NEW GENERA AND SPECIES OF CALIFORNIAN COLEOPTERA.

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As a member of an expedition which explored several of the northern counties of California during the past summer, opportunity was given me to collect a considerable number of specimens of Coleoptera. Among these several are thought to be of sufficient importance for description in an isolated manner, and the present occasion is also taken to interpolate a few from other portions of the state. The present paper is published with the hope that they may not prove entirely uninteresting to specialists in the several families.

It will be observed that by far the greater number of species here brought to notice, belong to the great tribe Aleocharini of the Staphylinidæ; these are all assignable, however, to genera containing but a comparatively small number of species, and in which no confusion can be made by the description of special forms. The great genera Homalota, Aleochara, etc., are left for the future consideration of others who must be more experienced in the study of them than the author, and with the hope that this much needed revision will soon be undertaken; the group merits all the attention which can be bestowed upon it, and contains some of the most interesting and elegant forms of the entire family. The genus here described under the name Colusa, appears to have been entirely overlooked, although the species are very striking in appearance and are comparatively abundant; they live in wet moss at the bottom of ravines in the coast regions of the state. The genus appears to be quite local, and Dr. Sharp has recently described several closely allied genera from various regions of Mexico and Central America.

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In regard to the defects of the present system of classification of the Aleocharini, the remarks which are made under the description of Colusa, are not intended as a final and definite opinion, but are merely the expression of a train of thought brought about by a somewhat extended study of the tarsi of many genera. Beginning with the assumption that the normal tarsus consists of five joints, a series of specimens can be readily formed in which one of these joints becomes gradually smaller and more anchylosed with another until finally no trace of it can be found, giving us a distinctly four-jointed tarsus. The radical difficulty, therefore, in a tarsal nomenclature, is the difficulty in determining whether the tarsus is really five or four-jointed, which difficulty is enormously increased in those genera having finely and densely pubescent tarsi. In the American species of Falagria the amalgamation of the fourth joint with the fifth has not become complete, so that the fourth joint is visible as a basal segment of the fifth; whether such a tarsus is to be considered five-jointed, as is done below, or four-jointed as in the books, is a fair sample of the questions which must continually arise under such a classification.

The older nomenclature based upon the structure of the trophi is open to the same objection in regard to difficulty of observation, and is even less satisfactory in other respects, and, although it is always easier to see defects in existing methods of classification than to propose new and better ones, I think it may be said with a considerable probability of truth that a really satisfactory classification of the Aleocharini is a thing yet to be conceived, and that it may ultimately depend in great measure upon the form and structure of large and important parts of the body.

The practice of assigning American species to European genera has perhaps been carried somewhat too far, and in many instances it will probably be found upon closer study that our species so disposed of are decidedly out of place; this

is particularly true of these isolated genera of the Aleocharini, and the species placed below in Phytosus and Tachyusa may possibly necessitate the creation of two or more new genera; their present position is assigned them only provisionally, and because these genera appear to approximate more closely to the observed characters than any others which have been hitherto described.

San Francisco, Nov. 14th, 1885.

The species described in the present paper are the following:

STAPHYLINIDÆ
Falagria occidua
laticollis
Colusa gracilis n.gen.
eximia
valida
exilis
grandicollis
Pontomalota opaca Lec. n.gen.
californica
nigriceps
Tachyusa experta
linearis
laticeps
faceta
Harfordi
Platyusa sonomæ n.gen.
Calodera attenuata
Ilyobates californicus
nigrinus
Maseochara californica
Oxypoda insignis
Phytosus bicolor
maritimus
Bryonomus n.gen. (Philonthi)
Orus punctatus Casey
Homalium fucicola
rugipenne
Phlœopterus longipalpus
Vellica longipennis n.gen.
Lesteva truncata
Protinus salebrosus
TRICHOPTERYGIDÆ
Actidium robustulum
granulosum
attenuatum
DASCYLLIDÆ
Euscaphurus saltator n.gen.
PTINIDÆ
Cænocara occidens
LUCANIDÆ
Platycerus californicus
SCARABÆIDÆ
Polyphylla marginata

NOTE.—The Arabic numerals placed after the various localities indicate the number of specimens from each respectively.

FALAGRIA Mann.

F. occidua n. sp.—Rather slender; body dark brownish-piceous, legs paler, uniformly yellowish-testaceous, antennæ piceous, basal joint, the tenth partially, and the eleventh testaceous; pubescence very fine, moder-

ately dense, recumbent, more dense on the abdomen toward tip; integuments polished. Head moderate, as wide as long, truncate at base; sides parallel for a short distance behind the eyes; basal angles broadly rounded; base and occiput strongly convex, front nearly flat; punctures very minute, feeble and rather sparse; antennæ distinctly longer than the head and prothorax together, moderately slender and feebly incrassate, first three joints sub-equal in length, the first slightly more robust, the third conical and more than twice as long as wide, joints four to ten, equal in length, the former distinctly longer than wide, the latter slightly wider than long, eleventh ovoidal, acuminate, slightly thicker than the tenth and as long as the two preceding together. Prothorax widest at one-third its length from the apex, where it is very slightly narrower than long and scarcely as wide as the head; sides strongly convergent anteriorly and strongly arcuate, much less strongly convergent posteriorly and just visibly sinuate; base broadly, evenly and rather feebly arcuate, three-fourths as wide as the disk and nearly twice as wide as the apex; basal angles narrowly rounded; disk broadly and strongly declivous and convex along the sides, narrowly declivous along the base, feebly canaliculate along the middle, the furrow being narrowly impressed and vanishing toward the apex, not attaining the base; punctuation fine, even and rather sparse. Elytra at base one-third wider than the pronotum; sides parallel and feebly arcuate, more strongly so toward tip; together truncate behind; apical angles very small and slightly produced; disk nearly quadrate, distinctly longer than the prothorax, moderately convex, extremely, finely and rather sparsely punctate; punctures not appreciably denser toward the scutellum which is more densely asperate but not channeled. Abdomen at base much wider than the pronotum and slightly narrower than the elytra; sides feebly convergent to the apex of the sixth segment and rather strongly arcuate; border strong; three basal segments transversely and deeply impressed, channels very narrow, sparsely and rather more coarsely punctate, remainder finely and rather densely punctate. Legs long and very slender; posterior tarsi long, first joint distinctly longer than the next three together, second slightly shorter than the fifth. Length 2.2–2.7 mm.

California (Gilroy Springs, Sta. Clara Co. 12; Paraiso Springs, Monterey Co. 13).

This species may be distinguished by the feebly canaliculate pronotum, its slender form, sparse punctuation and form of the prothorax.. *F. cavipennis*, Lec. having a feebly sub-sulcate pronotum, has been described from California, but its roughly granulose elytra and habitat, being found on the sea shore, point it out as being aberrant and probably belonging to another genus; I have not, however, been

able to secure any specimens as yet, and therefore cannot pronounce a definite opinion.

F. laticollis n. sp.—Rather robust; body very dark piceous; pronotum and three basal joints of the abdomen paler, dark brown; legs translucent, testaceous; antennæ fuscous; integuments polished; pubescence fine and not very dense, cinereous. Head rather large, wider than long; sides behind the eyes short and parallel, arcuate; base broadly truncate; basal angles broadly rounded; occiput rather convex; front very wide, flat; punctures rather coarse, feeble and sparse; antennæ much longer than the head and prothorax together, very slender, three basal joints elongate, sub-equal in length, fourth slightly longer than the succeeding joints, twice as long as wide, tenth very slightly wider than long, eleventh slender, obliquely and gradually acuminate, slightly longer than the two preceding together. Prothorax widest at a little over one-third its length from the apex where it is as wide as the head and one-sixth wider than long; sides convergent and slightly arcuate to the apex which is squarely truncate, and very slightly less strongly convergent and feebly sinuate to the base which is broadly and evenly arcuate, four-fifths as wide as the disk and very slightly wider than the apex; basal angles obtuse and distinctly rounded; disk declivous and convex along the sides, broadly and very feebly impressed in the middle from the anterior third nearly to the basal margin where there are two approximate and feeble, eroded impressions which are sometimes sub-confluent; extremely minutely, feebly and very sparsely punctate. Elytra at base one-third wider than the prothorax; sides very feebly divergent and feebly arcuate, more strongly so toward the apical angles which are scarcely produced; together broadly truncate behind and feebly sinuate toward the suture; disk very slightly wider than long and about one-third longer than the pronotum, feebly convex, distinctly impressed on the suture toward the base, extremely minutely, evenly and rather sparsely punctate. Abdomen at base much wider than the pronotum and very slightly narrower than the elytra; sides nearly parallel and very feebly arcuate; basal impressions deep and almost entirely impunctate, strongly shining, elsewhere very minutely and moderately densely punctate; border strong, inclined. Legs very slender; posterior tarsi moderately long, first joint but slightly longer than the next two together and nearly as long as the last three. Length 2.7 mm.

California (Gilroy Springs, Sta. Clara Co. 3).

The type specimen is a male, the sixth ventral segment being truncate at apex; in the female, which is slightly more robust, this segment is broadly and rather strongly sinuate at tip. The species is very distinct by reason of the pronotal structure, this not being canaliculate and having two small punctures near the base; it is also more strongly transverse

and with a broader neck than in any other species which I have seen.

F. læviuscula, Lec.—I have seen eight or ten specimens of this species collected by Mr. W. G. W. Harford, Mr. C. Fuchs and myself in various parts of the middle coast region of California. The prothorax is very strongly canaliculate.

COLUSA n. gen. (Aleocharini).

Head borne on a narrow neck; inner lobe of the maxillæ hooked at tip and fimbriate internally with short spinules; outer lobe with a narrow porous process at tip and also internally a few long robust hairs; first and second joints of the labial palpi equal in diameter, cylindrical, almost anchylosed, the second the longer, third very thin, three-fourths as long as the first two together, slightly bent; maxillary palpi slender, second joint very slender, much narrower and distinctly shorter than the third, fourth extremely small, subulate, received far within the apex of the third. Gular sutures rather widely separated, convergent posteriorly. Labrum broadly arcuate, apex finely undulated; transverse section of the epistoma broadly angulate. Antennæ long and slender; eyes very broadly oval, finely granulate. Prosternum with the antecoxal piece large, three times as wide as long, separated from the sub- and intercoxal piece by a narrow raised margin; the intercoxal piece produced posteriorly as a short but acute spine extending for a short distance over the mesosternum; portion behind the coxæ membranous; posterior inflexed side pieces large, angulate, extending inward and slightly over the mesosternum. Mesosternum large, transversely impressed behind the narrowly elevated anterior margin but without any appearance of a neck, finely carinate in the middle anteriorly; intercoxal process very slender, separating the coxæ for three-fourths their length, very acutely rounded behind and appearing detached from the metasternum, the latter extending beneath it. Anterior coxæ contiguous; intermediate narrowly separated. Legs slender. Tarsi short, 5-5-5 jointed, first joint of the posterior longer than the second. Pronotum not canaliculate. Abdomen strongly narrowed toward base.

The various species of Colusa, with their strongly constricted head and very narrow neck, are of a distinctly Falagrioid type; the statement made above of a five-jointed anterior tarsus is therefore somewhat surprising; I have, however, carefully verified it by repeated observation of at least six specimens, and in one particular example, where the tarsus was partially detached from the tibia, the basal joint could be very clearly seen, the first four being distinctly defined against a bright background and without any indica-

tion of anchylosis; they are about equal in length and together scarcely longer than the fifth. I then examined the anterior tarsus in a series of specimens of *Falagria læviuscula*, Lec., in which the tarsi are very long and slender, differing from the comparatively short and robust ones of Colusa. To my surprise it could be plainly seen, when the tarsus was held in a suitable position, that this also is five-jointed, the fourth joint being very small and anchylosed with the fifth; the suture is very distinct on the upper surface, but is not so clear at the side, and if the tarsus were to be detached, mounted in Canada balsam, and viewed laterally by transmitted light, it would probably be entirely obliterated.

If the European species of Falagria have the anterior tarsi in reality four-jointed, that is if the fourth from the tibia has entirely disappeared by amalgamation, we should have three typical genera, Falagria, Colusa and Autalia, exhibiting so close a mutual resemblance as to indicate almost unmistakably descent from a common ancestral type, and having the tarsi 4–5–5, 5-5-5 and 4–4–5-jointed respectively; in other words these genera would be representatives of the three great groups of the tarsal nomenclature.

In reasoning upon this we cannot but be persuaded that a system of classification assigning these genera to groups in which they are placed with others of very different lines of development, is somewhat artificial and delusive. In this special group the tarsi appear to be the organs which are most susceptible to modification by descent, and therefore should not be taken as a basis of systematic division. A classification based upon the form of the head and its attachment by a narrow neck or otherwise to the prothorax, would give us two quite natural divisions of the Aleocharæ, which might then be subdivided according to modifications of the antennæ or of pronotal configuration, and, without claiming that such a system would be better than that now in vogue, it would certainly be more natural, and what is of no little importance, it would be easily observable.

