst the allied forms for its fossorial habits, in which respect it makes an approach to the *Erodiadæ*, though its broad and much compressed anterior tibiæ are *not* palmate externally. Its body is short, convex, and elliptical-ovate, the prothorax being subconical and narrower than the elytra, and its epipleuræ are rather rounded and obtuse; and although their edges are not ciliated as is frequently the case in sand-burrowing species, its *antennæ* are nevertheless exceedingly pilose, being clothed with elongate hairs. Its epistome is minutely serrated in front and slightly mucronated in the centre; and its eyes are small, subrotundate, and lateral,—in both of which respects it agrees with *Gnophota*. Its prosternal lobe also is *more* in accordance with the *Gnophotæ* than with the members of the neighbouring genera—since it is *not* produced horizontally beyond the commencement of the anterior coxæ, but may be regarded *either* as there suddenly terminated, or else as so completely bent downwards as to appear so; but its mesosternum has not even a tendency to be scooped-out in front, being, on the contrary, *convex*. Its scutellum is distinct, its elytra are margined along their basal edge, and its four hinder legs are slender and elongated—all of which particulars, no less than the smallness of its eyes, its general outline, and its fossorial front tibiæ, will separate it likewise from *Oxycara*, to which in some respects it is akin. The last joint of its antennæ, although smallish, is not obliquely truncated (as in *Hegeter* and the allied groups); neither are the under segments of its prothorax longitudinally strigose*.

706. **Melanochrus Lacordairii**, n. sp.

M. breviter elliptico-ovatus, convexus, niger, sæpius obsoletissime (vix perspicue) submetallico-tinctus, nitidus, argute sed haud dense

* Concerning the affinities of this insect, Prof. Lacordaire, immediately after the completion of his admirable volume on the genera of the *Heteromera*, wrote to me as follows:—"C'est bien une Tentyriide, et un genre nouveau voisin des *Gnophota* et des *Oxycara*."

punctatus (punctis in elytris sensim minoribus et vix subasperatis); prothorace subconico, tenuiter marginato, angulis posticis rotundatis; antennis fulvo-pilosis pedibusque rufo-piceis.—Long. corp. lin. $1\frac{1}{2}$–$2\frac{1}{2}$.

Habitat Lanzarotam et Fuerteventuram, ad radices plantarum in arenosis maritimis et submaritimis fodiens. Species in honorem Prof. Th. Lacordaire, per tot annos Historiæ Naturalis et præsertim Entomologiæ magistri, dicata.

Apparently not uncommon in certain spots, adjoining the sea-beach, in Lanzarote and Fuerteventura—where it burrows into the sand at the roots of plants, in company with the *Arthrodes subciliatus* and *costifrons*, the *Onycholips bifurcatus*, *Pentatemnus arenarius*, *Saprinus lobatus*, and other insects of similar habits. Under such circumstances it was taken by Mr. Gray and myself, at the end of January 1858, to the south of Puerto de Cabras, in Fuerteventura; and during the spring of the following year I met with it more abundantly in the sandy region at Corralejo, at the extreme north of that island, as well as to the south of Arrecife in Lanzarote. I captured an insect on the sand-hills to the south of Mogadore, on the opposite coast of Africa (close to the Emperor of Morocco's unfinished palace), which may perhaps be a second species of *Melanochrus**.

Fam. 65. BLAPIDÆ.

Genus 266. BLAPS.

Fabricius, *Syst. Ent.* 254 (1775).

707. Blaps gages.

Tenebrio gages, *Linn.*, *Syst. Nat.* ii. 676 [script., per err., *gigas*] (1767).
Blaps gages, *Brullé*, *in Webb et Berth.* (*Col.*) 68 (1838).

* The present position being the proper one for the *Akisidæ*, I should mention that the *Akis acuminata* of Fabricius is recorded by M. Brullé as Canarian, on the evidence of specimens supposed to have been captured by Messrs. Webb and Berthelot. I examined them, when in Paris; but as I feel considerable doubt whether they are truly Canarian, I cannot admit the species into this Catalogue. It is far from impossible that it *may* occur in these islands; but, at the same time, I think it much *more* likely that the examples were obtained (perhaps alive) at S^{ta} Cruz, having been brought over accidentally in some of the trading vessels from the coast of Africa. Such importations are both natural and by no means unfrequent; and, indeed, I have now before me specimens of a large *Scaurus*, a *Pimelia*, an *Erodius*, and of the *Scarites gigas* which were picked up by Dr. Crotch on the Mole at S^{ta} Cruz—*escaped from the actual steamer in which he had himself arrived from Mogadore* (the insects having been captured by himself and the sailors on the little island off that port, and afterwards allowed to run loose on board the vessel)! I conceive it very probable, therefore, that the *Akis* may have made its appearance in much the same way; or that, at all events, further evidence is necessary before it can be conscientiously cited as Canarian.

Blaps gages, *Woll., Ins. Mad.* 506 (1854).
—— ——, *Id., Cat. Mad. Col.* 157 (1857).

Habitat in Lanzarota, Canaria, Teneriffa et Gomera, in tenebris latens.

The European *B. gages*, which occurs likewise in the Madeiran Group, as well as at the Azores and on the rocks of the Salvages, will in all probability be found universal throughout these islands; nevertheless hitherto I have myself detected it only in Lanzarote, Grand Canary, and Teneriffe; but it has been communicated by the Barão do Castello de Paiva from Gomera. In Teneriffe it was taken also by M. Hartung.

708. Blaps alternans.

Blaps alternans, *Brullé, in Webb et Berth. (Col.)* 68 (1838).
—— ——, *Hartung, Geolog. Verhältn. Lanz. und Fuert.* 140.

Habitat Lanzarotam et Fuerteventuram, sub lapidibus magnis necnon in cavernis tufæ, in montibus, congregans.

This large *Blaps*, at once remarkable for its elytra being densely roughened, or asperated, and closely beset with longitudinal ridges, the alternate ones of which have a tendency to be more developed than the remainder (a peculiarity which is more expressed in some examples than in others), seems to be confined, so far at least as has been observed hitherto, to Lanzarote and Fuerteventura—where it congregates beneath slabs of stone, and in small basaltic caverns, on the mountain-slopes of intermediate elevations. Under such circumstances I have captured it in profusion on the hills above Haria, in the north of the former, in which island it was likewise found by M. Hartung.

709. Blaps similis.

Blaps similis, *Lat., Hist. Nat. Crust. et Ins.* x. 279 (1803).
—— fatidica, *Sturm, Deutsch. Fna*, ii. 205 (1807).
—— ——, *Brullé, in Webb et Berth. (Col.)* 68 (1838).
—— fatadica, *Woll., Ins. Mad.* 508 (1854).
—— ——, *Id., Cat. Mad. Col.* 157 (1857).

Habitat Fuerteventuram et Teneriffam (circa domos), forsan ex alienis introducta.

This common European insect, which occurs likewise in the Madeiran Group and at the Azores, seems to be scarce in these islands; though, being, in all probability, a mere introduction from more northern latitudes, it would very likely be found abundantly in the houses and warehouses, if carefully searched for. The only examples, however, which I happen to possess are from Fuerteventura and Teneriffe (in the latter of which it was found by M. Hartung).

Fam. 66. PIMELIADÆ.

Genus 267. PIMELIA.

Fabricius, *Syst. Ent.* 251 (1775).

§ I. *Scutellum* (ut in *Pimeliadis* typicis) *conspicuum, postice dilatato-transversum.*

710. Pimelia lutaria.

P. subopaca (subtilissime alutacea), pilis plus minus elongatis erectis præsertim versus latera parce obsita et pube parvâ cinereâ demissâ hinc inde (sed præcipue in limbo et postice) vestita; capite prothoraceque parce punctatis (punctis in illo parvis, in hôc minutissimis), hôc lato, postice truncato, ad latera subæqualiter rotundato, utrinque tuberculis magnis asperato; elytris ovalibus vel oblongo-ovalibus basi subemarginatis (vix bisinuatis), leviter transversim rugulosis, parce sed argute asperato-tuberculatis, in limbo grosse serratis, costis tribus (præter lateralem) indistinctis, antice evanescentibus, singulis instructis; tibiis in facie superiore breviter cinereo-pubescentibus.—Long. corp. lin. 6–11.

Pimelia lusaria*, *Brullé, in Webb et Berth. (Col.)* 68. pl. i. f. 11 (1838).
—— canariensis, *Hart.* [nec *Br.*], *Geolog. Verhältn. Lanz. und Fuert.* 140, 141.

Habitat Lanzarotam et Fuerteventuram, necnon in insulâ parvâ adjacente "Graciosa" dictâ, sub lapidibus vulgaris.

This *Pimelia* is universal (and, I think I may add, the *only* one) in Lanzarote and Fuerteventura, where it abounds, independently of elevation—occurring likewise in the little island of Graciosa, off the north of the former. It was captured also both by Mr. Gray and M. Hartung; and was wrongly referred by Dr. Heer (who prepared the list for M. Hartung's volume) to Brullé's *P. canariensis*—which is a totally different insect, found by Messrs. Webb and Berthelot on the extreme summit of the Peak of Teneriffe.

Apart from its numerous secondary characters, the *P. lutaria* may

* The inaccuracy of M. Brullé's catalogue seems to extend even to the very *correcting of the press.* In the text this *Pimelia* is called "*lusaria*"; but it is evident that *lutaria* is the title which was intended, not merely because *it is so spelt upon the plate*, but likewise from the fact that that term is peculiarly applicable to the present species—the short whitish, decumbent pubescence with which it is partially clothed having the *primâ facie* appearance of *mud*, or a kind of earthy deposit (such as the insect might have accumulated from the dry volcanic soil into which it often half-buries itself, beneath the stones, so as to remain concealed). But it is curious to observe how a blunder of this sort is apt to beget others; for Lacordaire, having apparently omitted to glance at the *plate*, and perceiving the absurdity of such a name as "*lusaria*," corrects it into *lusoria*; and thus the original title, which was a tolerably distinctive one, is entirely lost sight of!

readily be known by its broad, very lightly punctured prothorax; and by its entire surface (particularly towards the sides) being sparingly studded with more or less elongate, erect hairs, and clothed *in parts* with a short, decumbent, cinereous under-pile, which at first sight has more the appearance of a *muddy* or earthy deposit than of anything else. Its elytra are slightly wrinkled transversely, and sharply asperated with small, remote tubercles; and have their three costæ sufficiently distinct behind, but evanescent in front.

711. **Pimelia canariensis.**

Pimelia canariensis, *Brullé, in Webb et Berth.* (*Col.*) 67 (1838).

Habitat in montibus excelsis Teneriffæ, in summo ipso monte "Pico de Teyde" (12,100′ s. m.) a DD. Webb et Berthelot deprehensa.

I have not myself captured this *Pimelia*—perhaps owing to the fact that considerations of health did not permit me to ascend higher than about 9000 or 10,000 feet on the mountains of Teneriffe; for it would appear, from a note attached to the types, that it was taken by Messrs. Webb and Berthelot on the summit of the "Peak" itself *. It is the only insect, throughout the entire collection, in which I could detect any appended observation bearing upon its habits; nevertheless even that one, although of such extreme topographical interest, is of course totally ignored by M. Brullé. I examined the specimens with great care, whilst in Paris, and came to the conclusion that the species is exceedingly distinct from all the others hitherto detected in these islands. It appeared roundish in outline, and clothed with a fine, short, yellowish pubescence: its prothorax is impunctate; and each of its elytra is furnished with two beautifully defined outer rows of equal tubercles and a large raised costa nearer to the suture—the *intermediate* tubercles being rather distant, rounded, and distinct.

712. **Pimelia fornicata.**

Pimelia fornicata, *Hbst, Natursyst.* viii. 79. tab. 122. f. 8 (1799).
—— obesa, *Sol., Ann. de la Soc. Ent. de France*, v. 191 (1836).
—— ——, *Brullé, in Webb et Berth.* (*Col.*) 67 (1838).

Habitat?

I have not observed this Mediterranean species at the Canaries; nevertheless I examined carefully the types of Messrs. Webb and Berthelot, when in Paris, and they seemed to me to be correctly identified with the *fornicata*. M. Brullé, who compiled the list for Messrs. Webb and Berthelot's work, of course gives no information

* The note to which I allude is as follows: "Sous les pierres ou dans des cavités souterraines depuis des côtés jusque sur le pic, à 1600 toises d'élévation."

concerning the specimens; so that I am unable to state in which of the seven islands they were obtained.

713. **Pimelia ascendens**, n. sp.

P. subnitida; capite antice transversim subelevato et ibidem profunde punctato; prothorace apice subsinuato, minutissime et parcissime punctulato, utrinque tuberculis magnis obsito; elytris oblongo-ovalibus apice subacuminatis, grosse et dense subasperato-tuberculatis, in limbo leviter serratis, singulis costis tribus (præter lateralem) latis obtusis sed valde distinctis (sublaterali tuberculato-subserratâ, sed discali et subsuturali simplicibus, postice subito abbreviatis), instructis; antennis tarsisque piceis.—Long. corp. lin. $8\frac{1}{2}$–11.

Pimelia barbara, *Br.* [nec *Sol.*], *in Webb et Berth.* (*Col.*) 67 (1838).

Habitat in montibus excelsis Teneriffæ, usque ad 10,000′ s. m. ascendens.

This is essentially an alpine *Pimelia*, being confined (so far as I have observed hitherto) to almost the loftiest elevations of Teneriffe—ascending to at least 10,000 feet above the sea. Under such circumstances I took it in profusion, at the beginning of May 1859, on the Cumbre adjoining the Cañadas, above Ycod el Alto; where it was also captured, during the spring of 1862, by Dr. Crotch, and whence it has been communicated by the Barão do Castello de Paiva and M. Hartung. It may easily be known by its narrowish, oblong outline (the elytra being but little rounded at the sides, and not much drawn downwards at their apex); by its prothorax being subsinuated along the anterior edge; and by its elytra being very densely beset with large, round, coarse tubercles (which become less raised towards the suture, and smaller towards the sides), and with the three costæ, on each, considerably developed, broad, and obtuse—the sublateral one being more or less evidently composed of elongated tubercles, whilst the discal and subsutural ones are simple, and suddenly abbreviated behind.

An examination of M. Brullé's types, in Paris, convinced me that this is the *Pimelia* which he referred, in his very inaccurate catalogue, to the *P. barbara* of Solier. It is, however, totally distinct, even superficially, from that species—being not only smaller, narrower, and *very* much less roughly sculptured, but likewise with its prothorax conspicuously less widened, *much* less coarsely margined both before and behind, simply sinuated (or subemarginate) in front, instead of being somewhat bisinuated, and with only a few tubercles on either side; with its scutellum shorter, and differently shaped;

with its elytra less rounded at the edges, less raised along the suture, and with their costæ *relatively* broader and more obtuse; and with its limbs less robust—the antennæ and tarsi being also rufo-piceous instead of black.

714. Pimelia radula.

P. præcedenti similis, sed minus oblonga (elytris rotundatioribus et postice magis desilienti-truncatis); prothorace apice haud sinuato; elytris tuberculis paulo minoribus sed sensim magis asperatis obsitis, in limbo paulo minus grosse serratis, singulis costis tribus angustioribus minus elevatis (sed sublaterali et discali magis tuberculato-serratis, subsuturali antice lævi subevanescente sed postice in tuberculam parvam gradatim mergente) instructis.

α. Elytrorum tuberculis, præsertim versus suturam, minus distinctis. [Circa *Orotavam* vulgaris.]

β (*granulata*?, Lat., ined.). Elytrorum tuberculis grossius asperatis. [Circa et supra *Sanctam Crucem* præcipue degens.]—Long. corp. lin. 7½–10.

Pimelia radula, *Dej., ined.*
—— ——, *Sol., Ann. de la Soc. Ent. de France*, v. 136 (1836).

Habitat Teneriffam, præcipue in inferioribus occurrens.

Whilst the last *Pimelia* is peculiar to the higher elevations of Teneriffe, this one occurs principally in the lowest (even on the level of the sea-shore), though occasionally ascending into the intermediate districts. I have taken the state "α" (which has its elytral tubercles less strongly defined) around the Puerto Orotava, and the "β" in the vicinity of S^ta^ Cruz; the latter has also been communicated by the Barão do Castello de Paiva. That it is truly conspecific with the *P. radula* of Solier I can vouch for certain—having, through the kindness of M. Deyrolle, received the loan of two specimens which have been compared with Solier's types in the collection of the Count Breme at Turin. Curiously enough, one of these, which he regards as "tout-à-fait typique," is identical with my state "α," as enunciated above; whilst the other, which was labelled in the original collection of Dejean as "*radula*, var." (though with the erroneous *habitat* of the Cape of Good Hope), is a small example of my state "β." And this is the more satisfactory, inasmuch as I had drawn out the above diagnosis *before* I had even glanced at M. Deyrolle's individuals.

The *P. radula* is less oblong than the *ascendens*, its elytra being more rounded at the sides and more bent downwards (or truncated) towards their apex; its prothorax is straighter along the anterior edge; and its elytra have their tubercles rather smaller, but a little more *obliquely-impinged* (or asperate), and their three costæ less ele-

vated, and not so broad and obtuse—the sublateral one being more serrated with denser, or closely set, tubercles, whilst even the discal one (instead of being simple) is similarly, though less coarsely, constructed: the subsutural one (instead of being simple and well defined throughout, and terminated suddenly behind) is simple, and indistinct, in front, merging posteriorly into a series of small tubercles.

715. **Pimelia sparsa.**

Pimelia sparsa, *Brullé, in Webb et Berth* (*Col.*) 67 (1838).

Habitat?

I did not meet with this insect during my Canarian researches; but I examined it, when in Paris, and do not feel altogether sure that it is more than a variety of the *radula* in which the elytral tubercles are *very* much less numerous. Still, as I could not compare it with sufficient accuracy, and since I have no example amongst my extensive series of the *radula* which at all approaches it in this peculiarity of the elytral sculpture, I do not think it would be safe, at any rate without further evidence, to treat it as a mere phasis of that species. M. Brullé, of course, gives us no information as to the island in which it was obtained.

716. **Pimelia ambigua,** n. sp.

P. subopaca; capite antice transversim subelevato et ibidem profunde punctato; prothorace subinæquali, apice subsinuato, minutissime et parcissime punctulato, utrinque (præsertim postice) tuberculis obsito; elytris oblongo-ovalibus, basi bisinuatis, antice subdepressis, suturâ haud elevatâ, dense transversim undulato-inæqualibus et tuberculis minutissimis granuliformibus (versus suturam evanescentibus) parce obsitis, in limbo subinæqualiter serratis, singulis costis tribus (præter lateralem) acutiusculis subundulato-angulatis (sublaterali paulo evidentius serratâ) instructis.—Long. corp. lin. 8.

Habitat Teneriffam? (certe ab illâ ad Dom^{um} Deyrolle, Parisium, missa).

A single example of this *Pimelia* has been communicated by M. Deyrolle, of Paris, as having been sent to him from Teneriffe. Indeed it would appear from his statement that there can be no question that it is Canarian, though I will not commit myself to regarding it as undoubtedly *Teneriffan*. Its subopake and rather oblong elytra, which are bisinuated at their base, a good deal flattened anteriorly, with the suture hardly at all raised (even behind), and which are densely, though *minutely*, subrugulose (or *crumpled*) trans-

versely, so as to cause the ridges (which are narrowish and angular) to seem as though delicately subundulated, will serve to separate it from its allies. As in the *P. costipennis*, its elytral tubercles are so far reduced in dimensions as to take the form of small and remote granules (which are nearly evanescent on the sutural interval); and its subsutural ridge is rather suddenly curved outwards at the base. It appears, to a certain extent, to be intermediate between that insect and the *ascendens*, having rather the outline of the latter, with somewhat the sculpture of the former; nevertheless, of the two, it is certainly *more* akin to the *costipennis*, and might possibly be a *Teneriffan* phasis of that species.

717. **Pimelia costipennis**, n. sp.

P. subnitida; capite antice profunde, postice minute et parce punctato; prothorace minutissime et parcissime punctulato, utrinque tuberculis magnis obsito; elytris ovalibus, tuberculis parvis subasperatis granuliformibus (versus suturam minus distinctis) obsitis, in limbo leviter serratis, singulis costis tribus (præter lateralem) valde elevatis (sublaterali indistincte tuberculato-subserratâ) instructis, interstitiis subconcavis; antennis rufo-piceis.

α. Paulo minor, pedibus gracilioribus, rufo-piceis. [*Ins.* Hierro.]

β (*validipes*). Paulo major, pedibus robustioribus, piceis. [*Ins.* Gomera.]—Long. corp. lin. 7–11.

Habitat in Gomera et Hierro, hinc inde vulgaris: insectum vile, valde spernendum; in stercore humano arido sese occultare delectat.

I can detect no difference between the states *α* and *β*, above enunciated, except that the former (which abounds in Hierro) is a little the smaller of the two, and has its limbs slenderer; whilst the latter (which is apparently general throughout Gomera) is perceptibly larger, and with the legs thicker. I therefore conclude that they are but insular phases of a single species. The "*β*" was taken by Mr. Gray and myself near San Sebastian, and was subsequently communicated by the Barão do Castello de Paiva from Hermigua (on the opposite side of the island).

The *P. costipennis* may be known by its prothorax being very sparingly and most minutely punctulated, and by its elytra being sprinkled all over with small, but remote, granuliform tubercles (which, however, are less evident towards the suture), and with their costæ much raised—the sublateral one being indistinctly serrated (sometimes quite plain in the *middle*), whilst the discal and subsutural ones (the latter of which is faint, and a good deal bent outwards at the *base*) are simple, except quite behind. The great eleva-

tion of the ridges causes the spaces between them to appear somewhat concave.

718. Pimelia lævigata.

P. præcedenti similis, sed nitidior (sæpius læte nitida), elytrorum tuberculis obsoletis (versus apicem necnon in spatio laterali solum observandis, et etiam ibidem minutissimis, granuliformibus) necnon costis antice subevanescentibus et etiam postice paulo minus elevatis, antennis pedibusque lætius rufo-piceis.

Variat elytris leviter transversim malleatis.—Long. corp. lin. 7–10.

Pimelia levigata, *Brullé, in Webb et Berth.* (*Col.*) 67 (1838).

Habitat Teneriffam et Palmam; in illâ mihi haud obvia, sed in hac vulgaris.

I have not myself observed this *Pimelia* except in Palma—where I captured it abundantly, during May and June of 1858, in the Barranco above S^ta^ Cruz; nevertheless, as Messrs. Webb and Berthelot's examples are labelled as coming from Teneriffe, and since I have others before me, both from M. Hartung and Dr. Crotch, which were professedly taken in that island, I can scarcely disallow it, in my Topographical Catalogue, as a Teneriffan insect likewise. It is a well-defined species, and one which may easily be recognized by its *shining* and comparatively unsculptured surface and by the more rufescent hue of its limbs. Its elytral tubercles are quite obsolete, except towards the apex and along the lateral interval—where they are *excessively* minute, distant, and granuliform; and its costæ, although considerably raised behind, are indistinct (or subevanescent) anteriorly.

719. Pimelia serrimargo.

P. nitida vel subnitida; capite parcissime (apice distincte, postice minutissime) punctato; prothorace apice sæpius subsinuato, utrinque tuberculis magnis remotis obsito necnon minoribus etiam antice et postice (vix in disco ipso) irrorato; elytris ovalibus, in limbo valde et acute serratis, singulis costis tribus (præter lateralem) plus minus distinctis (sed sæpius sublaterali acute serratâ, discali multo minus elevatâ postice parce serratâ, et subsuturali simplici, vel omnino vel antice solum obsoletâ) instructis, interstitiis valde remote subseriatim tuberculatis, tuberculis in spatio laterali parvis, sed versus suturam gradatim majoribus (nunc maximis verruciformibus, nunc obsoletis); tibiis in facie superiore haud concavis.—Long. corp. lin. $4\frac{1}{2}$–8.

Pimelia verrucosa, *Br.* [nec *Fisch. de Waldh.*, 1821], *in Webb et Berth.* (*Col.*) 67 (1838).

Habitat Canariam Grandem, late diffusa: species in staturâ, necnon in elytrorum tuberculis, valde instabilis.

So excessively variable is this *Pimelia*, both in stature and in the greater or less development of its elytral tubercles, that, were only a few examples of it present, representing the extremes, they might well be regarded as specifically distinct; nevertheless, after a most careful inspection of a large series, collected in the different districts of Grand Canary (to which island it seems to be peculiar), I am quite satisfied that they merge gradually into each other, and must all of them be referred to a single species. Apart, however, from this instability of the elytral tubercles, which are either immensely developed, and wart-like, or else obsolete (but which, when present, are always exceedingly *few in number*, somewhat longitudinally disposed between the costæ, and in every instance minute on the *lateral* interval), the insect may be known by its usually rather shining surface; by the tubercles of its prothorax being large and comparatively remote at the sides, and with a *tendency* to spread themselves over the rest of the surface (except the actual disc), where, however, they are smaller; and by its elytra being most roughly and sharply serrated along their margin, or *lateral* ridge, and with the sublateral one also similarly (though less coarsely) constructed, whilst the discal one is sparingly serrated behind but simple and indistinct in front, and the sutural one is simple, and more or less obsolete, throughout. The *P. serrimargo* is, *on the average*, a smaller species than any of the others here enumerated, descending to a comparatively diminutive size *for a Pimelia*; and the upper face of its tibiæ is less concave.

M. Brullé's name of *verrucosa* cannot be retained for the species, it having been preoccupied for a *Pimelia* by Fischer de Waldheim in 1821.

§ II. *Scutellum brevissimum, pronoto tectum* (nec pone basin elytrorum ipsissimam extendens), *ergo superne vix observandum.* [Subg. *Aphanaspis*, Woll.]

720. **Pimelia granulicollis**, n. sp.

P. subopaca; capite parcissime et leviter punctato; prothorace angustulo, minus convexo, basi in medio obsoletissime (vix perspicue) angulatim subproducto, dense et minute granulato et granulis majoribus versus latera (præsertim postice) parce adsperso; elytris rotundato-ovalibus, dense, sed minute et leviter, malleato-rugulosis, versus latera parcissime et leviter tuberculatis (tuberculis postice in granula mergentibus), in limbo leviter serratis, singulis costis tribus (sublaterali parum distinctâ, tuberculato-serratâ, sed discali et subsuturali minus elevatis, antice simplicibus) instructis; tibiis in facie superiore breviter cinereo-pubescentibus. —Long. corp. lin. 9–12.

Habitat Canariam Grandem, in arenosis submaritimis juxta Las Palmas capta.

The present species and the following one may at once be known from the others here enumerated by the somewhat anomalous fact (*for the Pimeliadæ*) of their scutellum being so completely covered by the pronotum as to be perfectly invisible from above, except when the prothorax is unnaturally bent downwards so as to leave the mesonotum exposed. It is consequently so extremely short that it does not extend in the slightest degree beyond the basal line of the elytra. I cannot, however, detect any other structural peculiarities to warrant their generic separation from the remainder.

The *P. granulicollis* is remarkable for its subopake surface, and rather narrow, and densely and minutely granulated, prothorax. Its elytra are roundish in outline (being a good deal subtruncated posteriorly), closely and minutely, but *lightly*, uneven (or malleated), and have the *lateral* of their three costæ pretty distinct, and made up (particularly behind) of closely-set tubercles which form a serrated line, whilst the two inner ones (though well defined) are but faintly raised—the subsutural one being quite simple anteriorly, and the discal one nearly so. As in the following species and the *P. lutaria*, the upper, or concavé, face of its tibiæ is densely clothed with a minute decumbent cinereous pubescence. It appears to be exceedingly rare, the only specimens which I have séen (six in number) having been captured by myself in Grand Canary—on the sand-hills between Las Palmas and the Isleta—during March 1858.

721. **Pimelia auriculata.**

P. oblongior quam præcedens, ac multo nitidior; prothorace paulo latiore convexiore, basi sensim rectius truncato, esculpturato (tuberculis lateralibus exceptis); elytris minus ruguloso-inæqualibus, sed juxta suturam grosse sed levissime transversim malleatis, granulis perpaucis minutis (versus suturam minutissimis) parcissime asperatis, singulis costâ sublaterali tubercula majora ac multo pauciora efficiente, discali vel indistinctâ (sensim serratâ) vel obsoletâ, et subsuturali obsoletâ; spatio parvo ante oculos (mox intra genas auriculatas) tibiisque in facie superiore breviter cinereo-pubescentibus.—Long. corp. lin. 8–12.

Pimelia bajula, *Br.* [nec *Klug*, 1830], *in Webb et Berth.* (*Col.*) 57 (1838).

Habitat Canariam Grandem, hinc inde vulgaris.

That this is the *Pimelia* referred by M. Brullé to the Egyptian *P. bajula* I can state for certain, having examined his specimens carefully, whilst in Paris. I have not been able to procure an example

of the *bajula* for inspection; nevertheless I am informed by Schaum, who compared accurately the Canarian insect with Klug's type in the Royal Museum at Berlin, that it is certainly distinct from the latter*. Whether the same peculiarity of the scutellum exists in its Egyptian ally I cannot say, as I omitted to draw the attention of Schaum to that particular feature.

The *P. auriculata* is more oblong and shining than the *granulicollis*, its surface being *comparatively* unsculptured; its prothorax is a little wider and more convex, and, although with tubercles on either side, perfectly free from the minute granules which so densely crowd the pronotum of that insect; and its elytra are less malleated (or minutely roughened), though there are indications of a few large, but *faint*, transverse impressions towards the suture, most sparingly studded with a few very diminutive asperated granules (which become rather coarser towards the sides), and have their sublateral costa well developed, and composed of large but usually very remote tubercles, whilst the discal one is either very indistinct and subserrated, or else, *like the subsutural one*, obsolete. It appears, like the *P. granulicollis*, to be peculiar to Grand Canary, though very much more common and widely distributed over the island. Indeed it would seem to be nearly universal, since I have taken it around Las Palmas (in the extreme north), in the central district of Tarajana, and near Maspalomas (in the south). It varies a little, according to the region in which it is found.

Fam. 67. CONIONTIDÆ.

Genus 268. CRYPTICUS.

Latreille, *Règn. An.* (édit. i.) iii. 298 (1817).

722. **Crypticus punctatissimus**, n. sp.

C. obovato-ellipticus, subnitidus, densissime et distincte punctulatus, minute fulvo-pubescens; prothorace subconvexo, postice utrinque necnon intra angulos posticos obsolete impresso, angulis posticis acutiusculis, productis; elytris postice acutiusculis, parum distincte striato-punctatis; antennis, palpis pedibusque rufo-ferrugineis.—Long. corp. lin. 3–3⅔.

Habitat Palmam, in lauretis parum elevatis sub foliis prolapsis degens.

This large *Crypticus* I have observed hitherto only in Palma, where

* "Your *Pimelia*," says Schaum, "is quite distinct from (though allied to) the *bajula*, Oliv., Klug. The external part of the elytra is much more scabrous in the true *bajula*, though without that conspicuous row of tubercles so remarkable in your insect."

it seems to be universal in the laurel-districts of intermediate and lofty elevations. In such situations I have taken it, from beneath stones and fallen leaves, on the ascent to the Cumbre above Buenavista, as well as high up in the Barrancos of Agua and Galga; and it was also met with in Palma by Dr. Crotch. Two specimens have indeed been communicated by Prof. Heer as coming from Teneriffe; but as M. Hartung, who obtained them, visited Palma, and since I have already had occasion to notice the excessive inaccuracy of many of his *habitats*, I have no doubt whatsoever that these examples are in reality Palman ones. The *C. punctatissimus* may be known by its large size and distinctly punctulated surface, and by its elytra being very evidently striate-punctate. Like the following species, it is minutely pubescent and navicular in outline; nevertheless it is, relatively, not *quite* so much widened at the junction of its prothorax and elytra as that insect.

723. Crypticus navicularis.

C. ellipticus (antice et postice magis æqualiter acutus), subopacus, densissime sed minus distincte punctulatus, minute fulvo-pubescens; prothorace postice utrinque necnon intra angulos posticos obsolete impresso, angulis posticis acutis, productis; elytris postice acutis, obsolete substriato-subpunctatis; antennis, palpis pedibusque rufo-ferrugineis.—Long. corp. lin. $3\frac{1}{2}$.

Crypticus? navicularis, *Brullé, in Webb et Berth.* (*Col.*) 69 (1838).

Habitat Teneriffam, in locis similibus ac præcedens, supra Taganamam captus.

This *Crypticus* is closely allied to the preceding one, of which it may be regarded as the Teneriffan representative. It differs from it in being a little more *regularly* elliptic (or a trifle more *equally* attenuated before and behind); in its surface being rather more opake, and its punctation finer; in its prothorax (which is less convex) having the basal angles (although as much produced) perceptibly acuter, or at all events more *sharply defined*; and in its elytral striæ being both fainter and less decidedly punctured. Its posterior tibiæ are perhaps, if anything, somewhat more inwardly-curved. It inhabits precisely similar districts as the last species, only in Teneriffe instead of Palma. It would appear, however, to be scarce, the only specimens which I have captured being from the laurel-woods above Taganana. I compared them accurately, when in Paris, with M. Brullé's types, with which they seemed to agree entirely.

724. Crypticus canariensis, n. sp.

C. præcedenti similis, sed minor, oblongior (i. e. sensim angustior ac

minus navicularis), multo minus pubescens (sc. fere calvus), vix magis depressus et punctura sensim fortiore; prothorace minus conico, angulis posticis minus productis; elytris distinctius substriato-punctatis; tarsis minus elongatis.

Variat, in locis Teneriffæ valde elevatis, subangustior et opacior, punctura elytrorumque striis vix levioribus.—Long. corp. lin. $2\frac{2}{3}$–$3\frac{1}{3}$.

Crypticus glaber, *Br.* [nec *Fab.*], *in Webb et Berth.* (*Col.*) 69 (1838).

Habitat in Teneriffa et Hierro, sub lapidibus foliisque dejectis degens; per regiones sylvaticas usque ad 9000′ vel etiam 10,000′ s. m. ascendit.

This is the common *Crypticus* of the intermediate and lofty elevations of Teneriffe, occurring beneath stones and fallen leaves. It is found likewise in Hierro; though the only example which I met with in that island (namely, in the forest-district of El Golfo) is a trifle more shining, and has its punctation just perceptibly stronger. In Teneriffe it is tolerably abundant at Las Mercedes, and more so at the Agua Garcia, the Agua Mansa, above Ycod el Alto, on the lofty Cumbre adjoining the Cañadas (where it ascends to about 9000 or perhaps even 10,000 feet above the sea), and on the opposite Cumbre, above the Agua Mansa. The specimens from these very elevated regions are, on the average, a trifle narrower and more opake, and have their sculpture just perceptibly finer; but they shade off gradually into the others, and I have searched in vain for anything approaching to a *constant* difference which might serve to separate them. The species has also been communicated by the Barão do Castello de Paiva.

The *C. canariensis* is smaller and more oblong than the *navicularis*, being narrower (or less widened at the junction of its prothorax and elytra); it is a trifle less convex, and *much* less pubescent (being *usually* almost bald, except when viewed beneath a high magnifying power); its punctation and elytral striæ are a little coarser; its prothorax is less conical, and with the hinder angles less produced; and its feet are less elongated. An examination of M. Brullé's type has convinced me that it is the species which he referred (in doubt) to the European *C. glaber*. It has, however, in reality, nothing whatever in common with that insect—scarcely even its *generic* characters.

725. **Crypticus oblongus**, n. sp.

C. minor quam *C. canariensis* et sensim angustior, oblongior (i. e. minus ellipticus), fere omnino calvus (vix, oculo fortissime armato, etiam minute pubescens), punctura subtiliore necnon præsertim in elytris parciore; prothorace ad latera magis rotundato, angulis

posticis subrotundatis, obtusis (nullo modo productis), et intra angulos subintegro (rarius impresso); elytris paulo argutius striato-punctatis; pedibus sensim brevioribus, tibiis anticis vix robustioribus ac magis curvatis.

Var. β. Elytris levius striato-punctatis. [*Ins.* Hierro.]—Long. corp. lin. $2\frac{1}{4}$–$2\frac{1}{2}$.

Habitat in Teneriffa et Hierro, in locis similibus ac præcedens.

This species has much the same range as the *C. canariensis*—occurring, like it, in the intermediate and lofty altitudes of Teneriffe and Hierro. In the former (where it was found also by M. Hartung, and whence it has been communicated by the Barão do Castello de Paiva) I have taken it abundantly at the Agua Mansa and above Ycod el Alto, and more sparingly on the elevated Cumbre overlooking the Cañadas; whilst in the latter it was captured by Mr. Gray and myself near Valverde, and by myself on the grassy summit of the island above the sylvan region of El Golfo. It may at once be known from the *C. canariensis* by its smaller size and strictly *oblong* outline; by its surface being nearly free from any traces of pubescence, even when viewed under the highest magnifying power; by its punctation being finer, and (especially on the elytra) more remote; by its prothorax (which is *usually* unimpressed within the basal angles) being rounder at the sides, with the hinder angles more obtuse and *totally* unproduced; by its elytra being rather more sharply striate-punctate; and by its legs being a little shorter, with their anterior tibiæ just perceptibly robuster and more curved. The examples from Hierro differ from the Teneriffan ones, merely, in having their elytra less coarsely striate-punctate.

726. **Crypticus minutus.**

C. affinis *C. oblongo*, sed minor, angustior, sensim (præsertim in prothorace) nitidior; prothorace convexiore, ad latera magis rotundato, angulis posticis rotundatioribus, profundius densiusque punctato (punctis versus latera plus minus longitudinaliter subconfluentibus); elytris vix densius distinctiusque punctulatis, sed multo levius (sc. obsolete) subpunctato-striatis; pedibus vix brevioribus et subgracilioribus.—Long. corp. lin. $1\frac{3}{4}$.

Crypticus minutus, *Brullé, in Webb et Berth.* (*Col.*) 69 (1838).

Habitat in intermediis et elevatis Canariæ Grandis, rarissimus.

Two specimens only of this minute *Crypticus* (with the exception of M. Brullé's type, which I examined when in Paris) have as yet come beneath my notice. They were captured by myself, during the spring of 1858, in Grand Canary—one of them in the district of El Monte; and the other, at a high elevation on the mountains, about a mile to

the south of the Roca del Soucilho. Apart from its small bulk, the species may be recognized by its prothorax being convex, comparatively rounded both laterally and at the basal angles, and very closely punctured (the punctures being somewhat coarse *towards either side*, and with a *tendency* there to become longitudinally subconfluent—as in the *Gnophotæ*); by its elytral striæ being very faint, or nearly obsolete; and by its legs being rather short and slender. It is also a little more shining than the *C. oblongus*, especially the prothorax.

Fam. 68. PEDINIDÆ.

Genus 269. **MELASMA** (nov. gen.).

Genus *Heliopathes* affinitate proximum, sed structurâ pedum characteribusque sexualibus certe distinctum. *Corpus* et *instrumenta cibaria* fere ut in illo, sed *prothorace* ad apicem vix emarginato, ad basin rècte truncato, angulis posticis obtusiusculis (nullo modo productis); elytris ad humeros rotundatis, deficientibus, plicâ humerali tenui, superne vix observandâ: *pedibus* gracilioribus, *calcaribus tibialibus* multo minoribus; *tibiis anticis* haud dilatatis, *omnibus* (in utroque sexu) intus fere calvis. In maribus, *tibiis* intus (oculo fortissime armato) minutissime serratis, *anticis* ante medium spinulâ minutissimâ (ægerrime observandâ) subtus armatis, *tarsis anticis* late dilatatis, supra pilosis, subtus densissime spongiosis.

A μέλασμα, color niger.

Apart from other features, the greatly dilated fore feet of its males will at once assign this genus to the *Pedinidæ*; whilst its completely divided eyes, together with the fact of its mentum not being trilobed in front, and the hinder angles of its prothorax not being applied against the base of the elytra (within either shoulder), would all tend to identify it with *Heliopathes*. The construction, however, of its legs, in both sexes (though particularly in the males), removes it entirely from that group; and even the external configuration of its prothorax and elytra—of primary importance in the *Pedinidæ*—gives it a character essentially its own. The former of these is transverse-quadrate, being almost straightly truncated both before and behind—the posterior angles being rather obtuse and without even a *tendency* to be produced, so as to rest against the base of the elytra; whilst the latter are completely rounded-off at the shoulders, with their humeral plait thin and not at all prominent. It is, however, in the legs that its main peculiarity resides, which are much slenderer than in *Heliopathes*, and with their fore tibiæ *not at all dilated*: the tibial spurs, also, are comparatively minute. This applies equally to

both sexes; but the *males* are further remarkable for having the inner edge of their tibiæ most delicately serrated, the anterior pair being additionally armed (at a considerable distance behind the apex) with an infinitesimal spinule (both it and the serrations being so small as to be barely traceable except beneath a high magnifying power). The anterior male feet are broadly dilated, sparingly pilose above, and most densely spongiose below.

727. **Melasma lineatum.**

M. piceo-nigrum, subnitidum, ubique densissime punctatum, punctis in capite prothoraceque majoribus et ibidem plus minus longitudinaliter subconfluentibus; prothorace transverso-quadrato, tenuissime marginato, angulis posticis obtusiusculis (nullo modo productis) sed argute determinatis, ad latera æqualiter subrotundato; elytris oblongo-ovalibus (antice et postice subæqualiter angustioribus), leviter costatis; antennis pedibusque piceis.—Long. corp. lin. $2\frac{1}{2}$–$2\frac{3}{4}$.

Phylax ? lineatus, *Brullé, in Webb et Berth.* (*Col.*) 69 (1838).
—— ——, *Hartung, Geolog. Verhältn. Lanz. und Fuert.* 140.

Habitat Lanzarotam et Fuerteventuram, necnon etiam in insulâ parvâ adjacente Graciosa, sub lapidibus vulgaris.

A common insect throughout Lanzarote and Fuerteventura—occurring beneath stones at most elevations, though particularly at intermediate ones; and I have taken it also in the little island of Graciosa, off the extreme north of the former. In Lanzarote it was captured likewise by Mr. Gray and M. Hartung; and from Fuerteventura it has been communicated by the Barão do Castello de Paiva.

Fam. 69. OPATRIDÆ.

Genus 270. **CNEMEPLATIA.**

Costa, *Ann. Aspir. Nat. Nap.* (ser. 2) i. 146 (1847).

728. **Cnemeplatia laticeps.**

Autocera laticeps, *Woll., Cat. Mad. Col.* 155. fig. 2 (1857).

Habitat Teneriffam, a cl. W. D. Crotch semel tantum lecta.

A single example of this curious and minute insect was found by Dr. Crotch in Teneriffe, during the spring of 1862, and it is the only one which I have as yet seen from these islands. It occurs sparingly in Madeira, and was described by myself from a specimen which I captured, in June of 1855, on the ascent from S^{ta} Cruz to S. Antonio da Serra (in the *latter* of which localities it has subsequently been rediscovered by Mr. Bewicke). It is very closely allied to the Italian

C. Atropos, but differs from it in its head and prothorax being perceptibly wider—the former having the eyes more prominent and *conical*; whilst the latter is altogether a little larger, or more developed, considerably less attenuated behind, where it is of precisely the same breadth as (instead of conspicuously narrower than) the base of the elytra, merely rounded, instead of bisinuated, along the posterior edge (and therefore less *lobed* in the centre, in front of the scutellum), with the *extreme* hinder angles much less prominent, and with the two discal impressions transverse (instead of being rounded)*.

Genus 271. SCLERUM.

(Dej.) Hope, *Col. Man.* iii. 111 [script. *Scleron*] (1840).

729. Sclerum asperulum, n. sp.

S. parallelo-oblongum, squamis pallido-fuscis lutosis densissime tectum; prothorace antice lato rotundato, per basin profunde bisinuato, grosse asperato-granulato, postice utrinque longitudinaliter impresso; elytris parallelis, striato-punctatis (punctis magnis sed haud profundis), interstitiis alternis valde costato-elevatis (costis minute crenulatis); antennis pedibusque brevibus, piceis, tibiis anticis extus in medio valde angulatim dilatatis.—Long. corp. lin. 2–vix 3.

Habitat Canariam Grandem australem, prope Maspalomas repertum.

The mere *generic* characters of this insect, such as the greatly dilated fore tibiæ and the costate alternate interstices of its elytra, added to its asperated, anteriorly-widened prothorax and densely squamose surface (the scales of which are of pale muddy-brown), will prevent its being confounded with any of the *Opatridæ* enumerated below. It appears to be both rare and extremely local—the only spot in which I have hitherto observed it being at the edges of a small water-course close to Maspalomas, in the south of Grand Canary, where, during the spring of 1858, I captured it, not uncommonly, from beneath stones.

Genus 272. OPATRUM.

Fabricius, *Syst. Ent.* 76 (1775).

§ I. *Alis magnis.*

730. Opatrum lutosum, n. sp.

O. parallelo-oblongum, dense fusco-pubescens et -squamosum; genis ante oculos valde exstantibus, angulatis; prothorace granulato,

* Although these distinctions are small, and necessarily, therefore, somewhat difficult of observation, they are not the less *real*—being very distinct when the two species are viewed, side by side, under the microscope.

utrinque explanato, ad latera rotundato sed antice sæpius paulo latiore, angulis anticis obtusiusculis; elytris punctato-striatis; antennis tarsisque breviusculis.—Long. corp. lin. $3\frac{1}{4}$–$4\frac{1}{4}$.

Habitat Lanzarotam et Fuerteventuram, sub lapidibus in aridis degens.

This is the common *Opatrum* of Lanzarote and Fuerteventura, where it occurs beneath stones in arid spots at low and intermediate elevations; but I have not observed it in any of the other islands of the Group. It is closely allied to the *O. fuscum*, but is on the average a trifle larger and more obtuse anteriorly, and usually more densely covered with reddish-brown mud-like scales. Its prothorax is just perceptibly wider in front, with the anterior angles less acute, and more broadly flattened at the sides; and its antennæ and tarsi are, if anything, a little shorter. Its main difference, however, consists in the development of its *genæ*, which are both more prominent and more anguliform, in front of either eye. This character is not only a constant one but likewise conspicuous, the distance from the eye to the *apex* of the gena being appreciably greater than it is in the *O. fuscum*.

731. **Opatrum fuscum.**

O. subparallelo-oblongum, griseo-pubescens et -squamosum; genis ante oculos minus exstantibus, rotundato-angulatis; prothorace granulato et subtilissime ruguloso, utrinque minus explanato, ad latera æqualiter rotundato, angulis anticis acutiusculis; elytris punctato-striatis; antennis tarsisque sensim longioribus.—Long. corp. lin. 3–4.

Opatrum fuscum, *Hbst, Käf.* v. 225. tab. 52. f. 1 (1793).
—— fuscum, *Brullé, in Webb et Berth.* (*Col.*) 68 (1838).
—— rusticum, *Muls., Col. de France* (*Latig.*) 171 (1854).
—— errans, *Woll., Ins. Mad.* 501. tab. xi. f. 3 (1854).
—— ——, *Id., Cat. Mad. Col.* 156 (1857).
—— fuscum, *Hartung, Geolog. Verhältn. Lanz. und Fuert.* 140.

Habitat in Lanzarota, Fuerteventura, Canaria et Teneriffa, præsertim in aridis sed longe lateque diffusum.

The *O. fuscum* of Mediterranean latitudes is widely spread at the Canaries, where in all probability it is universal—though hitherto it has been observed only in Lanzarote, Fuerteventura, Grand Canary, and Teneriffe. It is, *on the average*, a trifle smaller than the last species, and has its antennæ and feet just perceptibly longer; and it is also, for the most part, less densely clothed with mud-like scales. Its *genæ* (or lateral edges of the clypeus) are neither so prominent nor so angular—the distance being perceptibly less from either eye to their tip (which is itself a little more obtuse); and its prothorax

is, if anything, shorter, and more *equally* rounded at the sides (where it is somewhat less broadly flattened), and has the anterior angles acuter. It appears to be rather scarce in Lanzarote and Fuerteventura (in the former of which it was found likewise by Mr. Gray and M. Hartung), but more abundant in Grand Canary (particularly in the sandy districts near Las Palmas and Maspalomas—in the north and south, respectively), and *locally* common in Teneriffe (whence it has also been communicated by the Barão do Castello de Paiva and Dr. Crotch). It is found in the Madeiran Group,—a recent, and more accurate, comparison of my *O. errans* with types of the *fuscum* having convinced me that the two are conspecific*.

