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Transactions of the Entomological Society of London.

London, The Society.

<https://www.biodiversitylibrary.org/bibliography/11516>

1879: <https://www.biodiversitylibrary.org/item/48188>

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V. *On some Coleoptera from the Hawaiian Islands.*
By D. SHARP.

[Read March 5th, 1879.]

THIS paper contains descriptions of thirty new species of beetles found by the Rev. T. Blackburn in the Sandwich Islands. A like instalment, which I hope shortly to offer to the Society, will complete the descriptions of the discoveries made by Mr. Blackburn up to the present time in the islands. The species described are most of them very minute insects, and this, unfortunately, will create a great difficulty in ascertaining at present their nearest relatives, for it is an undoubted fact that our knowledge of the Micro-Coleoptera is still quite rudimentary, except in regard to European and North American forms.

I have felt compelled to establish four new generic names, viz., *Omicrus* (*Hydrophilidæ*), *Monanus* (*Cucujidæ*), *Antilissus* (*Colydiidæ*) and *Propalticus*, this latter being so peculiar a form that I am quite doubtful what its affinities will ultimately prove to be, although I have temporarily placed it with the *Mycetophagidæ*.

Clytarlus microgaster is a most remarkable insect, by reason of the excessive reduction in size of its hind body or abdomen, which in the male sex is reduced to a small appendage, reminding one of what exists in some of the parasitic *Hymenoptera*. I have not seen the female of this interesting creature, and expect the hind body must be at any rate somewhat larger than in the male. I almost think I might cite this fact as a support of the suggestion I made (Trans. Ent. Soc. Lond. 1878, p. 15), that the paucity of individuals of most species of beetles in these islands is possibly due to a diminution in the reproductive powers of the species, owing to their long-continued isolation, and the consequent absence of that amount of breeding between slightly-different forms or races which is so favourable to fertility of organisms. The minute size of most of the species of these islands may perhaps also

be partly due to similar biological influences. Indeed it is, I believe, owing to deficiencies in the assimilative and reproductive powers that the organisms composing insular faunas (*i. e.*, long isolated and small communities) become so readily exterminated on the occurrence of any change in the conditions of their lives, or on their having to compete with introduced strangers.

Of the anomalous *Proterhinus*, Mr. Blackburn has discovered an additional series of species, including some extreme forms, which render it highly probable that other species will be brought to light. Meanwhile, I am so fortunate as to be able to give some remarks of Dr. Leconte on the genus, based on an examination he kindly made of *P. vestitus*. He says, in a letter to me, "It seems to me to represent a family easily distinguished from all others of the *Rhyncophora*, and not to have any affinities outside of that series. It differs from all of them by the absence of the first tarsal joint. The form of the dilated joint as well as its vestiture beneath indicates that it is the normal 3rd joint, and therefore it must be the 1st joint that has become obsolete. The mouth organs and the ventral segments are as in many *Curculionidæ*, while the sculpture of the undersurface of the beak resembles that of *Eupsalis* δ . It differs from *Anthribidæ* by the absence of labrum, covered pygidium, structure of mouth, and many other respects, though resembling that family in the beak and antennæ. In order to complete the investigation, I took up *Aglycyderes*, and studied carefully *A. setifer*. I think the Rhyncophorous affinities are very feeble, and that it belongs rather with the clavicorn series, having relationships with *Colydiidæ* more than with any other family. It differs from that family, especially by the tarsi and the maxillæ with but a single lobe. The head above and beneath does not resemble any *Rhyncophore*, but does look very much like certain of the first tribe of *Colydiidæ* (*Anchomma*, *e. g.*), the insertion of the antennæ under the frontal margin is also not Rhyncophorous. *Aglycyderes* has also perfectly-developed epipleuræ, the flanks of the prothorax are separated from the pronotum by a distinct margin, and there are quite obvious traces of prosternal sutures. These characters do not exist in *Rhyncophora*, and the last two are variable in *Colydiidæ* according to tribe and genus." Dr. Leconte further adds, "Should you wish to print and comment upon any of these views, do so without hesitation, as all I wish is to provoke dis-

cussion, until we or some one else puts these troublesome synthetic forms where they will be least out of place."

Dr. Leconte's opinion is of such great importance, and the question of the isolation of *Proterhinus* is of so much interest in relation to the affinities of the Hawaiian fauna, that I shall avail myself of his invitation to make some additional remarks on the question.

It will be gathered from what I have above quoted that he agrees with me in locating *Proterhinus* as an isolated and little developed type of *Rhyncophora*, while he also confirms the opinion I expressed (Ann. and Mag. Nat. Hist., July, 1876, p. 28), before Mr. Blackburn's researches had brought *Proterhinus* to light, that the relationships of the then unique *Aglycyderes* were with the *Colydiidæ*. It will be seen, however, that, on the other hand, the Philadelphian savant does not at all support my subsequent proposal (Trans. Ent. Soc. Lond. 1878, pp. 16, 21) to unite *Aglycyderes* and *Proterhinus* in one family, but, on the contrary, he leaves it to be inferred that there is no real affinity between the two genera, and on this point, after careful renewed examination of the insects, I feel compelled to differ from him.

It is, however, such a bold thing for me to dissent from a carefully-formed opinion of Dr. Leconte on such a point, that I must, before stating my reasons, take the opportunity of quoting the dictum of another most accomplished naturalist, the late T. V. Wollaston. In a letter I received from him a few days before his lamented decease, he acknowledges the arrival of a pair of *Proterhinus vestitus* I had sent to him, and says, "Your new member of the *Aglycyderidæ* is a most wonderful beast, quite one of the most extraordinary I have ever seen, but there is no mistaking, I think, its affinities." Although Mr. Wollaston speaks as if he had not made any complete examination, it will be seen that he was quite inclined to agree with me on the point in which Dr. Leconte differs from me.

I consider *Aglycyderes* and *Proterhinus* to be allied, because they have in common a structure of the tarsi, which out of the whole enormous order of *Coleoptera* is peculiar to them, and because they agree in all other points except those which Dr. Leconte has mentioned, and of some of which I think he has over-estimated the importance. For instance, though there is a great difference in the structure of the head in the males of the two forms, yet, on comparing together the females, I have

been unable to see any difference of importance between the two, and the insertion of the antennæ in this sex is likewise extremely similar. It is true that the upper surface of the prothorax in *Aglycyderes setifer* is differentiated, although somewhat indefinitely, from the flanks by a series of projecting serrations, and that in *Proterhinus* nothing but the rudiments of such a separation are to be detected, but I am unable to consider this as of extreme importance; for in *Aglycyderes Wollastoni* the separation alluded to is considerably more indefinite than it is in *A. setifer*; while, on the other hand, although such separation is excessively rare in the *Rhyncophora*, yet it is sometimes distinct, and, in fact, I have before me, as I write, a highly-peculiar genus of *Anthribidæ* (belonging, therefore, of course to the *Rhyncophora*), in which this lateral border is as highly developed along the whole side of the prothorax from the anterior to the posterior angles, as it is in the average of the *Coleoptera*, and far more than it is in *Aglycyderes*. Again, there exist, as stated by Leconte, in *Aglycyderes setifer* slight traces of two prosternal sutures, extending outwards from the front coxal cavities; but yet in *A. Wollastoni* I fail to trace them more certainly than I think I can in *Proterhinus vestitus*; and in *Anthribidæ* sutures extending from the coxal cavities to the sides of the thorax may often be seen much less obliterated. On the other hand, I quite fail to see anything in the structure of the head and thorax in *Aglycyderes* which does not accord with Dr. Leconte's definition of *Rhyncophora*, viz., "Rhyncophorous *Coleoptera* are those in which the posterior lateral elements of the head and prothorax coalesce on the median line of the undersurface of the body, so as to unite by a single suture." (Proc. Am. Phil. Soc. XV. 1876, p. xi.)