The character pointed out by LeConte and Horn in the classification, and which consists of a sub-ocular ridge, although probably of more or less value for the separation of genera, would not serve for a general division into subgroups, because we have genera and species possessing this ridge in all degrees of development, from Falagria, Colusa, etc., where it is entirely absent, through such species as *Oxypoda insignis* here described, where it is only present as a very feeble ridge and toward the base of the head, being entirely obliterated anteriorly, to Ilyobates and allied genera where the ridge is remarkably strong, entire and very conspicuous.

Another line of thought is opened by the contemplation of this genus. The Stenini, it is well known, are related more closely to the Aleocharini than any other group in one important character, which is the mode of insertion of the antennæ upon the front. In the Stenini there is a remarkable character to be seen in the structure of the dorsal segments of the abdomen, this consisting of a transverse ridge which is produced posteriorly at three or four points in elevated carinate cusps, and which forms one of the best characters for the classification of the species. In Colusa, this identical structure is to be seen, and also in a highly developed state, each dorsal segment having at base a straight transverse ridge from which three long narrow elevated carinæ project posteriorly; one of these is central and two, longer than the central one, are lateral and very near the elevated border; these ridges become abruptly very much shorter on the fourth and fifth visible segments, although nearly equal on the three basal ones. This rather remarkable coincidence would appear to indicate that in one line of descent the Stenini are very closely related to several forms at present placed in the Aleocharini, and if we simply shorten the basal joints of the palpi, we should have types of these organs not unusual in that group.

If the genus Neolara, described by Dr. Sharp (Biologia Centrali-Americana I, p. 231) should in reality have five

joints in the anterior tarsus instead of four, it would approach Colusa very closely according to the description, but would differ very decidedly in the structure of the mesosternum between the coxæ. These genera are allied especially in the structure of the prosternum.

The scutellum in Colusa is composite in structure, the central portion being triangular or parabolic with the surface strongly and asperately punctate, the exterior portion being in the form of a trapezoid with the sides nearly straight and convergent posteriorly, having the portion of its surface without the central triangle perfectly smooth and highly polished. This forms a convenient basis of classification, as in some species the triangle extends beyond the trapezoid posteriorly, and in others is entirely included within its limits. Dr. Le Conte has also made use of modifications of the scutellum in his classification of the species of Falagria.

The only species which I have seen are Californian, and they appear to be rather numerous, though somewhat closely allied, except *grandicollis*, which is quite aberrant in the form of the head, in sculpture and in the very feeble constriction of the abdomen toward the base. They live for the most part in wet moss.

The following table will serve to identify the species here described:

Head at least as wide as the prothorax; elytral punctuation coarse.
  Central asperate portion of the scutellum not passing beyond the enclosing trapezoid.
    Elytra ♂ having the sides convergent posteriorly, but very slightly longer than the pronotum..... **gracilis.**
    Elytra quadrate, at least one-third longer than the pronotum..... **eximia**
  Central portion of scutellum projecting beyond the enclosing trapezoid, the projecting portion being deflexed.
    Size large, 4.2 mm.; elytral punctuation very dense..... **valida.**
    Size small, 2.6 mm.; elytral punctuation much more sparse..... **exilis.**
Head slightly shorter and narrower than the prothorax; elytral punctuation extremely minute and dense..... **grandicollis.**

C. gracilis, n. sp.—Slender; surface polished; black, abdomen slightly paler toward base; legs piceous-black, tips of tibiæ and tarsi testaceous; tibiæ densely clothed with fulvous pubescence toward the apices; antennæ black throughout; pubescence very fine, rather sparse, recumbent. Head slightly longer than wide, nearly semi-circularly rounded at base from eye to eye; the latter not prominent; front and occiput rather strongly convex, even, very minutely and rather sparsely punctate; antennæ slightly longer than the head and prothorax together, very slender, densely clothed with cinereous pubescence, especially toward tip; basal joint slightly shorter and very slightly wider than the second, the latter three times as long as wide and slightly longer than the third, joints four to ten, sub-equal in length, the former twice as long as wide, the latter very slightly longer than wide, eleventh very long and slender, as long as the two preceding together, very obtusely rounded at apex. Prothorax very slightly narrower than the head, widest at two-fifths its length from the apex where it is distinctly narrower than long; sides strongly convergent to the apex just before which they are very feebly sinuate, feebly convergent to the base and nearly straight; base very broadly and feebly arcuate, five-sixths as wide as the disk and four-fifths wider than the apex; basal angles obtuse and very narrowly rounded; disk evenly and moderately convex, finely but strongly margined along the base and sides, vaguely and very feebly eroded transversely near the base, finely and rather closely punctate; punctures slightly larger than those of the head. Elytra at base nearly one-half wider than the pronotum; sides feebly but distinctly convergent toward the apices, feebly arcuate, more strongly so posteriorly; apex feebly incurvate and strongly trisinuate; disk rather convex, impressed behind the scutellum, very slightly wider than long, coarsely strongly and rather densely punctate near the scutellum, the punctures becoming much finer and more distant toward the outer apical angles. Abdomen at base much narrower than the elytra and scarcely as wide as the pronotum, widest at the base of the fourth visible segment where it is one-half wider than at base; border strong but not deep; each of the three basal segments extremely closely and coarsely punctate and transversely impressed at base, and all the segments very minutely and rather sparsely punctate upon the remainder of the disk; underside minutely and sparsely punctate. Legs slender; first joint of the posterior tarsi as long as the next two together. Length, 2.7–3.3 mm.

California, (Hoopa Val., Humboldt Co. 10; Anderson Val., Mendocino Co. 1).

In the males the terminal ventral segment is triangularly produced and acute at apex, with the sides very feebly sinuate; in the female this segment is rather broadly and evenly rounded behind, the first two joints of the antennæ nearly equal in length, longer than the third, and the pronotum is

nearly three times as wide at base as at the apex, the elytra being quadrate.

The present species was found rather abundantly in the very wet moss lining the inside of a flume or trough for conveying spring water.

C. eximia, n. sp.—Form slender; black, legs piceous-black, tarsi paler, abdomen scarcely perceptibly paler toward the base, antennæ not paler at base; pubescence rather long and coarse, somewhat sparse; integuments polished. Head very slightly longer than wide, nearly as in *gracilis;* antennæ long and very slender, longer than the head and prothorax together, three basal joints equal in length, tenth distinctly longer than wide, eleventh as long as the two preceding together. Prothorax widest at two-fifths its length from the apex where it is distinctly narrower than the head and distinctly narrower than long; sides strongly convergent and nearly straight to the apex, very feebly convergent and feebly incurvate to the base; the latter very broadly and rather strongly arcuate, just visibly narrower than the disk and much more than twice as wide as the apex; disk strongly convex, very finely and sparsely punctate. Elytra at base one-half wider than the pronotum; sides parallel and feebly arcuate, strongly convergent and arcuate near the apices; together slightly longer than wide, moderately incurvate posteriorly and trisinuate; disk about one-third longer than the pronotum, rather finely and sparsely punctate, especially posteriorly, where the punctures are minute and distant. Abdomen at base about as wide as the pronotum and at the apex of the fourth segment scarcely one-half wider; sixth segment very finely and sparsely punctate, otherwise nearly as in *gracilis.* Legs very slender; first joint of the posterior tarsi distinctly longer than the next two together claws extremely long and slender. Length 2.8–3.5 mm.

California (Gilroy Springs, Sta. Clara Co., 9; Hermitage, Mendocino Co. 1).

Described from the male in which the characters are as in *gracilis;* the female is slightly more robust, the prothorax shorter and broader, the elytra quadrate, the two basal joints of antennæ equal in length and distinctly longer than the third, and the sixth ventral segment obtusely rounded behind, and very feebly and minutely sinuate at the immediate apex. The species is distinguished from its allies by its fine and rather sparse punctuation and coarser and sparser pubescence.

C. valida, n. sp.—Form rather robust; shining; piceous-black, tips of the dorsal segments, particularly the basal, paler, fuscous, tips of the tibiæ and tarsi reddish-testaceous, antennæ scarcely perceptibly paler toward base; pubescence very fine, dense, pale fulvo-cinereous, conspicuous. Head as wide as long, semicircularly rounded behind from eye to eye; occiput strongly convex, very minutely evenly and rather densely punctate; antennæ not longer than the head and prothorax together, very slender, second joint three-fourths as long as the third which is scarcely as long as the first, remainder nearly as in *gracilis*, except the eleventh which is distinctly shorter than the two preceding together. Prothorax widest just perceptibly before the middle where it is very slightly narrower than long; sides very strongly convergent anteriorly and nearly straight, very feebly convergent posteriorly and just visibly incurvate; base broadly and very feebly arcuate, very slightly narrower than the disk and more than twice as wide as the apex; posterior angles slightly obtuse and very slightly rounded; disk as wide as the head rather strongly convex, very finely, evenly and densely punctate. Elytra at base one-half wider than the pronotum; sides parallel and feebly arcuate except near the apices where they become abruptly strongly convergent to the apical angles which are acute; together strongly incurvate pesteriorly and strongly trisinuate; disk feebly convex, narrowly impressed on the suture toward the scutellum, a little wider than long, much longer than the prothorax, coarsely and extremely densely punctate, much more finely and sparsely so toward the exterior apical angles. Abdomen at base scarcely more than one-half as wide as the elytra, and, at the apex of the fourth segment, one-half wider, otherwise as in *gracilis* except that the punctuation of the posterior segments is slightly denser; underside coarsely and very densely punctate toward base, more finely and distantly so toward the apex. Legs long and very slender; claws very long and slender; first joint of the posterior tarsi slightly shorter than the next two together. Length 4.2 mm.

California (Yountville, Napa Co., 1).

This species is the largest of the genus thus far discovered; it is easily distinguished from others by its size, more robust form, dense pubescence, very dense elytral punctuation, and especially by the very dense punctuation of the underside of the abdomen toward base. The pubescence of the pronotum streams from the middle outwardly and anteriorly.

C. exilis, n. sp.—Form slender; black throughout, tips of tibiæ and tarsi dark testaceous; polished; pubescence very fine, rather short and sparse; antennæ not paler at base. Head slightly longer than wide; portion behind the eyes slightly longer than in *gracilis* and more narrowly rounded; occiput very convex, very minutely but distinctly punctate; antennæ slightly longer

than the head and pronotum together, first two joints equal in length, third distinctly shorter, joints five to ten equal in length and slightly shorter than the fourth which is scarcely twice as long as wide, tenth very slightly wider than long, eleventh very slightly longer than the two preceding together, obtusely acuminate at tip. Prothorax widest at two-fifths its length from the apex where it is distinctly na rower than the head and very distinctly narrower than long; sides strongly convergent anteriorly and feebly sinuate near the apex, feebly but distinctly convergent posteriorly, and straight; base broadly and evenly arcuate and but very slightly more than twice as wide as the apex; disk moderately convex, extremely minutely and rather sparsely punctate. Elytra at base one-half wider than the pronotum; sides as in *eximia;* apex very feebly incurvate, trisinuate; disk very slightly longer than wide, much longer than the pronotum, very feebly impressed on the suture near the scutellum, moderately convex, very finely and rather sparsely punctate, more coarsely and closely so toward the suture and base. Abdomen at base nearly two-thirds as wide as the elytra and nearly three-fourths as wide as at the apex of the fourth segment, finely punctate posteriorly; underside minutely and very sparsely punctate. Legs very slender; first joint of the posterior tarsi distinctly longer than the next two together, the latter short and equal in length, much shorter than the fourth, fifth very slightly shorter than the first. Length 2.6 mm.

California (Gualala River, Mendocino Co., 1).

This species is the smallest thus far observed; it is probably described from a female, the sixth segment being very obtusely and broadly rounded at the apex with the sides widely divergent and feebly arcuate; the outline is nearly parabolic in shape. It may be distinguished from the others by its small size, very minute and comparatively sparse pronotal punctuation, and by the form of the abdomen which is less strongly narrowed toward base than in any other here described except *grandicollis.*

C. grandicollis n.sp.—Form rather robust; body black throughout, legs dark reddish-testaceous, tarsi scarcely paler; antennæ and under surface piceous-black, integuments shining; pubescence bright fulvo-cinereous, fine, very dense and conspicuous. Head about as wide as long, transversely truncate posteriorly; basal angles rounded; sides parallel and feebly arcuate; eyes small, not prominent; occiput moderately convex, very finely and densely punctate; antennæ as long as the head and prothorax together, slender, basal joints slender, equal in length and very slightly longer than the third, joints four to ten decreasing very slightly in length, the latter about as wide as long, eleventh scarcely as long as the two preceding together.