732. Opatrum hispidum.

O. elongato-oblongum, dense et grosse griseo- vel fulvescenti-pubescens (sed haud squamosum); genis ante oculos (magnos) rotundatis, multo minus exstantibus; prothorace brevi, transverso, profunde punctato, ad latera æqualiter vix rotundato, angulis omnibus acutis; elytris punctato-striatis.

Mas paulo minus, tarsis intermediis articulo basilari subtus retrorsum pectinato-setoso.—Long. corp. lin. $2\frac{1}{2}$–3.

Opatrum tomentosum, *Dej., Cat.* (edit. 3) 214 (1837).
—— hispidum, *Brullé, in Webb et Berth. (Col.)* 68 (1838).
—— prolixum, *Erich., in Wiegm. Archiv*, 248 (1843).
—— fuscum, *Woll.* [nec *Hbst*], *Ins. Mad.* 500. tab. xi. f. 1 (1854).
—— ——, *Id., Cat. Mad. Col.* 156 (1857).
—— septentrionale, *Falderm., ined.*

Habitat insulas omnes Canarienses, sub lapidibus, passim.

I have already stated that I erroneously regarded this *Opatrum*, in my 'Ins. Mad.,' as the *fuscum* (or *rusticum*) of southern Europe; which led me into the additional mistake of describing the latter as a new species (under the name of *errans*). It is, really, the *hispidum* of Brullé, and (according to M. Deyrolle) may *perhaps* be identical with the *affine* of Billberg; in which case the latter title would have the priority. That it is Erichson's *prolixum* (cited as *Angolan*, but in reality from the Cape de Verdes †) I can state for certain, having received two original types (a ♂ and ♀) of that species from Schaum. It is a common insect throughout the whole of these Atlantic Groups, abounding at the Madeiras and the Cape de Verdes. At the Canaries it is universal, I having myself captured it in the *whole seven* islands, more or less profusely. In Gomera it was found also by Mr. Gray

* In my 'Ins. Mad.' I applied the name of *fuscum* to the wrong insect—namely, to the *hispidum*, Brullé; and so fell into the error of regarding the *true fuscum* as a new species.

† *Vide supra* (p. 465, *note*).

and Dr. Crotch, in Palma by Mr. Gray, and in Teneriffe by Dr. Crotch and the Barão do Castello de Paiva. It occurs principally in hot and dry spots of a rather low elevation.

Its somewhat less parallel outline and short, deeply *punctured*, anteriorly narrower prothorax, in conjunction with its larger eyes, rounder and less prominent genæ, and more pubescent (though *un*-scaly) surface, will, apart from the curious, backwardly-directed bristles with which the underside of the basal joint of its intermediate male feet are pectinated (a structure which I have not seen noticed, except in my 'Ins. Mad.'), at once separate the *O. hispidum* from the other *Opatra* here enumerated.

§ II. *Alis parvis, fere obsoletis.*

733. **Opatrum oblitum**, n. sp.

O. oblongum, subcalvum (subtilissime, brevissime et parcissime pubescens), sed plus minus lutoso-squamosum; genis ante oculos valde exstantibus, rotundato-angulatis; prothorace parce et minute granulato (vix punctato) et subtilissime ruguloso, ante medium lato, ad latera valde rotundato, angulis anticis acutis, posticis acute subrecurvo-prominulis; elytris punctato-striatis, subtilissime rugulosis; antennis pedibusque clare rufo-ferrugineis.—Long. corp. lin. $2\frac{1}{4}$–$2\frac{1}{2}$.

Habitat Lanzarotam et Fuerteventuram, in aridis arenosis et calcariis, præsertim submaritimis, degens; necnon in insulâ parvâ Graciosa observavi.

This *Opatrum*, which has been observed hitherto only in Lanzarote and Fuerteventura, is smaller than any of the preceding ones, and *much* less pubescent—being merely besprinkled *sparingly* with excessively diminutive decumbent setæ, though often densely covered with mud-like scales; its prothorax is of a totally different shape—being wide in front, greatly rounded at the sides, and with the *extreme* hinder angles acutely prominent; its genæ project considerably, in front of either eye; and its legs are of a more or less clear rufo-ferruginous hue. It closely resembles a species which I have received, from Nice, as the "*O. pygmæum*, Dejean": but its genæ are a little less obtuse at the apex; its prothorax has the anterior angles somewhat more porrect and acute, and the posterior ones conspicuously less prominent; its elytra are more coarsely punctate-striated, with their humeral angles much rounder (or less of *right* angles); and its wings, instead of being powerfully developed, are very small and rudimentary. I have taken it in dry, calcareous, and sandy spots, of a low elevation, in Lanzarote and Fuerteventura, particularly at a

short distance behind the sea-beach. In such situations it is not uncommon to the south of Arrecife in the former, and of Puerto de Cabras in the latter (where it was likewise found by Mr. Gray); and I also met with it on the little island of Graciosa, off the extreme north of Lanzarote.

Genus 273. HALONOMUS.

Wollaston, *Ann. Nat. Hist.* vii. 201 (1861).

734. Halonomus salinicola.

H. fusco-piceus (fere niger), subopacus, setulis brevibus demissis cinereis irroratus; capite prothoraceque in limbo, antennis pedibusque rufescentioribus; genis ante oculos rotundatis, vix exstantibus; prothorace punctato, ad latera explanato et parum rotundato; elytris profunde et argute crenato-striatis, interstitiis minutissime et parce punctulatis.

Var. β. Subopacior, prothorace vix angustiore et vix densius punctato. [*Ins.* Canaria Grandis.]—Long. corp. lin. 2½–vix 3.

Halonomus salinicola, *Woll., loc. cit.* 203 (1861).

Habitat sub lapidibus in salinis Lanzarotæ et Canariæ (præsertim illius), valde gregarius. Species *H. ovato* (Dej.), Erich., nimis affinis et forsan ejus varietas geographica; sed genis mox ante oculos paulo minus exstantibus et minus subrecurvis necnon per marginem lateralem obliquum rectioribus (sensim minus sinuatis), prothorace ad latera vix magis rotundato, elytris sensim minus rugulosis ac multo profundius argutiusque crenato-striatis.

This insect is *very* closely allied to the *Heterophaga ovata* * of Dejean's Catalogue (=*Opatrum ovatum*, Erich., and *Halonomus Grayii*, Woll.), of which perhaps it may be only a geographical state. It appears to differ merely in having its genæ a *little* less prominent (or more obtuse), and also a little less recurved, in front of either eye, as well as a trifle *straighter* (or less sinuated) along their oblique lateral edge; in its prothorax being, perhaps, just perceptibly more rounded at the sides; and in its elytra being less evidently rugulose, and much more deeply, and sharply, crenate-striated. It was taken abundantly by Mr. Gray and myself, during January 1858, from beneath stones at the edges of the Salinas, and around the salt-works,

* This insect, which is recorded by Dejean from Senegal, occurs also in the south of Europe—a Sicilian example having been communicated to me by M. Deyrolle. It is found likewise at the Cape de Verdes, and was first *described* by Erichson, evidently from examples obtained from those islands [*vide supra*, p. 465, *note*], in his paper on (supposed) "Angolan" Coleoptera. I was unaware of this circumstance, in my enumeration of the Coleoptera of St. Vincent (in the 'Ann. of Nat. Hist.' in 1861), and so re-enunciated the species under the trivial name of *Grayii*.

in the north of Lanzarote—a locality in which I again met with it in March of the following year; and I also captured a single specimen at Maspalomas, the extreme southern point of Grand Canary.

Genus 274. **MELANSIS** (nov. gen.).

Genus *Phylaci* proximum, sed *tibiis omnibus masculis* (præsertim posterioribus) per marginem internum versus apicem minutissime sed argute serratis, *tibiis anticis* in utroque sexu angustioribus (nec dilatatis) et subflexuosis, *posterioribus* in maribus subflexuosis sed in fœminis rectis; *sculpturâ* omnino fortiore, rugosiore; *elytris* alte et argute costatis, nullo modo (nec longitudinaliter nec etiam in interstitiis) punctatis.

A *μέλανσις* (*μελαίνω*, denigro).

In their general *primâ facie* aspect and structure the two insects described below might be referred to *Phylax*; nevertheless the curious formation of their male tibiæ, which are minutely serrated along the apical half of their inner edge (as in *Xenoscelis*, of the *Cucujidæ*), combined with other features of secondary importance—such as the narrower (or undilated) front tibiæ of both sexes, their more roughly and coarsely sculptured surface, and their longitudinally *costate* elytra (which are totally free from any appearance of *punctation*)—give them a character essentially their own. But in the shape of their prothorax, and the dentiform humeral angles of their elytra, they agree with *Phylax*.

§ I. *Antennæ longiores, artº 3tio valde elongato.*

735. **Melansis costata.**

M. oblonga, atra, opaca; capite prothoraceque densissime et profunde rugoso-punctatis (punctis subconfluentibus), hôc transverso, ad latera explanato rotundato, angulis anticis acutiusculis porrectis, posticis minute subprominulis; elytris subparallelis, angulis humeralibus minute exstantibus, singulis costis 7 valde elevatis argute instructis, interstitiis subtilissime densissimeque granulatis et granulis paulo majoribus obscuris obsolete et parce irroratis; antennis pedibusque picescentioribus.—Long. corp. lin. $2\frac{1}{2}$–$3\frac{1}{2}$.

Phylax costatus, *Brullé, in Webb et Berth.* (*Col.*) 69 (1838).

Habitat in montibus Canariæ Grandis, in regione "Tarajana" capta.

The parallel, oblong outline, deep-black hue, and opake surface of this insect, combined with its coarsely and densely sculptured head and prothorax, and the seven sharp and greatly raised costæ with which each of its elytra is furnished (the interstices being most closely and minutely granulated), will sufficiently distinguish it. It appears to be extremely local, and confined (so far as I have observed hitherto)

to the mountains of Grand Canary, where it occurs, beneath stones and under refuse, at a rather high elevation. In such spots I took it, not uncommonly, during April 1858, on the ascent to the Pinal above San Bartolomé, in the central region of Tarajana. I compared it carefully, when in Paris, with M. Brullé's *Phylax costatus*, with which it agreed precisely.

§ II. *Antennæ paulo breviores, art° 3^tio longiusculo.*

736. **Melansis angulata**, n. sp.

M. præcedenti similis, sed minor, angustior, subovatior, colore plus minus evidenter picescentiore; capite prothoraceque paulo minus opacis et vix minus dense rugoseque sculpturatis, hôc sensim longiore, angulis anticis acutioribus, ad latera minus explanato necnon ante angulos posticos (sensim exstantioribus) magis excavato; elytris vix convexioribus; tarsis brevioribus.—Long. corp. lin. $2\frac{1}{4}$–$2\frac{1}{2}$.

Habitat Palmam, sub lapidibus in intermediis, rarissima.

Distinguished from the preceding species by, *inter alia*, its smaller size, narrower and rather less parallel outline, and less intensely black hue (the limbs being *considerably* more rufescent); by its head and prothorax being less opake, and *rather* less densely and coarsely sculptured; by the latter being relatively longer (or less transverse), less flattened-out at the sides, with the anterior angles more porrect and acute, and the posterior ones more prominent (occasioned by the sides being more *excavated* immediately in front of them); by its elytra being somewhat less depressed; and by its antennæ and feet being a little shorter. It seems to be excessively rare, and confined to Palma —where, during June 1858, I captured about twenty examples of it, from beneath stones, high up in the Barranco above S^ta Cruz.

Fam. 70. TRACHYSCELIDÆ.

Genus 275. **PSEUDANEMIA** (nov. gen.).

Corpus et *instrumenta cibaria* fere ut in *Anemiâ*, sed *illud* minus, in limbo calvum (nec ciliatum); capite minore; prothorace brevissimo, transverso, angulis posticis nullis, omnino rotundatis; *oculorum parte superiore* minore, valde demissâ; *palpis* etiam *labialibus* (ut *maxillaribus*) longissimis; necnon *antennis* certe 10- (nec 11-) articulatis—art° 1^mo parum elongato, ad basin gracili subflexuoso, apicem versus clavato, 2^do breviore sed vix graciliore, 3^tio, 4^to, 5^to et 6^to minutis brevibus subæqualibus, reliquis clavam elongatam abruptam 4-articulatam efficientibus.

A ψεῦδος, mendacium, et *Anemia*.

Until examining recently, with great care, the unique beetle from

which the above structural diagnosis has been compiled, I had regarded it as merely a small and short *Anemia* (*Cheirodes*, Dej.), with which in most respects it is identical. But an accurate inspection of its antennæ shows them to be, without doubt, only *ten*-articulate—the third joint being apparently absent*. The few differential characters, of secondary signification, which accompany this primary feature, consist in the shape of the prothorax, which is much more abbreviated, with the hinder angles obsolete (or almost completely rounded off), in its head being narrower and less developed, with the upper division of the eyes smaller, in its labial palpi being relatively as much elongated as the maxillary pair, and in the fact of the edges of its body being bald (as in *most* of the *Phaleriæ*) instead of ciliated—a character of no slight importance in a sand-burrowing insect. Of the antennal joints, the first one is rather long, slender and subflexuose at the base, and clavated at the apex, the second shorter but scarcely slenderer, the following four are minute and subequal, and the remainder constitute an abrupt, elongated, quadriarticulate club —*more* abrupt at the base than in *Anemia*. Its wings are largely developed; and its legs, as in that genus, are eminently fossorial—its tibiæ, especially the anterior pair, being powerfully bidentate (and crenulated at their base) externally.

737. **Pseudanemia brevicollis**, n. sp.

P. breviter oblonga, rufo-ferruginea, subnitida, supra necnon in limbo fere calva; capite prothoraceque transversim subscabroso-granulatis, hôc brevissimo, tenuiter marginato, ad latera necnon ad angulos posticos rotundato; elytris profunde subasperato-punctatis (punctis versus suturam obsoletissime subseriatim dispositis), paulo transversim rugosis; pedibus robustissimis, fossoriis, tibiis (præsertim anticis) extus fortiter bidentatis.—Long. corp. lin. $1\frac{1}{2}$.

Habitat Lanzarotam; in arenosis maritimis juxta Arrecife, Aprili A.D. 1859, exemplar unicum deprehendi.

A single example of this curious insect was captured by myself in Lanzarote, during April 1859—on the low sand-hills (or, more properly, on a low sandy ridge) immediately behind the sea-beach, about a mile to the south of Arrecife.

Genus 276. **TRACHYSCELIS.**

Latreille, *Gen. Crust. et Ins.* iv. 379 (1809).

* I find that I am corroborated in this statement by a most admirable drawing which has been made for me by Professor Westwood, in which he has exhibited the antenna (with his usual accuracy) as composed of merely ten articulations.

738. **Trachyscelis aphodioides.**

Trachyscelis aphodioides, *Lat., loc. cit.* (1809).
—— ——, *Guérin-Mén., Icon., Ins.* pl. 31. f. 3.

Habitat Lanzarotam, Fuerteventuram et Canariam, sub fucis necnon ad radices plantarum in arenosis maritimis crescentium fodiens.

This little insect of Mediterranean latitudes is locally abundant in the more eastern islands of the archipelago—burrowing beneath marine *rejectamenta* on the sea-beach, as well as at the roots of plants in the loose sand immediately behind it. In such situations I have taken it to the south of Arrecife in Lanzarote, at Corralejo and near Puerto de Cabras (where it was found also by Mr. Gray) in Fuerteventura, and between Las Palmas and the Isleta in Grand Canary.

Fam. 71. PHALERIADÆ.

Genus 277. **PHALERIA.**

Latreille, *Hist. des Crust. et Ins.* iii. 162 (1802).

739. **Phaleria cadaverina.**

P. ovata, subopaca, infuscato-testacea, minute punctulata (punctis in capite fortioribus), in limbo subcalva (nec ciliata); prothorace subconvexo, tenuiter marginato, ad latera subæqualiter leviter rotundato, angulis posticis subrotundato-obtusis, basi utrinque foveolâ brevissimâ punctiformi impresso; elytris convexis, profunde subcrenato-striatis, aut concoloribus aut singulis plagâ discali irregulari obscurâ nigrescente ornatis.—Long. corp. lin. $2\frac{1}{4}$–$2\frac{3}{4}$.

Tenebrio cadaverinus, *Fab., Ent. Syst.* i. 113 (1792).
—— ——, *Sturm, Deutsch. Fna,* ii. 230. pl. 47. f. A (1807).
Phaleria cadaverina, *Steph., Ill. Brit. Ent.* v. 15 (1832).

Habitat Gomeram, juxta oram maritimam ad Sanctum Sebastianum, tempore vernali A.D. 1862, a cl. W. D. Crotch reperta.

Four specimens of the common European *P. cadaverina* were taken by Dr. Crotch, during the spring of 1862, in Gomera, "close to the sea-shore at San Sebastian,"—the only ones which I have as yet seen from these islands.

740. **Phaleria ornata.**

P. præcedenti similis, sed paulo minor, nitidior, subtilius punctulata, sensim minus convexa, in limbo ciliata, clarius testacea, elytris conspicue et lætius nigro-maculatis (maculis plerumque maximis confluentibus, interdum elytra fere tegentibus); prothorace vix minore, ad latera minus æqualiter rotundato (basin versus sensim rectiore), angulis posticis argutius determinatis, paulo angustius marginato; elytrorum striis evidentius crenulatis.

Variat prothorace vel immaculato, vel in disco nigrescente.—Long. corp. lin. 2–2¼.

Phaleria cadaverina, *Brullé* [nec *Fab.*], *in Webb et Berth.* (*Col.*) 70 (1838).
—— picta, *Woll.*, *Ann. Nat. Hist.* vii. 246 (1861).

Habitat in arenosis maritimis Lanzarotæ, Fuerteventuræ et Canariæ, hinc inde vulgaris.

I have found it necessary to alter the trivial name of this *Phaleria*, that of *picta* having been preoccupied by Mannerheim (in 1843) for a species from Sitka. It is common on, and near, the sea-shore in Lanzarote, Fuerteventura, and Grand Canary (in the first of which it was also found by Mr. Gray)—where it burrows in the sand beneath marine, and other, *rejectamenta*. It is abundantly distinct from the *P. cadaverina*—not merely in colouring, but likewise in its brighter and more finely punctulated surface, in the edges of its body being conspicuously ciliated, and in its prothorax and elytra being, both of them, a little less convex—the latter having also their striæ more evidently crenulated, whilst the former is a trifle smaller and more narrowly margined, as well as less *equally* rounded at the sides (which are straighter posteriorly, causing the hinder angles to be somewhat more sharply defined). The black discal patch of each elytron is nearly always so immensely developed that the two are confluent; and in highly coloured examples they cover (when thus united) almost the whole surface except the margins. The *P. ornata* is, on the average, a trifle smaller than the *cadaverina*; its pallid portions are usually of a clearer testaceous-yellow; and its prothoracic disc is frequently much darkened. In M. Brullé's inaccurate Catalogue it is referred (without even a comment) to the *cadaverina*—as I ascertained for certain, when in Paris, by an examination of Messrs. Webb and Berthelot's specimens (which are normal ones of the *ornata*, and were found, according to a label appended to them, in "Grand Canary") *.

Fam. 72. ULOMIDÆ.

Genus 278. GNATHOCERUS.

Thunberg, *Act. Holmiens.* 47 (1814).

* In general colouring the *P. ornata* has a good deal in common with the *P. Clarkii*, from the Cape de Verdes; but that insect is more oblong and much less convex, less shining (or more coarsely alutaceous), and, like the *P. cadaverina*, almost entirely free from any appearance of cilia at its edges: its prothorax is considerably smaller, quite *equally* rounded laterally, and with the basal foveæ deeper and more elongate; its elytra are straighter at the sides, more rectangular at the shoulders, with the dark portions differently shaped, with their striæ *very* much finer, and with their interstices flatter; and its tibiæ and feet are slenderer.

741. Gnathocerus cornutus.

Trogosita cornuta, *Fab., Ent. Syst. Suppl.* 51 (1798).
Uloma cornuta, *Brullé, in Webb et Berth. (Col.)* 70 (1838).
Cerandria cornuta, *Woll., Ins. Mad.* 490 (1854).
—— ——, *Id., Cat. Mad. Col.* 151 (1857).

Habitat in Fuerteventura, Canaria, Teneriffa, Gomera et Hierro, in domibus officinisque pistoriis, ex alienis introductus.

This insect will probably be found to occur pretty generally in granaries and about houses, being (like the *Tribolium ferrugineum*) subject to constant introduction amongst farinaceous substances and other articles of commerce. I have taken it in Fuerteventura, Grand Canary, and Hierro; and it was found in Teneriffe and Gomera by Dr. Crotch. Being (as in Madeira) a mere importation from more northern latitudes, it has but little significance in our present fauna.

Genus 279. TRIBOLIUM.

MacLeay, *Ann. Javan.* 47 (1825).

742. Tribolium ferrugineum.

Tenebrio ferrugineus, *Fab., Spec. Ins.* i. 324 (1781).
Tribolium castaneum, *MacLeay, Ann. Javan.* 47 (1825).
—— ferrugineum, *Woll., Ins. Mad.* 491 (1854),
—— ——, *Id., Cat. Mad. Col.* 151 (1857).

Habitat in Fuerteventura, Teneriffa et Gomera, certe introductum.

Like the *Gnathocerus cornutus*, this insect is almost cosmopolitan, being liable to introduction, in civilized countries, amongst various articles of food and commerce. Although occasionally abundant at Madeira, it appears to be scarce at the Canaries,—Fuerteventura and Teneriffe (in the latter of which it was likewise taken by the Barão do Castello de Paiva) being the only islands in which I have myself observed it. It was, however, captured by Dr. Crotch in Gomera; and in all probability it will be found to be universal, if searched for in the warehouses and towns*.

Genus 280. PSEUDOSTENE.

Wollaston, *Ann. Nat. Hist.* vii. 247 (1861).

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* In every diagnosis to which I have had access (including my own, in the 'Ins. Mad.') the sexes of *Tribolium* are regarded as perfectly similar (externally) *inter se*. But an accurate inspection has lately convinced me that such is not, in reality, the case,—one of them (which I presume to be the male) being not only less opake and with its prothorax appreciably narrower behind, but having likewise its genæ just perceptibly more prominent and angular in front of either eye, and its antennal club much less abrupt, or more *gradually* formed (occasioned by the subclaval joint, or joints, being wider).

743. Pseudostene fossoria.

P. lineari-angusta, picea vel nigro-picea, nitida; capite dense ruguloso, antice ferrugineo, genis rotundatis (nec ante oculos exstantibus); prothorace magno, convexo, antice latiore, ad latera oblique subrotundato, sat profunde punctato; elytris angustioribus, subcylindricis, leviter transversim rugulosis, tenuiter sed distincte punctulato-striatis, interstitiis minute punctulatis; antennis pedibusque pallide rufo-ferrugineis, tibiis anticis valde dilatatis.—Long. corp. lin. $1\frac{2}{3}$–vix $1\frac{3}{4}$.

Pseudostene fossoria, *Woll., loc. cit.* 250 (1861).

Habitat Lanzarotam, in salinis necnon sub confervis per oram maritimam arenosam fodiens.

In my Paper (above referred to) in the 'Ann. of Nat. Hist.' for 1861, I described three nearly allied species of this genus—the *P. angusta* (from the Cape de Verdes), the present one, and the *P. subclavata* (from Egypt). And, alluding to their habits, I there stated that they "would seem to be more or less fossorial, living under seaweed on sandy shores, or in other salt places—a mode of life which their largely dilated anterior tibiæ, accompanied by a considerable development of the prothorax, would *primâ facie* indicate." In such situations I detected the *P. fossoria*, during the spring of 1859, in Lanzarote—both to the south of Arrecife (beneath marine *rejectamenta*) and at the Salinas (or salt-works) in the extreme north of the island. It would appear, however, to be excessively rare*.

Genus 281. ALPHITOBIUS.

Stephens, *Ill. Brit. Ent.* v. 11 (1832).

744. Alphitobius diaperinus.

Tenebrio diaperinus, *Kugel., in Panz. Fna Ins. Germ.* 37. 16 (1797).
—— ovatus, *Hbst, Natursyst.* viii. (1799).
Heterophaga opatroides, *Dej., Cat.* (edit. 3) 220 (1837).
Uloma opatroides, *Brullé, in Webb et Berth. (Col.)* 70 (1838).
Alphitobius diaperinus, *Woll., Ins. Mad.* 498 (1854).
—— ——, *Id., Cat. Mad. Col.* 154 (1857).
Crypticus opatroides?, *Hartung, Geolog. Verhältn. Lanz. und Fuert.* 142.

Habitat Canariam et Teneriffam, in domibus mercatorumque repositoriis, ex alienis introductus.

This widely spread insect has been introduced into these islands, as at Madeira, occurring sparingly about houses, and amongst fari-

* The *P. angusta*, from the Cape de Verdes, is just perceptibly narrower than its Canarian ally; its prothorax is a trifle less convex, and rather *straighter* both along its lateral and basal edges (causing the posterior angles to be somewhat less obtuse); and its elytra are more lightly striated: but I am exceedingly doubtful whether it is more than a mere state of the *fossoria*.

naceous substances, in the villages and towns. Not having thought it worth while to search in such localities, I do not happen to have observed it except in Grand Canary and Teneriffe; but in all probability it will be found generally distributed. Teneriffan specimens have been communicated by the Barão do Castello de Paiva and Dr. Crotch. I have little doubt that it is the insect referred to in M. Hartung's volume under the title of "*Crypticus opatroides*" [inserted without any *authority* to the specific name!]; but how, in a work so recently published, it could possibly be assigned to *Crypticus*, with which it has really nothing whatever in common, it is difficult to conjecture. Nevertheless I am the more satisfied that such is the case, inasmuch as no *Crypticus* has ever been described under the name of "*opatroides*"; nor, so far as I am aware, *has any member of that genus been as yet detected* in either Lanzarote or Fuerteventura.

Genus 282. HYPOPHLŒUS.

Fabricius, *Skrivt. af Natur. Selsk.* (1790).

§ I. *Oculi magni, superne valde conspicui: clypeus a fronte distincte et recte separatus: elytra pygidio multo breviora.*

745. Hypophlœus pini.

H. cylindrico-linearis, rufo-ferrugineus, subnitidus; capite prothoraceque sat dense punctulatis, illius clypeo ad latera vix elevato, hôc convexo, elongato-subquadrato; scutello parum magno; elytris punctulatis (nec striatis); antennis brevibus, valde (præsertim in medio) incrassatis, fusiformibus, subperfoliatis; pedibus robustis, rufo-testaceis.—Long. corp. lin. 1½.

Hypophlœus pini, *Panz., Fna Ins. Germ.* 67. 19.
—— ——, *Dufts., Fna Austr.* ii. 310 (1812).
—— ——, *Redt., Fna Austr.* 592 (1849).
—— nocivus, *Woll., Ann. Nat. Hist.* ix. 442 (1862).

Habitat in pinetis Teneriffæ et Palmæ, arbores antiquas perforans.

This large species, so well defined by its cylindric outline, its greatly developed eyes, its scarcely at all expanded, almost unrecurved genæ, its posteriorly-shortened, uniformly punctured, *un*striated elytra, and its immensely thickened, fusiform antennæ, the joints of which (*for an Hypophlœus*) are rather loosely connected together, or subperfoliated, does not appear to be distinct from the European *H. pini*; though I inadvertently treated it as such in the Paper above referred to. It seems, in these islands, to be confined to the pine-trees of intermediate elevations, beneath the loose rotten bark of which I have taken it at the Agua Mansa in Teneriffe, and in the Barranco above S^ta^ Cruz of Palma.

§ II. *Oculi minores: clypeus a fronte minus evidenter et minus recte separatus: elytra pygidio vix breviora.*

746. **Hypophlœus euphorbiæ.**

H. subfusiformi-linearis, angustus, rufo-ferrugineus, subnitidus; capite prothoraceque sat dense punctulatis, illius clypeo ad latera vix elevato, hôc elongato-subquadrato; scutello parvo; elytris levissime substriato-punctulatis, interstitiis minutissime uniseriatim punctulatis; antennis longioribus, articulis inter se parum arcte adpressis; pedibus rufo-testaceis.—Long. corp. lin. $\frac{3}{4}$–vix 1.

Hypophlœus euphorbiæ, *Woll., Trans. Ent. Soc. Lond.* i. 183 (1862).

Habitat in Lanzarota, Canaria, Teneriffa et Hierro, sub cortice *Euphorbiarum* emortuo, rarissimus.

This very minute and narrow *Hypophlœus* seems to be peculiar to the rotten stems of the various Euphorbias—beneath the loose bark of which I have taken it in the north of Lanzarote, as also in Grand Canary, on the mountains above S^{ta} Cruz in Teneriffe, and in the district of El Golfo on the west of Hierro. It is allied to the Madeiran *H. ambiguus*, but has the edges of its clypeus somewhat less reflected, its antennæ and prothorax considerably longer (with the punctation of the latter a little finer and more dense), its elytral striæ fainter and composed of smaller punctures, and its elytra and legs less abbreviated.

747. **Hypophlœus subdepressus,** n. sp.

H. subfusiformi-linearis, subdepressus, rufo-ferrugineus, subnitidus; capite prothoraceque sat dense punctulatis, illius clypeo ad latera (usque ad basin) elevato, oculos fere occultante, hôc transverso-subquadrato, antice sensim latiore; scutello brevi, valde transverso; elytris leviter striato-punctatis, interstitiis minutissime uniseriatim punctulatis; antennis brevissimis, articulis inter se arctissime adpressis; pedibus rufo-testaceis.—Long. corp. lin. 1.

Obs.—Species *H. depresso* Fab. valde affinis, sed vix depressior, omnino levius sculpturata, punctis in prothorace elytrorumque striis sensim densioribus; clypeo etiam *postice* (i. e. supra et pone oculos) utrinque distincte elevato, oculos superne fere occultante; epistomate a clypeo minus evidenter separato; antennis etiam subbrevioribus.

Habitat Fuerteventuram, in Rio Palmas sub stercore camelino (!) captus.

I have unfortunately but a single individual to judge from of this small *Hypophlœus*, which was taken by myself, at the beginning of April 1859, from beneath camels' dung (!), in the Rio Palmas of Fuerteventura. It so nearly resembles, at first sight, the European *H. depressus*, that until I had examined it closely I imagined it to be

conspecific with that insect. A more accurate comparison, however, has satisfied me that, although nearly allied to the *depressus*, it is truly distinct from it—being not only a little flatter and more lightly sculptured (the punctures of its prothorax and elytral striæ being likewise *denser*), but having its clypeus very perceptibly elevated not merely in front of the eyes (as in that species) but also above and *behind* them, on either side (so as more nearly to conceal them when viewed from above). The line of separation between the clypeus and epistome, which is pretty evident in its ally, is less traceable in the *subdepressus*; and the latter has its antennæ, perhaps, if anything, even still shorter.

Fam. 73. COSSYPHIDÆ.

Genus 283. **COSSYPHUS.**

Olivier, *Ent.* iii. 44 *bis* (1795).

748. **Cossyphus insularis.**

Cossyphus siculus, *Dej., Cat.* 220 (1837).
—— insularis, *Laporte, Hist. des Col.* ii. 228 (1840?).
—— ——, *Brème, Ess. sur les Cossyph.* ii. 16. pl. 2. f. 2 (1846).

Habitat Teneriffam, mihi non obvius.

It is somewhat remarkable that I have not myself observed this insect at the Canaries, and yet that I should have received Teneriffan examples of it from no less than *four* different quarters,—namely, the Barão do Castello de Paiva (out of an old, and accurate, collection which was formed in the island many years ago), Dr. Heer of Zurich (the specimens having been obtained by M. Hartung), M. Deyrolle of Paris, and Mr. A. Fry of London. They all agree perfectly, in every respect, and I have no doubt were captured in the same region (wheresoever it may have been), though, apparently, it did not fall to my lot to visit it. The species does not seem to differ, so far as I can detect, from the *C. siculus* of Dejean's Catalogue—a type of which (captured by himself in Sicily) was given to me by the late Mr. Melly of Liverpool.

Fam. 74. TENEBRIONIDÆ.

Genus 284. **TENEBRIO.**

Linnæus, *Syst. Nat.* edit. 6 (1748).

749. **Tenebrio obscurus.**

Tenebrio obscurus, *Fab., Ent. Syst.* i. 111 (1792).
—— ——, *Steph., Ill. Brit. Ent.* v. 8 (1832).

Tenebrio molitor* ?, *Brullé, in Webb et Berth.* (*Col.*) 68 (1838).
—— obscurus, *Woll., Ins. Mad.* 497 (1854).
—— ——, *Id., Cat. Mad. Col.* 153 (1857).

Habitat Fuerteventuram, Canariam, Teneriffam, Gomeram et Palmam, in domibus, granariis, et præcipue sub recremento farris circa basin acervorum tritici sparso, certe introductus.

This common European *Tenebrio* (which is found also in Madeira and at the Azores) abounds at the Canaries, where it has doubtless been introduced from more northern latitudes, and where it occurs not only about houses and granaries but (more particularly) beneath the rubbish around the base of corn-stacks. In such situations I have taken it in Fuerteventura, Grand Canary, Teneriffe, and Palma; and it has been communicated from Teneriffe and Gomera by the Barão do Castello de Paiva. There can be no doubt that it must exist equally in Lanzarote and Hierro, and that it is, consequently, universal.

750. **Tenebrio olivensis**, n. sp.

T. præcedente minor ac nitidior, scutello multo minore, triangulari (nec transversim pentagono), elytris valde profunde crenato-striatis, tibiis sensim gracilioribus; capite prothoraceque dense, sat profunde et argute punctatis, hôc convexo, ad latera grosse sed ad basin tenuiter marginato, angulis anticis acutis porrectis, posticis acutissimis productis; elytris basi profunde bisinuatis, interstitiis convexis, minutissime et parce sed argute punctulatis.—Long. corp. lin. 4.

Habitat Fuerteventuram; Martio exeunte A.D. 1859 exemplar unum sub lapide prope Olivam collegi.

A single example of this well-marked *Tenebrio* was captured by myself, on the 31st of March 1859, in Fuerteventura—from beneath a stone, in the flat ground about half a mile to the south of Oliva. Its comparatively small size and triangular scutellum would, even of themselves, distinguish it from the *obscurus* and *molitor*, in which that organ is large and transversely pentagonal†; but it is further remarkable for the acute angles of its prothorax (which is convex, and broadly margined at the sides), and for its elytra being greatly bisinuated at their base and very deeply crenate-striate, with their

* Although it is very possible that the common European *T. molitor* may likewise have been introduced at the Canaries, nevertheless, as neither I nor any of the collectors with whom I have been associated have detected any traces of it, whilst the *obscurus* absolutely abounds (and could scarcely, therefore, have escaped the observation of even Messrs. Webb and Berthelot), I have little doubt that the "*T. molitor*" of M. Brullé's most inaccurate list was inserted, in reality, from examples of the *obscurus*.

† Lacordaire calls it *hexagonal*; but if the basal line be straight (as I take it to be), the scutellum of the *molitor* and *obscurus* cannot be more than a pentagon.

interstices convex and minutely (though sharply and rather sparingly) punctulated. Its head and prothorax are likewise sharply, but more closely and coarsely, punctured.

Genus 285. **BOROMORPHUS.**

Wollaston, *Ins. Mad.* 492. tab. xi. f. 9 (1854).

751. **Boromorphus parvus,** n. sp.

B. angusto-subcylindricus, subopacus, parce sed grosse fulvescenti-cinereo-pubescens, fusco-piceus; capite prothoraceque sæpius paulo rufescentioribus, densissime rugoso-punctatis (punctis longitudinaliter subconfluentibus), hôc elongato-quadrato (postice vix angustiore); elytris subparallelis, minute et levissime punctulatis (punctis indistinctis et vix longitudinaliter dispositis); antennis pedibusque rufo-testaceis.—Long. corp. lin. 1–1¼.

Obs.—Species quam *B. tagenioides* Lucas (=*B. maderæ* Woll.) minor ac magis cylindrica, elytris antice et prothorace postice minus angustatis, oculis minoribus, punctură in capite prothoraceque densiore ac magis rugosâ sed in elytris subtiliore ac leviore (sc. levissimâ), antennis gracilioribus, pedibus brevioribus sed femoribus forsan sublatioribus.

Habitat in montibus Lanzarotæ, Fuerteventuræ et Teneriffæ, rarissimus.

This little *Boromorphus* seems to occur at rather lofty altitudes in the eastern and central portions of the archipelago, and is evidently very scarce. I have taken it from beneath small stones in the crevices of the rocks on the top of one of the highest hills about a mile to the south of Haria, in the north of Lanzarote; as well as on the summit of the Atalaya, above the Rio Palmas, in Fuerteventura—the most elevated mountain in that island: and a single specimen was captured by Dr. Crotch, during the spring of 1862, in Teneriffe—I *believe* at, or near, Ycod el Alto. It is exceedingly distinct from the *B. tagenioides*, of Mediterranean latitudes and Madeira, being smaller and more parallel, or cylindric (the bases of the prothorax and elytra being, each of them, less narrowed, or drawn in), with the punctation of its head and prothorax denser and more rugose, whilst that of the elytra is both finer and *lighter* (the punctules being very obscure even under a lens), with its eyes smaller, its antennæ slenderer, and its legs shorter.

Fam. 75. HELOPIDÆ.

Genus 286. **HELOPS.**

Fabricius, *Syst. Ent.* 257 (1775).

752. **Helops altivagans**, n. sp.

H. niger, nitidus, in elytris subopacus et obsoletissime subænescens; capite prothoraceque sat profunde et dense punctatis, illius clypeo antice late et recte truncato, utrinque ante oculos elevato et subangulatim exstante, hôc convexo, ad latera rotundato subexplanato, ante angulos posticos obtusos vix sinuato; elytris subellipticis (antice paulo angustatis), leviter et tenuiter subcrenulato-striatis, interstitiis minute et levissime punctulatis sed haud transversim rugulosis nec tuberculatis; antennis pedibusque rufo-piceis.—Long. corp. lin. 4–vix 5.

Habitat in montibus valde excelsis Teneriffæ, usque ad 9000′ s. m. ascendens.

This *Helops* appears to be peculiar to almost the loftiest altitudes of Teneriffe, the only four specimens which I have seen having been captured by myself on the elevated Cumbre (overlooking the Cañadas) above Ycod el Alto, and on the opposite Cumbre above the Agua Mansa. It may be known by its elytra being elliptical (or a good deal drawn-in at the shoulders), in their having an exceedingly faint, just perceptible, metallic tinge, and in being very lightly and *finely* subcrenate-striated, with the interstices most minutely punctulated and scarcely at all wrinkled transversely; by its prothorax being convex, considerably rounded at the sides, and but *very* slightly sinuated in front of the hinder angles (which are obtuse); and by its clypeus being *straightly* and *broadly* truncated anteriorly, and rather conspicuously raised and prominent (or subangulated) before either eye.

753. **Helops elliptipennis**, n. sp.

H. præcedenti nimis affinis, sed sensim ænescentior, punctură in capite prothoraceque paulo grossiore sed in elytris etiam subtiliore (ægre observandâ); clypeo antice minus recte truncato necnon ante oculos minus elevato et minus exstante; prothoracis angulis posticis obtusioribus (sc. valde obtusis); elytris antice vix magis angustatis, vix levius subcrenulato-striatis, interstitiis postice obsoletissime et remote seriatim tuberculatis; antennis pedibusque rufescentioribus ac paulo brevioribus.—Long. corp. lin. 4.

Habitat Teneriffam, in sylvaticis parum elevatis degens.

In its elliptic, lightly sculptured elytra and just perceptibly ænescent hue this species much resembles the preceding one, of which it is barely possible that it may be but a permanent state peculiar to the sylvan districts of a rather lower elevation. Unfortunately I have but a single example, taken by myself at the Agua Mansa in Teneriffe, to judge from; but if it be normal of its kind, the *H. elliptipennis* differs from the *altivagans* in the above-mentioned pecu-

liarities being more expressed; in its clypeus being less straightly, and less widely, truncated at the apex, as well as more rounded-off (or less prominent) in front of either eye; in the hinder angles of its prothorax being still more obtuse (the sides not being *at all* sinuated immediately before them); and in its limbs being both shorter and more rufescent.

754. **Helops congener**, n. sp.

H. ater (interdum obsoletissime subænescens), parum nitidus; capite prothoraceque dense punctatis, hôc ad latera ante angulos posticos (vel subrectos vel obtusiusculos) plus minus evidenter sinuato; elytris plus minus profunde crenulato-striatis, interstitiis vel convexis vel planiusculis, plus minus distincte punctulatis et plus minus transversim rugulosis, versus apicem interdum obsolete seriatim tuberculatis; antennis tarsisque rufescentioribus.

a. *turgidicollis*. Major; clypeo ante oculos paulo magis rotundato (minus exstante); prothorace densissime et rugose punctato, ad latera et postice subexplanato-impresso, ante angulos posticos distincte sinuato; elytrorum interstitiis convexis et sat grosse transversim rugulosis. [*In elevatis sylvaticis* Palmæ.]

β. Minor, paulo minus dense rugoseque sculpturatus; prothorace sæpius æquali (rarius ad latera et postice subexplanato-impresso), ante angulos posticos vel distincte vel indistincte sinuato; elytrorum interstitiis vel convexiusculis vel depressiusculis. [Teneriffa.]

γ. Punctulis in elytrorum interstitiis fere obsoletis. [Hierro.]

δ. Prothorace densissime sed vix minus profunde punctato; elytrorum interstitiis versus apicem evidentius seriatim tuberculatis. [*In regione El Monte* Canariæ Grandis.]—Long. corp. lin. 3½-6.

Habitat in Canaria, Teneriffa, Palma et Hierro, hinc inde sub lapidibus congregans.

This appears to be the most widely spread of the Canarian members of the genus, and by far the most variable—having a *slightly* different phasis for nearly every district in which it occurs. It will probably be found to be universal throughout the central and western portions of the archipelago, though hitherto I have observed it only in Grand Canary, Teneriffe, Palma, and Hierro,—namely, in the region of El Monte, of the first; around Orotava, the Agua Mansa, Ycod el Alto, the Agua Garcia, Taganana, and Las Mercedes, of the second; just below the Cumbre above Buenavista, of the third; and near Valverde, of the fourth. In Teneriffe it was taken likewise by Dr. Crotch and the Barão do Castello de Paiva.

The larger state (*a*), which may *possibly* be distinct specifically, of the *H. congener* has a certain affinity with the Madeiran *H. Vulcanus*, whilst the smaller ones are still more evidently allied to the

Madeiran *confertus*—of which indeed the species might almost be regarded as a geographical modification. Apart, however, from obscurer characters, the rather narrower prothorax of the *H. congener*, which is also a little less rounded, and less coarsely margined, at the sides, combined with its just perceptibly *broader* eyes (longitudinally) and its almost entire freedom from tubercles on the hinder portion of its elytral interstices (which even in the state "♂," from Grand Canary, are *comparatively* but ill expressed), will serve to separate it from the (equally variable) *H. confertus*.

755. Helops carbunculus.

H. præcedenti similis, sed paulo minor et minus ater (interdum etiam subpicescens); prothorace vix longiore, antice convexiore, ad latera minus rotundato, ante angulos posticos paulo minus evidenter sinuato sed ibidem plus minus lateraliter compresso, angulis anticis acutioribus et sensim magis porrectis, in disco plerumque paulo levius punctato; elytris vix opacioribus, levius ac magis tenuiter crenato-striatis, interstitiis sæpius subdepressis, paulo minus rugulosis ac subtilius (sc. subtilissime) punctulatis.

Var. β. congesta. Prothorace ad latera ante angulos posticos etiam minus evidenter sinuato, elytris plerumque parum profundius sculpturatis. [*Ins.* Palma *et* Hierro.]—Long. corp. lin. 3–4½.

Helops transversus ?, *Brullé**, *in Webb et Berth. (Col.)* 70 (1838).
—— carbunculus, *Woll., Ins. Mad.* 519 (note) (1854).

Habitat in Teneriffa, Palma et Hierro, præcipue in subinferioribus degens.

This *Helops* has been observed in Teneriffe, Palma, and Hierro, and was described by myself (in a foot-note of the 'Ins. Mad.') in 1854, from a specimen which was received from the first of those islands by M. Rousset, of Funchal. In Teneriffe it is the common species around S^ta^ Cruz, and occurs likewise about the Puerto Orotava; in both of which localities (though particularly the former) I have met with it rather abundantly, and from the latter of which (where it was found by Mr. Gray) it has also been communicated by the Rev. R. T. Lowe and the Barão do Castello de Paiva. In Palma I captured it in the Barranco above S^ta^ Cruz; and in Hierro, in the district of El Golfo. Although extremely variable, it is on the average a little smaller than the *H. congener*; and the larger examples of it are not

* I examined, when in Paris, M. Brullé's types of his *H. transversus* (the "description" of which gives no clue whatsoever to the characters of any single species), and thought it barely possible that they might be conspecific with my *H. carbunculus*. Nevertheless, as I was far from satisfied about this, I do not consider it safe to identify them accordingly without further evidence. I need scarcely add, however, that if a future and more accurate inspection of them should prove the two to be coincident, M. Brullé's name will of course have the priority.

always readily separable, at first sight, from the smaller ones of that insect. Nevertheless I believe it to be truly distinct—differing from it in its less intensely black hue (which is *occasionally* even subpicescent), and in its less shining and less coarsely sculptured elytra, the striæ of which are both *finer* and more lightly impressed, whilst the interstices (which are generally rather flattened, and but slightly rugose) are so minutely punctulated that the punctules are often barely traceable. Its prothorax is a trifle longer, and convexer anteriorly, though somewhat more *laterally-compressed* on either side before the posterior angles, its front angles are appreciably acuter and more porrect, and the punctures on its disc are usually smaller and less deep. The specimens from Palma and Hierro have their prothorax almost *un*sinuated at the sides (in front of the basal angles), and their elytra *usually* a little more coarsely sculptured.

756. **Helops aterrimus**, n. sp.

H. affinis *H. carbunculo*, sed aterrimus, nitidissimus; prothorace ad apicem quasi profundius bisinuato (angulis anticis valde et acute porrectis), in disco levius subtiliusque sed versus latera densius punctato; pedibus masculis sensim crassioribus.—Long. corp. lin. 4–5½.

Habitat Gomeram, sub lapidibus prope Sanctum Sebastianum vulgaris.

This is the common *Helops* around, and above, San Sebastian in Gomera—where it was taken by Mr. Gray and myself, from beneath stones, during February 1858. It may be known by its intensely black hue and highly polished surface; by its prothorax being lightly and finely punctured on the disc, but densely and coarsely so at the sides, with the anterior angles very porrect and acute (which causes the apical edge, when viewed from above, to appear as though deeply bisinuated); and by the thickness of its male legs.

757. **Helops nitens**, n. sp.

H. breviusculus, obsoletissime submetallico-ater, nitidissimus; capite prothoraceque dense et profunde punctatis, hôc ad latera ante angulos posticos argute obtusiusculos vix sinuato; elytris leviter crenato-striatis, interstitiis depressis, minutissime punctulatis ac paulo transversim rugulosis, versus apicem obsolete seriatim tuberculatis; antennis pedibusque læte rufo-piceis.—Long. corp. lin. vix 4.

Habitat Teneriffam, a W. D. Crotch semel repertus.

A single example of this *Helops* was taken by Dr. Crotch in Teneriffe (I *believe*, above Ycod el Alto), during the spring of 1862. It has somewhat the shape of (though a little broader and shorter than)

the *H. congener*, with the highly polished surface of the *aterrimus*: but it may be known by its deep-black hue having a faint cyaneous, or greenish-cyaneous, tinge; by its prothorax being closely and coarsely punctured, almost unsinuated on either side before the posterior angles, and with the anterior ones (as in the *H. congener*) *not* porrect; and by its elytra having their striæ most lightly impressed, with the interstices flattened and very minutely punctulate.