Nevertheless there does exist an important difference between *Proterhinus* and *Aglycyderes*, as to the direction which the sexual differentiation of the head has taken. In one of the sexes of *Proterhinus* the head is elongated in front into a well-marked beak, while in that sex of *Aglycyderes* in which the head is most extended, the extension is rather in the transverse than in the longitudinal direction. When we recall how persistent a character the beak-like extension of the head is in the *Rhyncophora*—existing in a well-marked form in all the species except in certain *Anthribidæ*—much importance must clearly be attached to this character.

The impression left on my mind with regard to these insects may be thus summed up:—

1. In *Proterhinus* and *Aglycyderes* we are probably dealing with very primitive *Coleoptera*, such, in fact, as existed before the present great development of the highly-differentiated families of the order had occurred.

2. That *Aglycyderes* and *Proterhinus* may be treated as one family, to be placed at the commencement of the families of *Rhyncophora*.

3. That the distinctions between the two forms are of such a nature that they may be justly treated as representing two ultimate divisions of one family: *i. e.*, the two forms remain ununited through a considerable number of repeated and progressively more important syntheses, till the synthesis of family value is reached, when they unite to form the family *Aglycyderidæ*.

It may not be amiss here to remark that the few species constituting this primitive family are all members of insular faunæ: *Aglycyderes setifer* being confined to the Canary Islands; *A. Wollastoni* to New Zealand; and the species of *Proterhinus* to the Sandwich Islands.

HYDROPHILIDÆ.

OMICRUS (new name).

Omicrus brevipes, n. sp. Minutus, latus, subrotundatus, parum convexus, subtus rufescens, opacus, supra nigropiceus, nitidus, nudus, capite antèrius rufescente, pedibus rufis, antennis palpisque testaceis, illis clava fusca; capite thoraceque fere lævigatis, hoc margine laterali tenuissimo; elytris parum subtiliter haud dense punctatis, stria suturali tantum postèrius impressa, versus latera parum distincte seriatim punctatis. Long. $1\frac{1}{4}$ mm.; lat. 1 mm.

This little insect has perhaps at first sight more the aspect of a *Cyclonotum* than of any other *Hydrophilid*; it is among the smallest of the family, only attaining the size of a moderate *Limnebius*: the very short, and rather stout middle and hinder tarsi, the joints of which are compressed and adjusted to one another, but are not, I believe, fitted for swimming, are characteristic.

Oahu; widely distributed, but not common. No. 236

of Mr. Blackburn. The structural characters which have justified the formation of a new generic name for this species may be enumerated as follows:—

Head short and broad, truncate and depressed in front, so that the small eyes project as subangular projections; the short very broad labrum quite exposed. Antennæ 9-jointed, the 1st joint elongate, the 2nd rather short, the three following very small, short and equal, the 6th joint short and strongly transverse, closely applied to the base of the 7th joint, this and the 8th and 9th joints forming a large very compact club. Maxillary palpi formed much as in *Megasternum*, the 2nd joint being a good deal incrassate, the 3rd and 4th slender, the latter acuminate. Prosternum short, and unarmed; intermediate coxæ approximate, separated by the greatly-elevated mesosternal lamina; this lamina is linear, and perfectly on a level with the metasternum, to which it is amalgamated without any trace of suture remaining; the metasternum not in the least carinate. Legs short, the tarsi extremely short, the basal joint of the posterior ones quite short, and not easily distinguished, the 2nd longer than the 3rd.

I am quite unable to find any near ally for this minute insect; it must be located at present in the *Hydrobiides* of Lacordaire between *Anacæna* and *Volvulus*, but it is widely separated from each of those genera. In respect of its hind tarsi it is more approached by *Chætarthria*, which is in other respects widely different.

Only three other species of *Hydrophilidæ* have been yet found by Mr. Blackburn, they are—

1. *Hydrophilus semicylindricus*, Esch.

This species should at present be located as a member of the genus *Hydrobius* of the Munich Catalogue: it departs, however, in some important particulars from our European species; the posterior and intermediate tarsi are furnished above with long ciliæ; the prosternum is finely carinate along the middle, and the undersides of the femora are polished, there being on the front and middle ones merely a small punctate space near the trochanter. In these respects it agrees with the one or two Australian allies, from which it is, however, as a species, abundantly distinct. In the form and development of the mesosternal protuberance the Hawaiian species agrees with our Euro-

pean *Hydrobius convexus*, Brullé, in which species there is likewise a slight ciliation of the hind tarsi.

Found in Oahu, and probably in other islands of the group.

2. *Cyclonotum subquadratum*, Fairm.

This species was described by Fairmaire from specimens from Tahiti. I have had no opportunity of comparing Hawaiian with Tahitian individuals.

This species is common in vegetable refuse.

3. *Sphæridium abdominale*, Fab. (*Dactylosternum*, Woll.)

This widely-distributed insect is one of the commonest beetles at Honolulu, where it is found, as elsewhere, among rotting vegetables.

NITIDULIDÆ.

BRACHYPEPLUS (Munich Cat.).

Brachypeplus tinctus, n. sp. Haud latus, parum convexus, tenuiter pubescens, testaceus, viridi-tinctus, elytris læte viridi-æneis, abdomine medio fusco; capite dense punctato, oculis magnis; prothorace transversim convexo, anterius truncato, dense punctato, dorso pone medium bi-impresso; elytris subtiliter seriatim punctatis, interstitiis adhuc subtilius punctatis, angulo externo late rotundato; abdomine nitido, crebrius sat fortiter punctato. Long. $3\frac{3}{4}$ mm.; lat. $1\frac{2}{3}$ mm.

The antennæ are of a dusky yellow colour, with the club large. The eyes are very large and reach to the back of the head, the upper surface of which is densely and distinctly punctured. The thorax is narrower than the elytra, nearly truncate in front, with the anterior angles extremely rounded; the sides are rounded, but become a little less curved near the hind angles, which are rather obtuse; the width is slightly greater at the base than at the front; the punctuation is dense and distinct, and is finer and closer on the front parts than it is behind, and has a slightly rugose appearance on the disc; just behind the middle are two distinct impressions. The scutellum is large. The elytra are long, and leave exposed only the two apical segments and just the hind margin of the preceding one; the sides are not explanate, and the hind

angles are extremely rounded; the sculpture consists of series of somewhat indistinct punctures, with a scanty and extremely fine punctuation on the interstices. The punctuation of the exposed dorsal segments is rather close and distinct.