Prothorax widest at slightly more than one-third its length from the apex where it is as wide as long, and slightly wider and longer than the head; sides strongly convergent and feebly arcuate anteriorly, very feebly convergent and nearly straight posteriorly, base evenly and feebly arcuate throughout, very slightly narrower than the disk and nearly three times as wide as the apex; basal angles slightly obtuse and distinctly rounded; disk moderately convex, very minutely, evenly and densely punctate; in the middle near the base there is a very feeble transverse impression. Elytra at base scarcely one-fifth wider than the pronotum; sides parallel and very feebly arcuate, strongly convergent near the apices; together as wide as long and distinctly longer than the prothorax, slightly incurvate at apex and trisinuate; disk very feebly impressed on the suture toward the scutellum, rather depressed, extremely minutely and densely punctate; punctures scarcely larger than those of the pronotum and not apparently denser toward the base. Abdomen at base nearly three-fourths as wide as the elytra and about four-fifths as wide as at the apex of the fourth segment; three basal segments very deeply and transversely impressed at base; punctures throughout very minute and dense, without trace of coarse punctuation at the bases of the three first segments, the middle carinæ being almost obsolete; under side slightly alutaceous and very minutely punctate. Legs slender; first joint of the posterior tarsi as long as the next two together; claws very long and slender, much longer than the basal joint of the posterior tarsus. Length 3.2 mm.

California (Gilroy Springs, Sta. Clara Co., 1).

The first four joints of the anterior tarsus are seen to be equal in length and all clear and distinct, no two of them being in the least anchylosed. The species is remarkably distinct from the four preceding, both in form and in punctuation; it is also remarkable for the slight narrowing of the abdomen toward base.

PONTOMALOTA, n. gen. (Aleocharini).

Head slightly deflexed, not narrowed toward base; labrum strongly transverse, very slightly sinuate anteriorly; mandibles simple; mentum trapezoidal, large, truncate anteriorly; ligula short, having at tip two small approximate tubercles. Outer lobe of the maxillæ consisting of two lunate members, the inner corneous, the outer membranous; inner lobe having an internal membranous appendage which is finely ciliate within, the remainder of the lobe being slender and arcuately toothed at tip, the inner edge being finely spinose; maxillary palpi robust, first joint short, second very slightly shorter than the third, the latter feebly swollen, fourth thin, subulate, affixed obliquely, bulbous at base, and received far within the

third; labial palpi small, three-jointed, joints cylindrical, decreasing in thickness, last longer than the second and shorter than the first, affixed obliquely; gular sutures distinct, distant, straight and parallel; eyes large, rather finely granulate, not very prominent; antennæ 11-jointed, strongly geniculate, slightly incrassate toward tip, second joint longer than the third. Prosternum acutely carinate; mesosternum narrowly separating the coxæ, not carinate. Tibiæ terminated by two small, slightly unequal, spurs, spinulose along the exterior edges and at tip. Tarsi 4-5-5-jointed; first joint of the posterior variable in length; claws small, robust, feebly arcuate. Integuments strongly alutaceous. Hind wings rudimentary, consisting of two small thick membranous appendages of a coarse cellular structure.

The species of this genus live on the ocean beach in decomposing seaweed; they are narrow, depressed, having the sides parallel, the elytra much shorter than the pronotum, and the abdomen strongly margined with a thick and rather depressed border. Pontomalota bears a somewhat close resemblance at first sight to Phytosus, but is in reality much more closely allied to Homalota, from which it differs in the structure of the maxillary lobes and most decidedly in appearance. The length of the first joint of the posterior tarsi varies greatly in the three species, and cannot be assumed as a generic character.

Our three species may be distinguished as follows:

Head testaceous.
- First joint of the posterior tarsi fully two-thirds longer than the second; fourth visible dorsal and sometimes the base of the fifth clouded with castaneous..... **opaca**

Head blackish.
- First joint of the posterior tarsi scarcely longer than the second; abdomen entirely black..... **californica**
- First joint of the posterior tarsi about one-third longer than the second; apex of the third, the fourth and the base of the fifth dorsal segments clouded with blackish castaneous..... **nigriceps**

P. opaca, Lec. *Phytosus opacus,* Lec. Sm. Misc. Coll. vi., p. 28.—Slender; sides parallel; testaceous, fourth visible dorsal segment of the abdomen clouded with dark castaneous toward the middle of the disk; pubescence fine, short and very sparse, recumbent; integuments not shining, very strongly alutaceous, rather sparsely and very feebly punctate. Head suborbicular; surface feebly convex. Pronotum slightly wider, a little wider

than long; sides strongly arcuate and convergent posteriorly; disk moderately convex. Elytra conjointly wider than long, much shorter than the pronotum. Abdominal segments not decreasing in width posteriorly. Legs slender. Length 2.8–3.8 mm.

This species is common on the ocean beach at San Diego, Cal. A figure of the anterior portion of the body is given on the plate. The elytra are, in proportion to the length of the pronotum, longer than in either of the others.

P. californica, n. sp.—Form slender; sides parallel; anterior portions of the body dark blackish-piceous, elytra slightly paler, translucent, piceo-testaceous, abdomen above and below black; antennæ and legs testaceous, translucent, the former very slightly darker toward tip; pubescence very fine, short and sparse, recumbent; integuments very coarsely and evenly granulate, abdomen shining and minutely reticulate. Head wider than long, very feebly and coarsely punctate; eyes large, finely granulate, rather prominent; antennæ slightly shorter than the head and pronotum together, very slightly thicker toward tip, basal joint slender, not as long the next two together, second slightly longer and more robust than the third, outer joints much wider than long, last as long as wide. Prothorax widest slightly before the middle where it is slightly wider than long and one-third wider than the head; sides evenly and strongly arcuate; base slightly shorter than the apex, two-thirds as wide as the disk, broadly arcuate; apex broadly emarginate; basal angles obtuse and slightly rounded; disk moderately convex, finely, feebly and rather sparsely punctate; having a very feebly impressed dorsal line. Elytra at base slightly narrower than the pronotum; sides rather strongly divergent posteriorly and rather strongly arcuate; together two-thirds wider than long and about three-fourths as long as the pronotum; apex transversely truncate, slightly sinuate in the middle; apical angles acutely produced; disk depressed, impunctate, very slightly wider at apex than the pronotum. Scutellum triangular, as wide as long, darker in color. Abdominal segments long, equal in width to the fifth, slightly narrower than the elytra; border strong, segments transversely impressed at base, depressed, shining with an æneous lustre, finely, closely and asperately punctate. Legs slender, moderate in length. Abdomen beneath tipped with a paler reddish tint. Length 2.7-3.5 mm.

California (San Francisco, 5.)

The abdominal border is deeper and less depressed than in *opaca*. The pubescence of the abdomen above and beneath is longer and very much closer than upon the remainder of the body. The species is very rare on the sea beach near the Cliff House.

P. nigriceps n. sp.—Form slender; sides parallel; pale yellowish-testaceous, head and sometimes the apex of the pronotum dark piceous, elytra paler and whiter; clouded portions of the abdomen æneous in lustre; anterior portions strongly alutaceous; abdomen shining, coarsely and evenly asperate, the asperities having a tendency to form transverse rows, especially toward the apices. Head slightly wider than long; eyes elongate, oval; front feebly convex, feebly and sparsely punctate. Prothorax slightly wider and much longer than the head, widest very slightly in advance of the middle, where it is about one-fifth wider than long; sides evenly and rather strongly arcuate; apical angles slightly obtuse, not at all rounded, basal rather broadly rounded; base about four-fifths as wide as the apex, very broadly arcuate, the latter very broadly emarginate; disk feebly convex. Elytra at base slightly wider than the base of the pronotum; sides rather strongly divergent posteriorly, moderately arcuate; disk depressed, about one-half wider than long, as wide at the apices as the pronotum, nearly three-fourths as long as the latter; exterior apical angles prolonged and acute, inner angles slightly rounded; each elytron very narrowly margined along the suture. Scutellum very small, triangular. Abdomen nearly twice as long as the head, prothorax and elytra together, as wide as the latter; sides parallel; fifth dorsal very broadly sinuate at tip, sixth truncate. Legs and antennæ pale tastaceous, slender. Anterior coxæ large, elongate. Length, 3.3–3.8 mm.

California (Santa Cruz, 11).

The three species here described agree very closely in general form, but the characters given in the table will serve to distinguish them without trouble. The inflexed sides of the pronotum terminate at about one-fourth the length from the anterior angles.

TACHYUSA Erichs.

The following species are placed in this genus, although the anterior tarsi are apparently five-jointed, the fourth joint being small but not anchylosed. They differ from Phlœopora, Colodera, etc., in facies, and especially in the tarsal and antennal structure; the first four joints of the hind tarsi decreasing almost uniformly and very rapidly in length, the first being generally shorter than the next two united; the antennæ are very slender. The middle coxæ are very narrowly separated.

T. experta n. sp —Form rather slender, sides parallel; body black throughout, legs piceous, tarsi dark rufo-testaceous; antennæ black throughout; integuments polished; pubescence very fine, moderately dense, coarser longer, more erect and more conspicuous, though more sparse, on the abdomen. Head rather depressed, including the labrum rather longer than wide; sides behind the eyes arcuate and rather strongly convergent; neck broad; eyes rather large, not prominent, very finely granulated; front nearly flat between the eyes, excessively minutely and rather sparsely punctate; labrum prominent, wider than long; antennæ distinctly longer than the head and prothorax together; three basal joints slender, slightly decreasing in length, joints four to ten equal in length, the former scarcely twice as long as wide, the latter as wide as long, eleventh as long as the two preceding together, slender, acuminate, slightly compressed. Prothorax widest at one-third its length from the apex where it is slightly wider than the head, and slightly wider than long; sides moderately convergent and distinctly arcuate to the apex, and slightly less convergent and nearly straight to the base which is broadly, evenly and moderately arcuate, but slightly narrower than the disk, and distinctly wider than the apex; the latter nearly squarely truncate; apical angles strongly obtuse and slightly rounded, basal less strongly obtuse and very slightly rounded; disk moderately convex, nearly flat in the middle, finely, evenly, sub-asperately and rather densely punctate. Scutellum ogival, slightly wider than long, densely asperate. Elytra at base slightly wider than the pronotum; sides parallel and feebly arcuate, more strongly so toward the apex; apical angles slightly produced, acute; together as long as wide, one-fourth longer than the pronotum, broadly and feebly incurvate at apex; disk rather depressed, distinctly impressed on the suture near the base, extremely minutely, evenly and rather sparsely punctate; punctures much smaller and sparser than those of the pronotum. Abdomen at base as wide as the prothorax; sides feebly divergent and straight to the apex of the fifth segment where it is slightly narrower than the elytra; first three or four segments deeply and transversely impressed at base, the bottom of the impressions being very coarsely and closely punctate, remainder minutely and rather sparsely punctate; border rather narrow, deep and prominent; underside very minutely, evenly and rather sparseley punctate; first three segments rather strongly convex longitudinally. Legs and tarsi moderate in length, very slender; first joint of the posterior tarsi much longer than the second, slightly shorter than the next two together; first four joints decreasing nearly uniformly in length; claws extremely slender, moderate in length. Length 3.4 mm.

California (Gualala Riv., Mendocino Co., 2).

The type is a male, and has the apex of the sixth segment conspicuously bilobed at apex, the notch being triangular in outline, nearly twice as wide as deep, and rather small in

proportion to the width of the segment. Each dorsal segment has at base two short lateral carinæ from the transverse ridge; the median carina is entirely obsolete.

T. linearis n. sp.—Very slender; body black throughout, legs piceous, tibiæ toward tip and tarsi pale testaceous; antennæ fuscous, slightly paler toward base; integuments polished; pubescence very fine, moderately dense, densest on the elytra, more sparse but longer, more erect and coarser on the abdomen, very pale flavo-cinereous. Head as wide as long; sides convergent and arcuate behind the eyes; occiput rather strongly convex, finely, evenly and rather densely punctate; antennæ slender, slightly longer than the head and prothorax together, second and third joints very slender, equal in length and slightly shorter than the first, fourth scarcely more than one-half as long as the third, longer than wide, tenth slightly wider than long, eleventh as long as the two preceding together, very obtusely rounded at tip; front very feebly impressed in the middle between the eyes. Prothorax widest at scarcely one-third its length from the apex where it is slightly wider than the head and just visibly wider than long; sides moderately convergent anteriorly and distinctly arcuate, less convergent posteriorly and nearly straight; base very slightly narrower than the disk and very slightly wider than the apex, broadly and rather strongly arcuate; apex very feebly arcuate; basal angles obtuse but not rounded; disk transversely convex anteriorly, narrowly and feebly impressed in the middle posteriorly, very finely and moderately densely punctate. Elytra at base distinctly wider than the pronotum; sides parallel and feebly arcuate; apical angles slightly produced, acute; together quadrate, slightly incurvate at apex; slightly emarginate at the suture; disk distinctly longer than the pronotum, impressed on the suture near the scutellum, feebly convex, very finely, feebly, evenly and rather sparsely punctate; punctures slightly asperate, forming indefinite and broken transverse rows. Abdomen distinctly narrower than the elytra, scarcely wider than the pronotum; sides to the apex of the sixth segment parallel and feebly arcuate; punctures, carinæ and border nearly as in *experta*. Legs very slender; first four joints of the posterior tarsi decreasing uniformly and rapidly in length, first much longer than the second. Length 3.3–3.5 mm.