758. **Helops quadratus.**

H. piceo-niger, subænescens, nitidissimus, ubique dense punctatus, punctis in capite prothoraceque majoribus; clypeo ante oculos rotundato (nullo modo exstante); prothorace subquadrato, angulis anticis acute porrectis, quare ad apicem quasi profunde bisinuato, ad latera minus rotundato, ante angulos posticos (vel subrectos vel obtusiusculos) sat conspicue sinuato necnon utrinque pone medium lateraliter compresso; elytris leviter punctato-striatis, striis rarius evanescentibus et plerumque conspicue punctatis; antennis pedibusque pallide rufo-ferrugineis.—Long. corp. lin. $3\frac{1}{2}$–$4\frac{1}{2}$.

Helops quadratus?, *Brullé, in Webb et Berth.* (*Col.*) 70 (1838).

Habitat in montibus Canariæ Grandis, rarior.

Although the types of M. Brullé's *H. quadratus*, which I examined in Paris, do not perfectly agree with my examples of this species (their elytral striæ being finer, and less evidently punctured), nevertheless they appeared to me to be sufficiently near to render it probable that they are conspecific with them; and such seems the more likely from the fact of one of my individuals having the striæ of its elytra almost evanescent. In the event, however, of the two proving hereafter to be distinct, I would then propose for the present one the trivial name of *montanus*.

In its subæneo-piceous hue and shining, densely punctured surface, the *H. quadratus* (as here defined) has somewhat the *primâ facie* appearance of the common European *H. caraboides*; but the resemblance is merely a superficial one, for when more closely inspected it will be seen to have abundant characters of its own. Thus, it is more shining, and more coarsely, though rather less densely, punctured; its prothorax is a good deal longer and more quadrate, with the anterior angles *much* more porrect and acute, and the posterior ones less obtuse, as also straighter (and more laterally-compressed) at the sides, but more sinuated in front of the basal angles; its elytral striæ are considerably lighter (in rare instances subobsolete), though much more evidently punctured; and its eyes are differently shaped. The only locality in which I have observed it is at a high ele-

vation on the mountains of Grand Canary—namely in the Pinal above San Bartolomé, in the central region of Tarajana; where, during April 1858, I captured it not uncommonly, from beneath stones, under the fir-trees.

759. **Helops rimosus**, n. sp.

H. angustulus, niger, parum nitidus; capite prothoraceque dense punctatis, hôc ad latera subæqualiter rotundato, ante angulos posticos argute obtusos vix sinuato; elytris cylindrico-ovalibus antice angustatis, profunde crenulato-striatis, interstitiis grosse transversim rimosis sed quasi impunctatis (*i. e.* punctulis subtilissimis, nisi oculo fortissime armato haud discernendis); antennis pedibusque piceis, tarsis dilutioribus.—Long. corp. lin. $4\frac{1}{2}$.

Obs.—*H. congeneri* aliquo modo similis, sed angustior, elytris magis cylindricis, tamen antice angustioribus, in interstitiis multo magis transversim rugosis (sc. valde ac profunde rimosis) necnon multo subtilius punctulatis (punctulis ægerrime observandis), prothorace ad latera magis æqualiter rotundato, genis vix minus exstantibus, tibiis sensim gracilioribus antennarumque articulo 3^{tio} minus elongato.

Habitat Fuerteventuram, a Dom. Gray Januario exeunte A.D. 1858 semel tantum repertus.

A single example of this distinct *Helops* was taken by Mr. Gray in Fuerteventura, at the end of January 1858. Although with somewhat the *primâ facie* aspect of the *H. congener*, it may easily be known by its narrowish outline and convex, though anteriorly-contracted elytra, the interstices of which are *very* coarsely wrinkled (or, rather, *cracked*, or rimose) transversely, but with their punctules so excessively diminutive that they are quite invisible except beneath a high magnifying power. Its prothorax is a good deal (and subequally) rounded at the sides, its tibiæ are rather slender, and its third antennal joint is less elongated than is usual in the allied species.

760. **Helops porrectus**, n. sp.

H. aterrimus, nitidus; capite prothoraceque densissime sed vix profunde punctatis, hôc transverso-quadrato, ad latera minus rotundato, angulis anticis acutis porrectis (ergo ad apicem quasi profunde bisinuato), posticis subrectis (rarius obtusiusculis), per basin subarcuato-truncato; elytris profunde striato-punctatis, interstitiis minute punctulatis.—Long. corp. lin. 5–6.

Habitat Lanzarotam borealem, rarior.

The large size and shining, intensely black surface of this species, combined with its subquadrate and thickly (though not very coarsely) punctured prothorax, which has its front angles rather acute and

very porrect (causing the anterior margin, when viewed from above, to appear as though deeply bisinuated), the basal ones more or less right angles, and the sides not much rounded, will serve to distinguish it. It was taken sparingly by Mr. Gray and myself, during January 1858, near Haria, in the north of Lanzarote; and again, by myself, in the spring of 1859, in the same district.

761. **Helops æthiops**, n. sp.

H. præcedenti similis sed ad staturam minorem descendens, sæpius obsoletissime (vix perspicue) subæneo-tinctus; oculis vix majoribus; prothorace subconvexiore, ad latera magis rotundato, angulis anticis minus porrectis, posticis obtusioribus, vix parcius profundiusque punctato, per basin minus arcuato-truncato; elytrorum interstitiis plerumque etiam subminutius punctulatis.—Long. corp. lin. $3\frac{1}{2}$–6.

Habitat Lanzarotam et Fuerteventuram, sub lapidibus, passim.

In the large size of at any rate the larger examples, deep-black hue, and shining surface, this species is at first sight scarcely separable from the preceding one; nevertheless it appears to descend to a smaller stature than that insect, and the shape of its prothorax is exceedingly different—being somewhat convexer and less quadrate, with the sides rounder, the anterior angles less porrect, the posterior ones more obtuse, and its basal edge rather less arcuated. Its eyes are a trifle more developed (or longitudinally broader); its prothorax is, if anything, a little less closely and more coarsely punctured; the punctules of its interstices are, if possible, even still more minute; and its surface has very often a just perceptible ænescent tinge. It seems to be confined to Lanzarote and Fuerteventura, in both of which I have taken it, though especially the latter (where it was likewise found by Mr. Gray and M. Hartung). My Fuerteventuran specimens are chiefly from the vicinity of Puerto de Cabras and Oliva; and I met with it even on the little island of Lobos, in the Bocayna Strait.

762. **Helops picescens**, n. sp.

H. fusco-piceus, minus nitidus; capite prothoraceque densissime punctatis, hôc ad latera subæqualiter rotundato (ante angulos posticos obtusiusculos haud sinuato); elytris tenuiter punctato-striatis, interstitiis minutissime punctulatis; antennis pedibusque plus minus clare rufo-ferrugineis.

Variat in *Fuerteventura* prothorace vix levius parciusque punctato.—Long. corp. lin. $2\frac{1}{2}$–4.

Obs.—Species exemplaribus minoribus fere in præcedentem primâ facie mergens, sed tamen nisi fallor vere distincta: in sta-

turâ haud ultra lin. 4 ascendit, necnon in colore plus minus fusco-picescente (nec aterrimo) differt; corpore sæpius minus nitido, punctură in capite prothoraceque subdensiore et vix subtiliore, elytris plerumque vix magis tenuiter striatis atque in interstitiis forsan subdensius distinctiusque (tamen subtilissime) punctulatis.

Helops caraboides ?, *Brullé* [nec *Linn.*], *in Webb et Berth.* (*Col.*) 69 (1838).

Habitat in Lanzarota et Fuerteventura (præsertim illâ) hinc inde vulgaris.

The larger examples of this *Helops* would seem, at first sight, almost to merge into the smaller ones of the *H. œthiops*; yet I believe that the species are positively distinct from each other, even though extreme individuals of the two (in opposite directions) are not always readily separable—at any rate without a very accurate comparison of them. The largest specimens which I have been able to detect of the *H. picescens* are so *very* much smaller than those of the *œthiops* that in their ordinary states no species could be better defined; but, apart from this, the *much* less blackened hue of the former (which is more or less of a dark reddish-brown, with the limbs pale rufo-ferruginous), combined with its somewhat more densely and finely punctured head and prothorax, and (however minutely) *rather* more evidently punctulated elytral interstices, will additionally separate it from that insect.

The size, colour, and general appearance of this *Helops* give it slightly the *primâ facie* aspect of the European *H. caraboides*, and I have little doubt that it is the species referred to that insect in M. Brullé's most inaccurate and loosely-compiled list*. The most superficial inspection of it, however, will suffice to prove that it belongs in reality to a totally different type—in which the body is always apterous, the eyes rather less developed, and the prothorax totally unflattened at the sides; whilst it is further distinguished from the *caraboides* by its longer genæ, its somewhat less closely and more coarsely punctured prothorax (which is convexer and less evidently margined), and by its elytra having their striæ considerably lighter but more decidedly punctured, with the punctules of their interstices *comparatively* imperceptible. In the development of its male tarsi it is a little variable.

* From Prof. Heer, of Zurich, I have received it (and so has Dr. Schaum) actually *identified* with the *caraboides*, and labelled as coming from "Teneriffe"; whereas, in reality, it has nothing whatever to do with the *caraboides*, and most unquestionably is *not* Teneriffan! His examples were received from M. Hartung; and I *myself* took others of them out of M. Hartung's own boxes (by his permission), *where they were* (*then*) *rightly associated with his material from Lanzarote.*

The *H. picescens* seems to be peculiar to Lanzarote and Fuerteventura, but is more common in the former than the latter. It was taken abundantly by Mr. Gray and myself, during January 1858, around Haria and Magui, in the north of the former—where I again met with it in the spring of the following year; and it was likewise found (in Lanzarote), as already stated, by M. Hartung. My Fuerteventuran examples are principally from the intermediate district between La Antigua and the Agua Bueyes*.

763. **Helops fusculus,** n. sp.

H. fusco-piceus, subopacus; capite prothoraceque densissime punctatis, illius oculis (longitudinaliter) angustulis, hôc convexo, ad latera subæqualiter rotundato, mox ante angulos ipsos posticos (argute obtusos et obsoletissime subrecurvos) vix sinuato; elytris fere simpliciter striatis (striis externis obsolete crenulatis), interstitiis minutissime punctulatis; antennis pedibusque longiusculis, clare rufo-ferrugineis.—Long. corp. lin. 4.

Habitat Teneriffam, a W. D. Crotch semel repertus.

The single example from which the above diagnosis has been drawn out was taken by Dr. Crotch in Teneriffe (I *believe*, near Ycod el Alto), during the spring of 1862. In its fusco-piceous hue, very densely punctured head and prothorax, and most minutely punctulated interstices it agrees with the *H. picescens*; nevertheless it is very different in most other respects. It is well distinguished by its subopake surface, by its (longitudinally) narrowish eyes, by the convexity of its prothorax (which is almost *equally* rounded at the sides, and has its extreme hinder angles obtuse and with a faint tendency to be subreflected), and by its elytra having their inner striæ nearly simple—even the outer ones being but faintly crenulated.

Fam. 76. ŒDEMERIDÆ.

Genus 287. **DITYLUS.**

Schmidt, *in Linn. Ent.* i. 87 (1846).

* Prof. Heer, in the list which he prepared for M. Hartung's volume, cites two species of *Helops* (namely, "*transversalis*, Br." and "*quadratus*, Br.?") for Lanzarote, and one ("*quadratus*, Br.?") for Fuerteventura. Being mere *catalogue*-insertions, it is scarcely necessary to notice them, or to conjecture what they were intended to refer to; but by "*quadratus*, Br.?" he probably meant the *H. æthiops* (which, however, has nothing in common with M. Brullé's *quadratus*); whilst his "*transversalis*, Br." may perhaps have been applied to one of the sexes of the *picescens*. But I must remark that M. Brullé has *no Helops* called "*transversalis*." He has an *H. transversus*; but that insect comes nearer to the *carbunculus* than to anything else here enumerated, and is totally distinct from all the three species found in Lanzarote and Fuerteventura.

764. Ditylus concolor.

D. elongato-cylindricus, lætissime aurantiaco-testaceus, pube grossâ demissâ aurantiaco-testaceâ densissime tectus; prothorace cordato, inæquali (postice canaliculato, in disco utrinque longitudinaliter bi-impresso).—Long. corp. lin. 4–7.

Ditylus concolor, *Brullé, in Webb et Berth.* (*Col.*) 70. pl. i. f. 13 (1838).
—— fulvus, *Woll., Ins. Mad.* 523 (1854).

Habitat in Canaria, Teneriffa, Gomera et Palma, sub lapidibus necnon juxta radices plantarum (præsertim *Euphorbiarum*) latens.

This elegant *Ditylus*, so remarkable for its pale, orange-yellow surface, which is densely clothed with decumbent pubescence of a similar colour, is (although decidedly scarce) widely spread over the Canarian archipelago, where in all probability it is universal. It was taken rather commonly by the Rev. R. T. Lowe at Arguiniguin, in the south of Grand Canary, on the 15th of April 1858; and I have myself obtained it from the vicinity of the Puerto Orotava, as well as below Taganana, in Teneriffe, and from the Barranco de Nogales in Palma. In Gomera it was found by Dr. Crotch; and Teneriffan examples have likewise been communicated by the Barão do Castello de Paiva. It seems to be conspecific with the *Ditylus* which I described, in a foot-note of my 'Ins. Mad.,' from the rocks of the Salvages (where it was captured, in 1851, by Mr. Leacock, of Funchal); and is also *very* nearly allied to a species which occurs at the Cape de Verdes, and which, although with small and constant distinctions of its own, may *possibly* be but a geographical modification of it*.

Genus 288. ISCHNOMERA†.

Stephens, *Ill. Brit. Ent.* v. 53 (1832).

765. Ischnomera melanura.

Cantharis melanura, *Linn., Syst. Nat.* ii. 651 (1767).
Ischnomera melanura, *Steph., Ill. Brit. Ent.* v. 54 (1832).

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* This *Ditylus* I described, in the 'Ann. of Nat. Hist.' in 1861, under the trivial name of *pallidus*; and I there stated that "it is not only of a much more pallid hue than the *concolor* (being of a pale testaceous, and entirely free from the beautiful orange tint which is always so conspicuous in that insect), but its pubescence is distinctly longer and coarser (particularly behind), its eyes are more prominent, its pronotum is somewhat less uneven, and the first joint of its antennæ is perceptibly thicker—a structure which is very apparent at the base."

† Although Stephens's genus *Ischnomera* is composed of several insects which have since been erected into separate genera, nevertheless, since he takes the *Cantharis melanura* as his *type*, and even *expresses his conviction that the group requires in reality further subdivision*, it seems most unfair to give the preference to *Nacerdes* of Schmidt, which was established (to receive that, and one other, insect) fourteen years afterwards. On this principle almost any of the old genera might be summarily disposed of by subsequent, and more accurate, analyzers.

Ditylus rufus, *Brullé, in Webb et Berth.* (*Col.*) 70 (1838).
Nacerdes melanura, *Schmidt, in Linn. Ent.* i. 29 (1846).

Habitat?

I have not myself observed this insect at the Canaries, and therefore I should not have admitted it into the present Catalogue had I not examined carefully the specimens of MM. Webb and Berthelot, which are certainly conspecific with the *Ischnomera melanura* of central and southern Europe. M. Brullé, of course, gives us no information as to the island in which they were found; but it is not unlikely they may have been taken at S^ta^ Cruz in Teneriffe, imported accidentally from more northern latitudes.

Fam. 77. MELOIDÆ.

Genus 289. MELOË.

Linnæus, *Syst. Nat.* edit. 1 (1735).

766. Meloë tuccius.

Meloë tuccia, *Rossi, Fna Etrusc.* i. 238 (1792).
—— ——, *Brandt et Erich., Mon. Mel. Nov. Act. Acad.* xvi. 121 (1832).
—— ——, *Brullé, in Webb et Berth.* (*Col.*) 70 (1838).
—— ——, *Lucas, Col. de l'Algérie*, 396 (1849).
—— ——, *Hartung, Geolog. Verhältn. Lanz. und Fuert.* 141, 142.

Habitat in Lanzarota, Fuerteventura, Canaria, Teneriffa et Gomera, passim.

The *M. tuccius* of Mediterranean latitudes, so well distinguished by its usually immense size and deeply pitted (or variolose) surface, will almost certainly be found to be universal throughout the Canarian archipelago. At present, however, I have observed it only in Lanzarote, Grand Canary, and Teneriffe; but examples from Gomera have been communicated by the Barão do Castello de Paiva, and in Fuerteventura (as well as in Lanzarote) it was taken by M. Hartung.

767. Meloë rugosus.

Meloë rugosus, *Mshm, Ent. Brit.* 483 (1802).
—— rugulosa, *Brullé, in Webb et Berth.* (*Col.*) 70 (1838).
—— rugosus, *Woll., Ins. Mad.* 527 (1854).
—— ——, *Id., Cat. Mad. Col.* 162 (1857).

Habitat in Teneriffa, Gomera et Hierro, hinc inde, minus frequens.

The European *M. rugosus*, which occurs also in the Madeiran Group, is found sparingly in these islands. I have taken it in Teneriffe, Gomera, and Hierro; from the first of which it has likewise been communicated by the Barão do Castello de Paiva.

768. Meloë murinus.

Meloë murina, *Brandt et Erich., Mon. Mel. Nov. Act. Acad.* xvi. 127 (1832).
—— ——, *Lucas, Col. de l'Algérie*, 398 (1849).
—— flavicomus, *Woll., Ins. Mad.* 528. tab. xiii. f. 1 (1854).
—— ——, *Id., Cat. Mad. Col.* 162 (1857).

Habitat in Canaria, Teneriffa et Gomera, passim.

This *Meloë*, which is also found in Mediterranean latitudes and which is abundant in the Madeiran Group, is, like the *rugosus*, sparingly distributed over the Canarian archipelago, where I suspect, however, that it will be found to be universal. At present I have taken it only in Grand Canary and Teneriffe, but it was obtained (at Hermigua) in Gomera by Dr. Crotch. At first sight it closely resembles the last species, but is, *on the average*, a little smaller and with its limbs slenderer, and it is more or less clothed with a fine golden pubescence: its head and prothorax (the former of which is more deeply channeled behind) are more finely punctured, and its eyes are a trifle less reniform—being rather broader (longitudinally), or more semicircular.

769. Meloë nudus, n. sp.

M. (vix subplumbeo-) niger, subopacus, alutaceo-coriaceus; capite prothoraceque parcissime sed argute punctatis, hôc parvo, basi profunde arcuato-emarginato, inæquali (sc. tenuiter canaliculato, ad basin ipsam profunde transversim impresso, in disco antico utrinque foveolato); oculis magnis, reniformibus.—Long. corp. lin. 7–8.

Habitat in Fuerteventura, rarissimus.

Readily known from the *murinus* by its freedom from pubescence; by its very much more sparingly punctured head and prothorax—the former of which is less deeply channeled behind, whilst the latter is less transverse (or more quadrate), as well as less uneven and rather more emarginated along its basal edge; and by its eyes being larger. It would appear to have more in common with the south-European *M. majalis*, Linn., than with any other species with which I am acquainted; but is smaller, with its head and prothorax (the latter of which is less flattened, and less quadrate) more sparingly punctate, with its elytra differently sculptured, and with its eyes (longitudinally) broader. I have seen hitherto but three examples of it, all of which were taken in Fuerteventura—two by myself, and one by M. Hartung.

770. Meloë subcyaneus, n. sp.

M. subcyanescenti-niger, subnitidus; capite prothoraceque parce sed profunde punctatis, illo postice haud canaliculato, hôc subquadrato

postice paulo angustiore, subæquali, basi vix emarginato; oculis elongato-reniformibus, (longitudinaliter) angustis.—Long. corp. lin. 10.

Habitat in intermediis Lanzarotæ, semel tantum repertus.

The obscurely subcyaneous and slightly shining surface of this *Meloë*, combined with the *lightness* of its *under* sculpture (which on the head and prothorax is almost obsolete), and its narrow and rather elongate (-reniform) eyes, will sufficiently distinguish it from the whole of the preceding species. Its head and prothorax (the former of which is unchanneled except quite in front, whilst the latter is subquadrate and comparatively *even*) are sparingly but deeply punctured. The only example of it which I have seen was taken by myself in Lanzarote—I believe, on the hills immediately to the north of Los Valles de S^ta^ Catalína, on the road to Haria. In general aspect it seems a good deal allied to a European species which I have in my collection under the name of *gallicus*, but is smaller and much less brightly cyaneous, its head and prothorax are less deeply punctured, and its eyes are longer and narrower.

Fam. 78. MORDELLIDÆ.

Genus 290. MORDELLISTENA.

Costa, *Faun. del Regn. Napol., Mordell.* 16 (1849?).

771. Mordellistena pumila.

Mordella pumila, *Gyll., Fna Suec.* ii. 605 (1810).
—— ——, *Steph., Ill. Brit. Ent.* v. 48 (1832).

Habitat in Canaria, Teneriffa, Gomera et Palma, ad flores haud infrequens.

The European *M. pumila* is widely spread over the Canarian archipelago, where (although I did not happen to meet with it in Hierro) I believe it will be found to be universal in all the islands except Lanzarote and Fuerteventura (in which its place is supplied by the following species). Throughout the region of El Monte in Grand Canary I have taken it commonly; as also at Souzal, the Agua Garcia, and around the Puerto Orotava in Teneriffe, and in the Barranco da Agua of Palma—in the last two of which islands, as well as in Gomera, it was captured (during the spring of 1862) by Dr. Crotch.

772. Mordellistena sericata, n. sp.

M. pumilæ similis et forsan ejus varietas insularis; vix minor, pube pallidiore subaureo-cinereâ sericeâ hinc inde, sed præsertim per ely-

trorum suturam, (rarius omnino) vestita, quasi sericata.—Long. corp. lin. $1\frac{2}{3}$–$2\frac{1}{3}$.

Habitat in Lanzarota et Fuerteventura, hinc inde ad flores.

Although on the average a trifle smaller, the only real character, that I can detect, which separates this *Mordellistena* from the preceding one is the fact of its pubescence being of a paler (or somewhat golden-cinereous) hue—particularly down the sutural region of the elytra; which imparts to the surface, when viewed in one direction, a peculiarly silken appearance. It is possible, therefore, that it may be but an insular modification of the *pumila*; nevertheless, as it seems to obtain *universally* throughout Lanzarote and Fuerteventura, whilst the ordinary form of that insect is equally constant in the other islands of the Group, I am not satisfied that there is sufficient evidence for treating it as such. In rare instances the paler silken pubescence covers its entire surface, but it is more often concentrated merely down the suture. My examples are principally from the little island of Graciosa (off the extreme north of Lanzarote), and from the vicinity of Oliva in Fuerteventura.

Genus 291. **ANASPIS.**

Geoffroy, *Hist. Abr. des Ins.* 315 (1762).

773. **Anaspis Proteus.**

Anaspis Proteus, *Woll., Ins. Mad.* 532 (1854).
—— ——, *Id., Cat. Mad. Col.* 163 (1857).

Habitat insulas omnes Canarienses, ab orâ maritimâ usque ad 9000′ s. m. ascendens.

This most variable little *Anaspis*, which abounds throughout the Madeiran Group, is equally universal (and almost equally abundant) at the Canaries—in the whole seven islands of which I have myself captured it. It was found likewise by Mr. Gray in Lanzarote, Teneriffe, Palma, and Hierro; by M. Hartung in Lanzarote; by Dr. Crotch in Teneriffe, Gomera, and Palma; and by the Barão do Castello de Paiva and the late Rev. W. J. Armitage in Teneriffe. It occurs independently of elevation; for in Teneriffe I have taken it from the sea-level to an altitude (on the Cumbre overlooking the Cañadas) of about 9000 feet, and it was met with by Dr. Crotch in the same upland region.

Its variations of colour seem, as in Madeira, endless—some examples being almost black, whilst others are well nigh testaceous; but, on the average, the *darker* specimens prevail more at the Canaries

than in Madeira. Nevertheless the following observations, from my 'Ins. Mad.,' are nearly as applicable here as in the neighbouring Group. "So great are the changes of hue through which it passes, that at first sight it would seem to vary from a uniform testaceous into a deep black. Such, however, is not in reality the case (as a closer examination will prove), seeing that in the *palest* specimens an obscurer portion along the suture, an ill-defined cloud at the base, and a sublateral dash towards either side (representing the transverse medial band) are usually more or less present on the elytra, and there are often the rudiments of a patch on the prothoracic disc; whilst even in those extreme varieties where these darker portions are so increased in size as to occupy nearly the entire surface there are generally faint indications of four subrufescent elytral blotches, which at once enable us to identify them with the rest."

Fam. 79. ANTHICIDÆ.

Genus 292. FORMICOMUS.

(Motschulsky) La Ferté, *Mon. des Anth.* 70 (1848).

774. Formicomus cæruleipennis.

Anthicus cæruleipennis (*Dufour*), *Dej., Cat.* 249 (1836).
Formicomus cæruleipennis, *La Ferté, Mon. des Anth.* 73 (1848).
Anthicus cæruleipennis, *Lucas, Col. de l'Algérie,* 369 (1849).

Habitat Canariam Grandem; ad Arguiniguin d. 14. Apr. A.D. 1858 duo exemplaria deprehendi.

This elegant insect, so remarkable for its clear rufo-ferruginous prothorax and limbs, black head, viridi-cyaneous elytra, and shining, pilose surface, appears to be of the greatest rarity in these islands—the only two examples which I have seen having been captured by myself, on the 14th of April 1858, by brushing the short grass at the edges of one of the freshwater pools (close to the sea) at Arguiniguin, in the south of Grand Canary. It is recorded by La Ferté from Algeria and the south of Spain; and indeed I possess a specimen which was taken by the Rev. Hamlet Clark at Malaga.

Genus 293. ANTHICUS.

Paykull, *Fna Suec.* i. 253 (1798).

775. Anthicus floralis.

Anthicus floralis, *Fab., Syst. Eleu.* i. 29 (1801).
—— ——, *Schmidt, Stett. Ent. Zeit.* iii. 131 (1842).

Anthicus floralis, *La Ferté, Mon. des Anth.* 150 (1848).
—— ——, *Woll., Cat. Mad. Col.* 164 (1857).

Habitat in Lanzarota, Fuerteventura, Teneriffa et Gomera, sub quisquiliis et in cultis, hinc inde frequens.

This common European insect, which has been naturalized in the most distant parts of the world and which is abundant around Funchal in Madeira, will almost certainly be found to be universal in these islands. Hitherto, however, I have taken it only in Lanzarote, Fuerteventura, and Teneriffe; but it was found by Dr. Crotch in Gomera. In Lanzarote it was captured likewise by Mr. Gray.

776. Anthicus hispidus.

A. niger, nitidus, parce cinereo-pilosus pilisque nigris longissimis erectis obsitus, ubique profunde sed parce punctatus; elytris pone basin fasciâ transversâ dentatâ testaceâ ornatis; antennis, tibiis tarsisque piceo-testaceis.—Long. corp. lin. $1\frac{1}{2}$.

Notoxus hispidus, *Rossi, Mant.* i. 46 (1792).
Anthicus hispidus, *La Ferté, Mon. des Anth.* 209 (1848).
—— ——, *Woll., Ins. Mad.* 535 (1854).
—— ——, *Id., Cat. Mad. Col.* 166 (1857).

Habitat Lanzarotam borealem, semel tantum captus.

Of the *A. hispidus* of Mediterranean latitudes, and which abounds at rather low elevations in Madeira, I have taken but a single example, hitherto, in these islands—namely, near Haria, in the north of Lanzarote: we may, however, expect it to occur more generally. It may be known by its black surface having a transverse, dentate, testaceous fascia behind the base of the elytra, and being deeply but somewhat sparingly punctured, as well as beset (in addition to its decumbent cinereous under-pile) with exceedingly long and erect darker hairs. In the specimen before me the prothorax is concolorous with the rest of the surface; but this is probably accidental, as that portion of the body is nearly always more or less obscurely rufescent behind.

777. Anthicus crinitus.

A. gracilis, piceo-niger, nitidus, parce sed grosse cinereo-pilosus; capite prothoraceque parcissime et minute punctulatis, illo subrotundato-quadrato, hôc angusto, læte rufo-ferrugineo; elytris profundius punctatis, fasciâ magnâ transversâ obliquâ mox pone basin et maculâ parvâ communi posticâ centrali (rarius obsoletâ) rufo-testaceâ ornatis; antennis pedibusque testaceis, femoribus apicem versus plus minus picescentibus.—Long. corp. lin. $1\frac{1}{3}$–$1\frac{1}{2}$.

Anthicus crinitus, *La Ferté, Mon. des Anth.* 204 (1848).
—— ——, *Woll., Cat. Mad. Col.* 165 (1857).

Habitat in Canaria, Teneriffa et Gomera, parum rarus.

This *Anthicus* is slenderer and more rufescent than the *hispidus*;

its head and prothorax (the latter of which is rufo-ferruginous and less widened anteriorly) are much less coarsely and less closely punctured; its elytra have their basal fascia larger and differently shaped, and increased by an additional patch (rarely obsolete), common to them both, on the suture behind; and its surface is free from the elongate, erect, darker hairs which are so conspicuous in that insect. As at Madeira, it appears to be rare in these islands, though widely distributed over the archipelago. I have taken it sparingly at San Mateo in Grand Canary, and near the Puerto Orotava in Teneriffe; and it was found by Dr. Crotch in Gomera. It is recorded by La Ferté from Egypt and Senegal.

778. **Anthicus humilis.**

A. colore facieque generali *A. crinito* primâ facie fere similis, sed pube breviore minutiore ac magis demissâ irroratus; capite prothoraceque sensim minoribus, minus nitidis ac multo densius punctatis, illo ovali (ergo postice rotundatiore, angulis posticis omnino rotundatis obsoletis) rufescentiore oculis minoribus, hôc postice magis constricto; elytris subconvexioribus (ad latera vix magis rotundatis) subleviusque punctatis, pone basin minus evidenter impressis, plagâ posticâ communi submajore necnon in medio per suturam evidentius bipartitâ (i. e. in maculas duas divisâ).—Long. corp. lin. $1\frac{1}{4}$–$1\frac{1}{3}$.

Anthicus humilis, *Germ., Fna Ins. Eur.* 10. 6 (1817).
—— constrictus (*Rudd*), *Steph., Man.* 342 (1839).
—— humilis, *La Ferté, Mon. des Anth.* 125 (1848).

Habitat Lanzarotam, rarissimus.

The *A. humilis* of central and southern Europe may easily be known from the *crinitus* (to which in its general colouring the brighter examples of it approach very closely) by having its pubescence shorter, minuter, and completely decumbent; both its head and prothorax smaller, rather less shining, and much more densely punctured—the former being likewise more *oval* (or rounded behind the eyes—which are themselves less developed) and more rufescent, whilst the latter is more *constricted posteriorly*; and by its elytra being just perceptibly convexer and more rounded at the sides, less evidently impressed behind the base, rather more lightly punctured, and with their postmedial patch (or abbreviated fascia) both larger and more decidedly *interrupted* (or divided into two spots) along the suture. I have seen hitherto but six examples of it, all of which were captured (five of them by myself, and one by Mr. Gray) in Lanzarote—I *believe*, at the Salinas, in the extreme north of that island.

779. **Anthicus opaculus,** n. sp.

A. subopacus, pube minutâ fulvo-cinereâ demissâ vestitus; capite pro-

thoraceque rufo-ferrugineis, densissime et (præsertim illo) parum profunde punctatis, illo subquadrato convexo, hôc antice lato; elytris subconvexis, paulo subtilius punctatis, piceo-nigris, antice necnon in maculâ magnâ communi posticâ plus minus suffusâ (et interdum etiam per suturam) rufo-ferrugineis; antennis rufo-ferrugineis; pedibus pallide rufo-testaceis.—Long. corp. lin. $1\frac{1}{3}$–$1\frac{1}{2}$.

Habitat in aridis arenosis Lanzarotæ, Fuerteventuræ et Canariæ, hinc inde (præsertim in locis inferioribus) vulgaris.

This *Anthicus* seems to be rather common in dry sandy spots, principally (though by no means always) of a low elevation, in Lanzarote and Fuerteventura (in the latter of which it was taken likewise by Mr. Gray), and less so in Grand Canary. It may easily be known by its rufo-ferruginous hue and rather opake surface, which is clothed with a very minute and entirely decumbent fulvo-cinereous pubescence; by its head and prothorax (the former of which is squarish and convex, whilst the latter is much widened anteriorly) being very densely and somewhat deeply punctured; by its elytra (which are a little convex, and not at all impressed in front) being piceous-black but broadly rufo-ferruginous at their base, and with the postmedial patch (of the same colour) which obtains equally in the last two species larger and more suffused, and frequently united along the suture to the basal portion; and by its legs being altogether pale.

780. **Anthicus notoxoides**, n. sp.

A. præcedenti valde similis sed paulo major, lætius coloratus, minus opacus et pube sensim pallidiore (magis argenteâ) longioreque vestitus, punctis ubique submajoribus; oculis multo magis prominentibus; prothorace antice latiore; antennarumque articulis intermediis vix longioribus.—Long. corp. lin. $1\frac{2}{3}$.

Habitat in Lanzarota et Fuerteventura, rarissimus.

Of this *Anthicus* I have but two examples (one of which is immature) to judge from; nevertheless it is certainly distinct from the last species, which in general hue and markings it much resembles—being larger, more brightly coloured, and less opake, with its pubescence a trifle longer, paler (or more silvery), and less depressed, and its punctation a little coarser. Its eyes are very much more prominent; its prothorax is still broader in front; and its antennæ have their intermediate joints just perceptibly more elongated. One of my specimens I captured on the hills above Haria, in the north of Lanzarote, and the other in Fuerteventura*.

* I had at first imagined it possible that the immature example (from Fuerteventura) above referred to might be a pale and ill-developed *female* of the European (and Madeiran) *A. instabilis*; but, having identified it satisfactorily with

781. **Anthicus dimidiatus**, n. sp.

A. gracilis, parum nitidus, piceo-niger, pube minutâ fulvo-cinereâ demissâ vestitus, ubique minutissime et levissime punctulatus; capite parvo, ovali (pone oculos rotundato); prothorace postice constricto; elytris angustis, subparallelis, ad (aut potius mox pone) basin fasciâ maximâ testaceâ obliquâ (fere ad medium ductâ) ornatis; antennis pedibusque longiusculis, graciliusculis, pallido-testaceis, femoribus plus minus picescentibus.—Long. corp. lin. 1–1½.

Habitat in salinis Lanzarotæ et Canariæ, sed parum rarus; necnon etiam in Gomera, infra oppidum Hermigua, cepit W. D. Crotch.

The narrow outline and dark surface of this little *Anthicus*, which has an immense fascia at the base of its subparallel elytra (occupying almost their anterior half), together with its antennæ, tibiæ, and tarsi, testaceous, and the punctules of its entire surface *most* minute and lightly impressed, will sufficiently distinguish it. In its small, *oval* head, basally-constricted prothorax, and rather slender and elongated limbs it agrees with the *A. humilis*; nevertheless all its other characters (of colour, markings, sculpture, and outline) are entirely different from those of that insect; whilst its total freedom from a postmedial elytral patch will tend rather to bring it into juxtaposition with the *lapidosus*.

The *A. dimidiatus* I have myself observed only in salt places in Lanzarote and Grand Canary—in the former of which I met with it both at the Salinas in the extreme north of the island, and along the edges of the salt lake of "Januvio" adjoining the south-western coast; whilst, in the latter, I took a few examples, on the 12th of April 1858, in a precisely similar spot, at Juan Grande. Five specimens of it were, however, captured by Dr. Crotch, during the spring of 1862, "below Hermigua" in Gomera.

782. **Anthicus lapidosus**, n. sp.

A. subnitidus, niger, pube grossâ argenteo-cinereâ sat dense vestitus, ubique profunde et (præsertim in elytris) dense punctatus; capite quadrato; prothorace antice minus dilatato, postice vix constricto; elytris ad humeros subrectis, pone basin fasciâ parvâ valde obliquâ indistinctâ (interdum ægre observandâ suffusâ) subtestaceâ ornatis;

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the other, and perfect one (from Lanzarote), I now perceive that (even assuming them both to be females) they could not be identical with that species; for (not to mention the colour, which is paler and quite different) its punctation is altogether a little coarser, its head is longer behind the eyes, its prothorax is wider in front, its pubescence is not quite so minute, its antennæ are relatively somewhat slenderer, with their intermediate joints less abbreviated, and its legs are entirely pale. I need scarcely add that if either of these two examples be *males*, it is still further separated from the *instabilis* by the simple posterior tibiæ of that sex.

antennis pedibusque infuscato-testaceis, illarum articulo ultimo horumque femoribus plus minus picescentibus.—Long. corp. lin. 1–1¼.

Habitat Teneriffam, inter lapillos per marginem paludis cujusdam parvæ in "Barranco Santo" prope Sanctam Crucem lectus.

Readily known by its small size, dark hue, thickly and (especially on the elytra) deeply punctured surface (which is rather densely clothed with a robust, decumbent, silvery pile), by its square head, and by its elytra (which are rectangular at the shoulders) being each of them ornamented immediately behind the base with an exceedingly oblique and very obscure (occasionally but just traceable) paler fascia. Its limbs are brownish-testaceous, with the apical joint of the antennæ, and the femora, more or less picescent. The only spot in which I have observed it is at the extreme head of the Barranco Santo (close to S^ta^ Cruz) in Teneriffe—where, in June 1858, I captured it in profusion amongst wet shingle at the edges of a small stagnant pool, in company with the *Perileptus nigritulus* and several minute members of the *Staphylinidæ*.

783. **Anthicus angustatus.**

A. præcedenti primâ facie similis, sed opacior, punctură multo leviore; capite prothoraceque (sensim longiore) rufescentioribus (sc. rufo-piceis); elytris multo magis ovalibus (ad humeros rotundatis, nec rectis), nigris, immaculatis; antennis pedibusque omnino piceo-testaceis.—Long. corp. lin. 1¼.

Anthicus angustatus, *Curt., Brit. Ent.* fo. 714.
—— ——, *Steph., Man.* 342 (1839).

Habitat Fuerteventuram, a Dom. Gray semel tantum repertus.

Of this little *Anthicus* I have seen but a single Canarian individual, which was taken by Mr. Gray in Fuerteventura, and which does not appear to differ appreciably (so far as I can detect) from the British *A. angustatus*. In its small size, general colouring, robust, silvery pubescence, and squarish head it has somewhat the *primâ facie* aspect of the *lapidosus*; nevertheless, when viewed more closely, it will be seen to be totally distinct. Thus, it is more opake and with its punctation much lighter; its head and prothorax (the latter of which is a little longer) are rufo-piceous instead of black; its elytra are much more oval (or considerably rounder at the shoulders), black, and immaculate; and its limbs are uniformly piceo-testaceous.

784. **Anthicus guttifer,** n. sp.

A. subnitidus, niger, pube fulvo-cinereâ demissâ parce vestitus,

ubique dense punctatus; capite subquadrato, oculis minutis; prothorace breviusculo, basi marginato; elytris ad humeros maculâ obliquâ et in disco postico alterâ submajore transversâ, testaceis, utrinque ornatis; antennis pedibusque fusco-testaceis, femoribus picescentioribus.

Variat (immaturus) capite prothoraceque rufescentioribus.—Long. corp. lin. 1–1½.

Obs.—*A. tristi* Schmidtii valde affinis et forsan ejus varietas geographica. Differt solum oculis etiam subminoribus, prothorace paulo minore, breviore, elytris sublatioribus, punctură omnino sensim fortiore et pube vix minus fulvescente.

Habitat insulas omnes Canarienses, præsertim in inferioribus degens.

It is with some hesitation that I regard this *Anthicus* as more than a geographical modification of the *A. tristis* of Mediterranean latitudes —with which, in its dark hue, squarish head, and the two more or less brightly testaceous spots (humeral and postmedial) with which each of its elytra is ornamented, it agrees; nevertheless, since the few minute differences which it presents are partly structural ones, I feel doubtful whether it would be safe to unite it actually with that species. Thus, when closely inspected, it will be seen that its eyes are invariably even more minute still than those of the *tristis*; its prothorax is altogether a little smaller and shorter; its elytra are a trifle wider; its punctation is appreciably coarser; its surface is rather less pubescent, and the pubescence itself is (if anything) less fulvous. It is a universal insect, principally at low elevations, throughout the Group—I having myself taken it in all the islands except Gomera (whence, however, there are seven examples now before me which were captured by Dr. Crotch). In Lanzarote it was met with likewise by Mr. Gray.

785. **Anthicus canariensis,** n. sp.

A. subnitidus, pube cinereâ demissâ tenui vestitus, ubique levissime et minutissime punctulatus (nisi oculo armato quasi impunctatus); capite prothoraceque vel nigris vel piceis (interdum submetallicotinctis), illo subquadrato-rotundato, hôc brevi, postice (rarius omnino) pallidiore ac profunde subconstricto-impresso; elytris testaceis, per suturam plus minus infuscatis (rarius concoloribus); antennis ad basin subgracilibus testaceis, versus apicem obscurioribus sensim crassioribus (articulo ultimo subincrassato); pedibus testaceis, femoribus picescentioribus.—Long. corp. lin. 1–1⅓.

Habitat insulas Canarienses, in Hierro solâ adhuc haud detectus.

In my notice of the *Attalus anthicoides* [*vide* p. 224] I called attention to the curious analogy, both of aspect and habits, which exists

between the present insect and that one, despite their being so widely removed from each other in affinity. Indeed, as there stated, when found in company (as is frequently the case), it is not always easy at first sight to define between them—as I have often experienced when collecting them (in Lanzarote) from beneath the refuse lying upon the ground around the base of corn-stacks (a *habitat* which is quite normal for an *Anthicus*, though a very anomalous one for a member of the *Malachiidæ*). Its more or less lurid-testaceous hue (the head, the anterior portion of the prothorax, and the elytral suture being alone, usually, more or less blackened) will at once separate it from the other *Anthici* here enumerated; nevertheless it is extremely variable in colour, inasmuch as the *entire* prothorax and elytra are sometimes pale, whilst at others, on the contrary, the whole surface is a good deal infuscated. Its antennæ are rather slenderer at the base, and more incrassated towards the apex, than is the case with the *Anthici* generally (the terminal joint itself being often appreciably enlarged); its elytra are of a softer, or less consistent, texture; and its punctation is so light and minute as to be almost obsolete.

The *A. canariensis* is doubtless universal throughout the Group: indeed I have myself captured it in all the islands except Gomera and Hierro, in the former of which it was taken by Dr. Crotch. In Lanzarote, Fuerteventura, and Teneriffe it was found likewise by Mr. Gray; and it has been communicated from the last by the Barão do Castello de Paiva. I even met with it on the little island of Graciosa, off the extreme north of Lanzarote.

786. **Anthicus scydmænoides**, n. sp.

A. fusco-piceus, subnitidus, pube subcinereâ demissâ tenui vestitus; capite magno, subrotundato, convexo; prothorace brevi, postice valde angustato et subconstricto-impresso; elytris ellipticis postice acutiusculis, conspicue punctatis, concoloribus; antennis pedibusque gracilibus, illis fusco-, his pallido-testaceis.—Long. corp. lin. $\frac{3}{4}$.

Habitat Teneriffam, a W. D. Crotch semel repertus.

The *elliptical* (or somewhat obovate, posteriorly acute) elytra and brownish-piceous hue of this excessively minute *Anthicus* give it so much the *primâ facie* appearance of a *Scydmænus*, that, before an accurate examination, I had inadvertently referred it to that group. Nevertheless the outline of its head and prothorax, as well as the structure of its antennæ, palpi, and feet, of course immediately remove it, on a closer inspection, from the *Scydmænidæ*. Its head and

prothorax (the former of which is large and round, whilst the latter is considerably abbreviated and much narrowed behind) are almost free from sculpture, but its elytra are rather distinctly punctured. The only specimen which I have seen is due to the researches of Dr. Crotch in Teneriffe, during the spring of 1862.

Genus 294. **OCHTHENOMUS.**

(Dejean) Schmidt, *Stett. Ent. Zeit.* iii. 196 (1842).

787. **Ochthenomus senilis,** n. sp.

O. angustus, fusco-piceus, opacus, pilis brevissimis cinereis argute irroratus et ubique dense punctulatus; capite elongato-subquadrato, inter oculos parvos prominentes depresso; prothorace parvo, tenui, basi magis testaceo; elytris subparallelis, mox pone basin fasciâ magnâ transversâ necnon ad apicem ipsum maculâ distinctiore hastatâ, testaceis, ornatis; antennis elongatis, apicem versus incrassatis, ferrugineis; pedibus gracilibus, testaceis.—Long. corp. lin. vix $1\frac{1}{2}$.

Habitat Palmam, ad rupes excelsas aquosas semel repertus.

A single example of this beautiful *Ochthenomus* was captured by myself, during June 1858, at a high elevation in the island of Palma —at the base of some damp, trickling rocks above the Pinal of the Banda, close to the edge of the great Caldeira.

Genus 295. **XYLOPHILUS.**

(Bonelli) Latr., *Fam. Nat.* 383 (1825).

§ I. *Corpus gracile, subcylindricum. Antennæ in maribus longissimæ, intus serratæ, art° 2^do^ (in utroque sexu) brevi. Oculi magni, in maribus maximi supra fere contigui. Pedes longiusculi.* (Euglenes, *Westw.*)

788. **Xylophilus oculatissimus,** n. sp.

X. testaceus, dense et (præsertim in elytris) profunde punctatus, pube grossâ subdemissâ fulvescente dense vestitus; capite transverso-rotundato, paulo fuscescentiore; prothorace parvo, subconico-quadrato, basi transversim impresso, angulis posticis subrectis; elytris parallelis, in medio fasciâ indistinctâ suffusâ (antice per suturam et ad latera per marginem ductâ) fuscescente nebulosis, basi conjunctim subemarginatis.—Long. corp. lin. $1\frac{1}{2}$.

Habitat Palmam, cum *Ochthenomo senili* deprehensus.

This beautiful *Xylophilus*, the elongated antennæ of which (with their abbreviated second joint) and enlarged subconfluent eyes, *in the male sex*, would refer it to the subgenus *Euglenes*, is remarkable, *inter alia*, for its testaceous surface—which has merely a suffused, indistinct, cloudy fascia across the central region of its elytra (and more or less produced along the lateral margins and the anterior portion

of the suture) slightly darkened. Its head, however, would appear to be sometimes a little infuscated. I have seen hitherto but three examples of it, which were taken by myself at a high elevation in the island of Palma—in the same locality as (and indeed in company with) the *Ochthenomus senilis*, described above.

§ II. *Corpus ovatum. Antennæ* (*in utroque sexu*) *breviores, haud serratæ, articulis intermediis brevibus, inter se subæqualibus. Oculi minores, in utroque sexu distantes. Pedes breviores.* (Phytobænus, *Sahlb.*)

789. **Xylophilus pallescens.**

X. testaceus, dense sed minutissime punctulatus (capite fere impunctato), pube subtilissimâ brevissimâ valde demissâ cinereo-fulvescente densissime vestitus (quasi sericatus); capite subtriangulari; prothorace transverso-quadrato, antice vix latiore, ad latera versus angulos posticos argute obtusiusculos oblique subtruncato, basi intra angulos minute foveolato; elytris ovalibus, subconvexis, concoloribus, basi conjunctim trisinuatis.—Long. corp. lin. vix 1.

Xylophilus pallescens, *Woll., Ins. Mad.* 538. tab. xiii. f. 3 (1854).
—— ——, *Id., Cat. Mad. Col.* 167 (1857).

Habitat Teneriffam, in collibus mox supra Sanctam Crucem lectus.

A single example of this insect, which occurs, not uncommonly, beneath vegetable refuse around Funchal in Madeira, was taken by myself on the ascent of the mountains immediately behind S^ta^ Cruz of Teneriffe—in the direction of El Campo and the Las Mercedes range.

Fam. 80. SCYDMÆNIDÆ.

Genus 296. **SCYDMÆNUS.**

Latreille, *Gen. Crust. et Ins.* i. 232 (1806).