Three specimens have been found in flowers in the mountain forests of Oahu; the one sent me by Mr. Blackburn was numbered 191.

This specimen is no doubt a male; the last dorsal plate is emarginate and the last ventral truncate. There is a distinct but short, exposed supplementary segment.

In company with these three individuals Mr. Blackburn found two others, which he considers to be the female. One of these he has sent as No. 190; it has the head narrower, and the head and thorax much less closely punctured. The elytra are rather shorter, and leave exposed a greater portion of the hind body, and the exposed dorsal segments are much less punctured. The apex of the last dorsal segment is depressed in the middle, but not emarginate, and there is no supplementary segment visible. Mr. Blackburn is probably right in considering this to be the female of the male above described; still the distinctions are of such a nature that I have not thought it right to treat the two forms as positively the sexes of one species at present.

B. tinctus is interesting as making a considerable approach to *Goniorhynchus*, from which, however, it still remains distinct by the finely-faceted eyes, and the much less elongated lobes of the third tarsal joint. It should be placed at the head of the Hawaiian *Brachypepli*, before *B. discedens*.

Brachypeplus explanatus, n. sp. Latiusculus, parum nitidus, ferrugineo-testaceus, vix variegatus, antennis fuscis, articulis 1° et 2° testaceis; oculis parvis; thorace magno, antrorsum quam ad basin magis angustato, dense fortiterque punctato, disco profunde quadri-impresso, lateribus explanatis; elytris inæqualibus, thorace haud sesqui longioribus, lateribus explanatis, posterius sat angustatis, angulo externo perparum rotundato; abdomine acuminato, fortiter, sed parum argute et profunde, punctato. Long. $4\frac{1}{4}$ mm.; lat. $1\frac{2}{3}$ mm.

The eyes are small, so that the post-ocular lobe is large; the thorax is largely developed, its anterior angles

are very rounded and indistinct, the narrowing of the sides behind the middle is abrupt and well-marked, the hinder angles are nearly rectangular. The alternate interstices of the elytra are a good deal more elevated than the others, but this character is rendered less striking by the inequalities of the surface.

This species is allied to *B. inæqualis*, from which, however, it is very easily distinguished by its smaller eyes, coarser sculpture, and the very explanate sides of the elytra, and their less rounded outer angles.

Two individuals have been found by Mr. Blackburn on the mountains near Honolulu; the one sent home was numbered 189; it exhibits a very distinct exerted apical segment, and is probably a male.

Brachypeplus protinoides, n. sp. Haud latus, convexiusculus, ferrugineo-testaceus, supra æneo-tinctus, parcius minus breviter pubescens, sat nitidus; capite thoraceque parce fortiter punctatis, hoc vix transverso; elytris obsolete seriatim punctatis, interstitiis vix conspicue punctulatis, lateribus nullo modo explanatis, angulo externo late rotundato. Long. 3 mm.; lat. $1\frac{1}{3}$ mm.

This species is somewhat allied to the preceding, but is smaller and more convex, and the eyes are smaller; the excessively indistinct sculpture of the wing cases, and the unusually convex form will readily distinguish it from its allies. From its form it has some resemblance to *Proteinus*, a genus of *Staphylinidæ*.

The only individual I have seen is in very bad condition, and shows no supplementary apical segment. It was found by Mr. Blackburn in the flowers of the koa tree, at an elevation of about 5,000 feet, on Halea Kala.

CUCUJIDÆ.

MONANUS (new name).

Monanus crenatus, n. sp. Ferrugineus, elytris pedibusque parum pallidioridus, angustulus, fortiter punctatus; prothorace subquadrato, posterius leviter angustato, lateribus æqualiter crenulatis, fortiter punctato; elytris fortiter seriatim punctatis, pube suberecta, sat elongata vestitis. Long. $2\frac{1}{8}$ mm.; lat. $\frac{3}{4}$ mm.

Antennæ about as long as head and thorax, rather stout,

1st joint but little different from the following ones, being only slightly longer and thicker than the 2nd; joints 2—8 differing but little from one another, each about as long as broad; joints 9—11 distinctly larger than the preceding ones, not transverse, the 11th rather the largest. Head coarsely punctured, not broad, a little narrower than the thorax. Thorax a good deal narrower than the elytra, nearly as long as broad, distinctly narrowed behind, the sides crenulate, it is coarsely punctured, and finely and indistinctly pubescent. Elytra rather slender, with rows of coarse punctures, and with a fine but rather elongate pubescence.

Found rarely in decaying vegetable matter on the mountains of Oahu; sent as No. 204.

I have seen but a single individual of this species; it cannot be placed in any established genus, and as its position is certain, I have given it a new generic name. Its structure is similar to that of *Psammæchus*, but the basal joint of the antennæ is less developed, and the apical joint of the maxillary palpi is not dilated, but acuminate. The tarsi have the 2nd and 3rd joints strongly lobed beneath, and the 4th joint small. The position of the genus at present is clearly therefore between *Psammæchus* and *Telephanus*. In appearance the species may be described as intermediate between *Silvanus* and *Corticaria*.

COLYDIIDÆ.

ANTILISSUS (new name).

Antilissus aper, n. sp. Elongatus, angustulus, parallelus, subcylindricus, fusco-ferrugineus, opacus, parcius hispidus; prothorace elongato, sulculis angustis, profundis, connexis, ornato; elytris punctato-sulcatis, interstitiis angustis; antennis pedibusque ferrugineis. Long. 3—4 mm.; lat. 1 mm.

Upper surface of head parabolic in form, the eyes continuing the outline of the sides, the posterior part bearing very flat tubercles, the anterior part very indefinitely sculptured. Thorax elongate and narrow, considerably longer than broad, nearly straight at the sides, the front margin with a rather deep, narrow sinuation on each side, so that the anterior angles are prominent; the surface is covered with flat tubercles, and peculiar depressions; the

depressed parts are without sculpture, one of them runs close to the side, with which it is parallel, another less definite one runs along the middle, and another exists between the central and the lateral one; these grooves are connected together, in an irregular manner, in the transverse direction, so that the rough surface is broken up into several irregular isolated portions, which bear a few short erect setæ, the sides also bear setæ. The elytra are elongate, and are marked by grooves separated by narrow interstices; these grooves bear deep punctures, or small depressions, separated from one another by small spaces only, and from these spaces spring the short erect setæ. The undersurface is coarsely punctured. The tibiæ are armed externally with fine setæ.

I have received four individuals from Mr. Blackburn, but have no information about them.

The species cannot be placed in any established genus, so that I have made a new generic name for it. Its position should be between *Bupala* and *Cicones*, though in form and sculpture it is nearer to *Lado Jelskii*. The following are its characters:—

Antennæ small, 10-jointed, the basal joint nearly concealed, the 1st and 2nd stouter than the following ones; the 10th joint dilated to form a club, the apex of which bears a conspicuous band of short pubescence. The parts of the mouth are, as usual in the allies, small and inconspicuous, but the last joint of the maxillary palpi is comparatively large, elongate and subacuminate. The head is constricted behind the eyes, so that these are separated from the thorax. The antennal grooves exist in the same rudimentary condition as in *Cicones*. The anterior coxal cavities are perfectly closed. The metathoracic episterna are very narrow and linear, and have the appearance of a groove close to the epipleura. The posterior coxæ are separated by a triangular projection of the basal ventral segment: first, second and third ventral segments of about similar lengths, fourth a good deal shorter, fifth margined by a deep impression. Legs rather short and slender; tibiæ almost linear, bearing setæ externally; basal three joints of the tarsi quite small, the basal one much concealed, the 4th joint elongate. Scutellum small.