California (Yountville, Napa Co., 1: Mt. Diablo, 1; Booneville, Mendocino Co., 1).

The type is a male; the sixth segment is broadly and moderately bilobed at apex, the notch being triangular, very small in proportion to the size of the segment, and about three times as wide as deep. The species is easily distinguished from the preceding by its more slender form and by the punctuation, which is about equally dense and strong on the elytra and pronotum.

T. laticeps n. sp.—Form slender; body rather dark piceous-brown throughout; legs slightly paler; antennæ piceous-black; integuments highly polished; pubescence extremely fine and rather sparse, closely recumbent. Head distinctly wider than long, broadly and squarely truncate at base; sides behind the eyes parallel and slightly arcuate, basal angles slightly rounded; front and occiput transversely, equally and moderately convex, excessively, minutely and very sparsely punctate; eyes rather small, not at all prominent; antennæ as long as the head and pronotum together, first three joints decreasing uniformly and rather rapidly in length, joints four to ten equal in length, the former slightly longer than wide, the latter slightly wider than long, eleventh as long as the two preceding together, abruptly compressed near the tip. Prothorax widest at about one-third its length from the apex where it is scarcely perceptibly wider than the head and slightly wider than long; sides strongly convergent and arcuate to the apex, and very feebly convergent and rather strongly arcuate to the base; the latter broadly, evenly and strongly arcuate, very slightly narrower than the disk and much wider than the apex; disk rather strongly and transversely convex, extremely feebly and transversely impressed in the middle just before the base, extremely, minutely, evenly and rather sparsely punctate. Elytra at base about one-fourth wider than the prothorax; sides nearly parallel, evenly and distinctly arcuate; together broadly truncate and trisinuate at apex; disk depressed, narrowly impressed on the suture toward the scutellum, quadrate, nearly one-third longer than the pronotum, finely, nearly evenly and sparsely punctate; punctures larger than those of the pronotum, feeble and subasperate, forming very broken series, giving a slightly imbricated appearance in certain positions. Abdomen at base slightly narrower than the elytra; sides parallel and straight; first three segments impressed at base, very slightly more coarsely punctate in the impressed areas, elsewhere finely, rather densely and asperately punctate; middle longitudinal carinæ obsolete. Legs moderate in length, very slender; posterior tarsi very slender, first joint distinctly longer than the next two together, nearly as long as the last three. Length 1.9 mm.

California (Paraiso Springs, Monterey Co., 1).

The type is a female, the sixth ventral segment being broadly and very evenly rounded behind. It is easily distinguished by its small size, pale color and very elongated basal joint of the posterior tarsi.

T. faceta n. sp.—Very slender; body piceous-black, antennæ same, two basal joints paler; legs piceous, extremities of the femora and tibiæ paler, tarsi testaceous; integuments polished; pubescence extremely fine, rather dense but not conspicuous except on the abdomen where it is much coarser. Head as long as wide; sides behind the eyes very moderately convergent and

slightly arcuate; eyes large, very slightly prominent; occiput convex, front flat, both very minutely and rather sparsely punctate; antennæ very slender, much longer than the head and pronotum together, two basal joints sub-equal in length, the second slightly more slender, third distinctly shorter, joints four to ten equal in length, the former nearly twice as long as wide, the latter as wide as long, eleventh scarcely as long as the two preceding together, acuminate at tip. Prothorax widest at one-third its length from the apex where it is only slightly wider than the head and distinctly narrower than long; sides rounded and convergent to the apex, and very feebly convergent and straight to the base, which is evenly and rather strongly arcuate, distinctly narrower than the disk, and one-third wider than the apex; the latter truncate; disk strongly convex, narrowly and rather feebly impressed in the middle from the anterior third nearly to the base, finely, evenly, densely and sub-asperately punctate. Elytra at base slightly wider than the pronotum; sides just perceptibly divergent, feebly arcuate, together broadly and feebly emarginate behind; apical angles very slightly produced; disk rather feebly convex, very slightly longer than wide, about one-fourth longer than the pronotum, very feebly impressed on the suture near the base, finely, nearly evenly and sub-asperately punctate; punctures more sparse than those of the pronotum. Abdomen long and slender, at base scarcely as wide as the pronotum; sides very feebly divergent posteriorly, more strongly arcuate near the tip; border narrow but rather deep; first three segments very strongly and transversely impressed at base; impressed areas very coarsely and densely punctate, elsewhere minutely and rather densely punctate; transverse basal ridges very strong, straight, each having three short posterior carinæ. Legs very slender; tarsi slender, first joint of the posterior as long as the next two together, much longer than the fifth. Length 2.6–2.9 mm.

California (Yountville, Napa Co., 1; San José, Sta. Clara Co., 1).

The specimens are apparently females; the sixth ventral is broadly rounded at apex; the description is taken from the first named specimen which is the larger; the second differs slightly in the form of the prothorax, which is as wide as long, and in which the sides are evenly sinuate through the basal two-thirds; they resemble each other so absolutely in all other characters, however, that there can be very little doubt of their mutual identity. The species is easily distinguished from the others by its very slender form, and by the tricarinate basal ridges of the dorsal segments.

T. Harfordi n. sp.—Moderately robust; black, antennæ very slightly piceous, legs dark piceous, tarsi paler, testaceous; integuments shining; pubescence extremely fine, not very dense, longer, coarser and more prominent on the abdomen. Head orbicular, as wide as long; sides behind the eyes moderately convergent and rather strongly arcuate; occiput and base strongly convex, very feebly and rather densely punctate; front nearly flat, finely and rather sparsely punctate, nearly impunctate along the middle and between the antennæ; eyes rather large, not prominent; antennæ very slender, as long as the head, prothorax and one-half the elytra together, basal joint distinctly more robust than, and equal in length to, the second, the latter slightly longer than the third, joints four to ten equal in length, the former scarcely twice as long as wide, the latter scarcely as wide as long, eleventh about as long as the two preceding together. Prothorax widest at one-third its length from the apex where it is as wide as long and distinctly wider than the head; sides rather strongly convergent and arcuate to the apex, and very slightly less strongly convergent and feebly arcuate to the base; the latter broadly sub-truncate and very feebly arcuate, strongly arcuate near the basal angles which are broadly rounded; basal width three-fourths that of the disk, and slightly greater than the apical; disk strongly convex near the sides, broadly and distinctly impressed in the middle from the apical third to very near the basal margin, where the disk becomes abruptly declivous and convex to the basal edge; the latter is narrowly margined and continuously so with the sides; punctuation fine, strongly and acutely asperate, evenly distributed and very dense. Elytra at base very slightly wider than the pronotum; sides nearly parallel, feebly arcuate; together truncate and strongly trisinuate behind; apical angles rather strongly produced, acute; disk scarcely longer than the prothorax, quadrate, rather depressed, feebly impressed near the scutellum, rather finely, evenly and not densely punctate; punctures sub-asperate, sparse and feeble near the outer apical angles. Abdomen at base as wide as the pronotum; sides sub-parallel, more strongly arcuate near the apex; punctures fine and rather dense, except in the basal impressions, where they are very coarse: middle carinæ obsolete; border strong. Legs slender; posterior tarsi long and slender, first joint much longer than the second but not as long as the next two together, longer than the fifth. Length 2.8–3.0 mm.

California (Sebastopol, Sonoma Co., 10).

The sexual characters are very feeble, the sixth ventral segment being rather strongly but very evenly rounded behind in the male, and sub-truncate and slightly wider at apex in the female. The elytral punctuation is slightly coarser and distinctly more distant, though a little less strongly asperate on the elytra than on the pronotum.

This very distinct species is dedicated with great pleasure to Mr. W. G. W. Harford, of the California Academy of Sciences.

PLATYUSA n. gen. (Aleocharini.)

Ligula long, with two approximate and robust processes at tip; paraglossæ short, pointed, robust; labial palpi slender, joints sub-equal in length, decreasing very rapidly in thickness; maxillary palpi very long and slender, third joint much longer than the second, fourth joint spiniform or subulate, but not received within the tip of the third; mentum broadly and very feebly emarginate. Antennæ very robust, basal joint extremely robust, second and third equal, much more slender, eleventh very large, moderately compressed. Head very short and broad, strongly constricted behind. Prothorax as wide as the elytra at base. Prosternum short, strongly and transversely swollen or sub-carinate; mesosternum moderately separating the coxæ; process short, truncate at tip; coxal cavities complete; metasternal process on the same level as the mesosternal but having a thick, slightly elevated border. Tarsi 4-5-5-jointed; first joint of the posterior elongate. Under surface of the head having a fine but distinct and entire carina under and behind the eye.

This genus belongs very near Myrmedonia to which I had assigned the specimens as a rather aberrant species. It however, differs so greatly in general appearance and especially in the structure of the ligula and antennæ, that I do not think it can be placed there with any degree of propriety. Platyusa evidently approaches Platonica Sharp, described from Mexico (Biologia Centrali-Americana, I, p. 214), but differs from it in the robust basal joint of the antennæ, in the structure of the apical processes of the ligula, which are very short and robust, and by the form of the paraglossæ which are not attenuated.

P. sonomæ n. sp.—Form depressed, robust; dark reddish-testaceous, elytra near the scutellum and toward each exterior apical angle black; abdomen above piceous-black except toward the base which is reddish-fuscous; beneath piceous with the apical border of each segment paler; pubescence fine, rather long, recumbent and close, except on the abdomen where it is almost entirely absent, and replaced toward tip by a few erect bristles; basal segments each with a single transverse row of long, fine hairs; antennæ infuscate, slightly paler toward base and at tip. Head very robust, much wider than long, extremely finely and rather sparsely punctate; eyes rather large,

very finely granulate, bristling with short setæ; antennæ nearly as long as the head, prothorax and elytra together, very robust, basal joint as long as the next two together, joints four to ten, increasing gradually in width, the the latter nearly twice as wide as long, eleventh slightly constricted toward tip, nearly as long as the three preceding together. Prothorax one-third wider than the head; sides parallel and feebly arcuate; base broadly and strongly arcuate; apex broadly and feebly emarginate; apical angles narrowly rounded, basal very broadly so; disk three-fourths wider than long, evenly and feebly convex, extremely finely and sparsely punctate. Elytra at base as wide as the prothorax; sides feebly divergent posteriorly, and nearly straight; together much wider than long and equal in length to the pronotum; surface depressed, very finely and somewhat asperately punctate. Scutellum triangular, strongly transverse. Abdominal segments decreasing in width from the fourth, seventh much narrower, border very strong, deep, rapidly becoming shallower posteriorly; surface polished, transversely and excessively finely reticulate, impunctate. Under surface of the abdomen finely and densely pubescent, finely but rather sparsely punctate; punctures slightly asperate. Legs rather long; tarsi slender, first joint of the posterior as long as the next two together. Length 4.0–5.0 mm.

California (Santa Rosa, Sonoma Co., 4).

The specimens indicated were taken while running actively in the crevices of the shaggy bark on a large oak near its junction with the soil; there were many large piceous ants in company with them, but I do not know whether this was otherwise than accidental.

CALODERA Mann.

C. attenuata n. sp.—Form very slender; body dark testaceous-brown; head piceous; legs testaceous; antennæ dark fuscous; integuments shining; pubescence coarse and rather dense, pale flavo-cinereous, conspicuous especially on the antennæ where it is very short and dense. Head orbicular, as wide as long; sides behind the eyes very feebly convergent and strongly arcuate; front and occiput evenly and moderately convex, very finely and not densely punctate; antennæ much longer than the head and prothorax together, moderately robust, three basal joints decreasing uniformly and very rapidly in length, the third scarcely more than one-half as long as the first, conical, and slightly less than twice as long as wide, joints four to ten increasing very slightly in length, the former one-third wider than long, the latter one-half wider than long, eleventh as long as the two preceding together, slightly compressed toward tip. Prothorax widest at one-fourth its length from the apex where it is scarcely wider than the head and as wide as long; sides strongly rounded thence to the apex, and extremely feebly

convergent and feebly incurvate to the base, which is broadly and rather strongly arcuate and but very slightly wider than the apex; the latter broadly and very feebly arcuate; basal angles obtuse and slightly rounded; disk feebly and evenly convex, very minutely, feebly, evenly and not densely punctate, not at all impressed. Elytra at base one-fifth wider than the prothorax; sides parallel and nearly straight; together transversely truncate and very broadly trisinuate at apex; disk slightly longer than wide, one-fourth longer than the pronotum, very depressed, nearly perfectly flat, feebly impressed on the suture toward the scutellum, finely margined along the suture, finely, evenly, very feebly and rather densely punctate. Abdomen at base slightly wider than the pronotum and very slightly narrower than the elytra; sides parallel and straight; entire surface granuloso-reticulate; granulation much coarser in the basal impressed areas which are not punctate, elsewhere in addition finely, feebly, sparsely and sub-asperately punctate; middle carinæ obsolete; lateral very broad. Legs rather short, moderately stout; first four joints of the anterior tarsi equal, very short and together much longer than the last; posterior tarsi short, first joint slightly shorter than the next two together, fourth very minute. Mesosternal process acute but rather short. Length 2.1 mm.