790. **Scydmænus tarsatus.**

S. piceo-niger, nitidissimus, fere impunctatus, parce sed grosse fulvescenti-cinereo-pubescens; prothorace ad basin foveolis quatuor punctiformibus notato; elytris ovalibus, apice pygidio brevioribus, basi lineolis duabus impressis; antennis pedibusque crassis, pallide rufo-ferrugineis, tarsis anticis dilatatis.—Long. corp. lin. $1\frac{1}{8}$.

Scydmænus tarsatus, *Kunze, Mon. Scyd.* 11. f. 3 (1823).
—— ——, *Denny, Mon. Pselaph. et Scyd.* 57 (1825).
—— ——, *Steph., Ill. Brit. Ent.* v. 80 (1832).

Habitat Teneriffam, a W. D. Crotch nuper repertus.

Six examples of the European *S. tarsatus* were taken by Dr. Crotch in Teneriffe, during the spring of 1862. They seem to accord precisely with the ordinary type—the species being well distinguished

by its bright and coarsely pubescent but almost impunctate surface, by the four rounded, punctiform foveæ at the base of its prothorax, and by the robustness of its antennæ and legs, the latter of which have their front tarsi perceptibly dilated.

Fam. 81. PSELAPHIDÆ.

Genus 297. EUPLECTUS.

(Kirby) Leach, *Zool. Miscell.* (1817).

791. Euplectus Karstenii.

E. rufo-testaceus; capite dense punctulato, antice transversim impresso et utrinque sulcato; prothorace in disco foveolâ impresso, basi profundius trifoveolato; elytris depressiusculis.—Long. corp. lin. vix $\frac{3}{4}$.

Pselaphus Karstenii, *Reichenb., Mon. Pselaph.* 71. tab. ii. f. 21 (1816).
Euplectus Karstenii, *Denny, Mon. Pselaph. et Scyd.* 12 (1825).
—— ——, *Aubé, Ann. de la Soc. Ent. de France,* 146 (1844).

Habitat Teneriffam et Palmam, sub cortice laxo putrido in sylvaticis intermediis degens.

The rufo-testaceous hue and distinctly punctured head of this *Euplectus*, combined with its rather depressed elytra and other details, seem to refer it to the European *E. Karstenii*. It is rare at the Canaries, or at any rate local, and confined apparently to the sylvan districts of intermediate elevations. Under such circumstances I have taken it sparingly (from beneath the loose, rotting bark of trees) at Las Mercedes in Teneriffe, and more abundantly high up in the Barranco da Agua of Palma.

792. Euplectus monticola, n. sp.

E. præcedenti similis, sed paulo major, foveis in capite prothoraceque levius impressis; oculis sensim majoribus; antennis pedibusque sublongioribus, illarum clavâ longiore, laxiore (magis perfoliatâ), articulis penultimo et antepenultimo distincte majoribus.—Long. corp. lin. 1.

Habitat in montibus valde excelsis Teneriffæ, usque ad 9000′ s. m. ascendens.

Although in general aspect and hue this *Euplectus* agrees with the *Karstenii*, nevertheless it is certainly distinct from it, ascending moreover (apparently) to a much higher elevation,—the only two examples which I have seen having been captured by myself on the lofty Cumbre of Teneriffe, overlooking the Cañadas, about 9000 feet above the sea. It differs from the *Karstenii* in being a little larger, with

the foveæ of its head and prothorax more lightly impressed, in its eyes being less minute, and in its limbs being perceptibly longer, with the antennal club more elongated and *perfoliate* (the penultimate and antepenultimate joints being more loosely connected, and very appreciably larger).

793. **Euplectus sanguineus.**

E. piceus vel piceo-castaneus; capite utrinque punctulato, antice transversim impresso et utrinque profunde sulcato; prothorace in disco foveolâ impresso, basi profundius trifoveolato; elytris convexiusculis, postice sensim latioribus; antennis pedibusque piceo-testaceis.—Long. corp. lin. $\frac{3}{4}$.

Euplectus sanguineus, *Denny, Mon. Pselaph. et Scyd.* 10 (1825).
—— ——, *Heer, Fna Col. Helv.* 362 (1841).
—— ——, *Aubé, Ann. de la Soc. Ent. de France,* 146 (1844).

Habitat Teneriffam, a W. D. Crotch semel captus.

A single specimen of this insect was taken by Dr. Crotch in Teneriffe, during the spring of 1862. I can detect no character to separate it from the European *E. sanguineus*—a species which may be known by its *piceous*, or dark-chestnut, hue (the limbs, however, being paler or more testaceous), by its head being punctured on either side (though less densely and less coarsely so than in the *Karstenii*), and by its elytra being rather convex, and rounded laterally (or gradually somewhat widened behind).

Genus 298. **ENOPTOSTOMUS** (nov. gen.).

Schaum* (in hoc opusculo citatus).

"*Antennæ* approximatæ, tuberculi frontalis lateribus insertæ, maris quatuor, fœminæ duobus articulis ultimis incrassatis, ultimo majore. *Palpi maxillares* 4-articulati (?), articulo secundo valde arcuato, apice parum incrassato, tertio utrinque valde dilatato, semilunari, quarto in conum transversum dilatato (ultimis duobus appendice laterali setiformi instructis). *Tarsi* unguiculis duobus æqualibus.

"This new genus is allied to *Ctenistes* and *Centrotoma*, especially to the former; the maxillary palpi have lateral setiform appendages as in those genera, but only on the last two joints.

* The little Pselaphid which forms the type of the above genus I consigned recently for description to Dr. Schaum, feeling assured that his long and close attention to the *Pselaphidæ* would enable him to point out its distinctive peculiarities with greater precision than I should myself be in a position to do. I would wish therefore to state that the generic and specific diagnoses given above have been communicated by him, for insertion in this Catalogue; and that I consequently cite them *verbatim*, without any additional observations of my own (beyond those relating to the *habitat*).

"*Body* covered with squamiform hairs. *Head* not broader than the prothorax and a little longer than broad, rounded behind and narrowed in front (the front being produced into a short process), longitudinally divided by a feeble channel; the forehead rather flat, and impressed with two foveæ. *Eyes* very prominent. *Antennæ* implanted at the sides of the frontal process, and 11-jointed; the first two joints thicker than the following one (the 1st being subcylindrical, and the 2nd somewhat rounded), the 3rd to the 7th equal and subglobular, the last four different according to the sex,—in the *male* all of them being thickened (the 8th considerably larger than the 7th, the 9th also larger than the 7th but smaller than the 8th, the 10th a little larger than the 8th, the 11th much incrassated, twice as long as the 10th, and rounded, with a somewhat oblique apex); whilst in the *female* the last two joints only are thickened (the 8th being even a trifle smaller than the 7th and 9th, which are of equal size), but a little smaller than in the male. *Maxillary palpi* 4(?)-jointed,—the basal joint (if existing) minute and not visible without dissection, the second strongly bent (being almost elbowed behind the middle) and slightly thickened at the apex, the third greatly dilated (more so on its inner than its outer side) and almost semilunar (being rounded at the base and nearly straight along its anterior edge—the outer horn being produced into a long setiform appendage, whilst on the inner horn the last joint is implanted), and the fourth of the same size as the preceding one but forming a transverse cone, and equally furnished with a lateral setiform appendage. *Prothorax* not longer than broad, with a round and large fovea in the middle behind, and a deep longitudinal impression on either side. *Elytra* longer than the prothorax, rounded at the shoulders and dilated towards their apex, transversely impressed along their hinder edge, and more thickly covered in this impression (or groove) with squamiform hairs; with an entire stria (on each) alongside the suture, and another in the middle which is more deeply impressed at the base. *Abdomen* with four segments uncovered; the first three have a thick margin, and the second is densely clothed with squamiform hairs at its base. *Legs* slender; *tibiæ* a little bent; *tarsi* narrow and short (the four hinder ones being four times shorter than the tibiæ), and all of them terminated by two equal and minute claws."

794. "Enoptostomus Wollastoni, n. sp.

"*E.* rufo-testaceus, nitidus, subdepressus.—Long. corp. lin. $\frac{2}{3}$."

Habitat in Teneriffa et Gomera, sub lapidibus rarissimus.

Apparently both rare and local. The only examples (about twenty in number) which I have seen (except one which was found by Dr. Crotch in Gomera) were captured by myself close to S^ta^ Cruz, in Teneriffe—from beneath small stones, under some fig-trees, at a low elevation in (and on the southern side of) the Barranco do Passo Alto.

Fam. 82. STAPHYLINIDÆ.

(Subfam. I. ALEOCHARIDES.)

Genus 299. **FALAGRIA.**

(Leach) Mannerheim, *Brachél.* 86 (1831).

795. **Falagria obscura.**

Aleochara obscura, *Grav., Col. Micropt.* 74 (1802).
Falagria obscura, *Mann., Brachél.* 87 (1831).
—— ——, *Woll., Ins. Mad.* 541 (1854).
—— ——, *Id., Cat. Mad. Col.* 169 (1857).

Habitat insulas Canarienses, in Lanzarota et Hierro hactenus haud detecta.

This common European insect (which abounds in Madeira and Porto Santo) is widely spread over the Canarian Group, where it is doubtless universal—though hitherto it does not happen to have been observed in either Lanzarote or Hierro. But in Fuerteventura, Grand Canary, Teneriffe, and Palma I have myself taken it; and in Gomera it was found by Dr. Crotch. In Palma it was likewise met with by Mr. Gray. It occurs principally at rather low elevations, but does not appear to be anywhere abundant.

Genus 300. **ECHIDNOGLOSSA** (nov. gen.).

Corpus angustum; *capite* rotundato, per collum angustum prothoraci connexo; *elytris* brevissimis; *abdomine* basi valde constricto. *Antennæ* articulis 1mo, 2do et 3^{tio} reliquis longioribus. *Labrum* transversum, antice rotundatum subintegrum (obsolete trilobatum). *Mandibulæ* elongatæ, basi subrectæ, apice incurvæ acutissime, intus pone apicem usque ad basin membranâ angustissimâ tenuissimâ (ægerrime observandâ) minute ciliatâ auctæ necnon in unâ denticulo minutissimo pone medium armatæ. *Maxillæ* lobo *externo* basi apiceque membranaceo, apice pubescente; *interno* vix breviore, intus membranaceo spinulisque elongatis omnino ciliato. *Palpi* longissimi; *maxillares* articulis 2do et 3^{tio} elongatis clavatis (hôc crassiore), 4to tenui aciculari; *labiales* 3-articulati, articulis inter se longitudine subæqualibus, latitudine decrescentibus (3^{tio} tenui cylindrico). *Mentum* transversum, apice late sed leviter emarginatum. *Ligula* antice in medio longissima, angustissima, parallela, membranacea, summo apice minutissime bifida; *paraglossis* nullis. *Tarsis* omnibus certe 5-articulatis, *posticis* articulis quatuor basalibus gradatim paulo decrescentibus.

Ab ἔχιδνα, vipera, et γλῶσσα, ligula.

In its round but excessively pedunculated head (which is joined to the thorax by an extremely narrow neck), as well as in its peculiar outline, greatly abbreviated, subconvex elytra, and basally-constricted

abdomen, the unique insect from which the above structural characters have been drawn has much the appearance of a large *Autalia* or *Falagria* (especially the former); nevertheless *all* its tarsi are most unquestionably 5-articulate, and it has no visible paraglossæ. In both of these latter respects, and in the narrow, parallel, greatly produced anterior portion of its ligula, it agrees with *Ocalea*; but the majority of its external features are so completely on the *Autalia*-type that I cannot but think that it would be unnatural to remove it far from that group. With the exception of its extremely elongated and straightened ligula, its oral organs are nearly similar to those of *Homalota*; but its front feet are (like the remainder) pentamerous, and in its general *facies* it is totally different from the members of that genus.

796. **Echidnoglossa constricta**, n. sp.

E. rufo-ferruginea, subnitida, alutacea (vix punctulata), parce pubescens; capite paulo obscuriore; prothorace angusto, ante medium angulatim sublatiore, canaliculato (canaliculâ in disco obsoletâ, sed postice in foveam latiorem mergente); elytris brevissimis, subconvexis, ad latera vix obscurioribus; abdomine postice obscuriore; antennis pedibusque infuscato-testaceis, illis versus apicem nigrescentibus.—Long. corp. lin. $1\frac{3}{4}$.

Habitat Teneriffam, prope oppidulum Guia a W. D. Crotch reperta.

Apparently extremely rare, the only specimen which I have seen having been captured by Dr. Crotch (during the spring of 1862) near the little town of Guia (opposite to Gomera) on the western side of Teneriffe.

Genus 301. **PHYTOSUS***.

(Rudd) Curtis, *Brit. Ent.* xv. 718 (1838).

797. **Phytosus minyops**, n. sp.

P. angustissimus, testaceus, opacus, dense cinereo-pubescens; capite vix rufescentiore; elytris brevissimis; abdomine in medio nigricante.—Long. corp. lin. vix $1\frac{1}{3}$.

Obs.—Species *nigriventri* Chev. affinis, sed angustior, capite pallidiore oculisque minoribus magis rotundatis. A *baltico* Kraatzii differt corpore majore pallidiore, abdomine densius subtiliusque punctulato et basi pallido (nec nigrescente).

Phytosus nigriventris, *Woll.* [nec *Chev.*], *Cat. Mad. Col.* 169 (1857).

Habitat Fuerteventuram, sub fucis per oram maritimam semel captus.

* Lacordaire and Kraatz, following Erichson, have defined *Phytosus* as having merely its front feet 4-articulate; but, after mounting in balsam the whole six legs both of the *nigriventris* and *spinosus*, I am quite satisfied that the *four* anterior tarsi are tetramerous (as indeed was originally, and correctly, stated by Curtis).

The only Canarian example of this *Phytosus* which I have hitherto seen was taken by myself in Fuerteventura—from beneath sea-weed on the sandy beach about a mile to the south of Puerto de Cabras. Although I do not possess at present a Porto-Santan specimen for comparison, I have no hesitation in regarding it as conspecific with the *Phytosus* which I identified (I now believe, wrongly), in my Madeiran Catalogue, with the *nigriventris* of more northern latitudes. There can be no doubt that it is very closely allied to that insect; but it is rather narrower, its head is scarcely (if at all) darker than the prothorax and elytra, and its eyes are very appreciably smaller and rounder. In some respects it approaches nearer to the *balticus* of Kraatz; but is larger and altogether paler, and its abdomen (which is more densely and finely punctulated) has the basal half of a rufo-testaceous instead of a piceous hue.

798. **Phytosus spinifer.**

P. præcedente vix latior magisque parallelus, niger, opacus, densissime cinereo-pubescens; elytris prothorace sensim longioribus, depressis, postice gradatim plus minus testaceis; antennis (articulo ultimo obscuriore excepto) pedibusque infuscato-testaceis.—Long. corp. lin. vix $1\frac{1}{3}$.

Phytosus spinifer?, *Curtis, Brit. Ent.* xv. 718 (1838).
—— ——, *Kraatz, Nat. der Ins. Deutsch.* ii. 44 (1858).

Habitat Lanzarotam et Fuerteventuram in locis similibus ac præcedens.

Although I have no actual type of the *P. spinifer* for comparison, I believe this to be the *Phytosus* which is referred by Kraatz to that species, and which corresponds with *one of the* (supposed) *sexes* described by Curtis (the other being probably either the *nigriventris* or the *balticus*). It is darker and more parallel than the other *Phytosi* hitherto detected, merely the hinder portion of its elytra (in addition to the limbs) being *gradually* more or less testaceous. Its elytra, likewise, are more flattened and less abbreviated; and its whole surface is very densely clothed with cinereous pubescence,—the entire insect being somewhat suggestive at first sight of a *Phlœopora*, or of an excessively diminutive *Aleochara* of the *obscurella*-type. I have taken it rather commonly from beneath sea-weed on the sandy shores of Lanzarote and Fuerteventura,—namely, to the south of Arrecife of the former and of Puerto de Cabras of the latter (in which second locality it was found likewise by Mr. Gray). It will probably occur generally throughout those latitudes, if searched for in the proper places, for I observed it in precisely similar spots at Mogadore on the opposite coast of Morocco.

Genus 302. PHLŒOPORA.

Erichson, *Käf. der Mark Brand.* i. 311 (1837).

799. Phlœopora corticina, n. sp.

P. nigro-picea, subopaca; prothorace quadrato, fuscescentiore; elytris rufo-testaceis, versus basin et latera plus minus infuscatis; antennis brevibus, incrassatis, ad basin pedibusque testaceis.—Long. corp. lin. $1\frac{1}{4}$–$1\frac{1}{2}$.

Habitat in sylvaticis Teneriffæ et Palmæ, sub cortice arborum latens.

Somewhat intermediate between the European *P. reptans* and *corticalis*—agreeing more with the former in its size and colour, but with the latter in its less transverse, subquadrate prothorax. When viewed, however, beneath the microscope, it will be seen to be rather more strongly and sparingly punctured than either of them, and to have its antennæ (if anything) even thicker still. As in the *reptans*, its elytra are almost entirely rufo-testaceous (though perhaps a *little* more infuscated towards the base and sides); but its prothorax is generally of a paler tint, being for the most part only a shade darker than the elytra. The *P. corticina* I have observed hitherto merely in Teneriffe and Palma—where it is extremely local, occurring under the bark of trees within the sylvan districts of intermediate elevations. In the former I have taken it in the laurel-woods above Taganana and at the Agua Garcia, as well as from beneath the bark of a felled *Pinus canariensis* at the Agua Mansa; and in the latter in the Barranco de Galga.

Genus 303. TACHYUSA.

Erichson, *Käf. der Mark Brand.* i. 307 (1837).

800. Tachyusa raptoria.

T. atra, nitida, minutissime et densissime punctulata, subtilissime pubescens; capite ovali, oculis magnis; prothorace subquadrato, integro; elytris apicem versus paulo fuscescentioribus; abdomine postice attenuato; pedibus elongatis, femoribus tibiisque picescentibus, tarsis pallide testaceis, posticis longissimis.—Long. corp. lin. $1\frac{1}{4}$.

Tachyusa raptoria, *Woll., Ins. Mad.* 542 (1854).
—— ——, *Id., Cat. Mad. Col.* 170 (1857).

Habitat Palmam, Maio exeunte A.D. 1858 exemplar unum in Barranco de Galga collegi.

A single example of this insect, captured by myself in Palma (by the edge of a small stream in the Barranco de Galga), is the only one which I have as yet seen from the Canaries; and it may therefore, as in Madeira, be regarded as exceedingly rare. Its intensely black hue, elongated legs, and pallid feet (the hinder pair of which are ex-

tremely long), combined with its posteriorly attenuated abdomen, its oval head and large eyes, its subquadrate prothorax, and its *most* minutely (though densely) punctulated surface, will sufficiently distinguish it. Like the *Chiloporæ*, it is of subaquatic habits—as indeed its general structure and rapid movements would seem to indicate.

801. **Tachyusa simillima**, n. sp.

T. depressa, fusco-nigra, subnitida, densissime punctulata, dense cinereo-pubescens; capite quadrato, in fronte longitudinaliter impresso, oculis parvis; prothorace late canaliculato; elytris vix fuscescentioribus; abdomine nigro; antennis pedibusque infuscato-testaceis.—Long. corp. lin. 1.

Obs.—Species *T. sulcatæ* Kiesenw. nimis affinis, et forsan ejus varietas geographica. Differt solum corpore subminore, subangustiore, elytris subminoribus, punctura (præsertim in capite) sensim fortiore necnon colore dilutiore (sc. magis fuscescente, antennis pedibusque pallidioribus).

Habitat Lanzarotam et Fuerteventuram, sub fucis per oras arenosas maritimas degens.

I am doubtful whether this *Tachyusa* should be regarded as more than a geographical modification of the European *T. sulcata*; nevertheless, since it unquestionably has a few differential features of its own, and as the acknowledged distinctions between the species of this immediate type are very minute, I do not think it should be absolutely identified with that insect*. It seems to be altogether a trifle smaller and narrower than the *sulcata*, with its elytra somewhat less developed; its punctation (particularly on the head) is a little stronger, and its colour is less black—the head, prothorax, and elytra being appreciably browner and the limbs more testaceous. From the Madeiran *T. maritima* it is abundantly distinct—not merely in its much smaller size and narrower outline, but likewise in its browner hue, its flatter and more sulcated head, and its thicker antennæ (the joints of which are less elongated, or more moniliform). The only two specimens which I have seen were taken by myself (from under sea-weed) on the sandy shores of Lanzarote and Fuerteventura respectively,—namely, to the south of Arrecife of the former and of Puerto de Cabras of the latter.

Genus 304. **XENOMMA**†.

Wollaston, *Ins. Mad.* 543 (1854).

* Dr. Kraatz, to whom I sent one of my specimens for examination, returned it with the remark "*Tachyusæ sulcatæ* Kiesenw. affinis, sed minor, capite fortius punctato."

† Whether *Xenomma* can be retained as a distinct genus, I will not venture to

802. **Xenomma muscicola**, n. sp.

X. angusto-lineare, infuscato-testaceum, nitidum, fere impunctatum; capite subrotundato, convexo, oculis minutissimis; prothorace subquadrato, postice paulo rotundato sed vix angustiore; elytris brevissimis; abdomine subparallelo, apicem versus obscuriore; antennis brevibus, fuscescentibus; pedibus testaceis.—Long. corp. lin. 1.

Habitat Canariam Grandem, in regione El Monte captum.

It is not impossible that this somewhat insignificant little insect may be identical with the Madeiran *X. filiforme*; nevertheless, as I have no type of that species at present for comparison, I do not think it would be safe to treat it as such. The few examples which I have seen were taken by myself, from beneath moss and fallen leaves, in the region of El Monte in Grand Canary, during the spring of 1858.

Genus 305. **HOMALOTA.**

Mannerheim, *Brachél.* 73 (1831).

803. **Homalota rufofusca**, n. sp.

H. rufo-fusca, subopaca, flavescenti-cinereo-pubescens, minutissime (in capite parcissime) punctulata; capite rotundato, oculis parvis; prothorace transverso-subquadrato, postice paulo angustiore et obsoletissime sed latissime canaliculato; elytris brevissimis; antennis ad basin pedibusque testaceis.—Long. corp. lin. $1\frac{1}{2}$.

Habitat elevatos humidos sylvaticos Teneriffæ, in lauretis supra Taganana Maio A.D. 1859 parcissime capta.

The subopake, reddish-brown surface of this *Homalota* (to which its somewhat yellowish pubescence imparts a slightly flavescent tinge), combined with its pallid legs, small eyes, and excessively abbreviated elytra, will serve to distinguish it. I have observed it only in the sylvan districts of a high elevation in Teneriffe—my few specimens having been obtained from the damp laurel-clad mountains above Taganana.

804. **Homalota rufobadia**, n. sp.

H. præcedenti similis, sed minor, paulo nitidior minusque pubescens, colore omnino rufescentiore; capite vix magis ovali, oculis etiam

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pronounce positively; but, apart from its secondary characters—of most diminutive eyes, greatly abbreviated elytra, apterous body, &c.—it seems impossible to amalgamate it either with *Myrmedonia* or *Homalota* on account of its 5-jointed anterior tarsi; whilst from *Oxypoda* the structure of its *hinder* feet (which have their articulations of subequal length) will alike remove it. At the same time I must express my conviction that there are few details less satisfactory for establishing genera upon than the tarsi of these minute members of the *Staphylinidæ*, which are often so difficult of observation that the highest powers of the microscope are apt to leave us in doubt as to the precise number of the joints which compose them.

subminoribus; prothorace in disco magis depresso; abdomine levius punctulato; antennis pallidioribus ac multo brevioribus, articulis magis transversis (ultimo minus acuto).—Long. corp. lin. 1–1¼.

Habitat in locis similibus ac præcedens, sed in Palma (nec Teneriffa).

This species seems to have exactly the same habits as the last one, occurring, however, in Palma instead of Teneriffe. It differs from it in being smaller, more shining, and less pubescent; in its head being a little more oval (or less rounded), and with the eyes perhaps even smaller still; and in its colour being a shade darker, or more rufescent,—the antennæ, however (which are much shorter, with their joints more transverse), being paler.

805. **Homalota trogophlœoides**, n. sp.

H. subdepressa, nigra, subopaca, densissime et grosse fulvescenti-cinereo-pubescens et coriaceo-alutacea; capite ovali, oculis magnis; prothorace transverso-quadrato, angulis posticis argute determinatis, postice in medio levissime sed latissime impresso; elytris quadratis; antennis brunneis, ad basin pedibusque testaceis.—Long. corp. lin. 1⅓–1½.

Habitat Fuerteventuram, sub fucis in arenosis maritimis latens.

This most distinct *Homalota* (which was examined by Kraatz, and regarded by him as new) seems to be a littoral species, residing beneath marine *rejectamenta* on the sandy shores. In such situations it was taken by Mr. Gray and myself, at the end of January 1858, about a mile to the south of Puerto de Cabras in Fuerteventura. Its very square elytra and general contour, combined with its subopake surface and dark hue (the legs alone being pale), give it somewhat the *primâ facie* appearance of a large *Trogophlœus*; and it is further remarkable for its rather coarse fulvo-cinereous pubescence, and for its (transverse-quadrate) prothorax having the posterior angles sharply defined.

806. **Homalota amnicola**, n. sp.

H. subdepressa, nigra, subopaca, dense pubescens, alutacea; capite subrotundato, oculis magnis; prothorace angustulo, subquadrato, basi foveolâ mediâ impresso; elytris latiusculis, quadratis; antennis pedibusque longiusculis, illis ad basin vix dilutioribus, his infuscato-testaceis.—Long. corp. lin. 1⅔–2.

Habitat Canariam, Teneriffam, Gomeram et Palmam, ad margines rivulorum in intermediis (præsertim sylvaticis) degens.

This rather large *Homalota* (which was examined by Dr. Kraatz, and considered to be new) appears, like the *H. gregaria*, the Madeiran *H. obliquepunctata*, &c., to be of subaquatic habits—residing beneath

stones and shingle at the edges of the small streams at intermediate elevations, particularly within the sylvan districts. In such situations I have taken it in Grand Canary, Teneriffe, and Palma; and in Gomera it was found by Dr. Crotch. My Teneriffan examples are from the Agua Garcia (where it abounds), Las Mercedes, La Esperanza, and Ycod el Alto. It is slightly blacker than the *obliquepunctata*, and relatively a little broader (both its head and elytra being appreciably more developed); its antennæ also are distinctly darker; and its elytra are not quite so flattened, and (although sometimes very obscurely *impressed*) free from the few rounded punctiform foveæ which are placed obliquely across either disc in that species. Its pubescence likewise is a shade darker, or less fulvescent.

807. **Homalota gregaria.**

H. subparallela, depressa, nigra, subopaca, minute fulvescenti-cinereo-pubescens; capite rotundato; prothorace subquadrato, basi rotundato et foveâ mediâ impresso; elytris postice gradatim lurido-testaceis; antennis brunneis; pedibus infuscato-testaceis, femoribus picescentibus.

Variat (rarius) elytris omnino concoloribus.—Long. corp. lin. $1\frac{1}{3}$–vix $1\frac{2}{3}$.

Homalota gregaria, *Erich., Gen. et Spec. Staph.* 87 (1839).
Tachyusa immunita, *Id., Gen. et Spec. Staph.* 916 (1839).
Homalota gregaria, *Woll., Ins. Mad.* 550 (1854).
—— ——, *Id., Cat. Mad. Col.* 174 (1857).

Habitat in inferioribus intermediisque Lanzarotæ, Fuerteventuræ, Canariæ, Teneriffæ et Gomeræ, inter lapillos per margines rivulorum hinc inde abundans.

The *H. gregaria*, so widely spread over Europe, and which occurs in the Madeiran Group, is probably universal at the Canaries—though hitherto I have myself detected it only in Lanzarote, Fuerteventura, Grand Canary, and Teneriffe (in the first of which it was taken likewise by Mr. Gray). It was, however, captured by Dr. Crotch in Gomera. It is more particularly abundant at low and intermediate elevations, residing at the edges of the small streams. It may be known by its rather parallel outline and depressed, subopake surface, by the small fovea at the base of its posteriorly-rounded prothorax, by its elytra being *gradually* of a more or less lurid-testaceous hue behind, by its brown and somewhat robust antennæ, and by the femora of its pallid legs being more or less infuscated.

808. **Homalota amnigena**, n. sp.

H. depressa, fusco-nigra, subopaca, dense pubescens; capite rotundato-ovali; prothorace subquadrato, leviter canaliculato, canaliculâ

in foveam parvam mediam basalem mergente; antennis ad basin infuscato-, pedibus pallido-testaceis.—Long. corp. lin. $1\frac{1}{4}$–vix $1\frac{1}{2}$.

Habitat in Teneriffa, Palma et Hierro, per margines rivulorum necnon in humidis intermediis (præsertim sylvaticis), rarior.

In habits and general contour this little *Homalota* has much in common with the last two species. It is, however, much smaller than either of them, of a browner or more picescent hue, and its elytra are scarcely a shade paler than the head and prothorax. Its head, also, is, if anything, a trifle more oval (or less rotundate), its prothorax is lightly channeled, and its legs are extremely pale *. Like the *H. obliquepunctata*, it seems to reside at the edges of the small streams, and on the damp ledges of rocks, at intermediate elevations, particularly within the sylvan districts. In such situations I have taken it sparingly at the Agua Garcia, Souzal, La Esperanza, and at Las Mercedes, in Teneriffe, as well as in similar localities both in Palma and Hierro. Teneriffan specimens have also been communicated by Dr. Crotch.

809. **Homalota persimilis**, n. sp.

H. præcedenti valde affinis, sed paulo minor angustior et densius sed etiam subtilius pubescens, sculpturâ (oculo fortissime armato) multo densiore (sc. densissimâ) et paulo fortiore; capite sensim minore, rotundatiore; prothorace subbreviore, basi sublatiore; elytris vix minoribus; antennis pedibusque paulo brevioribus gracilioribus, his vix magis infuscatis.—Long. corp. lin. $1\frac{1}{4}$.

Habitat in inferioribus Teneriffæ, prope Portum Orotavæ (per aërem volitantem) deprehensa.

Judging from the single individual now before me, the *primâ facie* aspect of this insignificant *Homalota* is very much that of the *amnigena*; nevertheless I am quite satisfied that it is altogether distinct specifically, as indeed its habits would seem to imply—it having been captured by myself immediately outside the Puerto Orotava in Teneriffe (scarcely above the sea-level), whilst that insect is essentially one of intermediate elevations. It is a little smaller and narrower than the *H. amnigena*, as also still more densely and minutely pubescent; its head is perceptibly smaller and rounder; its prothorax is shorter, and a trifle broader behind; its elytra are somewhat less developed; its limbs are appreciably shorter and slenderer, with the legs more infuscated; and its entire sculpture, when viewed beneath the microscope, will be seen (particularly on the abdomen) to be *very* much closer and rather more coarse.

* It was examined by Kraatz, who returned it as "Homalota, n. sp."

810. Homalota longula.

H. angusto-linearis, depressa, nigra, subnitida, pubescens, confertissime subtilissimeque coriaceo-alutacea; capite punctulis levissimis obscuris superadditis dense obsito, in fronte foveolato; prothorace subquadrato, canaliculato; elytris vix fuscescentioribus; abdomine confertissime subtilissimeque punctulato; antennis gracilibus, nigro-fuscis; pedibus brevibus, saturate testaceis.—Long. corp. lin. 1.

Homalota longula (*Chevrier*), *Heer, Fna Col. Helv.* 334 (1841).
—— thinobioides, *Kraatz, in Stett. Ent. Zeit.* xv. 125 (1854).
—— ——, *Id., Nat. der Ins. Deutsch.* ii. 228 (1856).
—— ——, *Woll., Cat. Mad. Col.* 175 (1857).

Habitat Lanzarotam et Teneriffam, inter lapillos ad margines aquarum degens.

The exceedingly dense and fine sculpture of this small and narrow *Homalota* (the head, prothorax, and elytra of which are most minutely and closely coriaceo-alutaceous, whilst the abdomen is almost *as* minutely and closely punctulated), combined with its depressed surface, parallel outline, slender antennæ, and rather short legs, will serve to distinguish it. When viewed beneath the microscope, its head will be seen (in addition to the dense alutaceous sculpture) to be somewhat thickly but very lightly subpunctulated. Like the allied species, it is of subaquatic habits, residing amongst wet stones and shingle at the edges of streams and pools. It is probably common throughout the Group, though, being so small and insignificant, I do not happen to have observed it very generally. I have, however, taken it sparingly in Lanzarote, as well as near S^ta^ Cruz in Teneriffe. It occurs also in Madeira.

811. Homalota fragilis.

H. præcedenti valde similis, sed punctulis superadditis in capite (oculo fortissime armato) minoribus remotioribus (sc. minutissimis, ægerrime observandis), abdomine paulo nitidiore et multo parcius sed parum profundius punctulato; pedibus pallidioribus (minus infuscatis).—Long. corp. lin. 1.

Homalota fragilis?, *Kraatz, in Stett. Ent. Zeit.* xv. 125 (1854).
—— ——?, *Id., Nat. der Ins. Deutsch.* ii. 223 (1856).

Habitat Teneriffam, Gomeram et Palmam, in locis similibus ac præcedens.

Without the aid of the microscope this species is scarcely separable from the preceding one, with which in its general *facies* it is almost coincident. Nevertheless, when placed under a high magnifying power, its abdomen will be seen to be very much less closely and rather more coarsely punctulated, and with the additional punctules

which stud its (densely alutaceous) head considerably smaller and more remote—indeed but *just* traceable. Its abdomen (through being more sparingly punctured) is a little less opake; and its legs are usually less infuscated, or of a slightly clearer testaceous hue. I believe it to be identical with the European *H. fragilis*; nevertheless, as it is very possible to be mistaken in species thus small and obscure, I have cited it as such with a mark of doubt. It occurs in precisely the same kind of places as the *H. longula*. I have taken it in the Barranco Santo (near S^ta^ Cruz) in Teneriffe, near San Sebastian of Gomera (in which island it was found likewise by Dr. Crotch), and in Palma.

812. **Homalota cursitans**, n. sp.

H. angustulo-linearis, nigra elytris fuscescentibus, nitida, parce pubescens, densissime subtilissimeque alutacea punctulisque minutis irrorata; capite subrotundato; prothorace transverso-subquadrato, angulis posticis sat argute determinatis; abdomine grosse sed parce asperato-punctato; antennis pedibusque brevibus, crassis, illis ad basin vix dilutioribus, his infuscato-testaceis.—Long. corp. lin. 1¼.

Habitat Lanzarotam, ultra oppidum Haria parce capta.

This little species I have observed hitherto only in the north of Lanzarote—chiefly beneath the refuse around the roots of the old Euphorbias on the rocky declivities of the "Risco." Its narrow, linear outline and densely alutaceous (though, at the same time, rather shining) surface, which is studded with small additional punctules, combined with the tolerably well-defined hinder angles of its prothorax, its brownish elytra, very thick antennæ, and infuscated-testaceous legs, are some of its principal features.

813. **Homalota subsericea**, n. sp.

H. præcedenti similis, sed minor, subangustior, punctulis superadditis (oculo fortissime armato) etiam minoribus, valde indistinctis; capite vix magis quadrato; prothorace vix breviore, angulis posticis rotundatis, fere obsoletis; elytris singulis in disco obsolete impressis; antennis vix brevioribus minusque incrassatis.—Long. corp. lin. 1.

Habitat Lanzarotam, in iisdem locis ac præcedens.

This *Homalota* is very closely allied to the last one, and is found (so far as I have observed hitherto) in the same district—namely, the north of Lanzarote. It differs from it in being smaller and rather narrower, and in the punctules of its (densely alutaceous) surface being still more obscure and minute, in its elytra being obsoletely impressed on either disc, in its antennæ being appreciably shorter and less incrassated, and (above all) in the hinder angles of its prothorax being more rounded off (or less defined). I am far from satisfied that

it is more than a geographical phasis of the European *H. sericea*, Mulsant; from which it seems merely to differ in its rather more fuscescent hue, in its forehead being marked with a central fovea, in its elytra being obscurely impressed on either disc, in the asperated punctules of its abdomen being somewhat coarser, and in its antennæ being (if anything) just perceptibly shorter.

814. **Homalota angustissima**, n. sp.

H. minuta, angustissime linearis, fusco-nigra elytris fuscis, nitida, parce pubescens, densissime subtilissimeque alutacea (punctulis superadditis vix, etiam oculo fortissime armato, observandis); capite magno, breviter oblongo; prothorace subquadrato, angulis posticis subrotundatis; abdomine parcissime sed distincte punctulato; pedibus testaceis.—Long. corp. lin. $\frac{3}{4}$.

Habitat Lanzarotam, semel tantum reperta.

The excessively narrow and parallel outline of this diminutive *Homalota*, which (on account of its large and *oblong* head being as broad as the prothorax, and the latter scarcely narrower than the elytra) is of almost equal breadth throughout, in conjunction with its fuscescent elytra, pale legs, and (except on the abdomen) nearly obsolete punctules, will suffice to separate it from its allies. The specimen from which the diagnosis has been compiled was taken by myself in the north of Lanzarote.

815. **Homalota misella**, n. sp.

H. minuta, angusto-linearis, nigra prothorace elytrisque fuscis, parce pubescens, densissime subtilissimeque alutacea punctulisque minutissimis parce (in elytris parum profunde) irrorata; capite magno, rotundato, oculis parvis; prothorace brevi, subsemicirculari; elytris brevissimis; antennis pedibusque brevibus, saturate testaceis. —Long. corp. lin. $\frac{3}{4}$.

Habitat ins. Hierro, sub cortice *Euphorbiæ* cujusdam laxo emortuo putrido in regione El Golfo semel reperta.

Having but a single example of this minute insect to judge from, I am unwilling to run the risk of dissecting it in order to examine the details of its structure; but its very narrow outline, much abbreviated elytra, and small eyes render it possible that it may be in reality a *Xenomma*. It was taken by myself, from beneath the dead bark of an old *Euphorbia*, in the region of El Golfo, on the western side of Hierro, during February 1858.

816. **Homalota nigra.**

H. angustulo-sublinearis, depressa, nigra, subopaca, minute pubes-

cens, densissime subtilissimeque (vix perspicue) alutacea punctulisque minutis levibus crebre irrorata; prothorace tenuissime canaliculato; pedibus paulo dilutioribus (sc. nigro-testaceis), tarsis fere testaceis.—Long. corp. lin. 1.

Homalota nigra, *Kraatz, Nat. der Ins. Deutsch.* ii. 287 (1858).

Habitat insulas Canarienses, in Fuerteventura solâ adhuc haud detecta.

The small size, rather flattened, minutely pubescent, very slightly shining surface, and deep-black hue of this little *Homalota* (the legs alone, which are blackish testaceous, being slightly paler) will sufficiently distinguish it. It is doubtless universal throughout the archipelago, in all the islands of which, except Fuerteventura and Gomera, I have myself captured it; and an extensive series of Gomeran specimens are now before me which were taken by Dr. Crotch. It remains, therefore, to be detected only in Fuerteventura. It is more common within the sylvan districts of intermediate altitudes than elsewhere (and therefore rarer in the two eastern islands of the Group)—occurring beneath fallen leaves and other vegetable refuse. My Grand-Canarian examples are principally from the region of El Monte; the Teneriffan ones from the hills towards Laguna, Taganana, Las Mercedes, the Agua Garcia, La Esperanza, the Agua Mansa, Ycod el Alto, and even from so low an elevation as the vicinity of S^{ta} Cruz and the Puerto Orotava; and the Palman ones from the Barranco de Galga. I cannot see that it differs appreciably from the European *H. nigra*, to which I have accordingly referred it.

817. **Homalota aleocharoides**, n. sp.

H. subconvexa, fusca capite nigrescentiore, subnitida, dense pubescens, parce minuteque punctulata; prothorace transverso, versus latera interdum obsolete subpellucido-pallidiore; antennis nigrescentibus, ad basin pedibusque saturate testaceis.—Long. corp. lin. 1.

Habitat Teneriffam, a W. D. Crotch sat copiose lecta.

At once known from the preceding species by its broader (and somewhat shorter) outline, convexer, unalutaceous, sparingly punctured surface, and browner hue (the head alone being quite black); by its prothorax having a very obscure tendency to become a little paler (or subpellucid) towards either side; and by its legs being testaceous. It is an insect which I did not myself observe at the Canaries, but of which a rather extensive series is now before me which was taken by Dr. Crotch (during the spring of 1862) in Teneriffe. *Primâ facie* it is somewhat suggestive of a very minute *Aleochara*, as indeed I have implied in its trivial name.

818. **Homalota atramentaria.**

Aleochara atramentaria (*Kby*), *Gyll., Ins. Suec.* ii. 408 (1810).
Homalota atramentaria, *Erich., Gen. et Spec. Staph.* 111 (1839).
—— ——, *Woll., Ins. Mad.* 555 (1854).
—— ——, *Id., Cat. Mad. Col.* 178 (1857).

Habitat insulas omnes Canarienses, in stercore bovino vulgaris.

The deep-black hue of the European *H. atramentaria* (the legs of which are dark piceous, with the tarsi pale), in conjunction with its somewhat slender limbs and its rather flattened, densely pubescent, thickly punctulated (and alutaceous) head, prothorax, and elytra, which have usually a just perceptible ænescent tinge, will readily distinguish it. It abounds throughout the Madeiran Group, and is equally universal at the Canaries—in the whole seven islands of which except Gomera (where it was found both by Mr. Gray and Dr. Crotch) I have myself captured it. My Teneriffan specimens are principally from the neighbourhood of S^ta^ Cruz and the Puerto Orotava, Ycod el Alto, the Agua Mansa, and Taganana. It occurs principally in the dung of cattle.

819. **Homalota læta,** n. sp.

H. subnitida, parce pubescens, densissime alutacea punctulisque sat crebre (in capite nigro parce) subasperata; prothorace rufo-ferrugineo, postice in medio impresso; elytris rufo-ferrugineis, hinc inde (præsertim versus latera) obscure infuscato-suffusis; abdomine nigro, basi et præsertim ad apicem rufo-ferrugineo; antennis nigrescentibus, ad basin pedibusque testaceis.—Long. corp. lin. $1\frac{1}{2}$.

Habitat Gomeram; tria specimina cepit W. D. Crotch.

The black head and rufo-ferruginous prothorax and elytra (the latter of which, however, are much infuscated in parts—especially towards the sides and scutellum) of this beautiful *Homalota*, combined with the rufo-ferruginous apex of its abdomen and its pale-testaceous legs, will at once characterize it. Its general aspect and colouring are more in accordance with the fungivorous species; but as I have not captured it myself, I am unable to vouch for its habits. The only three examples which I have seen were taken by Dr. Crotch in Gomera, during the spring of 1862. It is most nearly allied to the Madeiran *H. insignis*, with which in colouring it is almost coincident, and of which it is barely possible that it may be but a geographical state. It differs from that insect, merely, in being a little smaller and narrower, in its head being more oval (or less transverse), and in its prothorax being much more deeply (and rather more sparingly) punctured, whilst the sculpture of its abdomen is, if anything, somewhat denser and coarser.

820. Homalota canariensis.

H. angusto-linearis, alutacea, subopaca, minute et parce punctulata, pubescens; capite nigro, fronte depressâ, oculis magnis prominentibus; prothorace subquadrato, rufo-fusco, canaliculato; elytris fusco-testaceis, ad latera (præsertim versus angulos posticos) suffuse nigrescentibus; abdomine fusco-testaceo, pone medium nigrescente, antice subconstricto; antennis brevibus, crassis, articulo primo magno, ultimo breviusculo, nigro-fuscis, ad basin pedibusque testaceis.—Long. corp. lin. $1\frac{1}{4}$–$1\frac{1}{3}$.

Homalota canariensis, *Woll., Trans. Ent. Soc. Lond.* 184. pl. 7. f. 8 (1862).

Habitat Teneriffam et Gomeram, in caulibus putridis *Euphorbiæ canariensis* hinc inde parum vulgaris.

The narrow outline, subopake alutaceous surface, basally-narrowed abdomen, depressed forehead, and prominent eyes of this curious *Homalota*, combined with its thick and abbreviated antennæ (the first joint of which is much enlarged, whilst the terminal one is comparatively short and oval), will at once distinguish it. Its colour, too, is somewhat peculiar—the head and subapical abdominal segments being black, whilst the prothorax is reddish brown, the elytra (which are more or less darkened towards the outer posterior angles) and the base of the abdomen are brownish testaceous, and the legs are extremely pale. I have observed it hitherto only in the putrid stalks of the *Euphorbia canariensis*—under which circumstances I took it plentifully in Gomera, during February 1858, on a hill-top to the north-west of San Sebastian; and subsequently, in similar situations, on the mountains above S^{ta} Cruz of Teneriffe, in the direction of El Campo and Laguna. In Teneriffe it was captured likewise by Dr. Crotch.

821. Homalota vagepunctata.

H. nitidissima, parce sed grosse pubescens, parcissime punctata (nullo modo alutacea), nigra prothorace elytrisque castaneo-fuscescentibus (his interdum etiam subtestaceo-tinctis); capite parvo, rotundato; prothorace transverso, convexo, postice rotundato, obsoletissime canaliculato; antennis gracilibus, ad basin pedibusque saturate testaceis.—Long. corp. lin. 1–$1\frac{1}{4}$.

Homalota vagepunctata, *Woll., Trans. Ent. Soc. Lond.* 187 (1862).

Habitat Lanzarotam et Fuerteventuram, præsertim illam, inter *Euphorbias* præcipue degens.

The exceedingly shining and very sparingly punctured surface of this *Homalota*, in conjunction with its small, rounded head and slender antennæ, its coarse but distant pubescence, its convex, dark-brown, basally-rounded prothorax, and its more or less castaneous elytra, will

sufficiently distinguish it. I have observed it hitherto only in Lanzarote and Fuerteventura, especially the former—where it is not uncommon amongst the old Euphorbias (frequenting even their *flowers*) on the Risco, in the extreme north of the island.

822. **Homalota clientula.**

H. præcedenti similis, sed paulo minus nitida (tamen vix alutacea), densius pubescens et multo crebrius punctata (punctis minoribus ac levioribus); prothorace sensim latiore, angulis posticis vix omnino obsoletis; elytris densissime subasperato-punctulatis; antennis vix longioribus et crassioribus.

Variat prothorace elytrisque aut fere nigris, aut fuscescentibus, aut etiam clare rufo-ferrugineis.—Long. corp. lin. 1–1½.

Homalota clientula, *Erich., Gen. et Spec. Staph.* 133 (1839).
—— plebeia, *Woll., Ins. Mad.* 553 (1854).
—— ——, *Id., Cat. Mad. Col.* 176 (1857).
—— clientula, *Kraatz, Nat. der Ins. Deutsch.* ii. 322 (1858).

Habitat insulas Canarienses, sub quisquiliis, in Gomera solâ adhuc haud observata.

Although extremely variable in the colour of their elytra and prothorax (which, although sometimes nearly black, are usually more or less diluted in hue, and occasionally of a clear rufo-ferruginous*), an extensive series of specimens now before me seem all referable to a single species, and that one (so far as I can judge) not differing from the European *H. clientula*. Nevertheless there are many shades of colouring, and some diversity of outline†, amongst the mass of individuals from which the above diagnosis has been compiled; though, in the details of their sculpture, and the shape and size of their ultimate antennal joint (two of the main characters of the species), they show but little tendency to variation. Assuming them therefore to be all referable to the *H. clientula*, which I believe to be the case, I may add that I have no doubt the insect is universal throughout the archipelago—Gomera being the only island in which it does not happen to have been observed. In the remaining six islands of the Group I have myself captured it, more or less abundantly; and in

* Erichson mentions a variety, found by Prof. Ehrenberg in Egypt, in which the prothorax and elytra are rufo-testaceous.

† The difference of outline is perhaps more apparent than real, for the general *facies* of these minute members of the *Staphylinidæ* is marvellously dependent upon the exact manner in which they happen to be *mounted* for the cabinet. Thus, in the species of this immediate type, in which the prothorax is much rounded behind, if the head is at all deflexed the whole of the elytra are exposed, and appear consequently to be "well developed"; but if, on the contrary, the head is by chance raised, the posterior edge of the pronotum slips over the base of the elytra, and occasions the latter to seem (*primâ facie*) as though unusually abbreviated.