MYCETOPHAGIDÆ.

LITARGUS (Munich Cat.).

Litargus vestitus, n. sp. Regulariter ovalis, parum convexus, subnitidus, subseriatim parum subtiliter pilosulus, testaceus, capite pronotoque infuscatis, elytris fasciis tribus (prima circa scutellum) irregularibus, plus minusve conjunctis fuscis. Long. 2 mm.; lat. 1 mm.

Antennæ slender, and rather short, yellow, formed much as in *L. bifasciatus*, but more slender, the three apical joints large in proportion to the others, but not transverse. Head very small, with the eyes comparatively larger than in *L. bifasciatus*. Thorax transverse, closely applied to the elytra and perfectly continuing their outline, a good deal narrowed in front, moderately closely punctured, but the punctuation concealed by the rather rough pubescence. Elytra yellowish, but with large, transverse, irregular and variable bands, so disposed as to leave eight yellow marks; they are not closely punctured, and would be shining, except for the rather long pubescence. This is moderately dense, and has somewhat the appearance of being arranged in rows, but with the intervals also pubescent. Under-surface and legs yellow. Front coxæ but little distant.

Sent by Mr. Blackburn as No. 205; found in the crevices of the bark of trees in the mountains of Oahu.

PROPALTICUS (new name).

Propalticus oculatus, n. sp. Brevis, latiusculus, parum convexus, opacus, fere nudus, obsoletissime punctatus, ferrugineus, supra fuscus, elytris maculis duabus (vel quatuor) parum discretis, ferrugineis; antennis tenuibus, clava elongata, laxè articulata, fusca; prothorace basi utrinque prope medium sinuato; elytris striis tribus subtilibus; pedibus tenuibus, tibiis anterioribus elongatis, apice calcari valido armatis, ceteris ecalcaratis. Long. $1\frac{1}{2}$ —2 mm.; lat. $\frac{3}{4}$ —1 mm.

This minute insect has more the form of *Soronia* than of anything else I have seen. The antennæ have the two basal joints rather elongate and moderately stout, the intermediate joints are excessively slender and minute, while the three apical ones form an elongate, very slender, and extremely loosely articulated club; the eyes are very

large and rather closely faceted. The thorax is transverse, and emarginate in front, its width is almost that of the elytra, the sides are nearly straight behind the middle, and a good deal narrowed towards the front, the hind angles are rectangular, the base and sides are very finely margined. The scutellum is short and very broad. The elytra have each three fine striæ, which, viewed in a certain aspect, have the appearance of very fine elevated lines. The whole of the upper surface is excessively indistinctly punctured, and bears an extremely short, almost invisible, ashy pubescence, which is no doubt very easily abraded.

This insect was sent by Mr. Blackburn as No. 20; it is beaten from trees on the high mountains of Oahu, Maui, and Kauai; its extreme activity in leaping renders it difficult to capture.

The hind legs are not dilated, and I believe the saltatorial power must arise from the front legs, the anterior tibiæ of which are rather longer than the others, a little thickened towards the extremity and armed with a peculiar stout spur.

I subjoin the characters, so far as I have been able to add them, of this most anomalous little beetle.

Antennæ 11-jointed, with basal two rather long joints, then six very slender, subequal intermediate joints, the terminal three joints forming a very loosely articulated slender club. Eyes large but not very prominent, encroaching greatly on the upper surface of the head. Labrum large, distinct, transverse, rounded in front, leaving exposed the points of the mandibles. Mandibles rather large, with a large basal portion and a moderately slender apical portion; the latter bifid at the extremity. Maxillæ with a rather large, pubescent outer lobe, and an extremely slender, linear inner lobe; their palpi stout, 3-jointed, the apical joint not at all dilated, three or four times as long as broad, moderately acuminate, the basal joint rather stouter than the others; the middle joint about as long as broad. Labium not observed. Prosternum large, the coxæ placed at its hind part, very widely distant from one another, small but not globose, having an extension in the anterior and outward direction, their cavities not closed behind. Mesosternum broad and transverse, quite on the same plane as the metasternum; middle coxæ minute, globose, very widely separated. Hind coxæ transverse, very widely separated.

Ventral segments five in number, the basal one in the middle line as long as the two following together, the rest subequal. Legs slender, front tibiæ longer than the others, and with a rather large apical spur; tarsi slender and linear—I think, 4-jointed (possibly 5-jointed); the penultimate joint simple. Elytra covering the hind body, leaving, however, the tip of the pygidium visible.

I am sorry I am unable to see accurately the structure of the tarsi of this minute insect. It is a most difficult one to classify. I have decided that, on the whole, it will be at present least ill-placed in the *Mycetophagidæ*, although it has perhaps more the appearance of the *Nitidulidæ*.

SCARABÆIDÆ.

APHODIUS (Auctorum plurimum).

Aphodius pacificus (n. sp. ex affinitate *Atæni* granulatoris, Har.). Nigricans, parum elongatus, opacus, antennis, pedibus, capiteque antèrius sæpius rufescentibus; capite dense punctato, antèrius parum distincte granulato, clypeo late emarginato, utrinque parum distincte subdenticulato; thorace brevi, dense fortiter punctato; elytris subsulcatis, interstitiis subangulatis, antèrius parum, posterius magis elevatis, obsolete granulatis. Long. 3 mm.

This species is of rather short form. The thorax has the hind angles very broadly rounded, the punctuation at its sides is very dense. The sculpture of the elytra is of an indefinite character and very difficult to describe, indeed, it varies considerably in its appearance according to the direction from which it is viewed; there are broad shallow grooves, at the bottom of which are very fine crenate, or punctate striæ; the intervals can scarcely be described as convex, as they have an angulated appearance; along the middle of each interval is a series of very fine and very closely placed granulations, and less definite granulations may be seen along the lateral portions of the intervals. The metasternum is very coarsely punctured; the ventral segments also are coarsely and evenly but not deeply punctured. The basal joint of the posterior tarsus is equal to the length of the longer spur, and is as long as the three following joints together. The colour is variable, being sometimes brownish instead of black, and the legs, antennæ and palpi are sometimes blackish, sometimes red.

This species was sent by Mr. Blackburn as No. 232.

It was represented in the Lafertean collection of Lamellicorns by a specimen labelled "*Oxyomus pacificus* Reiche, Nov. Zealand;" but I have never seen an individual of it from New Zealand. It is worthy of remark, that all the other *Aphodii* found by Mr. Blackburn are species having a habitat outside of the islands, viz., *Aphodius lividus*, Ol.; *Saprosites pygmæus*, Har.; *Atænius peregrinator*, Har.; and *Atænius stercorator*, Horn. *Aphodius costulatus*, Fairm. is probably very closely allied to *A. pacificus*; indeed, I at first thought it to be that species, but after carefully considering Fairmaire's description I have thought it more probably that of an allied species. I am equally in doubt as to whether the *Oxyomus dilutus*, Fairmaire, may not be Harold's *Saprosites pygmæus*; if I understand correctly the French author's meaning as to the comparative lengths of the tibial joints and spurs, the two names do not apply to one species.