California (Paraiso Springs; Monterey Co., 1; Calistoga, Napa Co., 1).

Easily distinguished by its conspicuous pubescence, small size, slender form, and pale color. The infraocular ridge is very feebly developed anteriorly, becoming obsolete posteriorly. The type appears to agree quite well with the various descriptions of Calodera.

ILYOBATES Kraatz.

I. californicus n. sp —Form moderately robust, depressed; sides parallel; body shining, pale ochreous-testaceous throughout, a small indefinite spot near the scutellum and a larger one near each exterior apical angle of the elytra darker, castaneous; abdominal segments slightly paler toward tip. Head moderately deflexed, slightly longer than wide, feebly constricted posteriorly; front moderately convex, rather coarsely, feebly and closely punctate; eyes rather small, moderately prominent, finely granulated; antennæ scarcely as long as the head and pronotum together, strongly geniculate, rather strongly incrassate, basal joint much shorter than the next two together, second and third equal in length, the latter more slender and nearly three times as long as wide, fourth quadrate, joints five to ten transverse, the latter two-thirds wider than long, eleventh pointed, ovoidal, slightly longer than the two preceding together. Prothorax slightly wider than the head; sides parallel, moderately and nearly evenly arcuate; posterior angles obtuse

but not rounded; apex and base broadly, rather strongly and equally arcuate; disk nearly one-third wider than long, moderately and evenly convex, rather coarsely and closely punctate. Elytra at base about one-fourth wider than the prothorax; sides very feebly divergent posteriorly and very feebly arcuate; together very slightly wider than long, truncate posteriorly, feebly sinuate at the suture and more strongly so near each exterior angle; disk about one-fourth longer than the pronotum, feebly convex, very coarsely and rather densely punctate; punctures somewhat asperate. Abdomen slightly narrower than the elytra; sides parallel; border strong; basal segment very coarsely and densely punctate, each segment being successively more feebly and sparsely punctate, sixth finely and very sparsely so; underside slightly more finely punctate than the upper. Legs rather long, slender; first joint of the posterior tarsi as long as the next three together. Length 2.9–3.2 mm.

California (Hoopa Val., Humboldt Co.)

I found this very well-marked species to be gregarious and exceedingly plentiful under the fungous bark of a decayed log. The pubescence is fine, rather sparse, and not conspicuous. The mesosternal carina is strong, and is a posterior continuation of the reflexed apical margin.

The type is described from the female; in the male the third antennal joint is very much longer than the second.

In this genus the head beneath has a very strong infraocular ridge, proceeding from the outer posterior angle of each maxillary fissure, to the posterior margin of the head, feebly arcuate and gradually ascending.

I. nigrinus n. sp.—Blackish-piceous; two basal joints of the antennæ, a small humeral spot extending nearly to the scutellum, and legs paler, piceo-testaceous, the apices of the abdominal segments especially beneath are also narrowly paler; pubescence very fine, recumbent, not very dense. Head scarcely longer than wide; front moderately convex, very finely, feebly and sparsely punctate; eyes moderate, having excessively fine, short and erect setæ; antennæ slightly longer than the head and pronotum together, rather slender, moderately incrassate; basal joint short, scarcely one-third longer than the second, the latter about equal in length to the third, fourth very slightly longer than wide, joints five to ten transverse, eleventh ovoidal, acuminate, slightly shorter than the three preceding together; labrum more than twice as wide as long, truncate, sides parallel. Prothorax widest slightly before the middle where it is just visibly wider than the head and scarcely one-fourth wider than long; sides rather strongly arcuate anteriorly, feebly sinuate just before the posterior angles which are therefore slightly

prominent, obtuse, scarcely rounded, and in the form of wide cusps; base broadly and rather strongly arcuate, very feebly sinuate near the basal angles, about equal in width to the apex which is transversely truncate; disk rather strongly convex, especially anteriorly and laterally, even, very finely, rather sparsely and evenly punctate. Elytra at base about one-fifth wider than the pronotum; sides very feebly divergent and almost straight; disk as wide as long, depressed, even, nearly one-third longer than the pronotum, rather coarsely, moderately densely and deeply punctate; punctures somewhat asperate. Abdomen much narrower than the elytra; sides subparallel and feebly arcuate, rather finely and closely punctate; punctures becoming much more sparse toward the apex; border narrow and rather deep. Legs rather long, very slender; first joint of the posterior tarsi slightly shorter than the next three together. Length 2.6-2.9 mm.

California (Hoopa Val., Humboldt Co., 8).

This species occurs with the preceding but is very much less abundant; I have also received one specimen collected by Mr. C. Fuchs near San Mateo. It is distinguished at once by its very dark color, more slender form, by the much finer punctuation, especially of the head and pronotum, the more slender antennæ, and by the form of the pronotum.

MASEOCHARA Sharp.

Tithanis Casey.

M. californica n. sp.—Moderately robust; sides parallel; body intense black throughout except the last two segments of the abdomen which are dark fuscous above and beneath, the base of the penultimate being black; antennæ black, scarcely paler toward base; legs black, tarsi very slightly paler, rufo-piceous; pubescence very sparse, erect and fine on the anterior portions, absent on the abdomen above, except along the apices of the segments which are setigerous; much denser and rather fine beneath, with numerous long, erect, black bristles, especially toward the apex; anterior portion of the body finely but strongly granulose, alutaceous; abdomen polished. Head slightly longer than wide; occiput and front feebly and evenly convex, finely, feebly and very sparsely punctate; sides behind the eyes moderately convergent and arcuate; antennæ one-half longer than the head, rather robust, strongly compressed, four basal joints glabrous although sparsely setigerous, remainder covered densely with a short fulvous pubescence with many long erect setæ at the apices; basal joint three times as long as wide, distinctly shorter than the next two together, as long as the third and fourth, second much shorter than the third, fourth smallest, as wide as long. Prothorax widest at one-third its length from the apex where it is one-fourth wider than long; sides strongly and evenly arcuate, slightly convergent

toward the base which is strongly and evenly arcuate; sides strongly arcuate anteriorly; apex truncate; apical angles narrowly rounded, basal obsolete; disk feebly convex, rather finely, evenly and somewhat sparsely punctate; punctures very feebly impressed. Elytra at the humeri slightly narrower than the pronotum; sides rather strongly divergent and arcuate; together transversely truncate behind and feebly sinuate near the suture; outer apical angles broadly rounded; disk one-half wider than long, distinctly shorter than the pronotum, flat; inner apical angles deflexed slightly, punctured like the pronotum but slightly more densely. Abdomen at base nearly as wide as the elytra; sides feebly convergent toward the apex and very feebly arcuate; border narrow but very deep, vertical; surface rather finely and moderately densely, asperately and rather feebly punctate, impunctate at the bases of the segments. Legs rather long and slender; middle and posterior tibiæ densely clothed with short, fulvous, spinous setæ toward the tips; first joint of the posterior tarsi nearly as long as the next two together, scarcely as long as the fifth; joints two to four equal. Length 9.0–10.0 mm.

California (San Diego, 2).

The antennæ are moderately robust and incrassate toward tip where they are strongly compressed; the penultimate joint viewed on the narrow side is very slightly wider than long; viewed, however, on the compressed side it is nearly one-half wider than long. This species differs from *M. valida* Lec. by its black elytra and more slender form, and from *opacella* Sharp, by its much more transverse prothorax, in which also the basal angles are obsolete. The description is taken from the male, in which the seventh dorsal plate is armed as usual with six porrected teeth, the middle four being robust, the lateral ones much more slender and slightly shorter; all are directed inward toward the apices, but more strongly so in the outer teeth.

OXYPODA Mann.

O. insignis n. sp.—Depressed; rather robust; sides parallel. Body dark piceous-brown; abdomen darker, nearly black; legs slightly paler, brown; antennæ black, basal joint piceo-testaceous; surface shining; pubescence fine, rather long, closely recumbent, sparse. Head deflexed, slightly longer than wide; front broadly convex, finely, very feebly and sparsely punctate; eyes not prominent; antennæ very slender, as long as the prothorax and elytra together; basal joint more than twice as long as wide, sub-cylindrical, much shorter than the next two together, second slightly shorter than the

third, the latter conical and slender, joints four to ten equal in length, the former distinctly longer than wide, the latter slightly wider than long, eleventh conoidal and acuminate as long as the two preceding together; labrum nearly four times as wide as long, truncate at apex, sides parallel. Prothorax slightly wider than the head; about one-fourth wider than long; sides nearly parallel and feebly arcuate, more strongly so anteriorly; base slightly wider than the apex, broadly and evenly arcuate; the latter broadly and slightly more feebly so; posterior angles obtuse and slightly rounded; disk moderately convex, finely, very feebly and rather sparsely punctate. Scutellum large, triangular, slightly wider than long, granulose. Elytra slightly longer than the pronotum, and at base, slightly wider; sides feebly divergent and nearly straight; together slightly wider than long, truncate at apex; disk depressed, sub-alutaceous, very finely, feebly and rather closely punctate. Abdomen short and broad, very slightly narrower than the elytra; sides parallel; surface minutely, feebly and very sparsely punctate; border very deep, vertical, thin. Legs slender; first joint of the anterior and middle tarsi very short, in the latter much shorter than the second; first joint of the posterior slightly longer than the second. Length 3.0 mm.

California (San Francisco, 1).

The ligula is deeply bifid, the mentum transversely truncate, the third joint of the maxillary palpi being feebly swollen and longer than the second. The species is described because of its departure from the normal European forms, in that the second antennal joint is distinctly shorter than the third, and the first joint of the posterior tarsi but slightly longer than the second.

PHYTOSUS Curt.

P. bicolor n. sp.—Form very slender; sides parallel; anterior parts pale reddish-testaceous; legs and antennæ same; abdomen black, apex of the last segment slightly paler; pubescence very fine, rather long, moderately dense, semi-erect; surface rather feebly shining, finely and somewhat feebly alutaceous throughout. Head but very slightly deflexed sub-triangular, slightly longer than wide, broadly truncate at base; angles rather broadly rounded; sides evenly arcuate; eyes very small, not prominent, coarsely granulated; front depressed, convex only at the sides, excessively minutely and feebly punctate; in the middle, on a line with the posterior limits of the eyes, there is a small slightly elongate fovea; antennæ very strongly geniculate, slightly longer than the head and prothorax together, slender, very feebly incrassate; basal joint much shorter than the next two together, second and third equal in length, four to ten increasing very slightly in length and more distinctly in width, the former just visibly longer than wide, the latter distinctly wider

than long, eleventh conoidal, nearly as long as the two preceding together. Prothorax very slightly shorter and narrower than the head, widest at one-third the length from the apex where it is distinctly narrower than long; sides arcuate anteriorly, convergent and nearly straight toward the base; the latter broadly sinuate in the middle, slightly narrower than the apex, and two-thirds as wide as the disk; basal angles narrowly rounded; disk depressed, with a very feebly impressed median line, broadly impressed in the middle near the base; punctures scarcely visible. Elytra at base as wide as the pronotum; sides moderately divergent, very feebly arcuate; together truncate behind, feebly sinuate at the suture; disk much wider than long, three-fourths as long as the pronotum, depressed, much more coarsely alutaceous than the pronotum and with traces of rugulosity. Abdomen as wide as the elytra; sides slightly divergent; border strong but not very deep; surface coarsely alutaceous. Legs slender; first joint of the posterior tarsi nearly as long as the next two together. Length 2.3 mm. (very uniform).

California (San Diego).

This species is extremely abundant under the densely packed seaweed thrown up on the shores of the inner harbor in the Spring of the year; occurring with it and also in great abundance, were *Cafius (Remus) decipiens* Lec., *Motschulskium sinuatocolle* Matth., and *Phycocœtes testaceus* Lec., and, in less number, *Cafius (Remus) opacus* Lec.