Teneriffe it was also found by Dr. Crotch. It occurs principally beneath fallen leaves, and other vegetable refuse, at intermediate elevations. My Fuerteventuran examples are chiefly from the Rio Palmas, the Grand-Canarian ones from the region of El Monte, and the Teneriffan ones from the Agua Garcia, the Agua Mansa, and Taganana.

823. **Homalota coriaria.**

Homalota sodalis, *Woll.* [nec *Erich.*, 1837], *Ins. Mad.* 554 (1854).
—— coriaria (*Miller*), *Kraatz, Nat. der Ins. Deutsch.* ii. 282 (1856).
—— ——, *Woll., Cat. Mad. Col.* 177 (1857).

Habitat insulas Canarienses, in Fuerteventura et Hierro solis hactenus haud detecta.

The somewhat broad outline and finely punctulated surface of the *H. coriaria*, combined with its rather large head, its short and transverse prothorax (which is very widely, though lightly, impressed in the centre behind), its brownish elytra (which are more or less obscured, or blackened, towards either side and in the region of the scutellum), its dusky-testaceous legs, and its extremely thickened antennæ, will readily distinguish it. It is common throughout Europe, and abounds in Madeira; and I have little doubt that it is universal at the Canaries—Fuerteventura and Hierro being the only islands in which, hitherto, it does not happen to have been observed. I have, however, myself taken it in Lanzarote, Grand Canary, Teneriffe, Gomera, and Palma; and it was found in Teneriffe by Dr. Crotch. It occurs beneath vegetable refuse generally—often within the putrid stems of the dead Euphorbias (in which situations I have captured it on the mountains above S^{ta} Cruz in Teneriffe, as well as above San Sebastian in Gomera). My Teneriffan examples are principally from the Agua Mansa and Ycod el Alto.

824. **Homalota subcoriaria,** n. sp.

H. coriariæ valde affinis, sed vix ejus varietas; sensim minor et subdensius punctulata; antennis paulo brevioribus, magis compactis (articulis inter se magis arcte adpressis); prothorace vix angustiore, postice paulo magis rotundato (angulis posticis minus determinatis), in disco postico canaliculato sed haud late impresso; elytris vix minoribus.—Long. corp. lin. 1.

Habitat Gomeram, in *Euphorbiâ canariensi* quadam putridâ supra Sanctum Sebastianum semel tantum lecta.

A single specimen of a *Homalota* taken by myself in Gomera (in company with the *H. coriaria, putrescens*, and *canariensis*), out of some rotten *Euphorbia*-stems on the hills above San Sebastian, seems to differ so decidedly from the *coriaria* (which nevertheless it

closely resembles) that I cannot but regard it as an additional, though nearly allied, species. It recedes from that insect in being a trifle smaller and more densely punctulated; in its antennæ being shorter and more *compact* (the joints being more intimately connected *inter se*); in its prothorax being a little narrower, and more rounded behind, with the posterior angles less defined, and with the disc lightly channeled but *not* widely impressed; and in its elytra being, if anything, somewhat less developed.

825. Homalota putrescens.

H. subnitida, densissime alutacea punctisque (in capite abdomineque parcius) sat dense irrorata, nigra, elytris testaceis, versus angulos posticos externos necnon in regione scutellari nigrescentibus; prothorace vix picescente, transverso, lato, postice rotundato; antennis crassis, articulo ultimo longiusculo, nigro-fuscis, ad basin pedibusque testaceis.—Long. corp. lin. $1\frac{1}{3}$.

Homalota putrescens, *Woll., Trans. Ent. Soc. Lond.* i. 185 (1862).

Habitat Lanzarotam, Canariam et Gomeram, in truncis *Euphorbiarum* emortuis putridis degens.

The short and very wide prothorax of this species, which has the hinder angles almost completely rounded off, in conjunction with its thick antennæ and its testaceous elytra and legs (the former of which are more or less conspicuously darkened towards the outer posterior angles and in the region of the scutellum and suture), will serve to distinguish it. I have taken it sparingly, out of the damp rotting *Euphorbia*-stems, in Lanzarote, Grand Canary, and Gomera; and it will probably occur, like the *H. coriaria*, beneath decaying vegetable refuse generally.

826. Homalota cacti.

H. præcedenti similis, sed punctura leviore et parciore; prothorace angustiore, minus transverso, ad angulos posticos minus rotundato; antennarum articulo ultimo sensim minus elongato et paulo magis obtuso.—Long. corp. lin. $1\frac{1}{3}$.

Homalota cacti, *Woll., Trans. Ent. Soc. Lond.* i. 186 (1862).

Habitat Teneriffam et Palmam, in illâ in trunco *Euphorbiæ canariensis* putrido in montibus supra Sanctam Crucem, sed in hac in foliis marcidis *Cacti opuntiæ* lecta.

In size and general colouring this *Homalota* is almost coincident with the *putrescens*; but its prothorax is very much narrower (or less transverse), with the posterior angles less rounded off, its punctation is both finer and more distant, and the terminal joint of its antennæ is a trifle shorter and more obtuse. It is closely allied to the Euro-

pean *H. sublinearis*, Kraatz, but is smaller and less coarsely alutaceous, its pubescence is less elongated and not so pale, its head and prothorax are appreciably smaller, and its antennæ are darker and shorter. I have taken it out of a putrid stalk of the *Euphorbia canariensis* on the mountains above S^ta^ Cruz in Teneriffe; and more abundantly in the sodden leaves of the prickly pear in the Banda of Palma.

827. **Homalota terricola**, n. sp.

H. affinis *H. cacti*, sed major, profundius densiusque punctata; prothorace paulo majore, sublatiore, convexiore, ad angulos posticos sensim minus rotundato; elytris magis suffuse coloratis; antennis longioribus et paulo crassioribus, articulo ultimo vix longiore.

Var. β. Paulo minor, prothorace vix minore, antennis subbrevioribus. —Long. corp. lin. $1\frac{1}{2}$–$1\frac{2}{3}$.

Habitat Lanzarotam et Palmam, sub quisquiliis, rarior.

This *Homalota* is much on the same type as the preceding two species, but is certainly distinct from both of them—being larger, with its antennæ longer and more robust, its hinder prothoracic angles somewhat less rounded off, and its elytra more suffused in colouring (or less maculated). Its punctation is rather dense and strong, like that of the *H. putrescens*; but its prothorax is less abbreviated and not so wide, though a little broader than in the *H. cacti*. It appears to be scarce, the few examples which I have seen having been taken by myself, from beneath vegetable refuse, in Lanzarote and Palma. The only specimen, however, from the latter island, together with *one* (of the four) from Lanzarote, are a trifle smaller than the rest, with their prothorax and antennæ a little less developed; but I do not believe that they are specifically distinct, and have consequently treated them as a "var. *β*."

828. **Homalota Waterhousii**, n. sp.

H. subnitida, densissime alutacea punctisque (in capite abdomineque parcius) sat dense irrorata, grosse pubescens, subfusco-nigra elytris in disco vix dilutioribus; prothorace transverso-subquadrato, postice paulo rotundato et in medio foveolato; antennis elongatis, ad basin paulo dilutioribus; pedibus testaceis.—Long. corp. lin. $1\frac{3}{4}$–vix 2.

Habitat in editioribus Teneriffæ, usque ad 8000′ s. m. ascendens. Species in honorem cl. G. R. Waterhouse, Londini, Staphylinorum Britanniæ scrutatoris oculatissimi indefessi, citata.

This rather large *Homalota* has been observed hitherto only in the higher elevations of Teneriffe, where moreover it would seem to be scarce. I have taken it sparingly near Ycod el Alto, as well as at

the Agua Mansa and on the Cumbre above it (upwards of 8000 feet above the sea); and a single Teneriffan specimen is now before me which was captured by Dr. Crotch. It appears to be, on the average, slightly larger and narrower than the *H. terricola*, rather more coarsely pubescent, and more concolorous (its general surface being of a somewhat browner black, whilst its elytra, on the contrary, are darker or less diluted in hue); its head and prothorax are relatively a little smaller; its punctation, particularly on the elytra, is a trifle denser; and its antennæ are appreciably slenderer and darker.

829. **Homalota melanaria.**

Aleochara melanaria, *Sahlb., Ins. Fenn.* i. 398 (1834).
Homalota lividipennis, *Erich., Gen. et Spec. Staph.* 129 (1839).
—— ——, *Woll., Ins. Mad.* 557 (1854).
—— ——, *Id., Cat. Mad. Col.* 179 (1857).

Habitat insulas omnes Canarienses, in stercore bovino et equino vulgaris.

This common European insect, which abounds in the Madeiran Group, and which is so well distinguished by its posteriorly acute outline, its large and wide prothorax, its testaceous elytra (which are more or less infuscated in the region of the scutellum and at the sides), and its long, robust, brownish antennæ, is universal throughout the archipelago, in all the islands of which except Gomera (where it was found by Dr. Crotch) I have myself captured it. In Fuerteventura, Teneriffe, and Palma it was met with likewise by Mr. Gray. It occurs principally in the dung of cattle, and is independent of elevation; for in Teneriffe I have taken it from the level of the shore, at S^{ta} Cruz and the Puerto Orotava, to the Cumbre adjoining the Cañadas (upwards of 8000 feet above the sea).

Genus 306. **OXYPODA.**

Mannerheim, *Brachél.* 69 (1831).

830. **Oxypoda exoleta.**

O. rufo-ferruginea, subopaca, dense sericeo-pubescens, dense et minute punctulata; capite abdominisque segmentis intermediis, necnon elytris (sed obscurius ac magis suffuse) versus angulos externos et in regione scutellari, plus minus nigrescentioribus; antennis fuscis (articulo ultimo crassiusculo), ad basin pedibusque testaceis.—Long. corp. lin. 1–1½.

Oxypoda exoleta, *Erich., Gen. et Spec. Staph.* 149 (1839).
—— ——, *Krautz, Nat. der Ins. Deutsch.* ii. 179 (1856).
—— lurida, *Woll., Cat. Mad. Col.* 179 (1857).

Habitat in Lanzarota, Canaria, Teneriffa, Palma et Hierro, rarior.

After a careful inspection of many examples of this *Oxypoda*, found in five different islands of the Group, it seems to me that it ought not to be kept distinct from the European *O. exoleta*; though, as it is clearly conspecific with my *O. lurida*, which occurs sparingly in Madeira, this will necessitate the suppression of the latter name. In the majority of the specimens now before me, the head, prothorax, and elytra are *just perceptibly* larger, or more developed, than is the case in the ordinary English ones; and as this was likewise traceable in the few Madeiran individuals which I possessed for examination in 1857, I thought it safer to record them as the exponents of a closely allied species. But further material has convinced me that these differences are scarcely more than casual ones—or, even if permanent, much too insignificant to indicate more than a slight geographical modification of the insect. Indeed the species would appear to be eminently variable in stature, so that a certain amount of instability would naturally be anticipated in the development of its external parts.

The narrow outline and rufo-ferruginous hue of the *O. exoleta* (its head and the intermediate segments of its abdomen being alone conspicuously darkened—though the elytra are always *more or less* obscurely infuscated) will sufficiently distinguish it. I have taken it, from beneath stones, between Haria and Mágui, in the north of Lanzarote; in the region of El Monte in Grand Canary; above the Puerto Orotava in Teneriffe; as well as in Palma and Hierro: and several Teneriffan examples are now before me which were found by Dr. Crotch.

831. **Oxypoda brevipennis**, n. sp.

O. rufo-testacea, subopaca, dense sericeo-pubescens, dense et minute punctulata; capite angusto, ovato, oculis minutis; elytris brevissimis; antennis pedibusque testaceis.—Long. corp. lin. 1.

Habitat in sylvaticis parum excelsis Teneriffæ et Gomeræ, sub foliis dejectis necnon inter muscos, rarissima.

The uniformly pale, rufo-testaceous hue of this singular *Oxypoda*, combined with its narrow, ovate head, very minute eyes, and excessively abbreviated elytra, will at once characterize it. It is a good deal allied to the *O. formiceticola* of more northern latitudes, but is rather smaller, narrower, and paler, with its eyes still more diminutive, its head much narrower, its prothorax relatively longer, its punctation finer and denser, and its antennæ somewhat less incrassated towards their apex. It seems to be confined to the sylvan districts of rather lofty elevations, where, however, it is decidedly rare. I have taken it from beneath fallen leaves and moss in the laurel-woods

above Taganana and on the summit of the Las Mercedes range in Teneriffe; and a single example is now before me which was captured by Dr. Crotch in Gomera—I believe, above Hermigua.

832. **Oxypoda æthiops**, n. sp.

O. atra, nitida, parce pubescens, minus dense ac profundius subasperato-punctata; capite subrotundato, convexo; elytris convexis; antennis pedibusque concoloribus.—Long. corp. lin. 1.

Habitat Palmam, in "Barranco da Agua" semel reperta.

The intensely black hue of this small *Oxypoda*, combined with its shining, less pubescent, rather deeply and less densely punctured surface, will readily separate it from the two preceding species. Hitherto I have seen but a single example of it, which was taken by myself in the Barranco da Agua of Palma.

Genus 307. **ALEOCHARA.**

Gravenhorst, *Col. Micropt.* 67 (1802).

833. **Aleochara puberula.**

Aleochara puberula, *Klug, Col. Madagasc.* 51 (1833).
—— ——, *Erich., Gen. et Spec. Staph.* 165 (1839).
—— Armitagei, *Woll., Ins. Mad.* 559 (1854).
—— puberula, *Id., Cat. Mad. Col.* 180 (1857).

Habitat Lanzarotam, Fuerteventuram, Canariam, Teneriffam et Gomeram, sub quisquiliis necnon in stercore bovino, equino, camelino degens.

The fusiform outline and closely punctured, densely fulvo-pubescent surface of this beautiful *Aleochara*, combined with the suffused, red, oblique dash on each of its elytra, and the paleness of its legs, as well as of the base and apex of its antennæ, will at once distinguish it. It is probably universal throughout the archipelago, though I have myself observed it only in Lanzarote, Fuerteventura, Grand Canary, and Teneriffe; but it was captured in Gomera both by Mr. Gray and Dr. Crotch (the former of whom found it likewise in Fuerteventura, and the latter in Teneriffe). My Fuerteventuran specimens were taken from beneath camels' dung in the Rio Palmas, and the Teneriffan ones from the mountains above S^{ta} Cruz. It occurs in the south of Europe, and is not uncommon in the Madeiran Group.

834. **Aleochara crassiuscula.**

Aleochara crassiuscula, *Sahlb., Ins. Fenn.* i. 396 (1834).
—— fuscipes?, *Brullé* [nec *Grav.*], *in Webb et Berth.* (*Col.*) 60 (1838).
—— tristis, *Erich., Gen. et Spec. Staph.* 162 (1839).
—— ——, *Woll., Ins. Mad.* 560 (1854).
—— ——, *Id., Cat. Mad. Col.* 181 (1857).

Habitat insulas omnes Canarienses, in stercore bovino et equino vulgaris.

The more parallel outline and blacker, less pubescent, and more shining surface of this common European *Aleochara*, in conjunction with its darker limbs and more testaceous elytral dash, will readily separate it from the *puberula*. It is also more variable in stature—ascending to a somewhat larger, and descending to a very much smaller size. It occurs in the dung of cattle (independently of elevation), and is universal throughout the archipelago—in the whole seven islands of which I have myself captured it. In Lanzarote, Gomera, and Palma it was found likewise by Mr. Gray, and in Teneriffe and Gomera by Dr. Crotch. It abounds at the Madeiras. I have little doubt that the species referred to by M. Brullé under the name of "*A. fuscipes*, Grav." was entered in his most inaccurate list on the strength of a *large* example of this *Aleochara*; for I have no evidence of the *fuscipes* being found in *any* of these Atlantic Islands, whereas so universal and abundant an insect as the *A. crassiuscula* could scarcely have escaped the observation of even MM. Webb and Berthelot. If such, however, be the case (which, I think, is pretty evident), it is surprising how two species which differ so essentially from each other could possibly have been confounded by M. Brullé.

835. **Aleochara littoralis**, n. sp.

A. nigra, subopaca, grosse sed vix dense griseo-pubescens, elytris postice suffuse (plus minus evidenter) rufescentibus; capite utrinque grosse punctato; prothorace multo minutius elytrisque minutius et densius punctatis; abdomine nitido, parcissime punctato; antennis pedibusque rufo-testaceis.—Long. corp. lin. $1\frac{3}{4}$–2.

Obs.—Species *A. griseæ* Kraatzii valde affinis, sed minus atra, elytris etiam suffuse rufescentibus; antennis (vix longioribus) pedibusque rufo-testaceis (nec piceis), illarum articulo ultimo obtusiore, nec acuto; capite vix angustiore.

Habitat Lanzarotam, in arenosis maritimis sub putridis degens.

In its general contour and sculpture, as well as in the coarse griseous pubescence with which its subopake surface is clothed, this *Aleochara* is intimately related to the European *A. grisea*, of which indeed it is barely possible that it may be but a geographical state. It differs in having its head just perceptibly narrower (or more oval), in its elytra being more suffused with a reddish tint, and in its limbs being paler or more testaceous,—the antennæ being, also, a trifle longer, with their apical joint obtuser, or less pointed. It was taken sparingly by Mr. Gray and myself, from beneath a dead

hen, on the sandy beach close to Arrecife in Lanzarote; and subsequently, by myself, in a similar situation, at Berrugo, in the extreme south of that island.

836. **Aleochara funebris,** n. sp.

A. atra, nitida, grosse et longe subfulvescenti-pubescens; capite prothoraceque sat grosse sed haud profunde punctatis; elytris densius punctatis; antennis nigrescentibus, ad basin pedibusque rufo-ferrugineis.—Long. corp. lin. 2–2½.

Obs.—Affinis *A. mœstæ* Grav., sed paulo major, fortius (præsertim in capite prothoraceque) punctata, prothorace angustiore (minus transverso), antennis ad basin pedibusque sensim pallidioribus.

Habitat in Teneriffa, Gomera et Palma, rarior.

In its pubescent, shining, intensely black surface and ferruginous legs the present *Aleochara* very closely resembles the European *A. mœsta*; and, although I have not my original specimen now for comparison, I suspect that it is probably conspecific with the insect which I actually referred to the *mœsta* in my Madeiran Catalogue. At any rate the four Canarian examples now before me (one of which I captured at Taganana in Teneriffe, and another in the Barranco de Galga of Palma, whilst the remaining two were found by Dr. Crotch in Gomera) differ from the *mœsta* in being (particularly on the head and prothorax) rather more strongly punctured, in their prothorax being perceptibly narrower or less transverse, and in their legs and the base of their antennæ being a little paler. The species would seem, also, to ascend to a somewhat larger stature.

837. **Aleochara nitida.**

Aleochara nitida, *Grav., Col. Micropt.* 97 (1802).
—— ——, *Erich., Gen. et Spec. Staph.* 168 (1839).
—— ——, *Woll., Ins. Mad.* 560 (1854).
—— ——, *Id., Cat. Mad. Col.* 182 (1857).

Habitat insulas omnes Canarienses, in stercore necnon in humidis, ab orâ maritimâ usque ad 9000′ s. m. ascendens.

The common European *A. nitida,* which is universal in the Madeiran Group, is equally universal at the Canaries—I having myself captured it in the whole seven islands. In Lanzarote, Fuerteventura, Palma, and Hierro it was found likewise by Mr. Gray; and in Teneriffe and Gomera by Dr. Crotch. It occurs not merely in dung but in moist places generally—from the sea-level to an altitude of at least 9000 feet (at which elevation I have taken it in Teneriffe, on the Cumbre overlooking the Cañadas).

838. Aleochara binotata.

Aleochara binotata, *Kraatz, Nat. der Ins. Deutsch.* ii. 106 (1856).
—— ——, *Woll., Cat. Mad. Col.* 182 (1857).

Habitat in Lanzarota, Fuerteventura, Canaria et Gomera, unà cum specie præcedente degens.

I am not at all satisfied that the *A. binotata* of Kraatz is truly distinct from the *nitida*; for although it is not difficult to identify extreme specimens of each, it is occasionally next to impossible to assign the intermediate ones, with any certainty, to their supposed types; and, indeed, I am far from convinced that some of my examples are not completely osculant between the two. Nevertheless, since some of their characters may perhaps have escaped me, and there can be no question that normal individuals are easily separable, I will not venture to amalgamate the species. Typically the *A. binotata* may be defined as, on the average, smaller than the *nitida* (though both do occasionally descend to a very minute stature), with its punctation just appreciably stronger, its rufescent elytral spot larger and *more suffused*, and its antennæ shorter (though the last feature is a somewhat deceptive one on account of the slight difference in length exhibited by the *sexes* of both insects). The fact, too, of their being nearly always found in company would not militate against the supposition that they are but states assumed by a single species. I have taken the *A. binotata* in Lanzarote, Fuerteventura, Grand Canary, and Gomera (in the last of which it was found likewise by Dr. Crotch); but the specimens from Lanzarote and Fuerteventura are, I think, the most typical ones. It occurs in Porto Santo of the Madeiran Group.

839. Aleochara morion.

Aleochara morion, *Grav., Col. Micropt.* 97 (1802).
—— ——, *Erich., Gen. et Spec. Staph.* 175 (1839).
—— ——, *Woll., Ins. Mad.* 561 (1854).
—— ——, *Id., Cat. Mad. Col.* 183 (1857).

Habitat Teneriffam, Gomeram et Palmam, minus frequens.

The minute size, fusiform outline, and dark, concolorous, very slightly shining surface of this common European *Aleochara* will sufficiently distinguish it. As at Madeira, it occurs sparingly in these islands—where most probably it is universal. Hitherto, however, I have observed it only at the Agua Mansa and Las Mercedes of Teneriffe, and in Palma; but three examples are now before me which were captured in Gomera by Dr. Crotch (who likewise met with it in Teneriffe).

Genus 308. **OLIGOTA.**

Mannerheim, *Brachél.* 72 (1831).

840. **Oligota castanea,** n. sp.

O. linearis, rufo- vel fusco-castanea, elytris abdominisque apice fere rufo-testaceis, abdomine ad basin nigrescentiore; antennis ad basin pedibusque rufo-testaceis, illarum articulis 4 vel 5 ultimis sensim crassioribus.—Long. corp. lin. vix $\frac{3}{4}$.

Habitat in sylvaticis Teneriffæ, Gomeræ et Palmæ, sub foliis dejectis, rarior.

The rather large size, *for an Oligota*, of this (nevertheless minute) insect, combined with its reddish-castaneous hue (the elytra and apex of the abdomen being, however, generally of a more or less clear rufo-testaceous), its pale limbs, and the four or five apical joints of its antennæ being perceptibly incrassated, will sufficiently distinguish it. It appears to occur at intermediate elevations, principally within the sylvan districts, where, however, it is rare. I have taken it, from beneath fallen leaves, at the Agua Garcia, Taganana, Las Mercedes, and on the mountains above S^{ta} Cruz, in Teneriffe, as well as in the Barranco de Galga of Palma; and a single specimen is now before me which was captured by Dr. Crotch in Gomera (I believe, above Hermigua).

841. **Oligota inflata.**

O. minor, linearis, fusco- vel nigro-picea, abdomine nigro ad apicem vix dilutiore; antennis brevioribus, ad basin pedibusque testaceo-piceis, illarum articulis 4 ultimis sensim crassioribus.—Long. corp. lin. vix $\frac{2}{3}$.

Microcera inflata, *Mann., Brachél.* 72 (1831).
Oligota subtilis, *Erich., Gen. et Spec. Staph.* 180 (1839).
—— inflata, *Woll., Ins. Mad.* 562 (1854).
—— ——, *Id., Cat. Mad. Col.* 184 (1857).

Habitat Lanzarotam, Teneriffam et Gomeram, sub quisquiliis foliisque dejectis hinc inde haud infrequens.

I think that the brownish-piceous hue and the distinctly *quadri*-articulate antennal club of this diminutive *Oligota*, combined with the shape of its prothorax (which is appreciably narrower before than behind, with the posterior angles tolerably expressed), will assign it to the European *O. inflata*, rather than to the *pusillima*. It occurs beneath vegetable detritus at low and intermediate elevations. I have captured it abundantly, from under the refuse around the base of corn-stacks, at Haria in the north of Lanzarote, and more sparingly above the Puerto Orotava in Teneriffe; and a single

example, taken by himself in Gomera, has been communicated by Dr. Crotch. It is found likewise in Madeira.

(Subfam. II. TACHYPORIDES.)

Genus 309. **CONOSOMA.**

Kraatz, *Nat. der Ins. Deutsch.* ii. 431 (1856).

842. **Conosoma pubescens.**

Staphylinus pubescens, *Payk., Mon. Carab. App.* 138 (1790).
Conurus pubescens, *Erich., Gen. et Spec. Staph.* 221 (1839).
—— ——, *Woll., Ins. Mad.* 565 (1854).
Conosoma pubescens, *Kraatz, Nat. der Ins. Deutsch.* ii. 435 (1856).
Conurus pubescens, *Woll., Cat. Mad. Col.* 184 (1857).

Habitat Palmam; Junio ineunte A.D. 1858 specimina sex sub cortice arboris cujusdam laxo in montibus supra Sanctam Crucem cepi.

The only Canarian specimens which I have seen of this common European insect (which occurs sparingly at Madeira) are six which were captured by myself, at the beginning of June 1858, in the island of Palma—from beneath the loosened bark of an old tree high up in the Barranco above S^ta^ Cruz.

843. **Conosoma lividum.**

Conurus lividus, *Erich., Gen. et Spec. Staph.* 229 (1839).
Conosoma lividum, *Kraatz, Nat. der Ins. Deutsch.* ii. 436 (1856).

Habitat insulas Canarienses, in Hierro solâ adhuc haud observatum.

In a long array of specimens of this variable insect, now before me, I can detect no character to warrant the suspicion that they are distinct from the European *C. lividum*,—though, if anything, their antennæ are perhaps a trifle longer. One or two darker examples might almost pass for the *fusculum* of Erichson; but I cannot perceive in them any difference except that of colour (which is essentially variable in the *C. lividum*), and I therefore think it would be unsafe to admit an additional species into the fauna on such evidence. Indeed the paler and darker individuals were taken in company, and I am quite satisfied that they are all of them conspecific. It occurs principally, beneath vegetable refuse, in sylvan and subsylvan spots of intermediate elevations; and there can be little doubt that it is universal throughout the archipelago—Hierro being the only island of the seven in which hitherto it does not happen to have been observed. I have myself captured it in Lanzarote, in the Rio Palmas of Fuerteventura, in the region of El Monte in Grand Canary, at the Agua Mansa and on the mountains above S^ta^ Cruz in Teneriffe, as

well as in Palma; and a specimen has been communicated by Dr. Crotch, taken in Gomera.

Genus 310. TACHYPORUS.

Gravenhorst, *Col. Micropt.* 124 (1802).

844. Tachyporus pusillus.

Tachyporus pusillus, *Grav., Mon.* 9 (1806).
—— ——, *Erich., Gen. et Spec. Staph.* 239 (1839).
—— celer, *Woll., Ins. Mad.* 567 (1854).
—— ——, *Id., Cat. Mad. Col.* 185 (1857).
—— marginatus, *Hart.*[nec *Fab.*], *Geolog. Verhältn. Lanz. und Fuert.* 140.

Habitat insulas omnes Canarienses, passim.

The larger size, broader outline, and darker hue are almost the only characters which appear to distinguish the European *T. pusillus* from the *brunneus*; and yet the two species are easily separated when seen. The *T. pusillus* occurs at low and intermediate elevations, and is universal throughout the Group—in all the islands of which, except Palma, where it was found by Mr. Gray, I have myself captured it. In Lanzarote and Hierro it was likewise taken by Mr. Gray, and in Teneriffe by Dr. Crotch. It abounds in the north of Lanzarote, and is unquestionably the species referred to (by Dr. Heer) in M. Hartung's list under the name of "*Tachyporus marginatus*, F." It occurs sparingly at Madeira,—my *T. celer* appearing to me, on a closer examination, not to differ from the *pusillus*.

845. Tachyporus brunneus.

Oxyporus brunneus, *Fab., Ent. Syst.* i. ii. 535 (1792).
Tachyporus brunneus, *Erich., Gen. et Spec. Staph.* 241 (1839).
—— ——, *Woll., Ins. Mad.* 568 (1854).
—— ——, *Id., Cat. Mad. Col.* 185 (1857).

Habitat insulas Canarienses, in Fuerteventura solâ hactenus haud detectus.

This common European insect, which abounds in the Madeiran Group, is doubtless universal at the Canaries, though hitherto it does not happen to have been observed in Fuerteventura. I have myself captured it in Lanzarote, Grand Canary, Teneriffe, Palma, and Hierro; and it was taken by Dr. Crotch in Gomera, and by Mr. Gray in Palma.

Genus 311. HABROCERUS.

Erichson, *Käf. der Mark Brand.* i. 400 (1839).

846. Habrocerus capillaricornis.

Tachyporus capillaricornis, *Grav., Mon.* 10 (1806).
Habrocerus capillaricornis, *Erich., Gen. et Spec. Staph.* 245 (1839).

Habrocerus capillaricornis, *Woll., Ins. Mad.* 570 (1854).
—— ——, *Id., Cat. Mad. Col.* 185 (1857).

Habitat in Hierro, in regione sylvaticâ "El Golfo" dictâ mense Februario A.D. 1858 exemplar unum cepi.

The *H. capillaricornis*, so widely spread (though by no means common) throughout Europe, and which abounds in the sylvan districts of Madeira, is apparently of the utmost rarity in these islands. Indeed hitherto I have seen but a single Canarian example of it, which was taken by myself (during February 1858) in the wooded region of El Golfo on the western slopes of Hierro.

Genus 312. **TRICHOPHYA.**

Mannerheim, *Brachél.* 73 (1831).

847. **Trichophya pilicornis.**

Aleochara pilicornis, *Gyll., Ins. Suec.* ii. 417 (1810).
Trichophya pilicornis, *Mann., Brachél.* 73 (1831).
Trichophyus pilicornis, *Erich., Gen. et Spec. Staph.* 268 (1839).
Trichophya pilicornis, *Kraatz, Nat. der Ins. Deutsch.* ii. 390 (1856).

Habitat in Teneriffa, Palma et Hierro, in sylvaticis, rarissima.

The European *T. pilicornis* is of the greatest rarity at the Canaries, and confined apparently to the sylvan districts of intermediate and rather lofty elevations. The few specimens which I have seen were taken by myself at the Agua Garcia and above Ycod el Alto in Teneriffe, in Palma, and in the wooded region of El Golfo on the western side of Hierro. It is just possible that the Madeiran *T. Huttoni* may be but a large state of the *pilicornis*.

Genus 313. **MYCETOPORUS.**

Mannerheim, *Brachél.* 62 (1831).

848. **Mycetoporus rufus,** n. sp.

M. elongato-ellipticus; capite, prothorace elytrisque clare testaceo-rufis, abdomine (valde profunde punctato) nigro, apice rufescentiore; antennis fuscis, basi, apice ipso pedibusque rufo-testaceis; prothoracis punctis 4 anticis a margine parum remotis; elytrorum seriebus tribus parce sed distincte punctatis.—Long. corp. lin. $2\frac{1}{3}$-vix 3.

Habitat in Teneriffa et Gomera, rarissimus.

The clear rufous (or testaceo-rufous) hue of the head, prothorax, and elytra of this large and beautiful *Mycetoporus*, the abdomen of which is dark and very coarsely punctured, with the apex more or less rufescent, combined with its four anterior prothoracic punctules being situated at some little distance behind the front margin, will sufficiently distinguish it. It seems to be extremely rare and to

occur at low and intermediate elevations, the few specimens which I have seen having been captured by myself in Teneriffe and Gomera, —namely, near S^ta^ Cruz, at the Agua Mansa, and between Orotava and Realejo, of the former, and close to San Sebastian of the latter.

849. **Mycetoporus monilicornis**, n. sp.

M. angustus, parallelo-elongatus; capite (angusto, triangulari, oculis parvis) prothoraceque testaceis, elytris (brevibus) rufo-testaceis, abdomine (sat profunde punctato) rufo-piceo, basi apiceque vix pallidiore; antennis (elongatis, submoniliformibus) pedibusque testaceis; prothoracis punctis 4 anticis fere ad marginem ipsum sitis; elytrorum seriebus tribus parce et obsolete punctatis.—Long. corp. lin. 2.

Habitat in montibus excelsis Teneriffæ, a W. D. Crotch semel captus.

At once known from the preceding species by its smaller size and very much narrower and more parallel outline, by the paler or more testaceous hue of its head and prothorax (the former of which is narrower and with the eyes more minute), by its shorter elytra (the three lines on each of which are more obsoletely punctured), by its more piceous and less coarsely punctured abdomen, and by its relatively longer, paler, and more moniliform antennæ. Its four anterior prothoracic punctules, moreover, are placed nearer to the front margin. The only example which I have seen was captured by Dr. Crotch, during the spring of 1862, in Teneriffe—apparently (from the mark appended to it) on the elevated Cumbre adjoining the Cañadas.

850. **Mycetoporus solidicornis**, n. sp.

M. elongato-ellipticus; capite nigro, prothorace elytrisque rufo-testaceis, his circa scutellum necnon in disco suffuse infuscatis, abdomine (sat profunde punctato) piceo-nigro, apice paulo dilutiore; antennis brevibus, nigro-fuscis, basi pedibusque testaceis (tibiis tarsisque plus minus infuscatis); prothoracis punctis 4 anticis a margine parum remotis; elytrorum seriebus tribus valde distincte punctatis.—Long. corp. lin. 1½.

Habitat Canariam Grandem, in regione El Monte repertus.

The very much shorter antennæ of this *Mycetoporus*, combined with its black head and rufo-testaceous prothorax and elytra (the latter of which, however, are more or less infuscated, or suffused, about the scutellary region and across their disc), will readily separate it from the two preceding species. Its general appearance is much that of a *Bolitobius*; but the minute aciculated last joint of its maxillary palpi at once assigns it to the present genus. My only two examples I captured in the region of El Monte, in Grand Canary.

Genus 314. BOLITOBIUS.

(Leach) Stephens, *Ill. Brit. Ent.* v. 171 (1832).

851. Bolitobius luridus, n. sp.

B. ellipticus, lurido-testaceus, capite utrinque, prothorace in disco, elytris hinc inde (præsertim in disco utroque postico) abdominisque segmentis ad basin plus minus obscure et suffuse infuscato-nebulosis; antennis apicem versus nigrescentibus paulo incrassatis, basi pedibusque testaceis; prothoracis punctis 4 posticis ad marginem sitis, minutis (externis ægre observandis, ad angulum utrumque ipsum positis); elytris amplis, postice substriatis, seriebus tribus parcissime (sc. circa 4–6) punctatis.—Long. corp. lin. $1\frac{2}{3}$–2.

Habitat in intermediis sylvaticis Teneriffæ, rarissimus.

The elliptic outline and *comparatively* large head and elytra of this *Bolitobius*, in conjunction with its *lurid*-testaceous hue (the head on either side, the disc of the pronotum, a considerable portion of the elytra, and the hinder half of each of the abdominal segments being more or less obscurely clouded, or infuscate), will serve to characterize it. The four punctules at the base of its prothorax are extremely minute, and situated quite on the margin itself (the outer pair being very difficult to detect, from being placed exactly at either posterior angle); and its elytra, which are substriated behind, have their three longitudinal lines *most* remotely punctured (the punctures being usually not more than from about four to six in number). It appears to be extremely rare, and confined to the sylvan districts of Teneriffe—the few specimens which I have seen having been taken by myself at the Agua Garcia and in the laurel-woods above Taganana.

852. Bolitobius filicornis, n. sp.

B. elongato-ellipticus, angustus, capite parvo, nigro, prothorace clare sed elytris infuscate rufo-testaceis, abdomine piceo (segmentis basi singulatim rufescentioribus); antennis subfiliformibus, nigro-fuscis, basi pedibusque testaceis; prothoracis punctis 4 posticis vix ad marginem ipsissimum sitis, distinctis; elytris breviusculis, seriebus tribus distincte punctatis.

Variat (immaturus?) capite, elytris antennisque pallidioribus.—Long. corp. lin. $1\frac{1}{2}$–vix $1\frac{1}{3}$.

Habitat in Canaria, Teneriffa et Hierro, rarissimus.

The smaller size, very much narrower and less elliptic outline, and less developed elytra of this species, added to its smaller and blacker head, its rufo-testaceous prothorax and elytra (the former of which is clear and immaculate, whilst the latter are more or less infuscated), its slenderer and more filiform antennæ, the larger size of the four

punctules at the base of its pronotum (which are not situated quite upon the edge itself), and its more numerously punctured three elytral lines, will at once separate it from the *B. luridus*. In general colouring, size, and aspect it is scarcely distinguishable, *primâ facie*, from the *Mycetoporus solidicornis*; nevertheless, on a closer inspection, the last joint of its maxillary palpi will show it to be a true *Bolitobius*; and its antennæ are very much longer, more filiform, and less *compact*. When accurately examined it will be further seen to be altogether a trifle narrower and less elliptic, with its abdomen more piceous (or less black), its limbs a little paler, and its four *anterior* prothoracic punctules placed considerably nearer to the front margin.

Like the *B. luridus*, the present species seems to be very rare, and to be confined to intermediate elevations—occurring, however, in subsylvan as well as sylvan spots. I have taken it in the region of El Monte in Grand Canary, as well as in Hierro; and a single example is now before me which was found by Dr. Crotch in Teneriffe.

(Subfam. III. QUEDIIDES.)

Genus 315. **EURYPORUS.**

Erichson, *Käf. der Mark Brand.* i. 496 (1839).

853. **Euryporus princeps,** n. sp.

E. elongato-ellipticus, nitidus; capite prothoraceque nitidissimis, leviter (sed haud minute) punctatis, illo ovali nigro, hôc (utrinque in disco biseriatim tripunctato) unà cum elytris (brevibus, grosse rugoso-punctatis) fusco-piceis; abdomine piceo-fusco, metallico-tincto, postice dilutiore, utrinque valde profunde oblongo-punctato; antennis nigrescentibus, ad basin pedibusque piceo-ferrugineis.—Long. corp. lin. 7.

Habitat in intermediis Canariæ Grandis: sub lapide ad marginem rivuli cujusdam prope oppidum Teror, Aprili exeunte A.D. 1858, exemplar unicum collegi.

Although the large size and excessively abbreviated, roughly sculptured elytra of this fine Staphylinid might be supposed at first sight to assign it to a genus distinct from (however nearly allied to) *Euryporus*, nevertheless the various details of its structure do not appear to me (when carefully inspected) to present sufficient peculiarities to warrant its isolation. Indeed in most of its essential features—such as the approximation of its intermediate coxæ, its deeply incised upper lip, its filiform maxillary palpi and the securiform last joint of its labial ones, the shape and proportions of its mentum, ligula, and

paraglossæ, and its simple anterior feet*—it is quite *normal* for *Euryporus*. Its head is the only part of its body which seems to be quite black,—the prothorax and elytra being of a dark rufo-piceous brown, and the abdomen (which is most deeply punctured on either side and has a rather conspicuous metallic lustre) being still more diluted or ferruginous. The example described from was taken by myself, during April 1858, from beneath a wet stone at the edge of the little stream at Teror in Grand Canary.

Genus 316. HETEROTHOPS.

(Kirby) Steph., *Ill. Brit. Ent.* v. 256 (1832).

854. Heterothops minutus.

H. niger elytris abdominisque apice plus minus dilutioribus; capite prothoraceque angustulis, nitidissimis; elytris abdomineque pubescentibus, illis vel nigro-piceis apice et ad humeros dilutioribus, vel testaceo-piceis, vel etiam fere fusco-testaceis; antennis gracilibus, ad basin pedibusque piceo-testaceis.

Variat etiam prothorace dilutiore, antennis pedibusque omnino pallidis.—Long. corp. lin. $1\frac{3}{4}$–$2\frac{1}{2}$.

Heterothops minutus, *Woll., Ann. Nat. Hist.* vi. 53 (1860).

Habitat insulas omnes Canarienses, sub quisquiliis haud infrequens.

This insect, which occurs beneath vegetable refuse around Funchal in Madeira, is universal at the Canaries—in all the islands of which except Gomera and Palma, where it was found by Dr. Crotch, I have myself captured it. My Lanzarotan specimens are principally from under the refuse around the base of corn-stacks at Haria, the Fuerteventuran ones from the Rio Palmas, the Grand-Canarian ones from the region of El Monte, the Teneriffan ones from the mountains above S^{ta} Cruz, as well as from Las Mercedes, La Esperanza, Souzal, and the Agua Garcia, and the Hierro ones from near Valverde. It is somewhat allied, at first sight, to the European *H. dissimilis*; but, apart from *colour* (which in both species is essentially variable), its head and prothorax are relatively a little narrower than is the case in that insect (the former being more oblong, and the latter more laterally compressed in front, and with the discal punctures more evident); its elytra are a trifle longer; and its antennæ are somewhat longer, slenderer, more filiform, and more fragile—the joints being more loosely attached, and the apical one less abbreviated.

* The specimen before me is a *female* one; nevertheless, since the dilatation of the front tarsi in the immediately allied groups is not usually a sexual character (though frequently a little more expressed in the males), it is probable that the anterior feet of both sexes will be found to be simple.

Genus 317. QUEDIUS.

(Leach) Steph., *Ill. Brit. Ent.* v. 215 (1832).

§ I. *Oculi minores. Antennæ pedesque robusti, tarsis anticis latissime dilatatis.*

855. Quedius angustifrons, n. sp.

Q. capite (angusto) prothoraceque nigris, subnitidis; elytris abdomineque pubescentibus, illis brevibus subruguloso-punctatis rufo-piceis, hôc nigro-piceo postice paulo dilutiore, profunde sed parce punctato; antennis (articulo ultimo oblique subtruncato) fuscis, ad basin pedibusque piceo-testaceis.—Long. corp. lin. 5.

Habitat in intermediis Canariæ et Gomeræ, rarissimus.

The less highly polished head and prothorax (the former of which is narrow and oval, with the eyes not at all prominent), in conjunction with its relatively shorter and more rufescent elytra, will at once distinguish this *Quedius* from the two following ones. It is apparently extremely rare, and confined to damp spots (particularly sylvan and subsylvan ones) of intermediate elevations. I have captured it, beneath wet moss, near Teror in Grand Canary; and a single example was taken by Dr. Crotch (I believe, above Hermigua) in Gomera.

856. Quedius fulgidus.

Q. ater, interdum elytris abdominisque apice picescentioribus; capite (crasso) prothoraceque pernitidis; elytris subconvexis, sat parce subruguloso-punctatis; abdomine dense subasperato-punctulato; antennis (articulo ultimo acuminato-ovato) pedibusque valde incrassatis, nigro-piceis, illis basi nigro-variegatis.—Long. corp. lin. 4–5½.

Staphylinus fulgidus, *Fab.*, *Mant. Ins.* i. 220 (1787).
—— variabilis, *Gyll.*, *Ins. Suec.* ii. 303 (1810).
Quedius fulgidus, *Erich.*, *Gen. et Spec. Staph.* 525 (1839).
—— ——, *Kraatz*, *Nat. der Ins. Deutsch.* ii. 492 (1856).

Habitat in intermediis Teneriffæ et Gomeræ, rarissimus.

I can see nothing in the Canarian examples of this insect to warrant the suspicion that they are distinct from the common European *Q. fulgidus*. The species may immediately be known from the other *Quedii* here enumerated by its larger size, more robust form, and blacker hue, by its more sparingly punctured elytra (which vary from intense black to rufo-piceous), and by its very much thicker limbs. Like the *Q. angustifrons*, it is decidedly rare in these islands. I have taken it at Las Mercedes in Teneriffe, and it was captured in both Teneriffe and Gomera by Dr. Crotch.

§ II. *Oculi maximi, prominentes. Antennæ pedesque graciliores, tarsis anticis multo minus dilatatis.* (Raphirus, *Steph.*)

857. **Quedius megalops,** n. sp.

Q. capite (subrotundato) prothoraceque nigris, pernitidis; elytris abdomineque pubescentibus, illis dense subreticulato-punctulatis fusco- vel etiam subtestaceo-piceis, hôc piceo-nigro postice paulo dilutiore, dense subasperato-punctato; antennis (articulo ultimo ad apicem oblique truncato) nigro-fuscis, ad basin pedibusque piceo-testaceis.—Long. corp. lin. 4.

Habitat in Canaria, Teneriffa, Palma et Hierro, parum rarus.

The smaller bulk of this species, combined with its enormous and rather prominent eyes (which cause the head to appear considerably rounded), its slenderer limbs, browner and more minutely sculptured elytra, and its very much less expanded anterior feet, will readily characterize it. It is widely, but sparingly, distributed over the archipelago, occurring beneath vegetable refuse in sylvan and subsylvan spots at intermediate altitudes. I have taken it in the region of El Monte in Grand Canary, in Palma, and in the wooded district of El Golfo on the western flanks of Hierro; and a Teneriffan and Palman specimen are now before me which were captured by Dr. Crotch.

(Subfam. IV. STAPHYLINIDES.)

Genus 318. **CREOPHILUS.**

(Kirby) Steph., *Ill. Brit. Ent.* v. 202 (1832).

858. **Creophilus maxillosus.**

Staphylinus maxillosus, *Linn., Syst. Nat.* 421 (1758).
Creophilus maxillosus, *Steph., Ill. Brit. Ent.* v. 202 (1832).
Staphylinus maxillosus, *Brullé, in Webb et Berth. (Col.)* 60 (1838).
—— ——, *Woll., Ins. Mad.* 579 (1854).
—— ——, *Id., Cat. Mad. Col.* 188 (1857).

Habitat in Fuerteventura, Teneriffa et Gomera, passim.

This common European insect, which occurs also in Madeira and Porto Santo, is found occasionally in these islands (principally at low elevations and near the towns), where it has very likely been naturalized from more northern latitudes. I have taken it in Fuerteventura, Teneriffe, and Gomera; and in Teneriffe it was likewise found by Dr. Crotch.

Genus 319. **OCYPUS.**

(Kirby) Steph., *Ill. Brit. Ent.* v. 211 (1832).

859. **Ocypus olens.**

Staphylinus olens, *Müll., Faun. Fridr.* 23 (1767).
—— ——, *Brullé, in Webb et Berth. (Col.)* 59 (1838).

Ocypus olens, *Erich., Gen. et Spec. Staph.* 405 (1839).
—— ——, *Kraatz, Nat. der Ins. Deutsch.* ii. 553 (1856).

Habitat in insulis omnibus Canariensibus, sat vulgaris.

Although absent from the Madeiran Group, it is somewhat remarkable that the common European *O. olens* should be *universal* at the Canaries—in all the islands of which except Gomera, where it was found by Dr. Crotch, I have myself taken it. From Fuerteventura it has been communicated, likewise, by the Barão do Castello de Paiva; and in Teneriffe it was captured by M. Hartung. I have a single Teneriffan example which I met with in the wood at Las Mercedes, which has its entire pubescence of a yellowish (or golden) tint; but I can detect no other difference to warrant the supposition that it is more than an accidental variety.

860. **Ocypus brachypterus.**

O. piceo- vel fusco-niger (interdum in elytris et versus abdominis apicem paulo dilutior), subopacus, dense pubescens, ubique creberrime punctatis; capite (præsertim in maribus) magno, rotundato, lineâ mediâ lævi; prothorace subquadrato (nec transverso), distinctius lineato-subcarinato; elytris brevissimis, ad angulos externos posticos late oblique truncatis; antennis pedibusque rufo-piceis et (præsertim his) fulvo-pubescentibus.—Long. corp. lin. 10–14.

Staphylinus brachypterus, *Brullé, in Webb et Berth.* (*Col.*) 59 (1838).

Habitat in sylvaticis editioribus Teneriffæ, rarior.

The less black (or more piceous) hue and usually rather larger and less convex head of this *Ocypus*, combined with its less decidedly opake and not *quite* so closely punctured surface, its longer and more keeled prothorax, its very much shorter elytra (which have their outer posterior angle more broadly truncated obliquely), and its paler or more rufescent limbs, which are densely clothed with a bright fulvous pubescence, will readily separate it from the *O. olens*. It is totally distinct from the European species which has been referred to the *brachypterus* of Brullé; but the mistake probably arose from M. Brullé having himself (erroneously) stated that the Teneriffan insect was also found in Europe—"Cet insecte, qui ne nous paraît pas encore avoir été distingué de l'*olens*, se trouve aussi dans quelques parties de l'Europe."