CIOIDÆ.

Cis (Munich Cat.).

Cis alienus, n. sp. Cylindricus, fuscus, subopacus, crebrius subtiliter punctatus, pube flavicante, erecta dense vestita, antennis pedibusque testaceis. Long. $2\frac{1}{4}$ mm.

The antennæ are small and are pale yellow. The head is small and much immersed in the thorax, its front margin distinctly erect, and a little thickened on each side over the insertion of the antennæ. The thorax is a good deal longer in the middle than at the sides. The punctuation on the thorax and elytra is fine but very distinct and even; the pubescence is rather more conspicuous on the elytra than on the thorax.

This species is remarkably like the European *Cis punctulatus*, but it is smaller; the antennæ are a good deal smaller, the punctuation is closer and finer, and the pubescence much longer.

Two specimens found in the mountain forests of Honolulu, and sent as No. 107.

Cis pacificus, n. sp. Oblongus, convexus, haud elongatus, castaneo-testaceus, lævigatus, nitidus; antennis pedibusque testaceis; prothorace sparsim subtilissime punctulato; elytris sparsim sat fortiter sed subobsolete punctatis. Long. $1\frac{1}{4}$ — $1\frac{3}{4}$ mm.

The front margin of the head is very distinctly raised, and is thickened over the insertion of the antennæ, and in

some individuals this thickened portion is developed into a large angular projection. The species is most remarkably similar to the European *Cis lineato-cribratus*, but the punctuation of the elytra is less distinct and not so regularly arranged, and is, in fact, very nearly the same as in *Cis nitidus*. It is evidently a variable species, the largest individuals being about equal to *C. lineato-cribratus*, while others are not half the size. The punctuation of the elytra, likewise, shows considerable variation.

Found in the mountain forests of Honolulu, and sent as No. 106.

Cis porcatus, n. sp. Oblongus, angustulus, parum convexus, nigricans, crebre, fortiter punctatus, brevissime, parceque hispidulus, antennis pedibusque fuscis, illis basi testaceo. Long. $1\frac{1}{3}$ mm.; lat. $\frac{1}{2}$ mm.

The antennæ have the first joint of the club a good deal smaller than the following ones. The head has the front margin angularly prominent over the insertion of the antennæ. The thorax is quite as broad as the elytra, the anterior border in the middle is distinctly but not greatly produced over the head, the sides are much deflexed, the basal and lateral margins very fine, the hind angles are very rounded and indistinct, the surface is even, is coarsely, closely and deeply punctured, and not at all shining, it bears excessively short, pale setæ or scales, looking like mere shining, pale points. The elytra are not so dull as the thorax, their punctuation is irregular and rather coarse.

This species may perhaps be best compared with the European *Cis fuscatus*, but it is not half the size of that species, is darker in colour, and the sculpture and surface are more uneven.

Beaten from dry wood in the mountain forests of Oahu and Kauai; Nos. 33 and 212.

Cis signatus, n. sp. Oblongus, angustulus, parum convexus, opacus, testaceus, thorace, elytrisque nigro-signatis, prosterno medio, pectore abdomineque nigricantibus, densissime subtilissimeque punctatus, omnium brevissime hispidulus; antennarum clava fusca. Long. $1\frac{1}{2}$ mm.; lat. $\frac{2}{3}$ mm.

This minute species will be easily distinguished by its excessively dense punctuation, and by the markings of the upper surface; these latter consist of a large black irregular mark on the middle of thorax, occupying a large

part of the surface, of a mark on the elytra between the suture and shoulder, of another mark behind the middle, and of an infuscation of the posterior part of the suture; these marks are no doubt very variable in the extent to which they are developed. The very dense, very fine, and very short setæ with which the upper surface is covered may easily be overlooked.

Found on Waianae mountains, Oahu, and sent to me as No. 36. Specimens, which are apparently varieties of the same species, have been found on Halea Kala, Maui Island, and on the mountains of Kauai.

Cis bicolor, n. sp. Angustulus, sat convexus et elongatus, nitidus, fere lævigatus, subtus nigro-fuscus, supra variegatus, capite thoraceque nigris, hoc anterius et posterius albido-testaceo, elytris albido-testaceis, lateribus fasciæque mediali ad suturam late interrupta nigris; prothorace sat crebre et fortiter punctato; elytris basi fortiter punctatis, apice impunctatis; pedibus antennisque testaceis, illis femoribus, his clava infuscatis. Long. $1\frac{1}{2}$ mm.; lat. $\frac{2}{3}$ mm.

The thorax is rather elongate and narrow, distinctly narrower than the elytra; and the lateral and basal margins are excessively fine and difficult to distinguish. The elytra are slightly narrowed towards the shoulders; the black mark at their outer margin does not extend to the apex. The species is readily distinguished by its shining surface free from setæ, and the pale, almost white elytra, with black marks, as well as by the punctuation of the elytra. The colour is probably variable, as two individuals apparently belonging to the species have the thorax entirely yellow.

Found on the mountains near Honolulu, sent by Mr. Blackburn as No. 34.

Cis tabidus, n. sp. Oblongus, angustulus, sat convexus, nitidus fere lævigatus, nigro-fuscus, elytris sordide testaceis, lateribus fasciæque mediali parum discrete nigris; thorace elytrisque parum fortiter et dense punctatis, his ad apicem fere impunctatis, antennis pedibusque testaceis, illis clava fusca. Long. $1\frac{2}{3}$ mm.; lat. $\frac{2}{3}$ mm.

The front margin of the thorax is more or less distinctly pale; the thorax is nearly as broad as the elytra, and is but little longer in the middle than it is at the sides. The

punctuation of the elytra is sparing and indistinct, and though somewhat coarse on the basal portion, becomes entirely obsolete before the apex. The species is closely allied to *C. bicolor*, but is much more obscure in colour, and has the thorax rather shorter and broader, and the elytra rather shorter and more parallel, &c.

Sent as No. 214; found on the mountains of Kauai by beating dry wood.

Cis diminutivus, n. sp. Suboblongus, parum convexus, angustulus, rufo-testaceus, elytris, pectore abdomineque fuscis, crebrius parum subtiliter punctatus, crebrius breviter hispidulus, elytris rugulosus. Long. vix $1\frac{1}{2}$ mm.

The antennæ are short, with rather stout club; the margin of the front of the head is only to be distinguished over the antennæ, and is there excessively fine; the surface is closely and distinctly punctured. The thorax is transverse, slightly broader than the elytra, almost truncate in front, so that the head is not protected, the sides much rounded, and the hind angles greatly rounded; the surface is covered with a dense rather coarse punctuation, and with excessively short setæ. The elytra are nearly black in colour, and so form a great contrast to the head and thorax; they are closely punctured, the punctuation is of an irregular character and has a rugulose appearance; they bear excessively short setæ. The prosternum is infusate in the middle; the ventral segments are obscurely yellowish towards the extremity.