P. maritimus n. sp.—Very slender; abdomen black; head very slightly paler, piceous-black; prothorax and elytra much paler, dark piceous-brown, the latter shaded slightly darker toward the apices; legs and antennæ reddish-testaceous, the latter infuscate; surface strongly alutaceous; pubescence short, very coarse, rather dense, erect and rather conspicuous, pale fulvo-cinereous. Head sub-triangular, truncate at base; sides arcuate; front broadly convex, even throughout, finely and extremely feebly punctate; antennæ very short, scarcely two-thirds as long as the head and prothorax together, extremely geniculate, distinctly incrassate and feebly compressed toward tip; basal joint nearly as long as the second and third together, second nearly three-fourths longer than the third and as long as the third and fourth together, joints five to ten very short, the former slightly wider than long, the latter twice as wide as long, eleventh scarcely as long as wide, broadly impressed within and near the apex, impression spongy-pubescent; eyes oval, rather large, coarsely granulate. Prothorax widest at less than one-third its length from the apex where it is about as wide as long; sides feebly arcuate anteriorly, slightly convergent and nearly straight posteriorly; base broadly arcuate, distinctly narrower than the apex which is broadly and very feebly arcuate; the latter very nearly as wide as the disk; basal angles slightly rounded; disk feebly convex, without an impressed median line; scarcely

punctate. Elytra at base distinctly narrower than the prothorax; sides rather strongly divergent, feebly arcuate; together truncate behind, distinctly wider than long and scarcely more than two-thirds as long as the pronotum; disk depressed and slightly more finely alutaceous than the pronotum. Abdomen about as wide as the elytra; sides straight, just visibly divergent toward tip; border thick but very shallow; surface finely, evenly, moderately densely and sub-asperately punctate, very feebly alutaceous and subreticulate, shining; underside more densely, strongly and asperately punctate. Legs slender; first joint of the posterior tarsi equal in length to the second. Length 2.2 mm.

California (Oakland, Alameda Co., 4).

There are so many striking differences between the present species and *bicolor*, that there is scarcely a doubt of its distinctness generically; these are principally the dissimilarity in antennal and tarsal structure. One of the most salient differences, however, is due to the nature and arrangement of the pubescence. In *bicolor* this is very fine, much longer, and grows without any definite arrangement; in *maritimus*, however, it is very short and stout, and on the pronotum is parted along the median line, streaming out laterally and posteriorly in a beautifully regular manner. The antennæ are so very strongly geniculate, that the angle between the axes of the first and second joints is only about sixty degrees.

BRYONOMUS n. gen. (Staphylinini.)

The two species, *Cafius canescens* Mann. and *C. seminitens* Horn., present so many aberrant characters that it seems desirable to separate them generically under the above name. In a memoir recently published by Dr. Horn in the Proceedings of the Entomological Society of Philadelphia, upon the Philonthi of the United States, it is stated by this author that these two species will probably be found to form part of Dr. Sharp's genus Phucobius, from Japan. Through the kindness of Dr. Sharp, who has sent me several specimens of his *Phucobius simulator*, I am compelled to show that this opinion is untenable, the mandibles in Phucobius

being unidentate within, while in Bryonomus they are distinctly bidentate. The maxillæ and maxillary palpi of these genera are figured on the plate, and it will be seen that they also present important differences in form.

Bryonomus differs from Cafius, or more properly Remus, as the Californian species approximate much more closely to this genus than to the European Cafius, in the comparative shortness of the terminal joint of the maxillary palpi, and very greatly in appearance. The intermediate coxæ are also widely separated, while in the others they are nearly or quite contiguous, and, although generally in this group the latter cannot be depended upon as a generic character, it appears to be of much more importance in that portion immediately allied to Cafius and Remus.

In the two species *canescens* and *seminitens*, the former has the mesosternal process rounded behind and the mandibular teeth rather small and equal, the latter has the mesosternal process squarely truncate behind and the mandibular teeth very unequal in size, the smaller being minute and on the inner flank of the larger. *Canescens* is chiefly remarkable for its enormous variation in form; in a series of about forty males which I have before me, there is a regular succession proceeding without break from large males with large heads, wider behind the eyes and wider than the prothorax, the latter being much wider than long and narrowed strongly behind, down to small males having very small quadrate heads, narrower than the prothorax and not wider behind the eyes, the prothorax being quadrate with the sides parallel. The eyes in the large specimens are comparatively small and are far in advance of the hind angles, but in the series as the head decreases in size the eye remains the same, so that in the small specimens it appears relatively very large and is at only its own length from the posterior angles. These variations are not perceptible in a series of forty males of *seminitens*.

ORUS Casey.

Orus punctatus Casey, exists in the greatest profusion throughout the coast regions of California. Wherever there is a rivulet or pond this species may be gathered in multitudes amongst the rubbish along the banks. I have personally taken hundreds of specimens during a few months' residence. In these specimens the geniculation of the antennæ is seen to be as pronounced as in almost any other genus of coleoptera, the angle between the axes of the first and second joints being a right angle in the majority of cases; I have represented this upon the plate.

Of the two statements made by Dr. Horn (Ent. Amer. I, p. 112), viz.: "The antennæ are *not* geniculate," and "*O. punctatus* is from Owen's Valley, Cal.;" the first is therefore incorrect, and the second is at least open to doubt.

In the genus Orus the anterior tarsi are feebly and equally dilated in the male and female and clothed beneath rather densely with short spongy papillæ. Details of the structure of various parts of the body are shown on the plate. The genus is undoubtedly distinct from *Scopæus*, at least far as the Californian representative is concerned, the most salient differences being as follows:

In Scopæus the antennæ are straight, in Orus geniculate; in the former the mandibles are tridentate, in the latter 4-dentate; in the former the ligula has at the tip three approximate teeth, while in the latter there are plainly and distinctly but two.

In Orus the fourth joint of the maxillary palpi is excessively small, in most specimens absolutely invisible except under the most favorable conditions; when these conditions of light, position, etc., are attained, it is seen to be very oblique, thin and subulate, and to lie far within the large and deep oval excavation in the tip of the third joint, not projecting visibly beyond its margin, so that it is generally entirely invisible when viewed laterally. The labrum is strongly quadridentate.

HOMALIUM Grav.

H. algarum n. sp.—Form narrow, rather distinctly attenuated anteriorly, depressed; body castaneous; lateral margins of the pronotum, elytral humeri and apices externally, and a very small clouded spot on each elytron near the scutellum paler, testaceous; lateral margins of abdomen paler; first six joints of antennæ fuscous, remainder black; under surface pale especially the pronotal and elytral hypopleuræ; legs rufo-testaceous, femora darker; head, pronotum and elytra entirely glabrous, abdomen having a few extremely short and very sparse hairs; sub-alutaceous. Head rather small, slightly wider than long; eyes moderate, finely granulate; sides behind them short, very strongly convergent; base constricted, the constriction extending upon the dorsal surface; front very slightly produced as a broad muzzle between the antennæ, feebly impressed near the base of each antenna; having two feeble, distinct impressions on a line through the middle of the eyes and immediately in front of the small but very prominent ocelli, which are sub-triangular; surface shining, coarsely, strongly and very sparsely punctate, alutaceous near the antennæ; the latter short, three-fourths as long as the head and prothorax together; basal joint twice as long as wide, shorter than the next two together, second longer than wide, as long as the fourth and three-fourths as long as the third, the latter very slender, clavate, three times as long as wide; joints six to eleven gradually wider, forming a rather well-marked club, tenth much wider than long. Prothorax widest at two-fifths its length from the apex where it is more than one-third wider than the head and about one-third wider than long; sides parallel, more strongly arcuate anteriorly, straight near the basal angles which are obtuse and distinctly rounded; base feebly and evenly arcuate, very slightly narrower than the disk and as wide as the apex; the latter broadly and feebly incurvate; apical angles rather broadly rounded; disk depressed, impressed along each side toward the base, having in the middle two elongate, parallel and well-marked impressions, finely margined on all sides, rather coarsely, deeply, irregularly and extremely sparsely punctate; all impressed and depressed areas alutaceous. Elytra at base very slightly wider than the pronotum; sides nearly parallel and almost straight; apical angles broadly rounded; together truncate behind, slightly and evenly incurvate in the middle; disk nearly twice as long as the pronotum, nearly one-fourth longer than wide, depressed, abruptly declivous along the sides, broadly and very feebly impressed along the suture, coarsely alutaceous and sub-rugulose, rather finely and sparsely punctate. Abdomen with five exposed segments, shorter and slightly narrower than the elytra; sides of the first three segments parallel and straight; surface broadly and moderately convex, finely sub-alutaceous, excessively minutely, feebly and almost indistinguishably punctate; border very deep and strongly inclined. Legs stout and robust; first four joints of the posterior tarsi short, equal, together much shorter than the fifth; middle femora short, very thin, wide and bent very strongly upward; posterior femora feebly bent. Length 3.8 mm.

California (San Francisco, 2; Santa Cruz, 2).

This remarkable species is found on the sea beach in the bunches of seaweed cast up by the waves; the description is taken from a male, the sixth ventral segment being broadly and rather strongly sinuate at apex; the four basal joints of the anterior tarsi are slightly dilated, successively less strongly so, and each has on the lower surface four transversely arranged and very long membranous papillæ. The first visible segment has upon the middle of the dorsal disk two approximate, obliquely oval patches which are covered densely with an excessively minute, coarse and brilliant, fulvous pubescence, and beneath in the middle of the base a round abrupt tubercle.

For the present this species may be placed near *longulum* in the lists of Homalium, but it appears almost certain that it must sooner or later form the type of another genus.

H. rugipenne n. sp.—Moderately attenuated anteriorly, rather slender and convex; head piceous, prothorax and elytra very dark rufo-testaceous, abdomen black, legs and antennæ rufo-testaceous, the latter slightly infuscate toward tip, posterior femora clouded with piceous; integuments shining; pubescence of the anterior portions extremely short and excessively sparse, sub-erect, that of the abdomen three times as dense, pale fulvous. Head moderate, slightly wider than long; sides behind the eyes strongly convergent, short, very arcuate and prominent; eyes rather small, not very prominent; front broad, feebly convex, scarcely preceptibly impressed at each side between the antennæ; on a line through the posterior portion of the eyes there are two minute elongate impressions which join the broadly arcuate and strongly marked nuchal constriction, which extends entirely across the base of the occiput and just behind the eyes; punctuation very coarse and sparse; antennæ slightly shorter than the head and prothorax together, slender, last five joints forming a slender club; basal joint the longest, more than twice as long as wide, second two-thirds as long, much more slender, third very slender, as long as the fourth and fifth together, the latter each longer than wide. Prothorax widest at about two-fifths its length from the apex, where it is about one-fourth wider than the head and one-third wider than long; sides evenly and strongly arcuate anteriorly, moderately convergent and straight toward the basal angles; the latter obtuse and very slightly rounded; base broadly, evenly and moderately arcuate, four-fifths as wide as the disk and just visibly narrower than the apex, the latter broadly and very slightly incurvate; apical angles evenly rounded,

obsolete; disk rather strongly convex, feebly, narrowly and unevenly impressed along each side near the edge; surface unevenly and coarsely but not very strongly rugulose, very coarsely, unevenly, rather feebly and very sparsely punctate. Elytra at base scarcely wider than the pronotum; sides rather strongly divergent and straight; together broadly, evenly and feebly incurvate at apex; outer angles strongly and evenly rounded; disk transversely and distinctly convex, slightly shorter than the apical width, nearly one-half longer than the prothorax, coarsely, very strongly and unevenly rugulose; rugulosities polished, large, arranged in a generally longitudinal direction, divided by the very irregular coarse and ill-defined punctures. Abdomen having six exposed segments; together much longer and slightly wider than the elytra; exterior sides of the border arcuate, inner sides straight and parallel; border wide, feebly inclined; surface strongly convex, finely rather densely and asperately punctate; surface sub-alutaceous, feebly shining. Legs short and robust; middle and posterior tibiæ very coarsely and rather densely spinulose exteriorly; last joint of the posterior tarsi much longer than the first four together. Length, 2.9 mm.

California (Alameda Co., 1). Mr. Harford.

The humeri have no traces of callosity, and the median portions of the pronotum are evenly convex without traces of impressions or tuberculations; the species evidently belongs immediately after *hamatum* Fauv., from which it differs apparently in its greater slenderness.

PHLŒOPTERUS Mots.

P. longipalpus n. sp.—Broad, depressed, slightly wider behind; body black throughout; antennæ same; palpi intense black throughout; legs piceous-black, tarsi very dark reddish-fuscous; pubescence very fine, rather long, sub-recumbent, moderately dense, dark grayish in color; integuments polished. Head moderate or small, strongly constricted immediately behind the eyes, about as wide as long; eyes large, very prominent; front feebly convex, finely, evenly and rather densely punctate; having on a line slightly in advance of the middle of the eyes, two round impressed foveæ which are mutually slightly less than twice as distant as either from the eye; vertex transversely impressed between the antennæ; the latter long, very slender and filiform, nearly as long as the elytra and abdomen together, clothed densely with very minute pubescence; joints one, three to seven, and eleven nearly equal in length, the first slightly more robust and the last most slender, fusiform; joints eight to ten very slightly shorter and rather more slender than the seventh, second much the shortest, one-half as long as the third and more than twice as long as wide. Prothorax widest in the middle where the sides are very obtusely and feebly angulate, and where it is about two-

thirds wider than long; sides thence moderately convergent posteriorly and straight, except very near the basal angles where they are feebly sinuate; basal angles slightly prominent, right, not at all rounded; base transversely truncate, nearly five-sixths as wide as the disk and just visibly wider than the apex; apical angles broadly rounded; disk broadly convex in the middle, even, broadly impressed near each basal angle, and having on each side in the middle and very near the edge a large rounded and rather deep impression; punctures fine, even and rather dense. Elytra at base slightly narrower than the prothorax; sides slightly divergent and straight; outer apical angles extremely broadly rounded; inner very narrowly so; disk widest at one-fifth the length from the apices where it is one-fourth longer than wide, two and one-third times as long as the prothorax, strongly punctate; punctures denser and distinctly larger near the suture where also the surface is finely, longitudinally and obsoletely sub-costate. Exposed surface of the abdomen much wider than long, as wide as the elytra, very short, very broadly margined at base; surface finely sub-alutaceous, very minutely and not densely punctate. Legs long; femora twice as wide as the tibiæ, sides parallel; posterior tarsi long and slender, first four joints decreasing uniformly and very rapidly in length, first as long as the next two together and much longer than the last; basal joints of the anterior tarsi feebly dilated. Length 6.0 mm.