The *O. brachypterus* is extremely rare, or at any rate local, and confined to the damp sylvan districts of Teneriffe, at intermediate and lofty elevations. I have taken it at the Agua Garcia, as well as in the laurel-woods above Taganana, and elsewhere; and it was also met with by M. Hartung.

861. **Ocypus affinis,** n. sp.

O. præcedenti affinis sed (nisi fallor) verè distinctus; paulo minor, angustior, punctură omnino fortiore ac (præsertim in abdomine) parciore; capite subminore, sensim convexiore; prothoracis lineâ mediâ obscuriore; elytris paulo minus abbreviatis; antennis pedibusque clarioribus, illarum articulis apicalibus subbrevioribus.—Long. corp. lin. 9–12.

Habitat Teneriffam (Dom. Hartung) et Palmam, in locis similibus ac præcedens.

Although closely allied to the *brachypterus*, I do not think it possible that this *Ocypus* can be any modification of that species. So far as I have myself observed, it is confined to the sylvan districts of Palma, as the *brachypterus* is to those of Teneriffe; nevertheless, of two examples which were communicated by Dr. Heer as *Teneriffan*, and which were taken by M. Hartung, one pertains to the *brachypterus* and the other to the *affinis*. As it is certain, however, that many of M. Hartung's specimens from the various islands became afterwards accidentally mixed up, its Teneriffan *habitat* requires further corroboration. It is altogether a little smaller and narrower than the *brachypterus*, and its punctation is both stronger and (particularly on the abdomen) less dense; its head is a trifle less developed and more convex, its central prothoracic line is less conspicuous, its elytra are not quite so abbreviated, and its limbs are of a clearer hue, with the apical and subapical joints of the antennæ perhaps a little shorter. My specimens (from the intermediate districts of Palma) were captured high up in the Barranco de Galga and in the Barranco above S^ta^ Cruz.

862. **Ocypus umbricola,** n. sp.

O. colore et sculpturâ *O. brachyptero* fere similis, sed multo minor angustior; capite prothoraceque obsoletissime submetallico-tinctis, illo minore subovali (nec rotundato); elytris paulo minus abbreviatis necnon ad angulos externos posticos minus oblique truncatis; antennis pedibusque parcius fulvo-pilosis.—Long. corp. lin. 6–8.

Habitat in humidis sylvaticis Teneriffæ, rarissimus.

In its dense and fine punctation and general hue, this *Ocypus* is nearly similar to the *brachypterus*; but it is *very* much smaller and narrower, and its head and prothorax have often a slight metallic tinge; its head is also *relatively* smaller and less rounded, its elytra are not quite so shortened, nor so much truncated obliquely at their hinder external angles, and its limbs are more sparingly pilose. I have detected it hitherto only in the damp sylvan regions of Teneriffe, where, moreover, it is extremely scarce. I have taken it sparingly

on the densely-clad mountains towards Taganana, as well as at the Agua Garcia, the Agua Mansa, and above Ycod el Alto; and an example (also Teneriffan) has been communicated by the Barão do Castello de Paiva.

863. **Ocypus curtipennis,** n. sp.

O. niger vel piceo-niger (sæpius in elytris et versus abdominis apicem paulo dilutior), nitidus; capite prothoraceque plus minus æneotinctis, sat profunde punctatis, parce pubescentibus, illo parum magno subrotundato convexo, hôc obsolete lineato-subcarinato; elytris brevibus, densius pubescentibus ac densissime levius punctulatis; antennis pedibusque piceo-ferrugineis et (præsertim his) fulvo-pubescentibus.—Long. corp. lin. $6\frac{1}{2}$–9.

Habitat in sylvaticis subsylvaticisque Canariæ Grandis, passim.

The short and usually picescent elytra of this *Ocypus,* added to its shining, somewhat coarsely punctured, subænescent, and very sparingly pilose head and prothorax (the former of which is rather large, round, and convex), will distinguish it from the other species here enumerated. Hitherto I have observed it only in Grand Canary, where it is widely spread over the sylvan and subsylvan districts of intermediate altitudes. My specimens are principally from the region of El Monte, and from the remains of the old laurel-forest of El Dorames on the mountains between Osorio and Guia.

864. **Ocypus atratus,** n. sp.

O. ater, nitidus; capite prothoraceque parce sed dense punctatis punctulisque minutis interjectis parce irroratis, subcalvis, illo curtulo, mox pone oculos recte truncato, hôc (postice paulo angustato) obsoletissime lineato-subcarinato; elytris minutius densissime punctatis; antennis versus apicem tarsisque dilutioribus; mandibulis intus simplicibus.—Long. corp. lin. $6\frac{1}{2}$–8.

Habitat Lanzarotam et Fuerteventuram, hinc inde sub lapidibus.

In its rather large size, somewhat deeply but sparingly punctured shining head and prothorax, and intensely black hue, this *Ocypus* has much the *primâ facie* appearance of the European *O. ater*; nevertheless its mandibles are *simple* internally, and its head is shorter (or more straightly, and suddenly, truncated behind the eyes). Its prothorax, also, is a trifle longer, with the posterior angles less completely rounded off. It has been observed hitherto only in Lanzarote and Fuerteventura—in the former of which it was taken by Mr. Gray, and in the latter by M. Hartung and (near Oliva) by myself.

865. **Ocypus subænescens,** n. sp.

O. sequenti similis, sed plerumque vix major, obscurior (minus æneus)

et pube sæpius minus fulvescente vestitus; capite (submajore) prothoraceque parcius ac profundius punctatis; abdomine minus distincte lineato-pubescente; antennis vix robustioribus.—Long. corp. lin. 7–8½.

Staphylinus fuscatus?, *Brullé* [nec *Grav.*], *in Webb et Berth.* (*Col.*) 60 (1838).

Habitat in Canaria, Teneriffa et Hierro, ab orâ maritimâ versus 6000′ s. m. ascendens.

Whilst the following species is found in Lanzarote and Fuerteventura, the present one would seem to represent it in the other islands of the archipelago—where it will doubtless be found to be universal. Hitherto, however, I have detected it only in Grand Canary, Teneriffe, and Hierro; in the first of which it was found likewise by Mr. Gray. It is very closely allied to the *O. punctatissimus*, but (I believe) no local phasis of it; and, indeed, the fact of its occurring in at any rate *three* distinct islands without any appreciable change would tend to imply this. It was examined by Dr. Kraatz, and returned by him as "*Ocypus*, n. sp." It seems to differ from the Lanzarotan and Fuerteventuran species, principally, in being on the average a trifle larger and less brassy, and in having the punctation of its head and prothorax both coarser and less dense. Its entire pubescence, likewise, is a little less fulvous, and less condensed on the abdomen into broken-up lines; and its head and antennæ are just perceptibly more robust. It seems to be almost independent of elevation; for in Teneriffe I have captured it from nearly the sea-level, at S^ta^ Cruz and around the Puerto Orotava, to an altitude of about 6000 feet above the sea (on the ascent to the Cumbre above the Agua Mansa).

I have little doubt that it is the species referred in M. Brullé's list to the *fuscatus*, Grav., which in size and general contour it much resembles; nevertheless, in its *œnescent* and much more densely punctured head, prothorax, and elytra, as well as in its differently sculptured abdomen and paler limbs, it is altogether distinct from that insect.

866. **Ocypus punctatissimus**, n. sp.

O. fulvo-pubescens; capite prothoraceque nitidulis, densissime et minute punctulatis punctisque perpaucis magnis irroratis, æneis; elytris fusco-piceis, obscurius æneo-tinctis; abdomine nigro, lineis fulvis fractis (plus minus obsoletis) ornato punctisque permagnis paucis irrorato; antennis pedibusque rufo-piceis, hinc inde nigrescentioribus, tarsis anticis rufo-testaceis.—Long. corp. lin. 6–8.

Habitat Lanzarotam et Fuerteventuram, sub lapidibus, passim.

In its æneous head and prothorax, æneo-fuscous elytra, and general

contour this *Ocypus* very closely resembles the common European *O. cupreus*; and it is not impossible that it may be but a geographical phasis of that species*. Indeed I cannot detect any appreciable difference between the two, except that the head and prothorax of the Canarian insect are more densely and minutely punctulated and its elytra a trifle more developed. It is universal (though not very abundant) throughout Lanzarote and Fuerteventura, in the former of which islands it was found likewise by Mr. Gray.

Genus 320. **PHILONTHUS.**

(Leach) Steph., *Ill. Brit. Ent.* v. 226 (1832).

§ I. *Prothoracis seriebus dorsalibus e punctis* 4 *compositis.*

867. **Philonthus umbratilis.**

P. niger, elytris æneo-tinctis, crebre subtiliter punctatis, dense fulvo-cinereo-pubescentibus; capite lato, subrotundato; antennis elongatis, fusco-nigris, ad basin piceis; pedibus picescenti-testaceis.—Long. corp. lin. $3\frac{1}{2}$.

Staphylinus umbratilis, *Grav., Col. Micropt.* 170 (1802).
Philonthus umbratilis, *Erich., Gen. et Spec. Staph.* 445 (1839).
—— ——, *Woll., Ins. Mad.* 581 (1854).
—— ——, *Id., Cat. Mad. Col.* 189 (1857).

Habitat Teneriffam, rarissime: in "Barranco Santo" juxta Sanctam Crucem exemplar unum sub lapide aquoso collegi.

A single Canarian specimen of this European *Philonthus* (which occurs sparingly at Madeira) has hitherto come beneath my notice—taken by myself in the Barranco Santo, near S^ta^ Cruz, of Teneriffe. Its rather large, rounded head and elongate antennæ, combined with the *four* punctures of its prothoracic dorsal series, its slightly æneous, closely punctured, densely pubescent elytra, and piceo-testaceous legs, will sufficiently distinguish the species.

868. **Philonthus sordidus.**

P. niger, obsolete subæneo-tinctus, elytris lætius ænescentibus, parcissime profunde punctatis, parce sed grosse fulvo-pubescentibus; capite rotundato-ovali, punctis 4 frontalibus inter se subæqualiter distantibus; antennis piceo-nigris; pedibus piceis.—Long. corp. lin. $2\frac{1}{2}$–3.

Staphylinus sordidus, *Grav., Col. Micropt.* 176 (1802).
Philonthus sordidus, *Erich., Gen. et Spec. Staph.* 456 (1839).
—— ——, *Woll., Ins. Mad.* 582 (1854).
—— ——, *Id., Cat. Mad. Col.* 189 (1857).

Habitat Lanzarotam, Fuerteventuram, Teneriffam et Palmam, sub quisquiliis, passim.

* Dr. Kraatz, who examined it for me, returned it as "*Ocypus, cupreo* affinis."

This *Philonthus* is certainly identical with the *P. sordidus* of the 'Ins. Mad.,' and also with the European species of that name. In addition to the *four* punctures of its prothoracic series (in which it agrees with the *umbratilis*), it may be known by its rather distinctly æneascent and very deeply and remotely punctured elytra (on which the fulvous pile is coarse and distant), by its (suboval) head having the four frontal punctures almost *equidistant* from each other, and by its dark antennæ and piceous legs. It is widely, but sparingly, distributed over the archipelago, where it will probably be found to be universal. I have taken it in Lanzarote, Fuerteventura, Teneriffe, and Palma; in the last of which islands it was found also by Mr. Gray, and in Teneriffe by Dr. Crotch.

869. **Philonthus xantholoma.**

Staphylinus xantholoma, *Grav., Mon.* 41 (1806).
Cafius xantholoma, *Steph., Ill. Brit. Ent.* v. 246 (1832).
Philonthus xantholoma, *Erich., Gen. et Spec. Staph.* 452 (1839).
—— ——, *Kraatz, Nat. der Ins. Deutsch.* ii. 594 (1856).

Habitat Lanzarotam, Fuerteventuram et Canariam, per oras arenosas maritimas sub fucis et rejectamentis degens.

The common European *P. xantholoma*, which I have captured sparingly (from beneath sea-weed) on the sandy shores of Lanzarote, Fuerteventura, and Grand Canary, may be known by its rather large, subquadrate head (which is very deeply punctured on either side behind, and has the eyes somewhat prominent); by its opake, flattened, most densely and minutely punctulated, thickly pubescent elytra (which are often of a more or less brownish-piceous hue, and have their inflected margin testaceous yellow); by its piceo-testaceous legs; and by its prothorax (which is slightly narrowed posteriorly, and obliquely straightened at the sides) having *three* of its four dorsal punctures extremely large and subapproximated, whilst the fourth one is remote and placed close to the anterior margin.

§ II. *Prothoracis seriebus dorsalibus e punctis* 5 *compositis.*

870. **Philonthus bipustulatus.**

Staphylinus bipustulatus, *Pnz., Fna Ins. Germ.* 27. 10 (1795).
Philonthus bipustulatus, *Erich., Gen. et Spec. Staph.* 468 (1839).
—— ——, *Woll., Ins. Mad.* 583 (1854).
—— ——, *Id., Cat. Mad. Col.* 189 (1857).

Habitat insulas omnes Canarienses, in stercore vulgaris.

The rather larger size of this common European *Philonthus* (which abounds in the Madeiran Group), combined with its slightly more developed, less convex, more finely and closely punctured, and blacker

elytra (which have a reddish patch, seldom *altogether* obsolete, towards the inner hinder angle of each), will at once distinguish it from the *P. marcidus*. It is universal throughout the archipelago, occurring in the dung of cattle at most elevations. I have taken it in all the islands except Fuerteventura and Gomera—in the former of which, however, it was found by Mr. Gray (who likewise met with it in Palma), and in the latter by Dr. Crotch.

871. **Philonthus scybalarius.**

Philonthus scybalarius, *Nordm., Symbol.* 94 (1838).
—— varians, var. *b, Erich., Gen. et Spec. Staph.* 470 (1839).
—— ——, *Woll., Ins. Mad.* 583 (1854).
—— scybalarius, *Kraatz, Nat. der Ins. Deutsch.* ii. 601 (1856).
—— ——, *Woll., Cat. Mad. Col.* 189 (1857).

Habitat insulas Canarienses, in Fuerteventura et Canaria solis hactenus haud observatus.

It is extremely difficult to regard this *Philonthus* as more than a state of the *bipustulatus* in which the elytral spot is altogether absent; nevertheless, as Dr. Kraatz has upheld it as a distinct species, I will not do otherwise than treat it as such. Apart from its elytra being entirely black (which is sometimes the case, also, in undoubted examples of the *bipustulatus*), it may be defined as being, *on the average*, a trifle smaller, with its head just perceptibly less developed, and with its anterior coxæ and the inner surfaces of all its femora more or less obscurely diluted in hue, or subtestaceous*. But whether truly distinct or not from the *bipustulatus*, there can be little doubt that it is equally universal throughout the Canarian archipelago—though as yet it does not happen to have been observed in either Fuerteventura or Grand Canary. In Lanzarote, Palma, and Hierro, however, I have myself captured it; whilst in Teneriffe and Gomera it was found by Dr. Crotch. Like the *bipustulatus*, it is tolerably common in the Madeiran Group.

872. **Philonthus marcidus,** n. sp.

P. niger, elytris obscure æneo- vel viridiæneo-tinctis, parce et sat profunde punctatis, parce sed grosse griseo-pubescentibus, brevibus, subconvexis; capite rotundato-ovali; antennis pedibusque nigropiceis, interdum paulo dilutioribus.

Variat (rarius) elytris, præsertim postice, suffuse rufescentioribus.—Long. corp. lin. $2\frac{1}{2}$–$3\frac{1}{2}$.

Obs.—*P. scybalario* affinis, sed paulo nitidior, elytris subconvexi-

* I consider it is a mere *tendency* of the anterior coxæ and femora to become a little diluted in hue; for such, *as a character*, does not obtain universally. And I may further add that even the less development of the head seems to me to be by no means constant.

oribus, sensim æneo- vel viridiæneo-tinctis ac profundius parciusque punctatis, paulo minus dense sed subgrossius pubescentibus; capite vix majore, rotundatiore; antennis paulo brevioribus subrobustioribus (articulis intermediis sensim brevioribus, magis transversis, apicali vix crassiore, subquadrato apice oblique acuminato); pedibus piceis (coxis concoloribus).

Staphylinus politus?, *Brullé* [nec *Grav.*], *in Webb et Berth.* (*Col.*) 60 (1838).

Habitat insulas omnes Canarienses, sub quisquiliis (præsertim sub foliis *Opuntiæ Tunæ* putridis) vulgaris,—ab orâ maritimâ usque ad 9000′ s. m. ascendens.

This *Philonthus* is universal throughout the archipelago, in the whole seven islands of which I have myself captured it. It occurs beneath vegetable detritus generally, and is very partial to the rotten, putrid leaves of the fleshy *Opuntia Tuna* (or "Prickly Pear")—in places where they have been thrown away as refuse, and allowed to rot; under which circumstances I have taken it around Haria in the north of Lanzarote, near S^{ta} Cruz of Teneriffe, in the Banda of Palma, and elsewhere. It seems to be independent of elevation; for in Teneriffe I have met with it from almost the sea-level (near S^{ta} Cruz and the Puerto Orotava), through the sylvan and subsylvan districts (above Taganana, at La Esperanza, Souzal, and the Agua Mansa), to an altitude of at least 9000 feet (on the Cumbre overlooking the Cañadas). In Lanzarote, Fuerteventura, Teneriffe, and Hierro it was found likewise by Mr. Gray, in Teneriffe and Gomera by Dr. Crotch, and in Teneriffe by M. Hartung*. As so abundant an insect could scarcely have escaped the observations of even MM. Webb and Berthelot, and since so large a proportion of the very few species which they collected were afterwards wrongly identified by M. Brullé, I have little doubt that the "*Staphylinus politus*, Grav." of his list was inserted from a large example (or examples) of this *Philonthus*. Nevertheless from the true *P. politus* it is altogether distinct—not merely in the *five* punctures of its prothoracic series, but likewise in colour, bulk, sculpture, and entire contour.

From its dark hue and general size, the *P. marcidus* might at first sight be mistaken for the *scybalarius*; but when closely inspected it will be seen to be a little more shining, particularly on the elytra—which have a slightly brassy or greenish-brassy tinge, and are somewhat more convex and less densely (though very coarsely) pubescent,

* I have received some Teneriffan specimens of M. Hartung's, from Dr. Heer, under the name of "*P. varians*, Payk."—from which species, however, it is totally distinct.

as well as more deeply and remotely punctured; its head is a trifle larger and rounder, with the antennæ just perceptibly shorter and more robust (the intermediate joints being appreciably more abbreviated, and the terminal one, which is squarish but obliquely acuminated at the tip, perhaps a little thicker); and its coxæ do not appear to be diluted in hue.

873. Philonthus proximus.

P. niger, prothorace elytrisque (præsertim his) paulo picescentioribus, his subconvexis, sat profunde parceque punctatis et grosse griseo-pubescentibus; capite subrotundato-ovali; antennis fuscis, ad basin pedibusque piceo-testaceis.

Variat (rarius) antennis pedibusque paulo obscurioribus.—Long. corp. lin. $2\frac{1}{4}$–3.

Philonthus proximus, *Woll., Cat. Mad. Col.* 189 (1857).

Habitat in Teneriffa et Gomera, rarior.

Readily known from the *marcidus* by its rather smaller size and more piceous hue—even the prothorax being obscurely pitchy, whilst the elytra (which are deeply punctured and convex, and almost, or entirely, free from any metallic tinge) are often very appreciably so—and by its paler limbs (the apical joint of the antennæ being moreover less incrassated). It occurs sparingly at Madeira, and appears to be about equally rare at the Canaries. Indeed I have myself taken it only in Teneriffe; but it was found by Dr. Crotch both in that island and Gomera*.

874. Philonthus discoideus.

Staphylinus discoideus, *Grav., Col. Micropt.* 38 (1802).
Philonthus discoideus, *Erich., Gen. et Spec. Staph.* 474 (1839).
—— ——, *Kraatz, Nat. der Ins. Deutsch.* ii. 605 (1856).
—— ——, *Woll., Cat. Mad. Col.* 190 (1857).

Habitat in Lanzarota, Fuerteventura et Teneriffa, passim.

The common European *P. discoideus*, which occurs sparingly in Madeira, is probably universal in these islands. It was taken by Mr. Gray in Lanzarote, by myself (from beneath camels' dung) in the Rio Palmas of Fuerteventura, and by Dr. Crotch in Teneriffe. It may be easily recognized by its rather small size, but somewhat large, roundish-quadrate head and thick neck, by its picescent, distinctly punctured elytra (which are clothed with a fulvous pile, and have their margins, particularly down the suture, more or less conspicuously rufo-ferruginous), and by its piceo-testaceous limbs†.

* I may add that I transmitted the *P. proximus* to Berlin, in 1857, for the inspection of Dr. Kraatz (who had then just completed his Monograph of the German *Staphylinidæ*); and it was regarded by him as new.

† The antennæ (which are rather short and moniliform) are a little clearer, or

§ III. *Prothoracis seriebus dorsalibus e punctis 6 compositis.*

875. **Philonthus nigritulus.**

Staphylinus nigritulus et aterrimus, *Grav., Col. Micropt.* 41 (1802).
Philonthus aterrimus, *Erich., Gen. et Spec. Staph.* 492 (1839).
—— ——, *Woll., Ins. Mad.* 584 (1854).
—— nigritulus, *Kraatz, Nat. der Ins. Deutsch.* ii. 616 (1856).
—— ——, *Woll., Cat. Mad. Col.* 191 (1857).

Habitat insulas Canarienses, in Fuerteventura et Hierro solis adhuc haud detectus.

There can be little doubt that this common European *Philonthus* (which abounds in the Madeiran Group) is universal at the Canaries, though hitherto it does not happen to have been observed in either Fuerteventura or Hierro. In all the other islands I have myself captured it; whilst in Lanzarote and Gomera it was found likewise by Mr. Gray, and in Teneriffe, Gomera, and Palma by Dr. Crotch. It occurs in damp places generally, both at the edges of the streams and beneath decaying vegetable refuse, ascending from nearly the sea-level to an altitude of at least 8000 feet; nevertheless it is more abundant in the lower and drier districts than in the wooded ones (unless indeed the *P. simulans* is but a phasis assumed by it in the latter).

876. **Philonthus simulans.**

P. præcedenti valde affinis (fortasse ejus varietas in regionibus sylvaticis prædominans); plerumque vix major et obsoletissime subæneo-tinctus, capite prothoraceque (oculo fortiter armato) evidentius transversim undulato-substrigulosis, illo sensim majore, hujus punctis sæpius submajoribus, antennis vix robustioribus et sæpius (præsertim ad apicem) subnigrescentioribus.—Long. corp. lin. 2–2½.

Philonthus simulans, *Woll., Cat. Mad. Col.* 190 (1857).

Habitat in Canaria, Teneriffa, Palma et Hierro, præsertim in intermediis humidis sylvaticis, late diffusus.

Although I felt tolerably satisfied, when compiling my Madeiran Catalogue, that the *P. simulans* of that Group is distinct from (however closely allied to) the *nigritulus*, I must nevertheless acknowledge that an immense array of *Canarian* examples which I have since inspected leaves me in some doubt on the subject. Indeed it appears to me to be far from impossible that the *simulans* may in reality be but a state which the *nigritulus* is apt to assume (more or less de-

more *rufo*-testaceous, than the legs, and their third and terminal joints have a slight tendency to be faintly obscured—a character which I do not see alluded to either in Erichson's Monograph or elsewhere.

cidedly) when occurring within the sylvan districts; for at times it certainly is not easy (unless perchance any of the differential features have escaped me) to draw a line of positive demarcation between the two. Still, in a general way, they are easily separated; and since also their habits are not quite the same, I prefer thinking it probable that I have overlooked some few of their characters to treating them as absolutely conspecific.

The *P. simulans* (as above defined) differs from the *nigritulus*, merely, in being *on the average* just perceptibly larger, with its head a little more developed; in its having a more or less traceable (though always obscure) subænescent tinge; in its head and prothorax (when viewed beneath a high magnifying power) being more distinctly, though very minutely, transversely-*waved* or -substrigulose; and in its antennæ being *usually* a trifle thicker and darker (especially towards their apex). The Canarian examples have their elytra somewhat less deeply punctured than the Madeiran ones. It occurs pretty generally throughout the sylvan and subsylvan districts of intermediate elevations—predominating in those regions, just as the *nigritulus* does in the lower and more exposed ones. I have taken it in Grand Canary, Teneriffe (where it was found also by Dr. Crotch), Palma, and Hierro. My Grand-Canarian specimens are principally from the region of El Monte, and the Teneriffan ones from the laurel-woods above Taganana, Las Mercedes, La Esperanza, the Agua Garcia, and the Agua Mansa.

§ IV. *Prothoracis seriebus dorsalibus e punctis* 7 *vel* 8 *compositis.*

877. Philonthus punctipennis.

P. piceo-niger, nitidus; elytris profunde, densissime et argute punctatis, parce pubescentibus, suturâ paulo dilutiore; abdomine subtilius sed distincte punctato, plus minus metallico-tincto; antennis brunneis, ad basin piceo-testaceis; pedibus rufo-testaceis, hinc inde picescentioribus.—Long. corp. lin. 4–5.

Philonthus punctipennis, *Woll., Cat. Mad. Col.* 192 (1857).

Habitat in montibus Canariæ Grandis, rarissimus.

This noble *Philonthus*, which occurs sparingly at Madeira, may at once be recognized by its large size and piceous-black hue (the abdomen, however, having a slight metallic lustre), by its prothoracic series being composed of seven or eight punctures on either side of the disc, by its elytra being deeply, closely, regularly, and sharply punctured, by its piceous-brown antennæ, and by its rufo-testaceous (though a little infuscated) legs. The only two examples which I have as yet seen from these islands were captured by myself, during the

spring of 1858, in Grand Canary—on the mountains above San Mateo, in the direction of the Roca del Soucilho.

§ V. *Prothorax (et caput) plus minus crebre punctatus, lineâ mediâ longitudinali lævi.*

878. **Philonthus sericeus.**

P. plumbeo-niger, alutaceus, subopacus; capite (subtriangulari-quadrato) prothoraceque utrinque dense punctatis; elytris depressis, densissime et breviter fulvo-cinereo-sericeis; antennis pedibusque ferrugineis, illis ad basin tibiisque sæpius paulo picescentioribus.—Long. corp. lin. $1\frac{2}{3}$–$2\frac{1}{2}$.

Remus sericeus, *Holme, Trans. Ent. Soc. Lond.* ii. 64 (1837).
—— ——, *Steph., Man. Brit. Col.* 401 (1839).
Philonthus sericeus, *Erich., Gen. et Spec. Staph.* 509 (1839).

Habitat Lanzarotam et Fuerteventuram, per oras arenosas maritimas sub confervis et rejectamentis degens.

The *P. sericeus* may be distinguished by its alutaceous, subopake, *leaden*-black surface (the head and prothorax of which are coarsely and regularly punctured on either side, whilst the elytra and abdomen are very densely and minutely so, as well as closely beset with a short fulvo-cinereous pubescence) and by its ferruginous or piceo-ferruginous limbs. Its head is somewhat triangular-quadrate (being very straightly truncated behind) and its elytra are much flattened. It is strictly a littoral species, occurring (as in more northern latitudes) under sea-weed on the sandy shores. In such situations it was taken by Mr. Gray and myself, during January 1858, both to the south of Arrecife in Lanzarote and of Puerto de Cabras in Fuerteventura—where I again met with it in the spring of the following year.

879. **Philonthus tenellus,** n. sp.

P. angustus, niger elytris paulo picescentioribus, nitidus; capite (convexo, subquadrato, apice subtriangulariter impresso) prothoraceque utrinque parce punctatis; elytris densius subtiliusque punctatis, parce cinereo-pubescentibus; abdominis segmentis singulis (præsertim basalibus) convexis et postice grosse denseque punctatis; antennis pedibusque piceo-ferrugineis, illis ad basin tarsisque clarioribus; palporum articulo ultimo acutissime conico.—Long. corp. lin. $1\frac{2}{3}$–2.

Obs.—Species *P. filiformi* (insularum Maderensium) valde affinis, sed differt capite paulo convexiore oculis majoribus, elytris sensim profundius punctatis abdominisque segmentis singulis convexioribus et (præsertim basalibus) postice grosse ac dense punctatis.

Habitat Teneriffam, inter lapillos ad marginem paludis cujusdam prope Sanctam Crucem copiose deprehensus.

In its small size, extremely narrow outline, subquadrate head,

slightly picescent elytra, and the very acutely conical last joint of its palpi, this minute *Philonthus* is at first sight almost identical with the Madeiran *P. filiformis*. When closely inspected, however, it will be seen to differ in many respects from that species. Thus, its eyes (although not more prominent) are considerably larger; its head is, if anything, somewhat convexer, and more free from punctures in the centre; its elytra are a little more coarsely punctured; and its abdominal segments are, each of them, more impressed behind (and therefore convexer in front), and also (particularly the basal ones) *very rugosely and densely punctured posteriorly*. Hitherto I have observed it only in Teneriffe, where, however, I captured it in considerable abundance—from amongst wet shingle at the edges of a little stagnant pool at the extreme head of the Barranco Santo, close to S^{ta} Cruz. And a single specimen (likewise Teneriffan) is now before me which was taken by Dr. Crotch.

880. **Philonthus xantholinoides**, n. sp.

P. tenello similis, sed (si ex unico specimine immaturo adjudicare licet) aliter coloratus (sc. minus niger, prothorace fortasse etiam rufo-ferrugineo); capite majore, quadratiore, basi rectius truncato, antice distinctius canaliculato (nec subtriangulariter impresso) et unà cum prothorace profundius utrinque punctato, oculis minoribus; elytris sensim majoribus; abdominis segmentis singulis ad basin minus grosse punctatis; antennis paulo longioribus.—Long. corp. lin. vix 2.

Habitat Teneriffam, juxta Sanctam Crucem cum præcedente captus.

Although I have but a single specimen, and that an immature one, to judge from, nevertheless the present *Philonthus* is so unmistakeably distinct (even in some few of its *structural* details) from the *P. tenellus* that I cannot omit it from this Catalogue. In its small size, narrow outline, and the acute terminal joint of its palpi it is very similar to that species; but its head is larger and squarer (being more straightly truncated behind), and, together with the prothorax, more deeply punctured, its eyes are smaller, its elytra are a trifle more developed, its abdominal segments are both less convex and less coarsely punctured at their respective bases, and its antennæ are longer. Its forehead, also, is more decidedly marked with a central channel in front, but less triangularly impressed. The example described from (which was taken by myself, in company with the last species, near S^{ta} Cruz of Teneriffe) being immature, I cannot say much as to the differences of colour; but I *believe* that the *P. xantholinoides* will be found to be of a much paler hue, and perhaps to have its prothorax rufo-ferruginous.

(Subfam. V. XANTHOLINIDES.)

Genus 321. **XANTHOLINUS.**

Dahl, *Encyclop. Method.* x. 475 (1825).

881. **Xantholinus marginalis.**

X. niger, elytris (vix subseriatim punctatis) læte rufo-testaceis; capite magno, basi subrecte truncato, sat dense et profunde punctato punctulisque minutissimis intermediis irrorato; prothoracis margine postico late et laterali angustissime rufescentiore, seriebus dorsalibus 8–11-punctatis; abdomine, præsertim postice, rufescentiore; antennis rufo-fuscis; pedibus testaceo-rufis.—Long. corp. lin. $3–3\frac{2}{3}$.

Xantholinus marginalis, *Woll., Trans. Ent. Soc. Lond.* i. 187 (1862).

Habitat in Lanzarota et Fuerteventura (aut saltem in ins. parvâ adjacente "Lobos" dictâ), caules *Euphorbiarum* putridos destruens.

In its brightly rufo-testaceous elytra, this beautiful *Xantholinus* "has [as I stated in my Paper, above alluded to, "on the *Euphorbia*-infesting Coleoptera of the Canary Islands"] much the colouring and general aspect of the common European *X. glabratus*; but it is smaller than that insect, with its head and prothoracic series much more densely punctured, with the margin (particularly the hinder one) of its pronotum diluted in hue, and with its elytra, abdomen, and legs respectively paler. It is very rare, and (so far as observed hitherto) quite peculiar to the damp, rotting *Euphorbia*-stems—among which it was taken by Mr. Gray and myself, on the Risco, in the north of Lanzarote, during January 1858; as well as by myself, on the 28th of March of the following year, in the little island of Lobos, off the extreme north of Fuerteventura."

882. **Xantholinus hesperius.**

Xantholinus Hesperius, *Erich., Gen. et Spec. Staph.* 329 (1839).
—— ——, *Woll., Ann. Nat. Hist.* vi. 100 (1860).

Habitat Canariam, Teneriffam et Palmam, haud infrequens.

The *X. hesperius* of south-western Europe (and which occurs sparingly at Madeira) is probably universal in these islands—though hitherto I have observed it only in Grand Canary, Teneriffe, and Palma (in the second of which it was found likewise by Dr. Crotch and the Barão do Castello de Paiva, and in the third by Mr. Gray). My Grand-Canarian specimens are from the region of El Monte, and the Teneriffan ones from the Agua Garcia and the vicinity of Orotava. *Primâ facie* it is a good deal allied to the European *X. linearis* (which, although common in the Madeiran Group, has not yet been detected at the Canaries); but its head is a little larger and less ob-

long (or more straightly truncated behind), more sparingly punctured, and with the frontal sulci longer, wider, and deeper; its prothorax has the punctures of its dorsal series rather diminished in number (there being usually from about nine to eleven of them), and those of the lateral ones fewer and less confused (or with an evident *tendency* to arrange themselves in a curve); and its elytra are somewhat more remotely and coarsely punctured, and have their apical edge (and frequently the suture also) more or less translucid, or testaceous.

883. **Xantholinus punctulatus.**

Staphylinus punctulatus, *Payk.*, *Mon. Staph. Suec.* 30 (1789).
Xantholinus punctulatus, *Erich.*, *Gen. et Spec. Staph.* 328 (1839).
—— ——, *Woll.*, *Ins. Mad.* 577 (1854).
—— ——, *Id.*, *Cat. Mad. Col.* 188 (1857).

Habitat in Lanzarota, Teneriffa et Gomera, passim.

The common European *X. punctulatus* (which is tolerably abundant at Madeira) may be known by its black hue (the elytra, however, having usually a just perceptible ænescent tinge); by its head being very coarsely and rugosely punctured on either side, and very straightly truncated along its basal edge; by its prothorax having the dorsal series composed of comparatively few punctures, and the lateral ones very evidently curved; by the punctures of its elytra having a decided *tendency* to arrange themselves in longitudinal rows; and by its antennæ being rather short. It appears to be somewhat scarce at the Canaries. I have taken it at La Esperanza in Teneriffe; and it was found by Mr. Gray in Lanzarote, and by Dr. Crotch in both Teneriffe and Gomera.

The Canarian examples of the *X. punctulatus* seem to belong to the slightly larger state referred to by Erichson—in which the colour is deep black with (at any rate on the elytra) an appreciable ænescent tinge, the limbs a little darkened, and the punctures of the prothoracic dorsal series rather reduced in number. The eyes, also, appear to be less minute than in the ordinary type, and the forehead somewhat freer from punctures. But I imagine they can scarcely be indicative of an additional (closely allied) species.

Genus 322. **LEPTACINUS.**

Erichson, *Käf. der Mark Brand.* i. 429 (1837).

884. **Leptacinus parumpunctatus.**

L. nitidissimus, niger, elytris (extus seriatim punctatis) paulo dilutioribus necnon ad angulos singulos externos pellucido-testaceis;

capite triangulari, utrinque valde profunde sed parce punctato; prothoracis seriebus dorsalibus circa 5–6-punctatis (punctis magnis); antennis testaceo-piceis; pedibus piceo-testaceis.—Long. corp. lin. $2\frac{1}{2}$–$3\frac{1}{2}$.

Staphylinus parumpunctatus, *Gyll., Ins. Suec.* iv. 481 (1827).
Gyrohypnus parumpunctatus, *Mann., Brachél.* 33 (1831).
Leptacinus parumpunctatus, *Erich., Gen. et Spec. Staph.* 353 (1839).
—— ——, *Kraatz, Nat. der Ins. Deutsch.* ii. 648 (1857).

Habitat insulas Canarienses, in Hierro solâ adhuc haud observatus.

The European *L. parumpunctatus* (which occurs sparingly at Madeira) is widely diffused over the Canarian Group, where there can be no doubt that it is universal: indeed Hierro is the only island of the seven in which it does not happen to have been observed. In Lanzarote, Fuerteventura, Grand Canary, Teneriffe, and Palma I have myself captured it; whilst in Teneriffe and Gomera it was found by Dr. Crotch, and in Lanzarote and Palma by Mr. Gray.

885. **Leptacinus linearis.**

L. angustus, nitidus, niger, elytris (extus leviter subseriatim punctatis) vel concoloribus vel paulo dilutioribus; capite prothoraceque (oculo fortissime armato) subtilissime transversim undulato-substrigulosis, illo subtriangulari utrinque profunde sed parce punctato, hujus seriebus dorsalibus circa 8–9-punctatis; antennis testaceo-piceis; pedibus piceo-testaceis.—Long. corp. lin. $1\frac{3}{4}$.

Staphylinus linearis, *Grav., Col. Micropt.* 43 (1802).
Gyrohypnus sulcifrons (*Kby*), *Steph., Ill. Brit. Ent.* v. 260 (1832).
Leptacinus linearis, *Kraatz, Nat. der Ins. Deutsch.* ii. 649 (1857).

Habitat Lanzarotam et Teneriffam, minus frequens.

Like the last species, this European *Leptacinus* (which also occurs sparingly in Madeira) is widely spread at the Canaries—though hitherto it has been detected only in Lanzarote and Teneriffe (in the former by myself, and in the latter by Dr. Crotch). In all probability, however, it will be found to be equally universal; though its smaller size renders it more likely to escape observation.

Genus 323. **OTHIUS.**

(Leach) Stephens, *Ill. Brit. Ent.* v. 253 (1832).

886. **Othius brachypterus,** n. sp.

O. niger, elytris (brevibus, parce leviter punctatis) piceis; capite crasso, suboblongo, utrinque parce sed parum profunde punctato, oculis minutissimis; prothorace utrinque punctis 3 vel 4 notato aliisque perpaucis versus latera irrorato; abdomine dense sed leviter subasperato-punctulato, obsolete submetallico-tincto, ad api-

cem dilutiore; antennis rufo-, ad basin pedibusque piceo-testaceis. —Long. corp. lin. 3.

Habitat Gomeram, a W. D. Crotch semel captus.

The only specimen which I have seen of this *Othius* was captured by Dr. Crotch, during the spring of 1862, in Gomera. It is well distinguished by its black hue, extremely short, piceous, finely and sparingly punctulated elytra, rather thick oblong head, faintly submetallic abdomen, and piceo-testaceous limbs. In its minute eyes and general *facies* it has a good deal in common with the Madeiran *O. Jansoni*; but it is a smaller insect, with the limbs shorter, and the elytra much more finely sculptured and less developed.

887. **Othius philonthoides**, n. sp.

O. præcedente minor, angustior, subnitidior; elytris pallidioribus (sc. infuscato-testaceis), minus abbreviatis et profundius punctatis; capite subminore, utrinque vix parcius punctato, oculis paulo majoribus; abdomine etiam levius subasperato-punctulato, haud metallico-tincto; antennis pedibusque sensim brevioribus, pallidioribus.—Long. corp. lin. $2\frac{1}{2}$.

Habitat Canariam Grandem, in regione El Monte semel repertus.

This little *Othius* is of about the size and general outline of the *larger* examples of the *Philonthus nigritulus*; and it may be known from the preceding species by being smaller and narrower, with its limbs rather shorter and paler, and with its elytra likewise paler, somewhat less abbreviated, and much more coarsely punctured. Its head, also, is *relatively* a trifle smaller, its eyes are not *quite* so diminutive, and its abdomen is even more finely punctured still and apparently free from the slightest metallic lustre. The unique example described from I captured, during the spring of 1858, in the region of El Monte in Grand Canary.

(Subfam. VI. PÆDERIDES.)

Genus 324. **ACHENIUM.**

(Leach) Curtis, *Brit. Ent.* iii. 115 (1826).

888. **Achenium subcæcum**, n. sp.

A. pallidum, valde depressum, apterum; capite prothoraceque nitidissimis, rufo-testaceis, illo late obcordato profunde sed parce punctato oculis minutissimis (superne haud observandis), hôc trapeziformi (antice lato) et utrinque parcissime punctato; elytris brevissimis, parcissime ac leviter punctatis et (unà cum abdomine) testaceo; antennis (gracilibus) tibiisque infuscato-, femoribus (latis) tarsisque pallido-testaceis.—Long. corp. lin. $2\frac{2}{3}$.

Habitat Lanzarotam; in montibus supra Hariam exemplar unum sub lapide collegi.

In its extremely depressed surface, broadly obcordate head, trapeziform prothorax, wide femora, very deeply sinuated anterior tibiæ, and slender posterior feet, this singular Staphylinid is a normal *Achenium*; nevertheless its totally apterous body, greatly abbreviated elytra, and almost obsolete eyes (which are so diminutive and punctiform as to be quite imperceptible from above) give it a character peculiarly its own. The excessive paleness of its entire colour (the head, prothorax, and tibiæ being rufo-testaceous, whilst the elytra, abdomen, femora, and tarsi are more pallid still) will further distinguish it from anything else with which we have here to do. The only specimen which I have seen was captured by myself, from beneath a stone, on the hills above Haria, in the north of Lanzarote.

889. **Achenium salinum**, n. sp.

A. angustum, convexiusculum, alatum; capite prothoraceque nitidis, rufo-ferrugineis, regulariter sat profunde punctatis, illo triangulari-ovali oculis parum magnis prominulis, hôc angusto (antice paulo latiore) in lineâ mediâ lævi; elytris minus nitidis, pallido-testaceis, ad basin infuscatis, levissime parce punctulatis; abdomine subopaco, rufo-brunneo; antennis (gracilibus) pedibusque rufo-ferrugineis, tarsis posterioribus pallidioribus.—Long. corp. lin. $2\frac{1}{3}$.

Habitat Lanzarotam, ad marginem lacus ejus salini "Januvio" dicti Martio exeunte A.D. 1859 specimen unicum deprehendi.

Like the last one, this species also is unique and was captured in Lanzarote. Nevertheless in its habits it is totally dissimilar; for whilst the *A. subcœcum* was found at a comparatively high elevation on the mountains in the north of the island, the *salinum*, on the contrary, I captured at the edge of the curious salt lake of Januvio (which adjoins the south-western coast)—running rapidly over the mud in a most briny spot.

In its extremely narrow and comparatively convex body, as well as in its more oblong (or less obcordate) head and the fact of its prothorax being but very slightly widened in front, the *A. salinum* has much the *primâ facie* aspect of a *Lathrobium*; but its greatly developed femora, its very deeply sinuated anterior tibiæ, and its slender posterior feet (with their rather elongate terminal joint) refer it unmistakeably to *Achenium*; whilst even in the shape of its head and prothorax it is *intermediate* between the two genera. In mere specific details, it may be well distinguished by its rufo-ferruginous head and prothorax—which are regularly and (for an *Ache-*

nium) somewhat closely punctured, the latter alone having a central glabrous space; by its very slightly shining, most lightly punctured, *testaceous* elytra (which, however, are a little infuscated at their base); by its subopake, reddish-brown abdomen; and by its rufo-ferruginous limbs.

Genus 325. LATHROBIUM.

Gravenhorst, *Col. Micropt.* 179 (1802).

890. Lathrobium labile.

L. angustissimum, nigrum; capite quadrato-ovali, profunde punctato; prothorace angusto, oblongo, utrinque (necnon in dorso biseriatim) profunde punctato; elytris profunde et dense striato-punctatis, postice lævioribus et plus minus testaceis; abdomine dense leviter subasperato-punctulato; antennis (gracilibus) pedibusque rufo-testaceis, his plus minus picescentioribus.—Long. corp. lin. 2–2½.

Lathrobium labile, *Erich., Gen. et Spec. Staph.* 594 (1839).

Habitat Teneriffam, inter lapillos ad marginem paludis cujusdam parvæ in "Barranco Santo" juxta Sanctam Crucem lectum.

A Grecian example, communicated by Dr. Kraatz, of Erichson's *A. labile* (which occurs also in Sardinia) agrees precisely with the Canarian specimens now before me. The species may be known by its minute size and extremely narrow outline; by its (rather elongate) head being regularly and deeply punctured, and its prothorax also (which has a double row of punctures down its disc) on either side; by its elytra (which are more or less rufo-testaceous along their hinder edge, and occasionally even along the suture) being closely and coarsely striate-punctate; and by its rufo-testaceous limbs—the legs, however, being usually a little clouded or picescent. The only specimens which I have seen (sixteen in number) were taken by myself (in company with the *Philonthus tenellus* and *Anthicus lapidosus*) from amongst wet shingle at the edges of a little stagnant pool at the extreme head of the Barranco Santo, close to S^ta^ Cruz, in Teneriffe.

891. Lathrobium multipunctatum.

Lathrobium multipunctatum, *Grav., Col. Micropt.* 52 (1802).
—— ——, *Erich., Gen. et Spec. Staph.* 591 (1839).
—— ——, *Woll., Ins. Mad.* 588 (1854).
—— ——, *Id., Cat. Mad. Col.* 193 (1857).

Habitat in humidis Teneriffæ et Palmæ, sat rarum.

Although rather abundant at Madeira, the European *L. multipunctatum* is decidedly scarce in these islands—the very few Canarian

examples which I have seen having been captured by myself in Teneriffe and Palma. My Teneriffan specimens are from moist places in the vicinity of S^ta^ Cruz, Taganana, Las Mercedes, and Ycod el Alto.

Genus 326. **DOLICAON.**

Laporte, *Etud. Ent.* i. 119 (1834).

892. **Dolicaon nigricollis.**

D. apterus, subcylindricus, nitidus, niger, elytris (parce et leviter punctulatis) abdominisque segmentis ultimis testaceo-rufis; capite prothoraceque parce sed parum profunde punctatis; antennis pedibusque rufo-testaceis.

Mas abdominis segmento sexto infra profunde inciso, quinto integro. —Long. corp. lin. $2\frac{2}{3}$–$3\frac{1}{3}$.

Dolicaon ruficollis, *Woll., Trans. Ent. Soc. Lond.* i. 188 (1862).

Habitat Lanzarotam et Canariam, vel sub lapidibus vel in truncis *Euphorbiarum* emortuis putridis degens.

In a Paper "on the *Euphorbia*-infesting Coleoptera" of these islands, I stated that "the present *Dolicaon* appears to be very closely allied to the *D. illyricus*—with which indeed (judging from the diagnosis) I should have united it, had I not been informed by Dr. Kraatz that its head and prothorax are somewhat more lightly punctured, and its antennæ a little shorter, than is the case in that species. It is not impossible, therefore, that it may be but a geographical phasis of the *D. illyricus*; but, as I have no type of the latter for comparison, I will not venture to record it absolutely as such." It is not uncommon in Lanzarote, where it occurs both under stones and beneath the moist rotting bark of old Euphorbias; and I took a single specimen, during the spring of 1858, in the region of El Monte in Grand Canary. In Lanzarote it was found also by Mr. Gray.

893. **Dolicaon ruficollis.**

D. præcedenti valde affinis et forsan ejus varietas insularis; differt solum (ut mihi videtur) corpore sæpius paulo majore, prothorace (ut elytris) testaceo-rufo (haud nigro).—Long. corp. lin. $3\frac{1}{2}$–$3\frac{2}{3}$.

Dolicaon ruficollis, *Woll., Trans. Ent. Soc. Lond.* i. 189 (1862).

Habitat in locis similibus ac præcedens, sed in Fuerteventura necnon in insulâ parvâ adjacente "Lobos" dictâ, rarissimus.

Possibly this may be but an insular state of the last species—from which it merely differs (so far as I can detect) in being a trifle larger, and in having its prothorax (like the elytra) pale rufous instead of black. I have taken it, sparingly, both in Fuerteventura itself and on the little island of Lobos (off the extreme north of it)—in the latter locality from within a rotten *Euphorbia*-stem.