This minute species will be readily distinguished by its conspicuous punctuation from the following one, which resembles it in size and colour.

Two specimens were found by beating dry wood, near the summit of the highest mountain in the range, near Honolulu.

Cis læticulus, n. sp. Suboblongus, parum convexus, angustulus, nitidus, sublævigatus, rufo-testaceus, elytris fuscis; corpore subtus infuscato, capite prothoracisque lateribus læte testaceis. Long. $1\frac{1}{3}$ mm.

The antennæ are short with rather stout club; the small head is almost without raised margin over the antennæ. The thorax is hardly as broad as the elytra; it is but little produced over the head, it is distinctly narrowed behind, and the hind angles, though depressed

and not easily seen, are not rounded, but somewhat obtusely rectangular; the blackish elytra form a striking contrast in colour to the head and thorax. The whole surface is smooth and shining and nearly free from punctuation.

Found near Honolulu; sent as No. 43.

Cis evanescens, n. sp. Suboblongus, parum convexus, nitidus, sublævigatus, nigricans, pedibus fusco-testaceis, antennis basi testaceo, apice fusco. Long. $1\frac{1}{4}$ mm.

The antennæ are stout, with rather thick short club. The minute head is without raised margin, but has a very distinct transverse impression in front. Although the thorax is but little produced over the head, it is a good deal longer in the middle than at the sides, and the front angles are extremely rounded and indistinct; it is distinctly narrowed behind, and the hind angles, though very obtuse, are not rounded. The surface is almost free from punctuation.

This species seems closely allied to *C. laticulus*, but in addition to its black head and thorax, the more obtuse hinder angles of its thorax characterize it as a distinct species.

Found on the mountains of Oahu and Kauai; sent as Nos. 32 and 213.

AGLYCYDERIDÆ.

PROTERHINUS (Sharp, Trans. Ent. Soc. Lond. 1878, p. 20).

Proterhinus nigricans, n. sp. Latiusculus, nigricans, setis depressis, submaculatim vestitus, setis erectis parum conspicuis; antennarum articulo basali magno; prothorace latiusculo, anterieus parum distincte constricto, lateribus valde rotundatis, dense profundeque punctato, anterieus impresso; elytris brevibus, basi subplanato, versus humeros leviter angustatis (his sat acutis), crebre profundeque punctatis. Long. $2\frac{1}{2}$ —3 mm.

This species differs from *P. vestitus* in the following points: it is darker in colour, even the legs and antennæ being blackish; it has the eyes larger, the antennæ rather longer and thicker, with larger basal joint, and the punctuation of the surface has a more distinct and definite appearance, owing, perhaps, to the setæ being less deve-

loped. Slight differences in less important points are also to be observed. The anterior impression of the thorax is quite distinct, but the lateral impressions are not easily seen.

Of this species I have also received a pair from Mr. Blackburn, as Nos. 177 and 178; they were found on the mountains of Kauai, by beating dry sticks.

Proterhinus collaris, n. sp. Elongatulus, sat convexus, nigricans, setis depressis conspicue maculatim vestitus, setis erectis sat conspicuis; antennis elongatis, articulo basali præsertim elongato; fronte densius squamoso; prothorace elongato, anterieus impresso, dense fortiter punctato; elytris fortiter punctatis, maculis setarum sericatis, basi emarginatis, sed humeris vix acutis. Long. $3\frac{1}{4}$ mm.

This is a pretty little species with elongate thorax, and irregularly marked with patches of whitish silky setæ; the upper portion of the head is more than usually densely clothed with yellowish setæ; the antennæ are blackish, elongate and slender. The impression on the front of the thorax is rather distinct, but the lateral ones are scarcely represented. The hind legs are considerably longer than in *P. vestitus*. The tibiæ in the middle and the base of the femora are more or less distinctly rufescent.

I have received a pair as Nos. 175 and 176, and am informed by Mr. Blackburn that the species occurs sparingly in several localities on Kauai, in dry bark.

Proterhinus humeralis, n. sp. Angustulus; oculis mediocribus; fusco-rufus, parum distincte variegatus, setis depressis et erectis vestitus; prothorace elongato, evidenter tri-impresso, parum distincte punctato, lateribus rotundatis, antrosum minus evidenter constricto; elytris basin versus angustatis, humeris acutis antrosum productis, profunde fortiter punctatis, setis erectis parum conspicuis. Long. $2\frac{3}{4}$ — $2\frac{7}{8}$ mm.

The antennæ are very obscure red, getting darker towards the extremity, they are rather largely developed, the three terminal joints elongate, and quite distinctly thicker than the preceding ones; the punctures on the elytra are deep but not dense, and those on the basal portion, near the suture, are almost arranged in rows.

This is another of the obscure and difficult species allied to *P. vestitus*; it is narrower than that species, however,

and has the thorax much less constricted in front. In its form it more resembles *P. simplex*, but may be easily distinguished by the impressions of the thorax, and by the humeral angles of the elytra being more produced in front.

The pair of this species sent by Mr. Blackburn were numbered 169 and 170, and were found on Haleakala, Maui.

Proterhinus pusillus, n. sp. Minor; oculis parvis; fusco-rufus, setis albidis, depressis, et erectis vestitus, pedibus rufis; prothorace latiusculo, anterie abrupte constricto, basin versus angustato, pone marginem anteriorem parum distincte impresso, obsolete punctato; elytris indistincte punctatis, humeris haud acutis. Long. $1\frac{3}{4}$ — $1\frac{7}{8}$ mm.

This is the smallest *Proterhinus* yet found; it is most allied to *P. vestitus*, but independently of its much smaller size, it may be distinguished by its smaller eyes, less distinctly impressed thorax, more obscure punctuation, and the less development of the setæ; the scales and setæ with which it is clothed are in the two individuals before me nearly white in colour; the shoulders are a good deal more indistinct and more rounded than they are in *P. vestitus*. The structure of the antennæ is much the same as in *P. vestitus*, and this easily distinguishes the species from the almost equally small *P. debilis*.

A pair of this species, displaying the usual sexual distinction, has been sent by Mr. Blackburn as Nos. 181 and 182; they were found in the forests on the Honolulu range of mountains.

Proterhinus longulus, n. sp. Elongatus, angustulus, opacus, ferrugineus, elytris vage nigro-signatis, setis depressis sparsim vestitus, setis erectis sat conspicuis; prothorace elongato, parum inæquali, indistincte punctato, linea longitudinali sublævi sat distincta; elytris elongatis sparsim sat fortiter punctatis, humeris acutis, prominulis. Long. 3— $3\frac{3}{4}$ mm.; lat. 1— $1\frac{1}{8}$ mm.

This is a very distinct species, with scanty clothing, which has little tendency to form spots or bands. The eyes are small, the antennæ moderately long, rather slender. The thighs are rather more slender, or less clavate, than in most of the other species, and the ventral

sutures are rather deeper than usual. The dark marks on the elytra are indefinite, and no doubt variable. The species seems to be closer to *P. simplex* than to any of the others.