California (Middle Sierras).

The palpi are very long and slender; the first joint of the maxillary very small; the second long, strongly arcuate and distinctly shorter than the fourth; third scarcely more than one-half as long as the second, nearly three times as long as wide; fourth very long and slender, acuminate at tip, twice as long as the third; first joint of the labial much shorter than the second; third distinctly longer than the first two together. Mesosternum feebly carinate posteriorly, having in the middle and in the anterior half, two small, abrupt and prominent, spiniform tubercles, arranged longitudinally.

The type is a male; the female is very similar being merely a little larger and relatively wider. The three specimens before me show a slight variation from immaturity in the color of the palpi and legs; in one example the former are rather pale piceo-testaceous, and the tibiæ and tarsi in another somewhat pale and uniformly clear rufo-fuscous.

This is evidently the species referred to by Dr. Le Conte, (Proc. Ac. Sci., Phil., 1866, p. 375) from El Dorado Co., as

being identical with *P. fusconiger* Mots., from Unalaska Id., and not, as represented by M. Fauvel (Not. Ent. vii, p. 83), the *Tilea cavicollis* of the latter author. *Longipalpus* is evidently distinct from *fusconiger*, since the femora are described as being paler toward base in the latter, while in the former, even in the most immature specimens which I have seen, the femora are always perfectly uniform in color throughout and black; they are also somewhat alutaceous. This is the only character of positive importance which can enter into the comparison, the remaining characters given by Mäklin being applicable to a great variety of species; the color of *fusconiger* being as stated, black, would in addition lead us to suppose that the type of that species was not immature; the coloration of the femora is, therefore, for this reason, of still greater importance. The present species is distinct from *Tilea cavicollis* Fauv., in the structure of the palpi and in the color of the upper surface which is of an intense black throughout in the former. I have placed *longipalpus* in the genus Phlœopterus Mots., simply because it cannot appropriately enter Tilea Fauv., unless a wide limit of variation be granted to that genus in the relative length of the fourth joint of the maxillary palpi, and as it evidently differs widely from Lesteva, the present disposition obviates the necessity for the creation of a new genus, but is made at the same time without any positive proof of the generic identity of *longipalpus* and *fusconiger*.

One of the specimens before me is affected by a peculiar disease, of which the principal feature is a remarkable growth of long irregular corneous filaments from the dorsal surfaces; some of the filaments have at the base a very elongate acicular lobe. I have also noticed a similar fungoid disease affecting the Carabidæ, but in which the filaments, instead of being long and very slender, are shorter, robust and strongly club-shaped.

VELLICA n. gen. (Homalini.)

The following description and subsequent remarks will sufficiently characterize this genus, which belongs between Phlœopterus and Lesteva.

L. longipennis n. sp.—Moderately robust, rather strongly convex; body above throughout dark piceous-brown; prothorax slightly paler; antennæ very dark fuscous, first, second and eleventh joints much paler, testaceous; under surface paler, rufous; legs clear rufous, tarsi scarcely paler; integuments shining; pubescence coarse, sub-erect, pale fulvous, dense, much more sparse on the pronotum. Head slightly longer than wide; eyes rather small, at less than their own length from the base, prominent and coarsely granulated; front feebly and transversely convex, more strongly and evenly so between the very minute and extremely feebly impressed frontal foveæ, which are on a line nearly through the middle of the eyes and mutually slightly less than twice as distant as either from the eye; punctuation rather fine, strong and dense; antennæ slender, filiform, scarcely one-half as long as the body; basal joint more than twice as long as wide, second and fourth sub-equal, shortest, scarcely more than one-half as long as the first, and two-thirds as long as the third, the latter slightly longer than the fifth; joints five to ten equal, eleventh slightly thicker, fusiform, nearly as long as the two preceding together. Prothorax widest at one-third its length from the apex, where it is distinctly wider than the head and very slightly wider than long; sides strongly arcuate, and thence moderately convergent and very feebly incurvate throughout to the basal angles, which are very slightly obtuse and not at all rounded; base transversely truncate, three-fourths as wide as the disk and very slightly narrower than the apex; disk transversely and rather strongly convex, even, not at all depressed toward the basal angles, finely, evenly and rather densely punctate; at each side in the middle, near the edge, there is a large, rounded and very feeble impression. Elytra at base very slightly wider than the prothorax; sides very feebly divergent, feebly arcuate; outer apical angles very broadly rounded; together feebly emarginate behind; disk two and one-third times as long as the pronotum, transversely and rather strongly convex, widest near the apex, where it is two-fifths wider than the pronotum and two-fifths longer than wide, somewhat coarsely, feebly, sparsely and asperately punctate, leaving but three segments of the abdomen exposed. Abdomen very short, much wider than long, triangular, strongly and narrowly margined at base, strongly alutaceous. Legs moderately robust; posterior tarsi slender, cylindrical, glabrous; first joint nearly as long as the second and third together, very slightly longer than the fifth. Length, 3.0 mm.

California (Middle Sierras).

The palpi are long and slender, clear rufo-testaceous throughout, the third joint of the maxillary one-half longer than wide, the fourth three times as long as the third, slender, slightly fusiform, obtusely acuminate at tip; first joint of the labial scarcely two-thirds as long as the second, third much longer than the first two together; the terminal joints of all the palpi have disks at the tips, which are pale and apparently spongy.

This genus differs from Lesteva, which it should precede in the catalogue, in the structure of the labial and maxillary palpi, and in the very long elytra, which extend for a long distance behind the metasternum.

LESTEVA Latr.

L. truncata n.sp.—Rather broad, widest behind; body black throughout; antennæ not paler; legs black except the posterior tibiæ, which are slightly paler toward tip; oral organs black; integuments shining; pubescence fine, rather dense, sub-recumbent, dark tulvous. Head small, as wide as long; eyes nearly at the posterior angles, large, rather coarsely granulated, prominent; base broadly and nearly squarely truncate along a line just behind the eyes; front scarcely convex, rather coarsely, evenly and feebly punctate; having, on a line through the anterior extremities of the eyes, two small round foveæ mutually one-half more distant than either from the eye, feebly and arcuately impressed between the bases of the antennæ; the latter two-fifths as long as the body, slender, very feebly incrassate; basal joint slightly robust, more than twice as long as wide, second two-thirds as long as the first and four-fifths as long as the third; joints four to ten, equal in length, slightly shorter than the third, eleventh slightly shorter than the two preceding together; outer joints distinctly compressed. Prothorax widest at two-fifths its length from the apex, where it is two-fifths wider than the head and one-third wider than long; sides evenly and moderately arcuate, very moderately convergent and very feebly arcuate to the basal angles which are obtuse and not at all rounded; apical angles more obtuse and slightly rounded; base squarely and evenly truncate, nearly five-sixths as wide as the disk and about equal in width to the apex; the latter squarely truncate; disk transversely and rather strongly convex, even except very near each side, where, throughout the basal half, there is a narrow strongly impressed channel parallel to the edge, which terminates anteriorly at the middle in a large, round, rather broadly and deeply impressed pit; punctures fine, evenly distributed and rather dense, feebly impressed. Elytra at base as wide as the pronotum; sides distinctly divergent and nearly straight;

outer apical angles broadly rounded; together transversely, evenly and very squarely truncate behind; inner angles right and very narrowly rounded; disk at apex nearly one-half wider than the pronotum, nearly two-thirds longer, distinctly longer than wide, depressed above, abruptly declivous along the sides; margins narrowly reflexed; broadly and very feebly impressed along the suture; coarsely, rather densely, evenly and asperately punctate. Exposed segments of the abdomen five in number; together slightly longer than wide, and slightly shorter than the elytra, finely asperate, very densely so at base, becoming smooth and feebly alutaceous at apex; fourth visible segment having in the middle of the disk and very near each side a large, very shallow, rounded impression; border very wide, strongly inclined. Legs rather stout, moderately slender; first joint of the posterior tarsi as long as the next two together, as long as the last; third and fourth short; claws short, slender, simple. Length, 3.4 mm.

California (Middle Sierras).

In this species the structure of the maxillary palpus is unquestionably the same as that of Lesteva, the third joint being as long as wide, the fourth fully four times as long; the first joint of the labial palpi is distinctly longer than the second, the third longer than the first two together; as in Vellica, the palpi are all terminated by small pale spongy disks.

PROTINUS Latr.

P. salebrosus n. sp.—Depressed, moderately robust; entire body, except the tip of the abdomen beneath, black; the latter testaceous; antennæ piceous, two basal joints paler, testaceous; legs piceous, knees and tarsi paler, testaceous; pubescence in the form of exceedingly minute setæ, which are very sparsely and evenly distributed over the elytra and abdomen. Head small, much wider than long; eyes rather small, very prominent, nearly hemispherical; front with a deep oblique impression on each side near the eye; surface confusedly irregular and scabrous; antennæ very slender, one-half as long as the body; two basal joints much more robust, the second slightly shorter and more slender than the first; last three joints gradually and uniformly increasing in width, nearly of equal length. Prothorax widest at two-thirds its length from the apex, where it is about two and one-third times as wide as long; sides rather evenly and strongly arcuate posteriorly, very feebly arcuate and moderately convergent anteriorly; base transversely truncate, feebly sinuate toward each basal angle, but very slightly narrower than the disk and just visibly wider than the apex; the latter broadly and feebly emarginate; apical angles narrowly rounded; basal right and not at all rounded, in the form of very minute teeth, the sides of the pronotum in

front of them being deeply sinuate for a very short distance; disk strongly and coarsely scabrous, feebly convex in the middle, where there is a narrow canaliculation, growing deeper toward base, broadly impressed along each side near the margins. Elytra at base as wide as the prothorax; sides nearly parallel and moderately arcuate near the humeri; outer apical angles broadly rounded; inner narrowly rounded; together slightly longer than wide and very slightly more than twice as long as the pronotum; disk transversely and moderately convex, feebly and coarsely scabrous, indistinctly, feebly and sparsely punctate. Abdomen very short behind the elytra, triangular, wider than the elytral apices, coriaceous, dull, obsoletely and sparsely punctate; the apices of the segments paler; border evident near the elytra. Legs slender. Under surface of the abdomen shining; segments very short, each with one or two transverse discal rows of very minute setigerous punctures. Length, 1.6 mm.

California (Santa Cruz, 5).

The description is taken from the male, in which the sixth segment of the abdomen is narrowly and deeply sinuate at the apex, the sinus being strongly rounded at the bottom and slightly wider than deep; the fifth is broadly and strongly emarginate throughout its width, partially enclosing the sixth; the seventh is deeply divided; in the female the sixth segment is deflexed at tip and acutely triangular.

The species belongs near *sulcatus* Fauv., which is also from California. The antennæ from the second joint are almost precisely similar in structure to the prevailing type in the Trichopterygidæ.

ACTIDIUM Matth.

A. robustulum n. sp.—Form somewhat robust, rather convex. Body black throughout; antennæ piceous-brown; legs dark yellowish-brown; tarsi paler, flavate; pubescence very short, recumbent, rather dense, cinereous-brown in color; integuments feebly shining, very finely, feebly and somewhat densely granulose. Head nearly twice as wide as long, evenly and moderately convex; eyes small but rather prominent, very coarsely granulated; epistoma rather narrow, broadly and very feebly sinuate at apex; labrum much longer than wide, acutely rounded at apex, vertical or slightly inflexed; antennæ distinctly longer than the head and prothorax together, joints of club increasing in length and thickness. Prothorax slightly less than twice as wide as long, slightly longer and wider than the head; sides parallel and evenly arcuate; anterior angles viewed laterally narrowly rounded, basal more broadly so; base broadly and strongly rounded behind over the bases

of the elytra, strongly sinuate near the basal angles; disk rather convex, perfectly even throughout. Scutellum small, equilatero-triangular. Elytra at the humeri slightly narrower than the pronotum; sides parallel and rather strongly arcuate for three-fifths the length, thence rather rapidly convergent to the apex which is narrow and sub-truncate; inner angles scarcely rounded; humeri rounded; disk one-half longer than wide and about two-thirds longer than the head and prothorax together, widest at about one-third the length from the base. Legs rather short and robust; posterior coxæ triangular, nearly twice as wide as long, sinuate outwardly, apex narrowly rounded. Under surface of the abdomen more shining than the upper. Length 0.55 mm.