Genus 327. **STILICUS.**

Latreille, *Règn. Anim.* iv. 436.

894. **Stilicus affinis.**

Stilicus affinis, *Erich., Käf. der Mark Brand.* i. 522 (1837).
—— ——, *Redt., Fna Austr.* 720 (1849).
Rugilus affinis, *Woll., Ins. Mad.* 592 (1854).
—— ——, *Id., Cat. Mad. Col.* 195 (1857).

Habitat Teneriffam, a W. D. Crotch repertus.

Although common at Madeira, I have not myself observed this European *Stilicus* at the Canaries; but six examples of it are now before me which were captured by Dr. Crotch, during the spring of 1862, in Teneriffe.

Genus 328. **SCOPÆUS.**

Erichson, *Gen. et Spec. Staph.* 604 (1839).

895. **Scopæus trossulus,** n. sp.

S. angustus, subtilissime punctulatus, nitidus, minute cinereo-sericeus, piceo-ferrugineus; capite subquadrato; prothorace subovato, rufescentiore, basi in medio tenuiter carinato et obsolete biimpresso; elytris postice plus minus dilutioribus; abdomine subopaco, densissime subpunctato-ruguloso, apice dilutiore; antennis pedibusque testaceis.—Long. corp. lin. $1\frac{1}{2}$.

Obs.—*S. lævigato* Gyll. valde affinis, sed subangustior, capite vix minore et etiam paulo subtilius punctulato, elytris brevioribus, colore omnino subpallidiore, capite prothoraceque sensim nitidioribus.

Habitat Fuerteventuram, Canariam et Teneriffam, inter lapillos ad margines aquarum (vel fluentium vel stagnantium) parce degens.

Apparently extremely rare, occurring amongst wet shingle at the edges of pools and streams. In such situations I have taken it at La Antigua in Fuerteventura, at Arguiniguin in Grand Canary, and in the Barranco Santo (near S^{ta} Cruz) of Teneriffe. It is possible that it may be but a geographical modification of the European *S. lævigatus*, which at first sight it almost entirely resembles. It is, however, just perceptibly narrower, with its head not quite so much developed and a little more finely punctulated, its elytra are appreciably shorter, its entire colour is perhaps a shade paler, and its head and prothorax are rather more shining.

896. **Scopæus nigellus,** n. sp.

S. angustissimus, subtilissime dense punctulatus, subopacus, minute cinereo-sericeus, niger; capite triangulari-subquadrato; prothorace subovato, basi in medio obsoletissime biimpresso; elytris ab-

domineque (densissime subpunctato-ruguloso) postice vix dilutioribus; antennis (brevibus) pedibusque piceo-testaceis, tarsis clarioribus.—Long. corp. lin. $1\frac{1}{3}$.

Habitat Gomeram, a W. D. Crotch semel captus.

A single specimen only of this little *Scopæus*, taken by Dr. Crotch (during the spring of 1862) in Gomera, has hitherto come beneath my notice. It may be known by its minute size and very narrow outline, by its subopake and nearly black surface (the elytra being only a trifle more picescent posteriorly—though the limbs are of a piceo-testaceous hue), by its subtriangular-quadrate head, and by its much abbreviated antennæ. It is a little narrower and darker than the European *S. minutus*, with its head rather less developed, its punctation finer and closer, and its antennæ somewhat shorter and less robust.

Genus 329. LITHOCHARIS.

(Dejean) Boisd. et Lacord., *Faun. Ent. des Env. de Paris*, i. 431 (1835).

897. Lithocharis quadriceps, n. sp.

L. subnitida, griseo-pubescens, nigra elytris rufo-ferrugineis; capite (lato, quadrato) prothoraceque (vix picescentiore) densissime punctatis; abdomine picescentiore, apice ferrugineo; antennis pedibusque rufo-ferrugineis.—Long. corp. lin. $2\frac{1}{4}$–$2\frac{1}{2}$.

Obs.—*L. castaneæ* Grav. affinis, sed capite prothoraceque nigrescentioribus et minus rugose punctatis, illo longiore (magis quadrato) oculis sensim majoribus, tarsis paulo longioribus ac multo gracilioribus.

Habitat in Lanzarota et Fuerteventura, aliquanto rara.

This large and beautiful *Lithocharis* I have observed hitherto only in Lanzarote and Fuerteventura—namely, near Haria of the former (where it was taken likewise by Mr. Gray) and (from under camels' dung) near Betancuria of the latter. In its densely punctured head and prothorax and rufo-ferruginous elytra, it has much the *primâ facie* aspect of the European *L. castanea*; but its head and prothorax are blacker (or less piceous) and rather less rugosely punctured (the former also being larger and more quadrate, with the eyes not quite so minute), and its feet are a little longer and very much slenderer. It was examined by Dr. Kraatz, and regarded by him as new.

898. Lithocharis subcoriacea, n. sp.

L. præcedente paulo angustior, magis opaca ac densius subtiliusque cinereo-pubescens; capite (angustiore, oblongiore) prothoraceque multo levius punctulatis (hôc minutissime obsolete punctulato, quasi subcoriaceo); elytris obscurioribus (vel piceis in limbo fere nigres-

centibus, vel fusco-ferrugineis); antennis pedibusque sæpius paulo obscurioribus, illarum articulis intermediis plus minus evidenter nigro-variegatis.—Long. corp. lin. 2–2¼.

Habitat in Canaria, Teneriffa, Gomera, Palma et Hierro, passim.

This *Lithocharis* differs from the preceding one in being a little narrower and more opake, and more densely clothed with a finer and shorter cinereous pubescence; in its head (which is much straightened on either side) being especially narrower and less quadrate, and also, together with the prothorax, much more lightly punctulated (indeed the latter has more the appearance of being *coriaceous* than "punctulated"); in its elytra being of an obscurer hue (either dull rufo-piceous and still darker towards the sides, or else uniformly brownish ferruginous); and in the intermediate joints of its antennæ being more or less variegated with black. I have captured it in the region of El Monte in Grand Canary, as well as in Palma and Hierro; and it was found in Teneriffe and Gomera by Dr. Crotch. It would seem to ascend to a high elevation, for Dr. Crotch's Teneriffan examples are marked as having been taken on the Cumbre adjoining the Cañadas.

899. **Lithocharis ochracea.**

L. subopaca, densissime cinereo-sericea, minutissime punctulata; capite nigro, subtriangulari, oculis magnis (sed haud prominentibus); prothorace elytrisque subquadratis, plus minus infuscate rufo-ferrugineis (illo sæpius paulo rufescentiore); abdomine fusco-ferrugineo; antennis pedibusque testaceis.—Long. corp. lin. 1⅔–2.

Pæderus ochraceus, *Grav., Col. Micropt.* 59 (1802).
Lithocharis ochracea, *Erich., Gen. et Spec. Staph.* 623 (1839).
—— ——, *Woll., Ins. Mad.* 590 (1854).
—— ——, *Id., Cat. Mad. Col.* 193 (1857).

Habitat in Lanzarota, Fuerteventura, Teneriffa et Gomera, haud infrequens.

There can be no doubt that this common European *Lithocharis* (which abounds in Madeira, and which is widely spread over the world) is universal at the Canaries, though hitherto it has been observed in only four out of the seven islands of the Group. I have taken it in Lanzarote, Fuerteventura, and Gomera; and it was found in Teneriffe by Dr. Crotch. It occurs beneath vegetable *rejectamenta* generally, independent of elevation; and in the Rio Palmas of Fuerteventura I once met with it, in profusion, amongst the refuse of a camels' stable.

900. **Lithocharis nigritula.**

L. angusto-linearis, nigra, subnitida, cinereo-pubescens, dense sed

parum profunde punctata; capite (elongato-subquadrato) prothoraceque lineâ mediâ lævi (in hôc postice obsolete subelevatâ) instructis; abdomine subopaco densiusque cinereo-sericeo; antennis (breviusculis) pedibusque piceo-testaceis, tarsis clarioribus.—Long. corp. lin. $1\frac{1}{2}$.

Lithocharis nigritula ?, *Erich., Gen. et Spec. Staph.* 625 (1839).

Habitat Teneriffam, inter lapillos ad marginem paludis cujusdam parvæ in "Barranco Santo" juxta urbem Sanctæ Crucis capta.

Judging from the diagnosis, I have little doubt that this small *Lithocharis* is conspecific with Erichson's *L. nigritula* from Sicily; and it may easily be known by its narrow, linear outline, and by its black, slightly shining, and densely but rather coarsely punctured surface, by its (elongate-squarish) head and prothorax having each of them (though particularly the latter) a central unpunctured line, and by its antennæ and legs (the former of which are rather short) being of a piceo-testaceous hue. If, however, it should prove hereafter to be distinct, I would then propose for it the trivial name of *maura*. The only two examples which I have seen were taken by myself, from amongst wet shingle at the edges of a small stagnant pool, at the head of the Barranco Santo (close to S^{ta} Cruz) in Teneriffe—in company with the *Scopæus trossulus*, *Philonthus tenellus*, *Anthicus lapidosus*, the *Perileptus nigritulus*, and other Coleoptera of similar (subaquatic) habits.

901. Lithocharis melanocephala.

L. angusta, nitida, parce griseo-pubescens, profundius ac minus dense punctata; capite elongato-subquadrato, vel piceo-nigro, vel rufo-piceo, vel etiam rufo-ferrugineo; prothorace testaceo-rufo, lineâ mediâ paulo læviore; elytris piceo-testaceis; antennis rufo-testaceis (interdum articulis intermediis infuscatis); pedibus testaceis. —Long. corp. lin. $1\frac{1}{2}$–2.

Pæderus melanocephalus, *Fab., Ent. Syst.* i. ii. 538 (1792).
Lithocharis melanocephala, *Erich., Gen. et Spec. Staph.* 614 (1839).
—— ——, *Woll., Ins. Mad.* 591 (1854).
—— ——, *Id., Cat. Mad. Col.* 194 (1857).

Habitat insulas omnes Canarienses, aliquanto vulgaris.

This common European insect, which is universal in the Madeiran Group, is universal likewise at the Canaries—in the whole seven islands of which I have myself captured it. In Teneriffe and Gomera it was found also by Dr. Crotch. It is rather variable in stature, and exceedingly so in the colour of its head—which is normally black, but very often piceous, and occasionally bright rufo-ferruginous (or scarcely darker than the prothorax). It occurs principally beneath

stones, and is nearly independent of elevation—my Teneriffan specimens being from S^ta Cruz and the mountains above it, from Taganana, Las Mercedes, La Esperanza, Souzal, and the Agua Mansa.

902. **Lithocharis brevipennis,** n. sp.

L. præcedenti fere similis, fortasse ejus varietas regionibus valde elevatis Teneriffæ propria; sed paulo minor, angustior, oculis sensim minoribus elytrisque brevioribus (sc. prothorace haud longioribus); capite rufo-ferrugineo, ad basin vix minus recte truncato.—Long. corp. lin. $1\frac{1}{2}$.

Habitat sub lapidibus in montibus valde excelsis Teneriffæ, usque ad 10,000′ s. m. ascendens.

Although in colour and outline almost similar to the *L. melanocephala*, I am uncertain whether the present *Lithocharis* can be regarded as any modification of that insect peculiar to the loftiest altitudes of Teneriffe. The only examples of it (four in number) which I have myself taken were captured on the elevated Cumbre overlooking the Cañadas, at nearly 10,000 feet above the sea; and two more have been communicated by Dr. Crotch, which I have little doubt were met with in the same region. It differs from the *melanocephala* in being a little smaller, with its eyes still more minute, and its elytra very appreciably shorter (being, in fact, no longer than the prothorax). Its head appears to be rufo-ferruginous (as in the *paler* specimens of the *melanocephala*), and, if anything, somewhat less straightly truncated at the base.

903. **Lithocharis debilicornis.**

L. subopaca, pallida, subgrosse pubescens; capite (lato, subobcordato, oculis prominentibus) prothoraceque (breviusculo) rufo-testaceis, alutaceis, sat grosse sed haud profunde punctatis; elytris testaceis; abdomine fusco-testaceo; antennis (brevissimis, articulis intermediis brevibus) pedibusque testaceis.—Long. corp. lin. $1\frac{1}{3}$–$1\frac{1}{2}$.

Lithocharis debilicornis, *Woll., Cat. Mad. Col.* 194 (1857).

Habitat Teneriffam et Palmam, rarissima.

I have not taken the trouble to dissect this curious insect; but I think it far from unlikely that a careful examination of its oral organs would disclose sufficient structural peculiarities to render its isolation from *Lithocharis* desirable,—its greatly abbreviated antennæ (all the joints of which, except the basal and apical ones, are much shortened), combined with its prominent eyes and the more fusiform apex of its maxillary palpi, giving it a character essentially its own. In mere specific details it may easily be recognized by its entirely pallid hue and subopake surface, and by its head and prothorax (the former of

which is wide and obcordate, whilst the latter is somewhat short) being alutaceous and distinctly, but not deeply, punctured. It appears to be very rare, and indeed it entirely escaped my own observation in these islands. A single individual, however, was captured by Mr. Gray, during February 1858, in Palma; and five more are now before me which were taken by Dr. Crotch, during the spring of 1862, in Teneriffe. It is not uncommon around Funchal in Madeira, and occurs sparingly in the south of Europe—it having been described by M. Allard, subsequently to the publication of my Madeiran Catalogue, under the specific name of *brevicornis*.

Genus 330. **SUNIUS.**

(Leach) Stephens, *Ill. Brit. Ent.* v. 274 (1832).

904. **Sunius myrmecophilus,** n. sp.

S. crassiusculus, compactus, rufo-ferrugineus, subopacus, dense griseo-pubescens; capite prothoraceque creberrime et minutissime subreticulato-punctulatis, illo crasso lato subobcordato in fronte convexo oculis minutis prominulis, hôc subtrapeziformi antice lato; elytris rugosius subpunctulato-asperatis; abdomine fuscescentiore; antennis breviusculis; pedibus rufo-testaceis.—Long. corp. lin. 2.

Habitat Canariam et Teneriffam, in *Myrmicarum* nidis degens.

This remarkable *Sunius* (which was examined by Dr. Kraatz, and regarded by him as new) is at once distinguished by its rather thick and compact body, rufo-ferruginous hue, and wide, convex, somewhat obcordate head—which (together with its subtrapeziform, anteriorly broad prothorax) is most minutely but densely punctulated. Its eyes are small and prominent, and its limbs are rather short. It seems to be very rare, and confined (so far as I have observed hitherto) to the nests of a species of *Myrmica*—occurring, in company with the ants, beneath stones. In such situations I have taken it sparingly in Grand Canary and Teneriffe. My Teneriffan examples are principally from the Agua Mansa; but I captured a single individual at no great distance above the Puerto Orotava.

905. **Sunius megacephalus,** n. sp.

S. gracilis, rufo-ferrugineus, opacus, breviter griseo-pubescens; capite prothoraceque valde profunde et rugose subreticulato-punctatis, illo magno suboblongo oculis parvis, hôc angusto subovato; elytris rugose sed paulo minus dense asperato-punctatis, rarius antice vix fuscescentioribus; abdomine rugose punctato, obscuriore (apice rufo-ferrugineo excepto), segmento quinto antice nigro; antennis pedibusque elongatis, gracilibus, pallide testaceis.—Long. corp. lin. 2–2¼.

Habitat in intermediis editioribusque Teneriffæ et Palmæ, usque ad 9000′ s. m. ascendens.

In their narrower and more fragile bodies, more oblong and pedunculated heads, smaller prothoraces, and longer limbs the present and two following *Sunii* are quite on a different type from the preceding one —having more in common with the Madeiran *Mecognathus chimæra*, which perhaps may be but an extreme modification of *Sunius*. The *S. megacephalus* is, on the average, rather the largest of the three, and is generally of an obscure rufo-ferruginous hue—the elytra being immaculate (or sometimes very faintly clouded anteriorly); and its head is always greatly developed. I have observed it hitherto only in Teneriffe and Palma (in the former of which it was found also by Dr. Crotch), where it occurs at intermediate and lofty elevations—ascending to at least 9000 feet above the sea. My Teneriffan specimens are from the laurel-woods above Taganana, Souzal, the Agua Mansa, and the Cumbre above it, and from the opposite Cumbre adjoining the Cañadas.

906. **Sunius dimidiatus**, n. sp.

S. præcedenti similis, sed plerumque vix minor angustior, elytris in parte basali læte et abrupte nigris.—Long. corp. lin. 2–vix $2\frac{1}{4}$.

Habitat in Canaria, Teneriffa, Gomera et Hierro, sub lapidibus in inferioribus intermediisque præcipue degens.

It is barely possible that this *Sunius* may be but a well-marked variety, or state, of the *megacephalus*; but I think that it is truly distinct, though immature examples of both (in which the colour is not fully developed) are not always readily separable. On the average, the *S. dimidiatus* is just perceptibly smaller and narrower than its ally; and its elytra have their basal half conspicuously and abruptly black. It appears to have a rather lower range than the *megacephalus*; for, although it occurs equally at intermediate altitudes, it descends to almost the sea-level. I have taken it in the region of El Monte in Grand Canary, as well as in Teneriffe, Gomera, and Hierro. My Teneriffan examples are from S^{ta} Cruz and the mountains above it, the vicinity of the Puerto Orotava, the Agua Mansa, and from the hills between Laguna and Tacaronté.

907. **Sunius pallidulus**, n. sp.

S. præcedentibus duobus affinis, sed paulo minor, omnino pallidior (elytris pallidis immaculatis, abdominis segmento quinto solum nigro), sensim minus opacus ac minus rugose sculpturatus; capite

minore, pone oculos (submajore) paulo magis rotundato; antennis pedibusque minus elongatis.—Long. corp. lin. vix 2.

Habitat Teneriffam et Gomeram, a W. D. Crotch repertus.

The only three examples which I have seen of this species were taken by Dr. Crotch—two of them in Teneriffe, and the remaining one in Gomera. It seems to be quite distinct both from the *megacephalus* and *dimidiatus*, being a little smaller than even the latter, and altogether paler than both of them—the fifth abdominal segment being the only portion of its surface which is black. It is also a trifle less opake, and not quite so roughly sculptured; its head is less developed, and more suddenly rounded behind the eyes (which are themselves a trifle larger), and its limbs are appreciably shorter.

(Subfam. VII. STENIDES.)

Genus 331. **STENUS.**

Latreille, *Précis des Caract. Gén. des Ins.* 77 (1796).

§ I. *Corpus alatum: abdomen marginatum: tarsi articulo quarto simplici.*

908. **Stenus guttula.**

Stenus guttula, *Müll., in Germ. Mag.* iv. 225 (1821).
—— ——, *Erich., Gen. et Spec. Staph.* 691 (1839).
—— ——, *Woll., Ins. Mad.* 597 (1854).
—— ——, *Id., Cat. Mad. Col.* 196 (1857).

Habitat in aquosis Canariæ, Teneriffæ et Palmæ, rarissimus.

The European *S. guttula*, which abounds in the Madeiran Group, is apparently rare in these islands—the very few examples which I have seen having been taken by myself in Grand Canary, Teneriffe, and Palma. My Grand-Canarian specimen was captured on the ascent to the Pinal above San Bartolomé (in the central district of Tarajana), and the Palman ones are from the Barranco de Galga.

§ II. *Corpus apterum: abdomen marginatum: tarsi articulo quarto bilobo (sed tamen angusto).*

909. **Stenus æneotinctus,** n. sp.

S. niger vel piceo-niger, conspicue æneo-tinctus, subnitidus, parce griseo-pubescens; capite, prothorace elytrisque (brevissimis) paulo inæqualibus, valde profunde, dense et rugose punctatis; abdomine minus profunde (sed tamen grosse) punctato; antennis longiusculis, graciliusculis, apice nigrescentibus, versus basin, palpis pedibusque saturate pallido-testaceis.—Long. corp. lin. $1\frac{2}{3}$–2.

Habitat in Canaria, Teneriffa, Gomera, Palma et Hierro, in intermediis humidis sylvaticis, rarissimus.

Although extremely rare, this *Stenus* is widely spread over the archipelago—occurring in moist, sylvan (and subsylvan) spots of intermediate and rather lofty elevations, and having been detected in all the islands except Lanzarote and Fuerteventura (where it probably does *not* exist). I have taken it in Grand Canary, Teneriffe, Palma, and Hierro; and four specimens were captured in Gomera ("in the laurel-woods above Hermigua") by Dr. Crotch. My Teneriffan examples are from the sylvan mountains above Taganana, Las Mercedes, the Agua Garcia, the Agua Mansa, and Ycod el Alto. It may at once be known by its slightly shining, *æneous* and most coarsely sculptured surface—the head, prothorax, and elytra (the last of which are much abbreviated) being *very* deeply and roughly punctured. Its antennæ are rather long and slender; and their basal portion, together with the palpi and legs, are pale diluted-testaceous.

(Subfam. VIII. OXYTELIDES.)

Genus 332. **BLEDIUS.**

(Leach) Stephens, *Ill. Brit. Ent.* v. 307 (1832).

910. **Bledius januvianus,** n. sp.

B. capite prothoraceque grosse alutaceis, subopacis, illo nigro utrinque cornu sublamelliformi (præsertim in maribus) instructo, hôc piceo lato transverso-subquadrato canaliculato parce profundeque punctato; elytris densius sed minus profunde punctatis, testaceis sed versus suturam latissime ac suffuse nebulosis; abdomine nigro, apice paulo dilutiore; antennis rufo-ferrugineis, basi clarioribus; pedibus testaceis.—Long. corp. lin. 3–3½.

Habitat Lanzarotam, rarissime: ad marginem lacus ejus salini "Januvio" dicti, Martio A.D. 1859, exemplaria quinque collegi.

I am exceedingly doubtful whether this *Bledius* should be regarded as more than a greatly developed state of the European *B. bicornis*—with which in colour, sculpture, and general *facies* it is almost coincident. It seems indeed to differ merely (so far as I can detect) in being considerably larger, with its eyes still more prominent, and its prothorax a little wider and more coarsely punctured. Its comparatively large size and testaceous elytra, combined with its simple (or *un*cornuted) prothorax in both sexes, and the erect, compressed, somewhat lamelliform horn with which either side of its forehead is furnished, will at once distinguish it from the two following species. It appears to be exceedingly rare, and peculiar to saline spots—the few specimens which I have seen having been captured by myself at the edges of the salt lake of Januvio, adjoining the south-western coast of Lanzarote, on the 26th of March 1859.

911. Bledius cornutissimus, n. sp.

B. capite prothoraceque leviter alutaceis, subnitidis, illo nigro utrinque tuberculo elongato (præsertim in maribus) instructo, hôc nigro-piceo subquadrato canaliculato parce et sat profunde punctato; elytris densius sed minus profunde punctatis, rufis sed versus scutellum obsolete nebulosis; abdomine nigro, apice dilutiore; antennis pedibusque rufo-testaceis, illis paulo obscurioribus.

Mas prothorace antice in medio cornu longissimo, porrecto, angustissimo, aciculari, tereti, lævi, etiam ultra caput ducto, armato.—Long. corp. lin. 2.

Habitat Lanzarotam et Fuerteventuram, per oras arenosas maritimas necnon in Salinis fodiens.

Apart from its brightly rufescent elytra and rufo-testaceous limbs, this singular *Bledius* may readily be known by the immensely elongated, narrow, acicular, glabrous, and porrect horn with which the prothorax of its males is armed in the centre of the anterior margin. In the opposite sex the prothorax is quite simple; but in both (though more particularly the male) the head is furnished on either side (at the insertion of the antennæ) with an oblong tubercle. Like the last species, it is extremely rare, and confined (so far as I have observed hitherto) to the sandy shores (and salt places generally) in Lanzarote and Fuerteventura. In the former I took it sparingly both at the Salinas (or salt-works) in the north of the island and on the beach to the south of Arrecife; whilst in the latter I met with it, beneath marine *rejectamenta*, about a mile to the south of Puerto de Cabras.

912. Bledius galeatus, n. sp.

B. angusto-subcylindricus; capite prothoraceque grosse alutaceis, subopacis, illo nigro utrinque tuberculo elongato (præsertim in maribus) instructo oculis parvis (sed prominentibus), hôc piceo-nigro subquadrato canaliculato parce et sat profunde punctato; elytris brevibus, densius sed minus profunde punctatis, piceis vel rufo-piceis sed versus scutellum paulo obscurioribus; abdomine nigro, apice vix dilutiore; antennis pedibusque brevibus, piceis, tarsis testaceis.

Mas prothorace antice in medio cornu elongato subdecurvo, versus apicem gradatim augustissimo, haud ultra caput ducto et ad illum adpresso, armato.—Long. corp. lin. 2.

Habitat Lanzarotam borealem, in Salinis degens.

In the greatly-produced, narrow, and acute process with which the anterior margin of its male pronotum is armed this *Bledius* belongs to the same type as the preceding one; nevertheless the prothoracic horn of the *B. galeatus* is not quite so elongated (seeing that it does not extend beyond the extreme outline of the head), and it is also differently shaped—being *gradually* narrowed from the base to the

apex, and also slightly bent downwards, following the curvature of the pronotum (instead of being raised or porrect), and therefore more closely applied against the head. This curious arrangement causes the horn-like appendage of the pronotum to press against, and *protect*, the head (as it were with a helmet)—a circumstance which has suggested the trivial name of the species. In less important details, the *B. galeatus* is narrower and more cylindric, and of an altogether darker hue, than the *cornutissimus*, its eyes, although equally prominent, are smaller, and its elytra and limbs are shorter. It is quite as scarce as either of the preceding species—the only three examples which I have seen having been captured by myself, during March 1859, at the Salinas, in the north of Lanzarote.

Genus 333. **PLATYSTETHUS.**

Mannerheim, *Brachél.* 46 [script. *Platysthetus*] (1831).

913. **Platystethus cornutus.**

Oxytelus cornutus, *Grav., Col. Micropt.* 109 (1802).
Platysthetus cornutus, *Steph., Ill. Brit. Ent.* v. 311 (1832).
—— ——, *Erich., Gen. et Spec. Staph.* 782 (1839).
—— ——, *Kraatz, Nat. der Ins. Deutsch.* ii. 841 (1857).

Habitat Lanzarotam, Fuerteventuram, Teneriffam et Gomeram, in lutosis, passim.

This common European insect, which occurs rarely at Madeira, we may be pretty sure is universal at the Canaries. Hitherto, however, I have observed it only in Lanzarote, Fuerteventura, Teneriffe, and Gomera; and it was taken in Fuerteventura and Gomera by Mr. Gray, and in Teneriffe and Gomera by Dr. Crotch. It is found principally in muddy spots at low and intermediate elevations. My Teneriffan specimens are chiefly from the vicinity of S^{ta} Cruz, the Puerto Orotava, and Souzal.

914. **Platystethus fossor.**

P. cornuto minor ac nitidior (sc. nitidissimus, nec alutaceus), parcius (tamen argute) punctulatus, elytris minus testaceis (sc. vel nigris, vel plus minus picescentioribus), antennarum articulo ultimo longiore, magis oblongo pedibusque subpallidioribus (sensim minus piceis).

Mas capite utrinque supra oculos sulculis duobus impresso necnon apice spinulâ acutissimâ aciculiformi porrectâ armato; abdominis segmento septimo subtus in medio late impresso (impressione scutiformi, postice ad utrumque latus carinâ obliquâ brevi, vel potius dente elongato, terminatâ) necnon postice utrinque inter carinam et latus quasi biinciso (denticulum alterum obliquum efformante).

Fœm. capite haud (vel obsoletissime) sulcato, necnon apice inarmato;

abdominis segmento sexto subtus in medio obsolete subtriangulariter elevato, septimo producto rotundato.—Long. corp. lin. $1\frac{1}{2}$–$1\frac{2}{3}$.

Platysthetus spinosus?, *Erich., Gen. et Spec. Staph.* 784 (1839).
—— fossor, *Woll., Ins. Mad.* 603 (1854).
—— ——, *Id., Cat. Mad. Col.* 199 (1857.

Habitat in humidis lutosis Lanzarotæ et Teneriffæ, minus frequens.

Although (from description and recollection) I believe this *Platystethus* to be certainly identical with the Madeiran *P. fossor**, I think it far from improbable that it may also coincide with Erichson's *spinosus*—in which case the latter name will have the priority. Nevertheless, as I have no type of the *spinosus* to judge from, and Erichson's diagnosis of it makes no allusion to several important features (as, for instance, the *two* teeth on either side of the impression on the seventh abdominal segment of the males, and the disappearance of the sulci on the head of the opposite sex) which are conspicuous in the *fossor*, I do not think it would be safe, without further evidence, to treat it as conspecific with the *spinosus*. From the *cornutus* it may be known by its smaller size, more shining and rather more sparingly punctured surface (which is free from the minutely alutaceous sculpture which is always present in that insect), by its darker elytra (which are either entirely black or else picescent —but never with the disc actually testaceous), by its somewhat paler legs, and by the last joint of its antennæ being more elongated or oblong. Its male sex, also, recedes from the *cornutus* in having either side of its head (above the eyes) branded with two irregular sulci; though, as in that species, it is armed at each anterior angle with an exceedingly acute porrect spine (which, however, is smaller and less conspicuous than is the case in the *cornutus*). The few examples which I have seen from these islands were taken by myself—around Haria in the north of Lanzarote, and close to the Puerto Orotava in Teneriffe.

Genus 334. **OXYTELUS.**

Gravenhorst, *Col. Micropt.* 101 (1802).

915. **Oxytelus piceus.**

Staphylinus piceus, *Linn.*†, *Syst. Nat.* i. ii. 686 (1767).
Oxytelus piceus, *Erich., Gen. et Spec. Staph.* 788 (1839).

* I should state, however, that the few Canarian examples now before me are *on the average* rather larger than the Madeiran ones, and have their mandibles less conspicuously cleft at the apex; but as the *Platystethi* generally are eminently variable in stature, and the mandibles are the *least* stable of their oral organs, I do not lay much stress upon this twofold fact.

† Although this common *Oxytelus* has always been identified with the *Staphylinus piceus* of the 'Systema Naturæ,' I believe that Mr. Waterhouse has lately

Oxytelus piceus, *Woll., Ins. Mad.* 606 (1854).
—— ——, *Id., Cat. Mad. Col.* 199 (1857).

Habitat Canariam, Teneriffam, Gomeram et Palmam, in stercore bovino et equino vulgaris.

The European *O. piceus*, which abounds at Madeira, is probably universal in these islands—occurring in the dung of cattle, at most elevations. Hitherto, however, I have observed it only in Grand Canary, Teneriffe, and Palma; but specimens are now before me which were taken in Gomera by Dr. Crotch.

916. **Oxytelus sculptus.**

Oxytelus sculptus, *Grav., Mon.* 191 (1806).
—— longicornis, *Mann., Brachél.* 48 (1831).
—— sculptus, *Erich., Gen. et Spec. Staph.* 788 (1839).
—— ——, *Woll., Ins. Mad.* 607 (1854).
—— ——, *Id., Cat. Mad. Col.* 199 (1857).

Habitat in humidis Canariæ, Teneriffæ, Gomeræ et Palmæ, passim.

As at Madeira, this European *Oxytelus* is more attached to decaying vegetable refuse, and damp places generally, than to the dung of cattle; and it seems to be more local than the *piceus*. It is, however, widely spread over the archipelago, where in all probability it is universal. I have taken it in Grand Canary, Teneriffe, and Palma; and it was captured in Teneriffe and Gomera by Dr. Crotch. My Grand-Canarian specimens are principally from Teror; and the Teneriffan ones from the vicinity of the Puerto Orotava, the Agua Garcia, and Ycod el Alto.

917. **Oxytelus complanatus.**

Oxytelus depressus, *Gyll.* [nec *Grav.* 1802], *Ins. Suec.* ii. 457 (1810).
—— complanatus, *Erich., Käf. der Mark Brand.* i. 595 (1837).
—— ——, *Woll., Ins. Mad.* 608 (1854).
—— ——, *Id., Cat. Mad. Col.* 200 (1857).

Habitat insulas omnes Canarienses, late sed parce diffusus.

The *O. complanatus* (likewise European, and which abounds in Madeira) is not very common at the Canaries, where, however, it is universal. I have taken it in Lanzarote, Grand Canary, Teneriffe, Palma, and Hierro; and it was found in Fuerteventura, Teneriffe, Gomera, Palma, and Hierro by Mr. Gray, and in Teneriffe and Gomera by Dr. Crotch. It occurs both in the dung of cattle and beneath vegetable refuse generally.

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stated that the *type* in the Linnean cabinet pertains to the insect which is universally recognized under the name of *sculptus*. But as there is at least a *possibility* of the (so-called) "type" having been subsequently tampered with, and it is most undesirable to create confusion concerning two species the nomenclature of which has been regarded hitherto as completely settled, I would rather avoid all consideration of a question which can lead to no advantageous result, practically—but quite the reverse.

918. **Oxytelus nitidulus.**

Oxytelus nitidulus, *Grav., Col. Micropt.* 107 (1802).
—— ——, *Erich., Gen. et Spec. Staph.* 795 (1839).
—— ——, *Woll., Ins. Mad.* 609 (1854).
—— ——, *Id., Cat. Mad. Col.* 201 (1857).

Habitat insulas omnes Canarienses, in stercore bovino, equino, camelino, humano, ubique vulgaris.

This abundant European *Oxytelus*, which is common in the Madeiran Group, is universal at the Canaries—in the whole seven islands of which I have myself captured it. In Lanzarote, Fuerteventura, and Gomera it was found likewise by Mr. Gray, and in Teneriffe and Gomera by Dr. Crotch. It occurs principally in the dung of cattle, and is independent of elevation.

919. **Oxytelus glareosus.**

O. minutus, angustulus, opacus, densissime et grosse rugulosus; capite subquadrato, piceo-nigro, oculis parvis; prothorace rufo-ferrugineo, brevi, subsemicirculari (apice truncato, bisinuato), sulcis dorsalibus obsoletis; elytris (depressis) abdomineque nigro-fuscis; antennis ferrugineis, articulo ultimo acuminato; pedibus pallide testaceis.—Long. corp. lin. 1.

Oxytelus glareosus, *Woll., Ins. Mad.* 610 (1854).
—— ——, *Id., Cat. Mad. Col.* 201 (1857).

Habitat Teneriffam; exemplar unicum (per aërem volitans) mox supra Portum Orotavæ deprehendi.

The small bulk, opake and densely rugulose surface of this *Oxytelus*, combined with its subquadrate, piceous-black head and minute eyes, its short, somewhat semicircular, rufo-ferruginous prothorax (on which the longitudinal sulci are almost obsolete), its dark-brown elytra and abdomen, its ferruginous antennæ (with their apically-acute terminal joint), and its pale-testaceous legs, will at once separate it from all the preceding species. Although decidedly common around Funchal in Madeira, it appears to be rare in these islands—though perhaps, from its small dimensions, it may merely have escaped observation. The only Canarian example which I have seen I captured (on the wing) immediately above the Puerto Orotava in Teneriffe.

Genus 335. **TROGOPHLŒUS.**

Mannerheim, *Brachél.* 49 (1831).

920. **Trogophlœus transversalis.**

T. nitidus, niger (fere ater), elytris (amplis, depressis) postice læte rufo-ferrugineis; prothorace breviter subcordato, angulis posticis sat argute determinatis, basi profunde transversim impresso, in

disco antico plus minus obscure trinotato; antennis fusco-piceis; pedibus saturate testaceis.—Long. corp. lin. vix $1\frac{2}{3}$.

Trogophlœus transversalis, *Woll., Cat. Mad. Col.* 202 (1857).

Habitat Lanzarotam, Fuerteventuram et Teneriffam, in humidis, rarissimus.

In its rather large size, considerably developed, somewhat depressed elytra, and the deep transverse impression at the base of its prothorax, this *Trogophlœus* has a good deal in common with the European *scrobiculatus* (=*arcuatus*, Steph.); but it is more finely punctured, its eyes are a little smaller, its antennæ are somewhat longer and less black, and the hinder portion of its elytra is gradually of a clear rufo-ferruginous hue. The species was enunciated in my Madeiran Catalogue from a unique example which I captured, in 1855, on the Southern Deserta (or Bugio); and it appears to be nearly as rare at the Canaries as in the neighbouring Group. The very few specimens which I have seen were taken by myself—near Haria in the north of Lanzarote, at La Antigua in Fuerteventura, and at the Agua Garcia in Teneriffe.

921. **Trogophlœus riparius.**

T. subnitidus, niger, elytris sæpius concoloribus (rarius picescentibus); prothorace subcordato (antice lato), in disco postico longitudinaliter biimpresso; antennis fusco-piceis, articulis duobus basalibus pedibusque rufo-testaceis.—Long. corp. lin. $1\frac{1}{2}$–$1\frac{2}{3}$.

Trogophlœus riparius, *Boisd. et Lacord., Faun. Ent. Paris*, i. 467 (1835).
—— ——, *Erich., Gen. et Spec. Staph.* 807 (1839).
—— ——, *Kraatz, Nat. der Ins. Deutsch.* ii. 871 (1856).

Habitat Canariam, Teneriffam et Palmam, hinc inde in humidis, late diffusus.

I believe that this *Trogophlœus* is better referred to the European *T. riparius* than to the *bilineatus*—its slightly larger size and stronger punctation, combined with the *two* basal joints of its antennæ (and its entire legs) being rufo-testaceous, seeming to identify it with the former, rather than the latter, of those species. It appears to be scarce, or at any rate local, in these islands—occurring in moist places at low and intermediate altitudes. I have taken it (chiefly on the wing) in damp cultivated spots near Teror in Grand Canary, around S^{ta} Cruz and at the Agua Garcia in Teneriffe, as well as in Palma.

922. **Trogophlœus bilineatus.**

T. præcedenti similis, sed paulo minor, vix subtilius punctulatus; prothorace antice sensim minus dilatato, foveis duabus dorsalibus magis interruptis; antennis paulo brevioribus, nigrescentioribus, fere con-

coloribus (articulo primo obscure picescentiore); pedibus paulo minus rufescentibus.—Long. corp. lin. $1\frac{1}{4}$.

Trogophlœus bilineatus, *Erich., Käf. der Mark Brand.* i. 600 (1839).
—— ——, *Id., Gen. et Spec. Staph.* 806 (1839).
—— ——, *Kraatz, Nat. der Ins. Deutsch.* ii. 872 (1856).
—— ——, *Woll., Cat. Mad. Col.* 201 (1857).

Habitat Canariam Grandem, semel tantum lectus.

If the preceding species be rightly identified (as I believe to be the case) with the European *T. riparius*, I think that the present one should decidedly be referred to the (equally common) *bilineatus*—even though, unfortunately, I have but a single example of it (taken by myself in the region of El Monte in Grand Canary) to judge from. The specimen now before me differs from the *riparius* in being a little smaller and less coarsely punctured, in its prothorax (which is somewhat less dilated anteriorly) having the two longitudinal foveæ down its disc a trifle more interrupted (or divided into four impressions), in its antennæ being appreciably shorter and darker (their *extreme* base only being very slightly diluted in hue), and in its legs being a shade less rufescent—all of which points, it will be perceived, are the very ones which are supposed to separate the *bilineatus* from the *riparius*. It occurs also, though sparingly, in Madeira.

923. Trogophlœus exiguus.

T. bilineato minor et angustior; oculis minoribus; prothorace paulo minus cordato (ad latera sensim magis æqualiter rotundato), foveis dorsalibus subobsoletis; antennis vix brevioribus.—Long. corp. lin. vix 1.

Trogophlœus exiguus ?, *Erich., Käf. der Mark Brand.* 604 (1839).
—— ——?, *Id., Gen. et Spec. Staph.* 809 (1839).

Habitat Canariam Grandem, semel repertus.

It is with doubt that I refer this *Trogophlœus* to the European *T. exiguus*; but as I have only a single example to judge from, which certainly is *not* identical with any of the other species here enumerated, I think it better to assign it provisionally to some acknowledged member of the genus to treating it as new on insufficient evidence. It differs from all the preceding *Trogophlœi* in being considerably smaller and narrower (though it is not quite so minute as either of the following ones), in its eyes being less developed, and in its prothorax (which has the dorsal foveæ obscurely expressed) being a trifle less cordate (or less narrowed behind)—and, therefore, somewhat more *regularly* rounded at the sides. The only example which I have seen was captured by myself at Teror, in Grand Canary, during the spring of 1858.

924. **Trogophlœus ruficollis**, n. sp.

T. subnitidus, capite abdomineque nigris, prothorace elytrisque testaceo-rufis, his (argute punctatis) antice obscurioribus; capite prothoraceque densissime rugoso-alutaceis (vix punctulatis), hôc ad basin obsolete transversim impresso (foveis dorsalibus nullis); antennis breviusculis, nigrescentibus, ad basin ipsam pedibusque saturate rufo-testaceis.—Long. corp. lin. $\frac{3}{4}$–1.

Habitat Fuerteventuram et Teneriffam, sub lapidibus, rarissimus.

The rufous head and elytra (the latter of which, however, are rather obscured anteriorly) of this minute *Trogophlœus*, whilst its head and abdomen are black and its legs testaceous, will sufficiently distinguish it. Its prothorax has the dorsal impressions obsolete, but is lightly marked behind with a transverse (sometimes evanescent) fovea, and (together with the head) is very densely and coarsely alutaceous; and its elytra are somewhat sharply punctured. It is extremely rare, the few specimens which I have seen having been taken by myself at La Antigua in Fuerteventura and near the Puerto Orotava in Teneriffe.

925. **Trogophlœus bledioides**, n. sp.

T. subopacus, niger vel fusco-niger, subtilissime densissimeque cinereo-sericeus, minutissime et densissime (in elytris vix profundius) punctulatus; capite parum magno; prothorace angusto, subcylindrico-cordato, integro (i. e. foveis nullis impresso); antennis brevibus, nigris, articulo primo (longiusculo) vix picescentiore (articulo secundo sat aucto, sequentibus brevibus); pedibus pallide testaceis. —Long. corp. lin. $\frac{3}{4}$–vix 1.

Habitat Teneriffam et Gomeram, hinc inde haud infrequens.

In its minute size, and very densely, delicately, and evenly punctulated head and prothorax, the latter of which is perfectly free from all traces of impressions or foveæ, this little *Trogophlœus* has evidently much in common with the *T. simplicicollis* of the Madeiran Group; nevertheless (although I have at present no type of the latter for comparison) I am satisfied (both from recollection and the diagnosis) that it is truly distinct from it. It is remarkable, *inter alia*, for its head being rather large and wide (*for a Trogophlœus*), for its prothorax being narrow and elongate (instead of transverse), and for its entire colour (except the legs, which are pale testaceous) being of a dark brownish-black. Its wings are immensely developed; and its antennæ are abbreviated—with their basal joint a little longer, the second a trifle more enlarged, and the following ones shorter, than is the case in the *Trogophlœi* generally. It is extremely local, but perhaps not uncommon if searched for in the proper situations; though its very diminutive size renders it liable to escape detection. On one

occasion I observed it in tolerable abundance (on the wing) immediately outside the Puerto Orotava in Teneriffe; and several specimens are now before me which were captured by Dr. Crotch in Gomera.

(Subfam. IX. HOMALIADES.)

Genus 336. **PHILORINUM.**

Kraatz, *Nat. der Ins. Deutsch.* ii. 965 (1856).

926. **Philorinum floricola,** n. sp.

P. lineari-oblongum, subopacum, subtilissime et brevissime pubescens, dense, sat profunde, argute et subæqualiter punctatum, nigrum; capite subconvexo, æquali, simplici (nec, ut mihi videtur, ocellato, nec lineato); prothorace (interdum fuscescentiore) convexo, æquali, ad latera subæqualiter rotundato; elytris plus minus dilutioribus (vel testaceo-fuscis, vel fusco-testaceis, rarius fusco-nigris); abdomine multo levius parciusque punctulato; antennis rufo-testaceis (apicem versus interdum paulo obscurioribus); pedibus testaceis.—Long. corp. lin. 1–1¼.

Habitat ad flores (præsertim *Cytisi* et *Spartii*) in Canaria, Teneriffa, Palma et Hierro, a 2000′ usque ad 9000′ s.m. ascendens.

This *Philorinum* will probably be found in all the islands of the Group except Lanzarote and Fuerteventura; and, indeed, I have taken it in Grand Canary, Teneriffe, Palma, and Hierro. It occurs chiefly on flowers (particularly those of *Cytisus* and *Spartium*) at intermediate and lofty elevations, ascending to about 9000 feet above the sea. It is more often, however, to be met with in the *higher* altitudes; for on the two upland Cumbres of Teneriffe, above the Agua Mansa and Ycod el Alto respectively, I have (during May of 1859) brushed it in absolute profusion off the blossoms of the "Retama" (or *Spartium nubigena*). Nevertheless it does occasionally descend to an elevation of scarcely more than 2000 feet, inasmuch as I have also captured it (in Teneriffe) sparingly both at the Agua Garcia and in the laurel-woods above Taganana*.

Genus 337. **HOMALIUM.**

Gravenhorst, *Col. Micropt.* 116 [script. *Omalium*] (1802).

927. **Homalium sculpticolle,** n. sp.

H. oblongo-ovatum, depressum, nitidum, profunde punctatum, piceo-nigrum; capite subrotundato, postice longitudinaliter bifoveolato;

* The *P. floricola* was examined by Dr. Kraatz, who returned it with the observation, "Genus *Philorinum* mihi; sp. nov. videtur, antennis concoloribus excellens."

prothorace transverso-quadrato antice paulo angustiore, angulis posticis argute subrectis, in disco postico longitudinaliter bifoveato necnon utrinque versus latera (subrecurvo-explanata) profunde impresso; abdomine nitidissimo, subtilissime et parce punctulato; antennis longiusculis, versus basin rufo-ferrugineis; pedibus saturate rufo-testaceis.—Long. corp. lin. $1\frac{1}{4}$–$1\frac{1}{3}$.

Habitat in locis aliquanto elevatis Teneriffæ et Palmæ, rarissimum.

This *Homalium* has much the general aspect, colour, and sculpture of the common European *H. rivulare*; but it is considerably smaller, and rather more closely, finely, and sharply punctured; its head is narrower and less transverse; its prothoracic foveæ are more deeply impressed; its abdomen is very much more shining, being free from the alutaceous sculpture which is so conspicuous in that insect; and its antennæ are a little slenderer. It seems to be very scarce, and confined to intermediate and rather lofty elevations. I have taken it, from beneath small stones, in an open basaltic cavern at the base of the Organo Rocks (in the sylvan region above the Agua Mansa) in Teneriffe, and (more sparingly) in the district of the Banda in Palma.

928. **Homalium pusillum.**

H. angusto-lineare, valde depressum, opacum, alutaceum punctulisque levissimis minutis in prothorace elytrisque parce irroratum, nigro-piceum; capite brevi, triangulari, basi (ad ocellos) breviter bifoveolato; prothorace transverso-quadrato postice paulo angustiore, angulis posticis argute subobtusis, anticis rotundatis, in disco postico longitudinaliter bifoveato necnon utrinque versus latera late impresso; antennis (brevibus, compactis) pedibusque rufo-testaceis.—Long. corp. lin. 1.

Omalium pusillum, *Grav., Mon.* 205 (1806).
—— ——, *Steph., Ill. Brit. Ent.* v. 353 (1832).
—— ——, *Erich., Gen. et Spec. Staph.* 879 (1839).
—— ——, *Krautz, Nat. der Ins. Deutsch.* ii. 988 (1856).

Habitat Teneriffam sylvaticam; sub cortice *Pini canariensis* cujusdam laxo ad Agua Mansa exemplar unicum collegi.

I can see nothing to separate the single specimen now before me from the European *H. pusillum*, except that the prothorax has its foveæ rather deeper, and, together with the elytra, is a trifle more distinctly punctured; and consequently, as such differences (which are merely in degree, and not in kind) are scarcely worth noticing, I have referred it without hesitation to that species. The example from which the above diagnosis has been compiled I captured at the Agua Mansa in Teneriffe, from beneath the loosened bark of a felled *Pinus canariensis*.

(Subfam. X. PROTINIDES.)

Genus 338. **MEGARTHRUS.**

(Kirby) Stephens, *Ill. Brit. Ent.* v. 330 (1832).