A pair of this species was sent as No. 164. Mr. Blackburn says it is found in a large fern growing on the Honolulu range of mountains.

Proterhinus basalis, n. sp. Latiusculus, parum convexus, nigricans, setis depressis sat dense irregulariter vestitus, setis erectis sat conspicuis, antennis tibiisque rufo-obscuris; prothorace latiusculo, anterie breviter constricto, basi fortiter angustato, fortiter sed parum discrete punctato, subhispido, tri-impresso; elytris breviusculis, ad basin transversim depressis, humeris acutis. Long. 3 mm.

About the size of the largest *P. vestitus*, and somewhat similar thereto, but broader, and readily distinguished from it, and the other allies, by the depressed basal portion of the elytra. The scutellum is more than usually inconspicuous. The antennæ are rather long, and slender. The prosternum, in front of the coxæ, is somewhat flattened or depressed in the middle, and the undersurface is not so rugose as in the allies; the large basal ventral segment being remarkably free from punctuation.

Three individuals were beaten from dry sticks, at an elevation of 2,000 feet, on the island of Kauai; the one sent me is of the rostrate sex, and was No. 166.

Proterhinus sternalis, n. sp. Robustus, breviusculus, nigricans, antennis, femoribus basi, tibiis tarsisque rufis, setis depressis, densius irregulariter vestitus, setis erectis sat conspicuis; prothorace latiusculo, anterie constricto, rugoso-punctato, tri-impresso; elytris basi fortiter emarginato, parum discrete punctatis, basi summo utrinque prope scutellum subtuberculato, sutura subtilissime carinato-elevato, humeris prominulis; prosterno anterie in medio concavo; tibiis extus longius setosis. Long. $2\frac{1}{2}$ — $3\frac{1}{4}$ mm.

This is a very distinct species, though at first sight it seems similar enough to *P. vestitus*. The eyes are largely developed. The tubercle on each side at the base of the elytra is tomentose like the rest of the surface, and therefore not very conspicuous; there is also a very obscure oblique elevation proceeding from each shoulder

towards the suture; there is an indistinct darker patch on the side of each wing case about the middle, and on this the punctuation appears coarser than elsewhere.

Found on dead wood in the forests at an elevation of 4,000 ft. on Haleakala, Maui. The pair sent represent the sexes; the unrostrate individual is smaller than the other, with the anterior legs rather shorter, and the lobes of the 2nd tarsal joint on the front feet unusually developed. Sent as Nos. 167 and 168.

Proterhinus Lecontei, n. sp. Major; parum dense griseo-squamosus; prothorace inæquali; elytris basi emarginato, et quasi quadridentato, pone medium valde tuberculato elevatis, setis erectis sat conspicuis. Long. 4—4 $\frac{3}{4}$ mm.

The antennæ are largely developed, and are about intermediate between red and black in colour. The eyes are large. The thorax is constricted in front, and bears three very large impressions, the anterior one being excessively large, the sides and front margin are marked by some curved erect setæ. The elytra are emarginate at the base, with the humeral angles excessively prominent, and there is a prominent tubercle on each side of the scutellum projecting somewhat forwards as well as upwards; along the middle of each wing case is a longitudinal elevation, terminating some distance before the extremity very abruptly, and so forming a very prominent tubercle; the punctures are distant but distinct, and rather evenly distributed.

Beaten from dead wood in the forests at an elevation of about 4,000 ft. on Haleakala, Maui. No. 165.

Obs.—This is by far the largest species of the genus yet found, and is the most highly developed and most sexually differentiated, and at the same time seems to make the nearest approach to *Aglycyderes*; it may, perhaps, have to be treated as a distinct genus. The epipleuræ of the elytra are less rudimentary than in the allies, and the coxæ are not so widely separated, especially in the sex without rostrum. In the other sex the beak is highly developed. *P. sternalis* shows an approximation to *Lecontei*, however, and if one or two intermediate species are discovered, as is quite possible, *P. Lecontei* will have to remain united in a first synthesis, with its

more insignificant-looking allies. I have named this remarkable little beetle in honour of the distinguished entomologist of Philadelphia, who has so indefatigably and successfully added to our knowledge of the *Coleoptera*.

Proterhinus paradoxus, n. sp. Oculis minutis; parum elongatus, ferrugineus, subnitidus, sine setis depressis, setis erectis elytrorum sparsis, sed conspicuis; prothorace inæquali, antèrèus conspicue constricto, obsolete punctato, sparsim hispidulo; elytris planatis, lateribus rectangulariter deflexis, omnium fortiter, dense punctatis, humeris depressis, inconspicuis; femoribus parum clavatis. Long. $2\frac{1}{4}$ mm.

The antennæ are rather slender, but have the 2nd joint thicker than usual; the thorax is rather small, the three impressions are very large, the anterior one is particularly indefinite, and cannot be said to be limited laterally, and it is to this that is due the greater apparent constriction of the front part of the thorax; the punctuation is very indistinct, and the surface is rendered hispid by curled suberect setæ. The elytra have the whole of the dorsal portion quite flat, there is an appearance of an obsolete tubercular elevation at the base on each side near the scutellum, the lateral portions of the wing cases are placed quite at right angles to the disc; the punctuation is very deep and coarse and close.

Two individuals have been found in the mountain forests near Honolulu; sent as No. 163.

Obs.—This species is so very distinct that, if connecting links are not found, it will have to be treated as a distinct genus. The minute eyes indicate an inactive life. The very different sculpture and clothing, and the peculiar form of the wing cases, are accompanied by a diminution of the 2nd joint of the tarsi and a remarkable development of the sutures of the ventral segments, which are very coarse and deep. The individual described is probably the unrostrate sex, but, if so, it has the head narrower and more rostrate than in the unrostrate sex of other species, and I shall not be surprised if it prove that in this species the sexual differentiation of the head is less than in the other *Proterhini*.

SCOLYTIDÆ.

HYPOTHENEMUS (Leconte).

I have described one of Mr. Blackburn's new species under the above generic name with some hesitation, for at present it appears there are no systematic characters to distinguish the genus from *Cryphalus*. Hitherto the number of joints in the funiculus of the antennæ have been used for the purpose, but this has been abandoned by Leconte, who now includes under the name some species having two, and some having more than two intermediate joints in the antennæ. The reason he has given (Proc. Am. Phil. Soc. 1876, No. 96, p. 355) makes me think he is correct in this procedure. I have not, however, called the new species here described a *Cryphalus*, because I think it quite probable that future investigations will reveal a sufficient gap between *Cryphalus* (as represented by *binodulus*, Ratz., and its allies) and *Hypothenemus eruditus*, Westw., with the species near it, to justify their separation.

Hypothenemus maculicollis, n. sp. Breviusculus, latiusculus, subcylindricus, niger, antennis pedibusque fusco-testaceis, setulis omnium brevissimis, fuscis vestitus; prothorace antrorsum fortiter asperato, posterius subtilissime granulato, sub-opaco, medio parum distincte rufo-maculato; elytris subtiliter seriatim punctatis, posterius vix retusis. Long. $1\frac{3}{5}$ mm.

This species is intermediate in size between *H. eruditus* and *Cryphalus binodulus*; the setæ of the surface seem to be finer than in *H. eruditus*, and are very easily removed; they are very dense on the deflexed apical portion of the elytra, and cause the surface there to appear extremely opaque. The intermediate joints of the antennæ are excessively abbreviated, so that at first sight the globular 2nd joint appears contiguous with the base of the club; but examination with a compound microscope reveals some very short, broad, indistinctly separated intermediate joints, which are, I believe, three in number: this is the same structure as is stated by Leconte to occur in the North American *H. dissimilis*.

I have received three individuals as No. 39 from Mr. Blackburn, with the remark "widely distributed."

Besides the *H. maculicollis*, Mr. Blackburn has also found the *H. eruditus*, Westw.; and as regards this little mite, I may remark that I think it is probably nearly cosmopolitan, and it may be expected to have been described under various names. I do not consider, however, that it can be the species intended by Fabricius, under the name of *Bostrichus ruficollis* (Syst. El. ii. p. 388), as Ferrari has suggested (Berl. Zeit. 1868, p. 255). The little atom can probably live on a great variety of food, and will pretty certainly be found to vary a good deal in minor particulars. *Cryphalus aspericollis*, Woll., from the Canary Islands and Ascension Island, seems to me the same species; and also *Hypothenemus hispidulus*, Leconte; and it is also quite probable that *Stephanoderes seriatus*, Eich., is, as suggested by Leconte, the same thing.

Mr. Blackburn finds the insect in the bark of a species of acacia on the plains of Oahu.

CERAMBYCIDÆ.

CLYTARLUS (Sharp, Trans. Ent. Soc. Lond. 1878, p. 208).

Mr. Blackburn has now discovered two other species of this remarkable genus of Longicorns; the two are striking from the great difference that exists between them. Their divergence from the two species previously described is in opposite directions, and is so great that if these insects are treated in the same manner as the rest of the *Clytides* have been by modern authorities, they will have to be considered as two genera, distinct from *Clytarlus*. In *C. microgaster* the femora are much incrassate, the incrassation being nearly gradual from near the base to the apex, with a tendency to an apical knob in addition. The little *C. modestus*, on the other hand, has the basal half of the femora very slender, while the outer half is abruptly incrassate. Besides this the hind body is reduced to a mere appendage in *C. microgaster* (in the male at least, for that is the only sex I have seen), while it is well developed in *C. modestus*. I find, however, that the two original species, *C. robustus* and *C. cristatus*, by no means agree in the form of the femora; and the development of the hind body, as I have described in *C. robustus*, is liable to great difference in the sexes of one species. As there are no doubt other allied species to be discovered in the

Hawaiian Archipelago, I think it advisable, under the circumstances above mentioned, to leave the question of generic diversity till more is known of the actually existing species.

Clytarlus microgaster, n. sp. Niger, antennis pedibusque (his ex parte) rufis; fronte, thoraceque sulphureo-bivittatis; elytris fusco-rufis, maculis setarum pallidarum numerosis; pectore ad latera anterieus et posterius sulphureo-maculato; pedibus quatuor posterioribus, valde elongatis, ad apicem nigris, tibiis tarsisque posterioribus hirsutis. Long. 17 mm.; lat. ad elytrorum basin vix 4 mm.

Antennæ of male reaching just to extremity of elytra, entirely pale red; head black, with two approximate bands of yellow setæ on the front, on the vertex with scattered yellow setæ. Thorax longitudinally elevated along the middle, the elevation not reaching quite to the base, and with its anterior and posterior parts a little the most elevated, the posterior portion of the elevation is traversed by a very fine transverse carina, and the anterior portion is obscurely granulated. The thorax is black, but is traversed by two broad and excessively conspicuous bands of yellow setæ; the space between these bands is very densely punctured and dull, while outside these bands the surface is glabrous and shining. The elytra are very attenuate at the extremity, the base and sides are reddish, but this colour shades gradually into pitchy black; the surface is closely punctured (the punctuation becoming obsolete at the apex), and is marked by numerous irregular flecks of depressed pale-yellow setæ, which are so irregularly disposed that they are not quite similar on the two wing cases. The undersurface is black, clothed scantily with whitish setæ or hairs, and marked between the edge of the wing case and the middle with a dense patch of sulphur-yellow setæ, and with a similar patch at the apex of the side piece of the metasternum. The hind body (in the male) is very minute and much arched, the basal segments are pitchy, the apical ones reddish. The front legs are pale red, with the femora blackish towards the apex, and bear pale hairs. The middle and hind legs are greatly elongated (especially the hinder ones), and the femora are very peculiar, the base is rather slender,

and at a little distance from it they are slightly bent, and get gradually thicker, while at apex there is again a slight additional incrassation, which is very well marked on the hinder pair, though not on the middle ones; this apical portion is intensely black in colour, so as to form a remarkable contrast to the dull-red colour of the basal portion; the femora are somewhat scabrous, and bear rather scanty pale hairs or setæ, the black apical portion bearing a denser black pubescence; the middle tibiæ and tarsi are red, with but slight variegation in their colour or in that of the scanty hairs they bear. The hind tibiæ are elongate (just about the length of the wing cases), they are laterally compressed, and the basal portion is a little slenderer than the rest; they are clothed with rough, erect, dense hairs, which are but little developed on the basal portion, and are there yellowish, while on the lower part they become black, and are more largely developed; the hind tarsi also are hirsute, but the hairs are of a pale ochreous colour, and so form a striking contrast to the tibiæ.

This species was discovered by Mr. Blackburn on one of the higher mountains of the Honolulu range. Four visits to the spot of its discovery have been rewarded by the capture of three individuals; one of these is a female, and Mr. Blackburn informs me that it has the antennæ a good deal shorter than the male, and a little thicker near the apex, the elevation of the thorax flat, instead of saddle-shaped, and the hind tibiæ rather more straight. Whether its hind body is reduced in size in a manner comparable to that of the male I do not know.

Clytarlus modestus, n. sp. Minor; gracilis, rufo-testaceus, antennis, elytris, pedibusque pallidioribus, fere nudus, parum nitidus; prothorace dense obsolete punctato, opaco, medio longitudinaliter parum elevato, carinulis valde abbreviatis, transversis, tribus, anteriore magis elevato; elytris versus apicem leviter attenuatis, fortiter, dense punctatis; abdomine nigricante, apice rufescente; corpore subtus, sparsim albido-setoso; pedibus elongatis, gracilibus, femoribus quatuor posterioribus, dimidio apicali abrupte incrassato. Long. 5 mm.; lat. 1 mm.

The thorax is but little longer than broad, it is subcylindric, and has but little basal constriction; in the

middle, in front, there is a small elevation, the summit of which bears a fine carina, and behind the middle there are two somewhat similar but less elevated carinæ.

Two specimens of this fragile little Longicorn were found by Mr. Blackburn at a great elevation on Haleakala, Maui. They were apparently both of the same sex, and I am doubtful whether it will prove the male or the female. The antennæ scarcely extend so far back as the half length of the wing cases, and joints 6—11 are much abbreviated in comparison with the three preceding ones. The hind body is well developed, reaching nearly to the apex of the elytra. I suspect, however, that this is the male.