929. **Megarthrus longicornis.**

M. nigro-fuscus prothorace paulo rufescentiore, subopacus, profunde asperato-punctatus; capite (interdum fere nigro) antice inter oculos plus minus producto et sæpe recurvo, utrinque latissime subconcavo; prothorace profunde canaliculato, basi in medio sinuato et mox intra basin leviter transversim impresso, ad angulos posticos exciso necnon ad latera in medio obsoletissime subangulato; antennis subgracilibus, longiusculis (articulis intermediis sat elongatis, conspicue obconicis), nigrescentibus, ad basin piceis; pedibus rufo-testaceis.—Long. corp. lin. 1–1½.

Megarthrus longicornis, *Woll., Ins. Mad.* 615. tab. xiii. f. 9 (1854).
—— ——, *Id., Cat. Mad. Col.* 206 (1857).

Habitat in Lanzarota, Canaria, Teneriffa et Hierro, sub quisquiliis in inferioribus intermediisque degens.

This *Megarthrus* is nearly allied to the European *M. sinuaticollis*, but has its antennæ rather longer and slenderer, the intermediate joints being very conspicuously more elongated and obconical; its head is a little more produced in front, where it is frequently somewhat recurved; its prothorax is less rounded at the sides, and only *very obsoletely* subangulated in the middle, as also more decidedly sinuated (and transversely impressed) in the centre of its base; and its entire sculpture is coarser. I do not see that it differs specifically from the Madeiran *M. longicornis*; for although in Madeira two of its main features (namely, the rather elongated antennal joints and the slightly produced head) are usually a trifle more expressed, the examination of a very extensive series of Canarian specimens has convinced me that the clypeus, at all events, is subject to great variation—being sometimes considerably recurved, sometimes comparatively deflected, and at others more or less transitional. It occurs beneath vegetable refuse at low and intermediate elevations, and is doubtless universal throughout the archipelago—though hitherto I have observed it only in Lanzarote, Grand Canary, Teneriffe, and Hierro. In Teneriffe and Hierro it was found likewise by Mr. Gray, and in the former by Dr. Crotch. My Teneriffan specimens are principally from the vicinity of S^ta^ Cruz and the mountains above it, Las Mercedes, and the Agua Garcia. Although both common and widely distributed in these islands, it is an extremely rare insect at Madeira.

Genus 339. METOPSIA.

Wollaston, *Ins. Mad.* 616 (1854).

930. Metopsia cimicoides, n. sp.

M. oblonga, depressa, utrinque explanato-concava sed per medium subcarinata, pallide ferruginea, subopaca, grosse asperato-punctulata et antice granulis superadditis obsita; capite transverso, apice recte truncato et utrinque inciso, postice in medio ocello instructo; prothorace canaliculâ politâ notato, basi intra angulos utrinque late exciso; antennis nigro-fuscis, articulo ultimo ferrugineo, articulis primo et secundo pedibusque rufo-testaceis.—Long. corp. lin. $1\frac{1}{2}$.

Habitat in lauretis excelsis Teneriffæ, in montibus supra Taganam Maio A.D. 1859 semel reperta.

One of the rarest of the Canarian Coleoptera—the only specimen which I have seen having been obtained in the damp laurel-woods of a high elevation in Teneriffe, on the mountains above Taganana, during May of 1859. It has consequently the same habits as the Madeiran *M. ampliata*, to which indeed it is closely allied. It is, however, unquestionably distinct from that species—being not only smaller and more oblong, but likewise paler and more coarsely punctured, with its prothorax more deeply bilobed in front (causing the anterior angles to be more porrect), and with its legs rather shorter, besides numerous minor differences which are better seen than described. Its *primâ facie* aspect and colour are so curiously suggestive of the common *Cimex lectularius*, that I have chosen the above trivial name as peculiarly appropriate.

CORRIGENDUM.

P. 229. CEPHALONCUS.—Not having seen Prof. Westwood's diagnosis, when I prepared the MS. of this portion of the Catalogue, I was not aware that he had actually *published* the genus under the name (originally proposed by him) of "*Ogcocephalus*,"—he having merely informed me that the latter title (which I erroneously concluded *was still in litteris*) being apparently preoccupied, the name might be altered to *Cephaloncus*. And I consequently assumed that he had himself made the change *previous to publication*.

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	Lanz.	Fuert.	Can.	Ten.	Gom.	Palma.	Hierro.
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183. hemipterus, L.	..	..	..	*	..	..	..
184. auropilosus, W.	..	*	*	*	..	..	..
76. *Nitidula*, F.							
185. flexuosa, Oliv.	..	*	..	..	..	..	..
77. *Pria* (Kby), Steph.							
186. dulcamaræ, Scop.	..	..	..	*	..	*	..
78. *Meligethes* (Kby), Steph.							
187. varicollis, W.	*	*	..	*	..	..	..
188. virescens, W.	..	..	..	*	*	..	..
189. tristis (Schüpp.), St.	..	..	*	*	*	*	*
79. *Xenostrongylus*, W.							
190. histrio, W.	*	*	*	*	*	*	*
80. *Cybocephalus*, Erich.							
191. sphærula, W.	*	..	*	*	*	*	..
192. lævis, W.	*	..	..	..	..	..	..
81. *Rhizophagus*, Hbst							
193. pinetorum, W.	..	..	..	*	..	*	..
194. subopacus, W.	..	..	..	..	..	*	..
Fam. 14. Trogositidæ.							
82. *Temnochila*, Westw.							
195. pini, Br.	..	..	*	..	..	*	..
83. *Lipaspis*, W.							
196. lauricola, W.	..	..	..	*	..	*	..
197. pinicola, W.	..	..	..	*	..	*	..
198. caulicola, W.	..	..	..	*	..	..	..
84. *Trogosita*, Oliv.							
199. mauritanica, L.	*	*	*	*	..	..	..
200. recta, W.	*	..	..	..	..	..	..
201. latens, W.	*	..	..	*	..	..	*

	Lanz.	Fuert.	Can.	Ten.	Gom.	Palma.	Hierro.
Fam. 15. **Colydiadæ.**							
85. *Monotoma*, Hbst							
202. spinicollis, Aubé	..	..	..	*	*	..	..
203. picipes, Hbst	..	..	..	*	..	..	..
204. quadricollis, Aubé	*	*	..	*	..	..	..
205. 4-foveolata, Aubé	*	..	..	*	..	..	..
86. *Tarphius* (Germ.), Erich.							
206. simplex, W.	..	..	..	*	..	..	..
207. camelus, W.	..	..	..	..	..	..	*
208. canariensis, W.	..	..	*	*	..	*	..
209. erosus, W.	..	..	..	*	..	..	..
210. quadratus, W.	..	..	..	..	..	*	..
211. congestus, W.	..	..	..	*	..	..	..
212. gigas, W.	..	..	..	*	..	..	..
213. caudatus, W.	..	..	..	*	..	..	..
214. deformis, W.	..	..	..	*	..	..	..
87. *Cossyphodes*, Westw.							
215. Wollastonii, Westw.	..	..	..	*	*	..	..
88. *Aulonium*, Erich.							
216. sulcicolle, W.	..	..	..	*	..	*	..
89. *Aglenus*, Erich.							
217. brunneus, Gyll.	*	*	..	*	*	*	*
90. *Europs*, W.							
218. impressicollis, W.	*	*	*	*	*	*	*
219. duplicatus, W.	..	..	..	..	*	..	..
Fam. 16. **Cucujidæ.**							
91. *Caulonomus*, W.							
220. rhizophagoides, W.	*	..	..	*	..	..	*
92. *Læmophlæus*, Erich.							
221. granulatus, W.	..	..	*	*	..	*	..
222. clavicollis, W.	*	*	*	*	*	*	*
223. pusillus, Schön.	..	..	*	*	..	..	..
93. *Pediacus*, Shuck.							
224. tabellatus, W.	..	..	..	*	..	..	..
94. *Xenoscelis*, W.							
225. deplanata, W.	..	..	..	*	..	*	*
95. *Silvanus*, Lat.							
226. dentatus, Mshm	*	..	..	*	*	..	..
227. surinamensis, L.	*	*	*	..	..	*	*
228. nubigena, W.	..	..	..	*	..	..	..
Fam. 17. **Telmatophilidæ.**							
96. *Diphyllus*, Steph.							
229. lunatus, F.	..	..	..	..	..	*	..
97. *Thallestus*, W.							
230. subellipticus, W.	..	..	..	*	..	..	..
231. typhæoides, W.	..	..	..	..	*	..	..
Fam. 18. **Cryptophagidæ.**							
98. *Cryptophagus*, Hbst							
232. dentatus, Hbst	*	*	..	*	..	*	..
233. affinis, St.	..	..	..	*	..	..	*
234. obesulus, W.	*	*	..	..	..	..	..

	Lanz.	Fuert.	Can.	Ten.	Gom.	Palma.	Hierro.
98. *Cryptophagus*, Hbst (continued).							
235. fusiformis, W.	..	..	..	*	..	..	..
236. hesperius, W.	..	..	*	*	*	*	*
99. *Mnionomus*, W.							
237. ellipticus, W.	..	..	..	*	..	..	..
100. *Leucohimatium*, Rosenh.							
238. elongatum, Erich.	..	..	..	..	..	*	..
101. *Paramecosoma*, Curt.							
239. simplex, W.	..	*	..	..	*	..	..
102. *Hypocoprus*, Mots.							
240. Hochuthii, Chaud.	..	..	..	*	..	..	..
103. *Atomaria*, Steph.							
241. pilosula, W.	..	..	..	*	..	..	..
242. canariensis, W.	*	*	*	*	*	*	*
243. ruficollis, W.	..	..	..	*	..	..	..
104. *Epistemus* (Westw.), Steph.							
244. gyrinoides, Mshm	..	..	*	*	*	..	..
Fam. 19. **Latridiadæ.**							
105. *Holoparamecus*, Curt.							
245. caularum, Aubé	*	..	..	..	..	..	..
246. niger, Aubé	..	..	..	*	..	..	..
247. singularis, Beck	*	..	..	..	..	..	..
106. *Corticaria*, Mshm							
248. fulva (Chevr.), Mann.	*	..	..	*	..	..	..
249. maculosa, W.	*	*	..	*	*	*	*
250. serrata, Payk.	*	*	..	*	..	..	*
251. angulata, W.	*	*	*	..	..	..	..
252. curta, W.	*	*	*	*	*	*	..
253. tenella, W.	..	..	*	*	*	*	*
107. *Latridius*, Herbst							
254. minutus, L.	..	..	*	*	*	*	*
255. opacipennis, W.	..	..	..	*	..	..	..
256. ruficollis, Mshm	*	..	..	..	..	..	..
Fam. 20. **Mycetophagidæ.**							
108. *Myrmecoxenus*, Chev.							
257. sordidus, W.	..	*	..	..	..	..	..
109. *Symbiotes*, Redt.							
258. pygmæus, Hampe	..	..	..	..	..	*	..
110. *Typhæa* (Kby), Steph.							
259. fumata, L.	*	*	..	*	*	..	..
111. *Litargus*, Erich.							
260. trifasciatus, W.	..	..	..	..	*	..	..
Fam. 21. **Dermestidæ.**							
112. *Dermestes*, L.							
261. vulpinus, F.	*	..	..	*	*	..	..
262. Frischii, Kugel.	*	..	*	*	..	..	..
113. *Attagenus*, Lat.							
263. pellio, L.	..	..	..	..	..	..	..
264. Schæfferi, Hbst	..	..	..	*	..	..	..
114. *Telopes*, Redt.							
265. obtusus, Gyll.	*	*	*	..	..	..	..

	Lanz.	Fuert.	Can.	Ten.	Gom.	Palma.	Hierro.
114. *Telopes*, Redt. (continued).							
266. anthrenoides, W.	..	..	*	..	..	..	..
267. multifasciatus, W.	..	..	*	..	..	..	..
268. fasciatus, W.	..	..	..	*	*	*	..
115. *Anthrenus*, Geoffr.							
269. varius, F.	*	*	*	*	..	..	..
270. claviger, Erich.	..	..	..	..	..	*	..
Fam. 22. Byrrhidæ.							
116. *Syncalypta* (Dillw.), Steph.							
271. integra, W.	..	..	..	..	..	..	*
272. ovuliformis, W.	..	..	..	*	..	..	..
Fam. 23. Histeridæ.							
117. *Hololepta*, Payk.							
273. Perraudieri, de Mars.	..	..	..	*	*	..	..
118. *Teretrius*, Erich.							
274. cylindricus, W.	..	..	..	*	..	..	..
119. *Eutriptus*, W.							
275. putricola, W.	*	*	*	*	*	..	*
120. *Hister*, L.							
276. major, L.	..	..	*	*	..	..	..
277. canariensis, W.	..	..	..	*	..	..	..
121. *Carcinops*, de Mars.							
278. 14-striatus, Steph.	*	*	..	*	*	..	..
122. *Saprinus*, Erich.							
279. nobilis, W.	..	..	..	*	..	..	..
280. osculans, W.	..	*	..	..	..	..	..
281. nitidulus, F.	*	..	..	*	..	..	..
282. subnitidus?, de Mars.	*	*	*	..	..	..	..
283. chalcites, Illig.	*	*	*	*	*	*	..
284. fortunatus, W.	*	*	*	..	..	..	..
285. ignobilis, W.	*	..	..	..	..	..	..
286. minyops, W.	*	*	*	..	..	..	..
287. angulosus, W.	*	..	..	..	..	..	..
288. mundus, W.	*	*	..	..	..	..	..
289. erosus, W.	..	*	..	..	..	..	..
290. lobatus, W.	*	*	*	..	..	..	..
123. *Xenonychus*, W.							
291. fossor, W.	..	*	..	..	..	..	..
124. *Eubrachium*, W.							
292. punctatum, W.	..	..	..	*	..	*	..
293. ovale, W.	..	..	..	..	..	..	*
294. politum, W.	*	..	..	..	..	..	*
125. *Acritus*, Le Conte.							
295. punctum, Aubé	*	..	..	..	..	..	..
296. minutus, Hbst	..	*	*	*	*	*	..
Fam. 24. Thorictidæ.							
126. *Thorictus*, Germ.							
297. gigas, W.	..	..	*	..	..	..	..
298. canariensis, W.	*	*	*	*	*	*	*
299. vestitus, W.	*	..	..	..	..	..	..

	Lanz.	Fuert.	Can.	Ten.	Gom.	Palma.	Hierro.
Fam. 25. Aphodiadæ.							
127. *Aphodius*, Illig.							
300. hydrochæris, F.	*	*	*	*	*	..	*
301. Wollastonii, Harold	*	*	..	..	..	..	..
302. nitidulus, F.	*	*	*	*	*	*	*
303. tæniatus, W.	*	*	..	..	..	..	..
304. maculosus, Harold.	*	*	*	..	..	..	..
305. lividus, Ol.	..	..	*	*	*	*	..
306. granarius, L.	*	*	*	*	*	*	*
128. *Oxyomus* (Esch.), Casteln.							
307. brevicollis, W.	..	..	..	..	*	*	..
129. *Psammodius*, Gyll.							
308. cæsus, Pnz.	*	..	*	..	..	..	..
309. sabulosus (Dej.), Muls.	*	*	*	*	*	..	*
310. porcicollis, Illig.	*	*	..	..	..	..	..
Fam. 26. Trogidæ.							
130. *Trox*, F.							
311. confluens, W.	..	..	..	*	..	..	..
Fam. 27. Melolonthidæ.							
131. *Ootoma*, Blanch.							
312. bipartita, Br.	*	*	*	*	..	..	..
313. fuscipennis, Br.	..	*	..	*	..	..	..
314. integra, W.	..	..	*	..	..	..	..
315. castanea, Br.	..	..	..	*	..	..	..
316. obscurella, W.	..	..	..	..	..	..	*
317. obscura, Br.	..	..	..	..	..	..	..
Fam. 28. Dynastidæ.							
132. *Phyllognathus*, Esch.							
318. Silenus, F.	*	*	..	*	..	..	..
133. *Oryctes*, Illig.							
319. prolixus, W.	..	..	..	*	*	..	*
Fam. 29. Cetoniadæ.							
134. *Epicometis*, Burm.							
320. squalida, L.	*	*	*	*	*	*	*
321. femorata, Illig.	..	*	..	..	..	..	..
Fam. 30. Buprestidæ.							
135. *Acmæodera*, Esch.							
322. cisti, W.	..	..	*	*	..	*	..
323. fracta, W.	..	..	*	..	..	..	..
324. plagiata, W.	..	..	*	..	..	..	..
325. ornata, W.	..	*	..	..	..	..	..
136. *Buprestis*, L.							
326. Bertheloti, Br.	..	..	..	*	..	..	..
137. *Anthraxia*, Esch.							
327. senilis, W.	..	..	*	..	..	..	..
Fam. 31. Throscidæ.							
138. *Throscus*, Lat.							
328. integer, W.	..	..	..	*	..	*	..

	Lanz.	Fuert.	Can.	Ten.	Gom.	Palma.	Hierro.
Fam. 32. Elateridæ.							
139. *Coptostethus*, W.							
329. brunneipennis, W.	..	..	..	*	..	*	*
330. gracilis, W.	..	..	..	*	..	..	..
331. canariensis, W.	..	..	..	*	..	..	..
332. globulicollis, W.	..	..	..	*	..	..	..
333. obtusus, W.	..	..	..	*	..	..	..
334. crassiusculus, W.	..	..	*	..	..	..	..
Fam. 33. Cyphonidæ.							
140. *Cyphon*, Payk.							
335. gracilicornis, W.	..	..	*	*	*	..	..
141. *Eucinetus*, Schüpp.							
336. ovum, W.	..	..	..	*	..	..	..
Fam. 34. Drilidæ.							
142. *Malacogaster*, Bassi							
337. tilloides, W.	..	*	..	..	..	..	..
Fam. 35. Telephoridæ.							
143. *Malthinus*, Lat.							
338. mutabilis, W.	*	*	*	*	*	*	*
339. croceicollis, W.	..	..	*	..	..	..	..
Fam. 36. Malachiidæ.							
144. *Pecteropus*, W.							
340. angustifrons, W.	..	..	..	..	*	..	..
341. scitulus, W.	..	..	..	..	*	..	..
145. *Attalus*, Erich.							
342. ruficollis, W.	..	..	..	*	..	*	..
343. pellucidus, W.	..	..	..	*	..	..	..
344. pallipes, W.	..	..	..	*	*	..	..
345. ovatipennis, W.	*	*	*	*	*	*	..
346. biscuipturatus, W.	..	*	..	..	..	..	..
347. rugifrons, W.	..	..	..	..	*	..	..
348. ornatissimus, W.	..	..	..	..	..	*	..
349. chrysanthemi, W.	*	*	..	..	..	..	..
350. commixtus, W.	*	..	..	..	..	..	..
351. lævicollis, W.	*	..	..	..	..	..	..
352. posticus, W.	..	*	..	..	..	..	..
353. anthicoides, W.	*	*	..	..	..	..	..
354. tuberculatus, W.	..	..	..	*	..	..	..
355. obscurus, W.	..	..	*	..	..	..	..
356. subopacus, W.	*	*	..	..	..	..	..
357. metallicus, W.	*	..	..	*	..	..	..
358. ænescens, W.	..	..	*	*	*	*	..
146. *Micromimetes*, W.							
359. alutaceus, W.	..	..	*	..	..	..	..
360. jucundus, W.	..	..	*	..	..	..	..
147. *Cephalogonia*, W.							
361. cerasina, W.	..	..	..	*	..	*	..
148. *Cephaloncus*, Westw.							
362. capito, Westw.	..	..	*	..	..	..	..

	Lanz.	Fuert.	Can.	Ten.	Gom.	Palma.	Hierro.
Fam. 37. Melyridæ.							
149. *Dasytes*, Payk.							
363. subænescens, W.	*	*	*	*	*	*	..
364. dispar, W.	..	..	*	..	..	..	..
150. *Dolichosoma*, Steph.							
365. Hartungii, W.	*	*	*	*	..	..	..
151. *Haplocnemus*, Steph.							
366. sculpturatus, W.	..	..	..	*	*	*	..
367. vestitus, W.	..	..	..	..	..	..	*
152. *Melyrosoma*, W.							
368. costipenne, W.	..	..	*	..	..	..	..
369. hirtum, W.	..	..	..	*	..	..	..
370. flavescens, W.	..	..	..	..	..	*	..
Fam. 38. Cleridæ.							
153. *Clerus*, Geoffr.							
371. Paivæ, W.	*	*	*	*	..	..	*
154. *Corynetes*, Hbst							
372. rufipes, Thunb.	*	*	*	*	*	..	..
373. ruficollis, Thunb.	..	..	..	*	..	..	..
374. fimetarius, W.	*	*	..	..	..	..	..
Fam. 39. Ptinidæ.							
155. *Casopus*, W.							
375. Bonvouloirii, W.	..	..	..	*	..	..	..
376. dilaticollis, W.	..	..	..	*	*	..	..
377. alticola, W.	..	..	..	*	..	..	..
378. radiosus, W.	..	..	*	..	..	..	..
379. subcalvus, W.	..	..	..	..	..	..	*
156. *Dignomus*, W.							
380. gracilipes, W.	*	*	..	..	..	..	..
157. *Ptinus*, L.							
381. testaceus, Oliv.	..	..	..	..	..	..	*
158. *Mezium*, Curt.							
382. sulcatum, F.	*	*	*	*	*	*	*
159. *Nitpus*, Duv.							
383. gonospermi, Duv.	..	..	..	*	*	..	..
160. *Sphæricus*, W.							
384. simplex, W.	..	..	..	..	*	..	*
385. gibbicollis, W.	*	*	..	..	..	..	..
386. impunctipennis, W.	..	..	..	..	*	..	..
387. Crotchianus, W.	..	..	..	..	*	..	..
161. *Piarus*, W.							
388. basalis, W.	*	*	..	..	..	..	..
162. *Piotes*, W.							
389. inconstans, W.	..	..	*	..	..	..	..
390. vestita, W.	..	..	..	..	..	*	..
Fam. 40. Anobiadæ.							
163. *Stagetus*, W.							
391. crenatus, W.	..	..	..	*	..	..	..
392. hirtulus, W.	..	..	..	..	*	..	*
164. *Xyletinus*, Lat.							
393. latitans, W.	*	*	..	*	..	..	*
394. desectus, W.	..	..	*	*	..	..	..

	Lanz.	Fuert.	Can.	Ten.	Gom.	Palma.	Hierro.
164. *Xyletinus*, Lat. (continued).							
395. brevis, W.	..	..	..	..	..	*	..
396. excavatus, W.	..	..	*	..	..	..	..
165. *Notiomimus*, W.							
397. fimicola, W.	*	*	..	..	..	..	..
398. holosericeus, W.	..	..	..	*	..	*	..
399. punctulatissimus, W.	..	..	*	..	..	..	..
166. *Anobium*, F.							
400. velatum, W.	*	..	..	..	*	..	..
401. villosum, Br.	..	..	..	*	..	..	..
402. paniceum, L.	*	..	*	*	*	..	..
403. molle, L.	..	..	..	..	..	*	..
404. striatum, Oliv.	..	..	..	*	..	*	..
405. cryptophagoides, W.	..	..	..	..	..	..	*
167. *Ptilinus*, Geoffr.							
406. lepidus, W.	..	..	..	*	..	*	..
Fam. 41. **Bostrichidæ.**							
168. *Xylopertha*, Guér.							
407. barbifrons, W.	..	..	..	..	..	*	..
169. *Dinoderus*, Steph.							
408. brunneus, W.	..	..	..	*	..	*	..
Fam. 42. **Cioidæ.**							
170. *Cis*, Lat.							
409. lauri, W.	..	..	..	*	..	..	..
171. *Octotemnus*, Mellié							
410. opacus, Mellié	..	..	..	*	..	*	..
Fam. 43. **Tomicidæ.**							
172. *Tomicus*, Lat.							
411. nobilis, W.	..	..	..	*	..	*	..
412. Saxesenii, Ratz.	..	..	..	*	..	*	..
173. *Xyloterus*, Erich.							
413. longicollis, W.	..	*	..	..	..	..	..
174. *Cryphalus*, Erich.							
414. aspericollis, W.	..	..	..	*	..	..	..
175. *Aphanarthrum*, W.							
415. Jubæ, W.	*	..	..	..	..	..	..
416. armatum, W.	*	..	..	..	..	..	..
417. glabrum, W.	..	..	..	..	*	..	*
418. bicolor, W.	..	..	..	*	*	*	*
419. affine, W.	*	*	*	..	*	..	..
420. piscatorium, W.	..	..	..	*	*	*	*
421. bicinctum, W.	*	*	..	..	..	..	..
422. canariense, W.	..	..	*	*	*	*	*
423. luridum, W.	..	..	..	*	*	..	..
424. pusillum, W.	..	..	*	*	*	..	..
425. concolor, W.	..	..	..	*	..	*	..
176. *Triotemnus*, W.							
426. subretusus, W.	..	..	..	..	*	..	..
177. *Liparthrum*, W.							
427. bituberculatum, W.	..	..	..	*	..	..	..
428. curtum, W.	*	*	*	*	..	*	*

	Lanz.	Fuert.	Can.	Ten.	Gom.	Palma.	Hierro.
177. *Liparthrum*, W. (continued).							
429. inarmatum, W.	*	..	*	*	*	*	..
430. Lowei, W.	..	..	..	*	*	..	..
Fam. 44. Hylesinidæ.							
178. *Hylesinus*, F.							
431. indigenus, W.	..	..	..	..	..	..	*
179. *Hylurgus*, Lat.							
432. ligniperda, F.	..	..	..	*	..	*	..
180. *Hylastes*, Erich.							
433. Lowei, Paiva	..	..	..	*	..	*	..
Fam. 45. Curculionidæ.							
181. *Eremotes*, W.							
434. crassicornis, Br.	..	..	*	*	..	*	..
182. *Rhyncolus* (Creutz.), Germ.							
435. crassirostris, W.	..	..	*	..	..	..	..
183. *Phlœophagus*, Schön.							
436. caulium, W.	*	*	..	..	..	..	..
437. laurineus, W.	..	..	..	*	*	*	..
438. affinis, W.	..	..	..	*	..	..	*
439. simplicipes, W.	..	..	..	*	..	..	..
440. piceus, W.	*	*	*	..	..	..	..
184. *Pentatemnus*, W.							
441. arenarius, W.	*	*	*	..	..	..	..
185. *Onycholips*, W.							
442. bifurcatus, W.	*	*	*	..	..	..	..
186. *Mesoxenus*, W.							
443. Monizianus, W.	..	..	..	*	..	..	..
187. *Mesites*, Schön.							
444. complanatus, W.	..	..	..	..	..	*	..
445. persimilis, W.	..	..	..	*	..	..	..
446. proximus, W.	..	..	..	*	..	..	..
447. fusiformis, W.	*	*	*	*	*	..	*
448. pubipennis, W.	..	..	..	..	..	*	..
188. *Sitophilus*, Schön.							
449. granarius, L.	*	*	*	*	..	*	*
450. oryzæ, L.	*	*	*	*	*	*	*
189. *Ceuthorhynchus*, Schön.							
451. pollinarius, Forst.	..	..	..	*	..	..	*
452. quadridens, *Pnz.*	..	*	..	*	*	*	*
453. nigroterminatus, W.	..	..	..	*	..	..	*
454. pyrrhorhynchus, *Mshm.*	..	*	..	..	..	..	..
455. phytobioides, W.	..	..	..	*	..	..	..
456. hesperus, W.	..	..	..	..	..	..	*
190. *Acalles*, Schön.							
457. argillosus, Schön.	..	..	..	*	..	..	..
458. æonii (Chev.), W.	..	..	..	*	..	..	..
459. fortunatus, W.	..	..	..	..	*	..	..
460. xerampelinus, W.	..	..	..	*	..	..	..
461. nubilosus, W.	..	..	..	*	..	..	..
462. sigma, W.	..	..	..	..	..	*	..
463. senilis, W.	..	..	..	..	..	..	*
464. brevitarsis, W.	..	..	*	..	..	..	..

	Lanz.	Fuert.	Can.	Ten.	Gom.	Palma.	Hierro.
190. *Acalles*, Schön. (continued).							
465. acutus, W.	..	..	..	*	..	..	..
466. instabilis, W.	..	..	*	*	..	*	..
467. seticollis, W.	..	..	..	..	..	..	*
468. pilula, W.	..	..	..	*	..	*	..
469. verrucosus, W.	..	..	..	*	..	*	..
191. *Echinodera*, W.							
470. hystrix, W.	..	..	..	..	..	*	*
471. crenata, W.	..	..	..	*	..	..	..
472. angulipennis, W.	..	..	..	*	..	..	..
473. orbiculata, W.	..	..	..	*	..	..	..
474. compacta, W.	..	..	*	..	..	..	..
475. picta, W.	..	*	..	..	..	..	..
192. *Baridius*, Schön.							
476. sellatus (Chev.), Schön.	..	*	..	..	..	..	..
193. *Nanophyes*, Schön.							
477. longulus, W.	..	..	*	*	..	..	..
478. lunulatus, W.	..	..	*	..	..	..	..
194. *Sibynes*, Schön.							
479. sericeus, W.	*	*	*	*	..	..	..
195. *Tychius* (Germ.), Schön.							
480. aridicola, W.	*	*	*	..	..	..	..
481. decoratus, Rosenh.	..	..	*	..	..	..	..
482. depauperatus, W.	..	*	..	..	..	..	..
196. *Auletes*, Schön.							
483. cylindricollis, W.	..	..	..	*	..	*	..
484. anceps, W.	..	..	..	..	..	..	*
485. convexifrons, W.	..	..	*	*	..	..	..
197. *Apion*, Hbst							
486. senex, W.	..	..	..	..	..	*	..
487. vernale, F.	..	..	..	*	..	..	*
488. delicatulum, W.	..	..	..	*	..	*	*
489. sagittiferum, W.	..	*	*	*	*	*	*
490. Germari, Walt.	*	*	..	..	..	..	..
491. chalybeipenne, W.	..	*	..	*	..	*	*
492. calcaratum, W.	..	..	..	..	..	..	*
493. Westwoodii, W.	..	..	*	..	..	..	..
494. tubiferum, Schön.	..	..	*	..	..	..	*
495. austrinum, W.	..	..	..	..	*	..	..
496. fallax, W.	*	..	*	*	..	*	*
497. rotundipenne, W.	..	..	*	*	..	*	*
498. ceuthorhynchoides, W.	..	..	..	*	..	..	..
499. umbrinum, W.	..	..	*	*	..	*	..
500. longipes, W.	..	..	..	*	..	*	..
198. *Smicronyx*, Schön.							
501. albosquamosus, W.	..	..	..	*	..	..	*
502. pauperculus, W.	..	..	*	*	..	..	..
199. *Procas*, Steph.							
503. Steveni, Schön.	..	*	..	..	..	*	..
200. *Lixus*, F.							
504. anguinus, L.	..	..	*	*	..	..	..
505. anguiculus, Schön.	..	*	..	..	..	..	..
506. Chawneri, W.	..	*	..	..	..	..	..
507. guttiventris, Schön.	*	*	..	..	..	..	..

	Lanz.	Fuert.	Can.	Ten.	Gom.	Palma.	Hierro.
201. *Bothynoderes*, Schön.							
508. Jekelii, W.	*	*	*	..	..	..	..
202. *Cleonus*, Schön.							
509. Armitagii, W.	..	..	..	*	..	..	..
510. variolosus, W.	..	*	..	..	..	..	..
511. tabidus, Oliv.	*	*	*	*	..	..	..
203. *Rhytidoderes*, Schön.							
512. siculus (Dup.), Schön.	*	*	*	..	..	..	*
204. *Alophus*, Schön.							
513. magnificus, W.	..	..	..	*	..	..	..
205. *Hypera*, Germ.							
514. lunata, W.	*	*	*	*	..	*	*
515. irrorata, W.	*	*	..	..	..	..	..
516. variabilis, Hbst	*	*	*	*	*	*	*
206. *Coniatus*, Germ.							
517. tamarisci, F.	..	..	*	..	..	..	..
207. *Plinthus*, Germ.							
518. musicus, W.	..	..	..	*	..	..	..
519. velutinus, W.	..	..	..	*	..	..	..
520. cucullus, W.	..	..	*	..	..	..	..
208. *Xenomicrus*, W.							
521. apionides, W.	..	..	..	*	..	*	..
209. *Gronops*, Schön.							
522. lunatus, F.	*	*	..	*	..	..	..
210. *Rhytidorhinus*, Schön.							
523. brevitarsis, W.	*	*	..	..	..	..	..
211. *Brachycerus*, F.							
524. opacus, W.	*	..	..	..	..	..	..
212. *Atlantis*, W.							
525. canariensis, Schön.	..	..	..	*	..	..	..
526. subnebulosa, W.	..	..	*	..	..	..	..
527. tibialis, W.	..	..	..	*	..	*	..
528. tetrica, Schön.	..	..	..	*	..	..	..
529. angustula, W.	..	..	*	..	..	..	..
213. *Laparocerus*, Schön.							
530. morio, Schön.	..	..	..	*	*	..	..
531. sculptus, Br.	..	..	..	..	..	*	..
532. undatus, W.	..	..	..	*	..	..	..
533. excavatus, W.	..	..	..	*	..	..	..
534. grossepunctatus, W.	..	..	..	*	..	..	..
535. squamosus, Br.	..	..	..	*	..	..	..
536. crassirostris, W.	..	..	*	..	..	..	..
537. crassifrons, W.	..	..	..	*	..	..	..
538. scapularis, W.	..	..	..	*	..	..	..
539. æthiops, W.	..	..	..	..	..	..	*
540. hirtus, W.	..	..	*	..	..	..	..
541. inæqualis, W.	..	..	..	*	..	..	..
542. globulipennis, W.	..	..	..	..	..	*	..
543. occidentalis, W.	..	..	..	..	..	..	*
544. obtriangularis, W.	..	..	..	*	..	..	..
545. ellipticus, W.	..	..	..	*	..	*	..
546. lepidopterus, W.	..	..	*	*	..	*	*
547. seniculus, W.	..	..	*	..	..	..	..
548. rasus, W.	*	*	..	..	..	..	..

	Lanz.	Fuert.	Can.	Ten.	Gom.	Palma.	Hierro.
213. *Laparocerus*, Schön. (continued).							
549. mendicus, W.	..	..	..	..	..	..	*
550. obscurus, W.	..	..	..	*	..	..	..
551. gracilis, W.	..	..	..	..	*	..	..
552. dispar, W.	*	..	..	..	..	..	..
553. vestitus, W.	..	..	..	*	..	..	..
554. sulcirostris, W.	..	..	*	..	..	..	..
555. compactus, W.	..	..	*	..	..	..	..
556. tessellatus, Br.	..	..	..	*	..	*	*
557. obsitus, W.	..	..	*	..	..	..	..
558. tenellus, W.	..	..	..	*	..	..	..
559. puncticollis, W.	..	..	..	..	..	..	*
214. *Trachyphlœus*, Germ.							
560. scaber, L.	..	..	..	*	..	..	..
215. *Lichenophagus*, W.							
561. auctus, W.	..	..	..	..	..	..	*
562. tesserula, W.	..	..	..	*	..	..	..
563. persimilis, W.	..	..	..	*	..	*	..
564. subnodosus, W.	..	..	..	*	..	..	*
565. sculptipennis, W.	..	..	..	..	..	*	..
566. impressicollis, W.	..	..	..	*	..	..	..
216. *Herpysticus*, Germ.							
567. eremita, Oliv.	..	..	*	*	*	*	..
568. calvus, W.	*	*	..	..	..	..	..
569. oculatus, W.	*	..	..	..	..	..	..
217. *Thylacites*, Germ.							
570. obesulus, W.	*	..	..	..	..	..	..
218. *Sitones*, Germ.							
571. gressorius, F.	..	..	..	*	*	*	*
572. latipennis, Schön.	..	..	*	*	..	..	..
573. punctiger, W.	*	*	..	..	..	..	..
574. cambricus, Steph.	..	..	*	*	..	..	..
575. lineatus, L.	..	..	*	*	..	*	..
576. humeralis (Kby), Steph.	*	*	*	*	*	*	*
577. setiger, W.	*	*	*	*	*	..	*
219. *Brachyderes*, Schön.							
578. rugatus, W.	..	..	..	..	..	*	..
579. sculpturatus, W.	..	..	*	*	..	..	..
Fam. 46. Bruchidæ.							
220. *Bruchus*, Geoffr.							
580. pisi, L.	*	*	*	*	*	*	*
581. rufimanus, Schön.	*	*	*	*	*	*	*
582. terminatus, W.	..	..	..	*	..	..	..
583. Teneriffæ, Schön.	..	..	*	*	..	*	..
584. floricola, W.	*	*	*	*	..	..	*
585. antennatus, W.	..	..	*	*	..	*	..
Fam. 47. Aglycyderidæ.							
221. *Aglycyderes*, Westw.							
586. setifer, Westw.	*	*	*	*	..	*	..
Fam. 48. Cerambicidæ.							
222. *Hylotrypes*, Serv.							
587. bajulus, L.	..	..	..	*	..	..	..

	Lanz.	Fuert.	Can.	Ten.	Gom.	Palma.	Hierro.
223. *Blabinotus*, W.							
588. spinicollis, W.	..	..	..	*	..	*	..
224. *Oxypleurus*, Muls.							
589. pinicola, W.	..	..	..	..	..	*	..
225. *Criocephalus*, Muls.							
590. rusticus, L.	..	..	..	*	..	*	..
591. pinetorum, W.	..	..	..	..	..	*	..
226. *Hesperophanes*, Muls.							
592. senex, W.	..	..	..	*	..	..	..
593. roridus, Br.	..	..	..	..	..	..	..
227. *Clytus*, F.							
594. Webbii, Lap.	..	..	..	*	..	..	..
228. *Gracilia*, Serv.							
595. pygmæa, F.	..	*	..	..	*	*	..
Fam. 49. Lamiadæ.							
229. *Leprosoma* (Dej.), Thoms.							
596. gibbum, Br.	..	*	..	*	..	..	..
230. *Stenidea*, Muls.							
597. annulicornis, Br.	..	..	..	*	..	..	*
598. albida, Br.	*	*	..	*	..	..	..
599. pilosa, W.	*	..	..	..	..	..	..
600. Hesperus, W.	..	..	..	..	..	..	*
231. *Agapanthia*, Serv.							
601. cardui, L.	..	..	*	*	..	*	..
Fam. 50. Crioceridæ.							
232. *Lema*, F.							
602. melanopa, L.	*	*	*	*	*	*	*
233. *Crioceris*, Geoffr.							
603. nigropicta, W.	..	..	*	..	..	..	..
Fam. 51. Eumolpidæ.							
234. *Pseudocolaspis*, Lap.							
604. divisa, W.	*	..	..	..	..	..	..
605. dubia, W.	..	*	..	..	..	..	..
606. splendidula, W.	..	..	*	..	..	*	*
607. obscuripes, W.	..	..	*	..	..	..	..
Fam. 52. Cryptocephalidæ.							
235. *Cryptocephalus*, Geoffr.							
608. nitidicollis, W.	*	*	*	*	*	*	*
609. puncticollis, W.	..	..	..	*	..	*	*
236. *Stylosomus*, Suffr.							
610. biplagiatus, W.	..	*	..	..	..	..	..
Fam. 53. Chrysomelidæ.							
237. *Chrysomela*, L.							
611. sanguinolenta, L.	*	*	*	*	..	*	..
612. bicolor, F.	*	*	*	..	..	..	..
613. obsoleta, Br.	..	..	..	*	*	..	..
614. fortunata, W.	..	..	..	..	..	*	..
615. rutilans, W.	..	..	..	..	*	..	..
616. gemina, Br.	..	..	..	*	..	*	..

	Lanz.	Fuert.	Can.	Ten.	Gom.	Palma.	Hierro.
238. *Phædon*, Meg.							
617. menthæ, W.	..	..	*	..	..	..	..
239. *Phratora* (Chev.), Redt.							
618. vulgatissima, L.	..	..	..	..	..	*	..
Fam. 54. Gallerucidæ.							
240. *Calomicrus*, Steph.							
619. Wollastoni, Paiva	..	..	..	*	..	*	*
Fam. 55. Halticidæ.							
241. *Haltica*, Geoffr.							
620. Allardii, W.	..	..	..	*	..	..	..
621. lubrica, W.	..	..	..	*	..	..	..
622. variipennis, Boïeld.	..	..	..	*	..	..	..
623. Paivana, W.	*	..	*	*	..	..	*
624. plenifrons, W.	..	..	..	..	..	*	..
625. crassipes, W.	..	..	..	*	..	*	..
242. *Longitarsus*, Lat.							
626. kleiniiperda, W.	..	..	..	*	*	*	*
627. persimilis, W.	..	..	..	*	..	..	*
628. messerschmidtiæ, W.	..	..	..	*	..	*	*
629. ochroleucus, Mshm	..	*	*	*	..	..	..
630. brevipennis, W.	*	..	..	..	..	..	..
631. strigicollis, W.	..	..	..	*	..	..	..
632. nubigena, W.	..	..	..	*	*	..	..
633. dorsalis, F.	*	..	..	..	..	..	..
634. pusillus, Gyll.	..	..	..	*	..	..	..
635. inconspicuus, W.	..	..	..	*	..	..	..
636. vilis, W.	..	..	*	*	..	..	..
637. fuscoæneus, Redt.	..	*	..	*	..	..	..
638. echii, Illig.	..	..	*	*	*	*	..
243. *Psylliodes*, Lat.							
639. hospes, W.	*	*	*	*	*	*	*
640. vehemens, W.	*	*	*	*	*	*	*
641. stolida, W.	*	*	..	..	..	..	..
244. *Dibolia*, Lat.							
642. obtusa, W.	..	*	..	..	..	..	..
245. *Chætocnema*, Steph.							
643. tarsalis, W.	..	..	*	..	..	..	..
Fam. 56. Hispidæ.							
246. *Hispa*, L.							
644. occator, Br.	..	..	..	*	..	*	..
Fam. 57. Cassididæ.							
247. *Cassida*, L.							
645. hemisphærica, Hbst	..	..	*	*	..	*	*
Fam. 58. Erotylidæ.							
248. *Xestus*, W.							
646. throscoides, W.	..	..	..	*	..	..	..

	Lanz.	Fuert.	Can.	Ten.	Gom.	Palma.	Hierro.
Fam. 59. Coccinellidæ.							
249. *Coccinella*, L.							
647. 7-punctata, L.	*	*	*	*	*	*	*
648. Miranda, W.	..	..	*	*	*	*	..
649. Doublieri, Muls.	..	*	..	..	..	..	..
250. *Chilocorus*, Leach							
650. renipustulatus, Scriba	*	*	*	*	*	*	*
251. *Epilachna*, Chev.							
651. 4-plagiata, W.	..	*	..	..	..	..	..
652. bella, W.	..	..	*	..	..	..	..
653. 10-plagiata, W.	..	..	..	*	..	*	..
252. *Scymnus*, Kugel.							
654. canariensis, W.	*	*	*	*	*	*	*
655. oblongior, W.	..	..	..	*	..	..	..
656. cercyonides, W.	..	..	..	*	*	*	..
657. maculosus, W.	*	*	*	*	..	*	..
658. arcuatus, Rossi	..	..	..	*	..	*	..
659. minimus, Rossi	*	*	*	*	*	..	*
253. *Rhizobius*, Steph.							
660. litura, F.	*	*	*	*	..	*	*
254. *Lithophilus*, Fröhl.							
661. deserticola, W.	..	*	..	..	..	..	..
Fam. 60. Corylophidæ.							
255. *Sericoderus*, Steph.							
662. lateralis (Meg.), Gyll.	..	*	*	*	*	..	..
Fam. 61. Endomychidæ.							
256. *Lycoperdina*, Lat.							
663. humeralis, W.	..	..	..	*	..	..	..
257. *Dapsa* (Ziegl.), Lat.							
664. edentata, W.	..	..	*	*	..	*	..
Fam. 62. Zophosidæ.							
258. *Zophosis*, Lat.							
665. 4-carinata, Deyr.	..	..	..	*	..	..	..
666. plicata, Br.	*	*	..	..	..	..	..
667. vagans, Br.	..	..	*	..	..	..	..
668. Clarkii, Deyr.	..	..	*	..	..	..	..
669. bicarinata, Sol.	..	..	*	*	*	..	..
Fam. 63. Erodiadæ.							
259. *Arthrodes*, Sol.							
670. inflatus, W.	*	..	..	..	..	..	..
671. curtus, Br.	..	..	*	..	..	..	..
672. obesus, Br.	..	..	..	*	..	*	*
673. byrrhoides, W.	..	*	..	..	..	..	..
674. laticollis, Br.	..	*	..	..	..	..	..
675. Hartungii, W.	..	*	..	..	..	..	..
676. punctatulus, W.	*	*	..	..	..	..	..
677. parcepunctatus, W.	..	..	..	..	*	..	..
678. subciliatus, W.	..	*	..	..	..	..	..
679. subcostatus, Br.	..	..	*	..	..	..	..
680. costifrons, W.	*	*	..	..	..	..	..
681. malleatus, W.	*	..	..	..	..	..	..

	Lanz.	Fuert.	Can.	Ten.	Gom.	Palma.	Hierro.
259. *Arthrodes*, Sol. (continued).							
682. emarginatus, W.	..	*	..	..	..	..	..
683. geotrupoides, W.	..	*	..	..	..	..	..
Fam. 64. Tentyriadæ.							
260. *Tentyria*, Lat.							
684. interrupta, ? Lat.	..	..	..	..	..	..	..
685. elongata, Br.	..	*	*	..	..	..	..
261. *Paivæa*, W.							
686. hispida, Br.	*	*	..	..	..	..	..
262. *Hegeter*, Lat.							
687. tristis, F.	*	*	*	*	*	*	*
688. Webbianus, Hein.	..	..	*	..	..	..	..
689. glaber, Br.	..	..	..	..	..	*	..
690. amaroides, Sol.	..	..	..	*	*	..	*
691. transversus, Br.	..	..	..	*	..	..	..
692. brevicollis, Br.	..	..	..	*	*	..	..
693. abbreviatus, Br.	..	..	*	..	..	..	..
694. costipennis, W.	..	..	*	..	..	..	..
695. impressus, Br.	..	..	*	..	..	..	..
696. subrotundatus, W.	..	..	*	..	..	..	..
697. tenuipunctatus, Br.	..	..	..	*	..	..	..
698. lateralis, Br.	..	..	..	*	..	..	..
263. *Thalpophila*, Sol.							
699. plicifrons, W.	..	*	..	..	..	..	..
700. Deyrollii, W.	*	*	..	..	..	..	..
701. fuscipes, Br.	*	*	..	..	..	..	..
702. submetallica, W.	*	*	..	..	..	..	..
264. *Gnophota*, Erich.							
703. cribricollis, Br.	..	..	*	..	..	..	..
704. inæqualis, W.	..	..	*	..	..	..	..
705. punctipennis, W.	..	..	*	..	..	..	..
265. *Melanochrus*, W.							
706. Lacordairii, W.	*	*	..	..	..	..	..
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266. *Blaps*, F.							
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711. canariensis, Br.	..	..	..	*	..	..	..
712. fornicata, Hbst	..	..	..	..	..	..	..
713. ascendens, W.	..	..	..	*	..	..	..
714. radula (Dej.), Sol.	..	..	..	*	..	..	..
715. sparsa, Br.	..	..	..	..	..	..	..
716. ambigua, W.	..	..	..	*	..	..	..
717. costipennis, W.	..	..	..	..	*	..	*
718. lævigata, Br.	..	..	..	*	..	*	..
719. serrimargo, W.	..	..	*	..	..	..	..

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268. *Crypticus*, Lat.							
722. punctatissimus, W.	..	..	..	..	..	*	..
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726. minutus, Br.	..	..	*	..	..	..	..
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269. *Melasma*, W.							
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272. *Opatrum*, F.							
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731. fuscum, Hbst	*	*	*	*	..	..	..
732. hispidum, Br.	*	*	*	*	*	*	*
733. oblitum, W.	*	*	..	..	..	..	..
273. *Halonomus*, W.							
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277. *Phaleria*, Lat.							
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