California (Mt. Diablo, 1; Santa Cruz, 2).

The sub-asperate granulation of the surfaces is feebler and rather sparser than in the other species here noted.

A. granulosum n. sp.—Form rather slender, more cylindrically convex than *robustulum*; color throughout the body, legs and antennæ intense black; tarsi and anterior coxæ slightly piceous; pubescence excessively fine and short, recumbent and somewhat dense, pale fusco-cinereous; upper surface feebly shining, very finely, densely and evenly granulate; granulation strong and slightly asperate. Head two-thirds wider than long, convex; eyes rather small but very prominent, very coarsely granulate; epistoma narrow, broadly rounded at apex; labrum longer than wide, acutely rounded; antennæ much longer than the head and prothorax together, two-fifths as long as the body; joints of club increasing rapidly in length but very gradually in width. Prothorax slightly wider and distinctly longer than the head, two-thirds wider than long; sides parallel and arcuate; anterior angles viewed laterally narrowly rounded, posterior excessively broadly rounded, almost obsolete; base broadly and strongly arcuate, just visibly sinuate laterally; disk strongly convex and perfectly even. Scutellum triangular, small, very slightly wider than long. Elytra at the humeri just visibly narrower than the prothorax; sides parallel and slightly arcuate for three-fifths the length, thence slightly more convergent posteriorly; together obtusely rounded behind; humeri narrowly rounded; disk widest at two-fifths the length from the base where it is very slightly wider than the pronotum, sub-cylindrically convex, three-fourths longer than wide and fully twice as long as the head and pronotum together. Legs rather slender; under surface of the abdomen polished and minutely reticulate; posterior coxæ more than twice as wide as long, semicircularly rounded within at the apex, sinuate outwardly. Length 0.50 mm.

California (San José, Santa Clara Co., 7; Santa Cruz, 4).

This species may be distinguished at once from *robustulum* by its more attenuated form, more dense and stronger granulation, and more particularly by the color of the legs and

structure of the prothorax; it is apparently more abundant than any other species.

A. attenuatum n. sp.—Very slender; sub-cylindrical; intense black throughout; antennæ black; legs dark castaneous; suface moderately shining, covered with minute granulations which are evenly disposed and somewhat asperate; pubescence very fine and short, moderately dense, dull grayish in color. Head scarcely more than one-half wider than long, rather convex, deflexed; eyes moderate, prominent, coarsely granulate; epistoma very narrow at the apex which is acutely rounded; antennæ two-fifths as long as the body; joints of club increasing very rapidly in length and gradually in width, eighth joint small, scarcely more than one-half as long as the seventh. Prothorax but very slightly wider than the head and scarcely longer; sides parallel and feebly arcuate; base rather strongly arcuate, feebly sinuate toward the basal angles; the latter viewed laterally broadly rounded; disk strongly and transversely convex, one-half wider than long, even throughout. Scutellum triangular, very slightly longer than wide. Elytra at the humeri slightly narrower than the pronotum; sides parallel and moderately arcuate for three-fourths the length, together rather abruptly and obtusely rounded behind; disk sub-cylindrically and strongly convex, four-fifths longer than wide and two-thirds longer than the head and prothorax together, humeri slightly prominent, rounded. Pygidium semi-circularly rounded beneath, vertical, not attaining the elytral tip, feebly convex, granulose and more conspicuously pubescent. Legs moderately stout; tarsi and coxæ very slightly paler. Length 0.45 mm.

California (Santa Cruz, 1).

A very minute species; it may be distinguished at once from either of the others here described by its narrow form, more quadrate prothorax and coarser sculpture. The sides of the pronotum are longer in proportion to the median length; the sculpture is as coarse as in *granulosum* and the granulations are much more sparsely distributed than in that species; in *robustulum* these are much finer and less conspicuous.

The species here described are very homogeneous and belong apparently to the *Fowlerianum* group of Mr. Matthews, this being distinguished by the dull alutaceous surface sculpture, elongate elytra, and fine dense pubescence. All the specimens were taken in wet sand, on the surface of mud between small stones, or in mouldy earth along the edges of

small streams. They are amongst the most minute of Trichopterygidæ, and are probably very numerous in species, although from the great care requisite in collecting them the number of described species will in all probability increase very slowly.

It has been stated by Dr. Horn (Ent. Amer. I, p. 108) that three of the species of Trichopterygidæ described by me (Cont. II. p. 162-166), viz: *Ptilium fungicola*, *Trichopteryx funginus* and *T. longipennis*, are synonymous with *P. Horniarum* Matth., *T. discolor* Hald., and *T. parallela* Mots., respectively. In order to show that in all probability this is not the case, I quote in parallel columns several salient differences as recorded in the descriptions of Mr. Matthews and those published by me in the work above mentioned.

P. Horniarum Matth. — Oblong, castaneous; antennæ dark yellow; legs bright yellow; under parts pale castaneous with the mouth, hinder parts of the metasternum and terminal segments of the venter flavescent. Length, .37 mm.

Texas.

P. fungicola Cas.—Form elongated. Color above piceous-black, beneath very slightly paler; oral organs, legs and parts of the prosternum pale reddish-flavate; antennæ black, basal joints dark flavo-testaceous. Length, .45 mm.

Pennsylvania.

The abdomen in *fungicola* does not project beyond the elytra as in the majority of species of Ptilium, and I noticed no flavescent parts of the metasternum and abdomen, as mentioned by Mr. Matthews.

T. discolor Hald.—Black, with the elytra testaceous, sparingly clothed with fulvous hair; thorax moderate, much broader and longer than the head, widest near the base, black with all the margins yellow; sides moderately rounded, hinder angles pale and much produced; elytra testaceous, short, rather shorter and narrower than the head and thorax; sides nearly straight; closely but ir-

T. funginus Cas.—Piceous-black, elytra becoming rufo-piceous toward the tips, which are margined with fulvous; legs and basal joints of the antennæ rather dark piceo-testaceous, remainder of the antennæ dark piceous-brown. Pubescence rather abundant, cinereous. Sides of the prothorax nearly straight anteriorly, very arcuate posteriorly; posterior angles very moderately produced.

regularly asperate. Legs and antennæ moderate, bright yellow. Length, .75–.87 mm.

United States.

Differs from other species in its depressed testaceous elytra and sculpture.

Elytra just visibly longer than wide, distinctly longer than the head and prothorax together, one-half longer than the pronotum, rather convex, more strongly and closely asperate than the prothorax; transverse rows only distinct near the suture. Length, .65–.8 mm.

Pennsylvania.

It will be readily seen that in color, especially of the legs and antennæ, in the convexity and length of the elytra, and particularly in the form of the posterior angles of the pronotum, *funginus* differs so greatly from *discolor* as to preclude any doubt of their distinctness.

T. parallela Mots.—Thorax rather large, sub-quadrate, widest at the base; sides slightly rounded; hinder angles much produced and very acute. Legs and antennæ long, bright yellow. Length, .75–.87 mm.

Dist. of Columbia.

Differs from others in its oval elongate form, rufofuscous elytra, and bright yellow antennæ.

T. longipennis Cas.—Prothorax widest slightly in advance of the base, where it is about twice as wide as long; posterior angles not at all produced. Legs and basal joints of antennæ dark piceo-rufous, remainder of the antennæ piceous-black. Color above piceous-black throughout. Length, 0.9 mm.

Pennsylvania.

The structure of the posterior angles of the prothorax and the color of the legs and antennæ alone would separate *longipennis* from *parallela* at the merest glance under suitable magnifying power.

EUSCAPHURUS n. gen. (Eucinetini).

Head strongly deflexed; mentum transverse, trapezoidal, apex broadly arcuate, continued anteriorly by a broadly lunate additional piece, leaving the tip of the ligula exposed. Labial palpi three-jointed; first strongly dilated, bulbous; second small, longer than wide, affixed obliquely to the first; third long, slender and in the form of a translucent spine; maxillæ large, lobes very small and slender, hook very minute and rudimentary; palpi four-jointed; first rather slender, sub-cylindrical; second slightly wider than long, nearly trapezoidal; third longer than the first, ovoidal, acuminate at tip; fourth in the form of a very small transparent spine. Antennæ eleven-jointed, geniculate, strongly clavate; club consisting of five or six joints which are gradually wider, strongly flattened; eyes having an acute edge at the sides beneath, where also they are feebly excavated for the passage of the antennæ, very coarsely granulated. Epistoma distinct, labrum small, strongly arcuate

anteriorly. Prosternum very short, consisting of a narrow edge in front of the coxæ and a slight process between them which is dilated and transversely truncate posteriorly and deeply excavated along the surface. Mesosternum small, narrowly separating the coxæ, produced in the middle in a small process which is excavated for the reception of the prosternal process, excavated at the sides for the anterior femora; epimera large, attaining the coxæ. Metasternum wide, produced posteriorly in a broad triangular process separating the posterior coxæ for two-thirds their length; epimera as long as wide, distinct. Anterior coxæ very strongly transverse, slightly separated, trochanters small but distinct; middle coxæ transverse, oblique, oval, slightly excavated, trochanters large and distinct; posterior in the form of large plates, nearly attaining the elytra and concealing the femora, in contact behind where the edge is transverse; sides nearly straight and very oblique. Middle and posterior tibiæ dilated toward tip and densely fimbriate at apex with short equal spinules, terminated by two rather small unequal spurs. Tarsi slender, all five-jointed; first four joints of the anterior short and nearly equal, last longer; those of the intermediate and posterior tarsi decreasing in length to the fourth, fifth longer; first joint of the posterior longer than the next three together; claws very small. Abdominal segments five in number, decreasing in length. Elytra covering the entire abdomen, navicular; inflexed sides not attaining the tips, suddenly and narrowly dilated toward base.

But five segments are visible, but in the males there is an indication of a rudimentary retractile sixth segment. The discovery of this somewhat anomalous genus may prove a link in the chain of evidence tending to place the Eucinetini among the Silphidæ. There are, however, many more reasons for retaining the group in the Dascyllidæ for the present; the antennæ although clavate and not at all serrate, are strongly flattened, and the structure of the labial palpi occurs frequently in the latter family. In the present genus I cannot perceive a minute basal joint in the latter, and the second is evidently very minute and affixed obliquely to the first, the third being clearly visible, not as an appendage of the second, but as a long spiniform terminal joint.

E. saltator n. sp.—Form narrowly oval, more than twice as long as wide, pointed behind, very convex; rather dark reddish-testaceous throughout; shining; pubescence fine, short and recumbent, rather sparse, fulvous in color. Head much wider than long, coarsely and rather closely punctate; punctures shallow and somewhat asperate; antennæ much shorter than the head and prothorax together; under surface deeply impressed with a transverse arcuate groove. Prothorax twice as wide as the head; apex broadly arcuate, one-half as long as the base; the latter strongly arcuate in the mid-

dle; sides strongly and evenly arcuate; posterior angles viewed laterally slightly produced, slightly acute, not rounded, anterior angles rather broadly rounded; disk strongly convex, very finely and rather sparsely punctate. Scutellum slightly wider than long, triangular. Elytra at base as wide as the prothorax, widest at slightly less than one-third their length from the base; sides at base continuous in curvature with those of the prothorax, gradually convergent posteriorly, evenly arcuate; together acutely rounded at tip; disk strongly convex, much more coarsely punctate than the pronotum, but slightly less so than the head; punctures moderately dense, rather feeble and somewhat asperate, irregularly but evenly distributed; suteral stria rather distinct, finely impressed, beginning at one-third the length from the base; suture about four times as long as the prothorax. Under surface much more densely pubescent than the upper; abdomen finely, closely and sub-asperately punctate. Legs rather long and slender; middle and posterior tarsi very slender and filiform, longer than the femora. Length 1.4–1.7 mm.

California (Anderson Val., Mendocino Co.).

This species is quite common under the bark of decaying logs and appears to be gregarious. It is difficult to discern as it feigns death at first and its color then renders it very difficult to distinguish from the surrounding powdery refuse of the Scolytides. It has a power of springing even greater in proportion to its size than that possessed by the species of Eucinetus.

CÆNOCARA Thom.

C. occidens n. sp.—Narrowly oval, two-fifths longer than wide; sides strongly declivous; color throughout rather dark brownish-red: integuments polished; pubescence coarse, rather long, moderately dense, bright fulvous, conspicuous. Head as wide as long, moderately convex, finely, nearly evenly and not densely punctate; eyes moderate, rather prominent, very finely granulate, almost divided by a narrow triangular cleft, lower lobe much wider than the upper. Prothorax viewed dorsally widest at the base; sides strongly convergent anteriorly and very feebly arcuate; apex nearly transversely truncate; base broadly and moderately angulate, sides straight, one-half wider than the apex; basal angles slightly obtuse and not rounded; disk rather strongly convex in the middle, nearly vertical at the sides, two and one-third times as wide as long, very finely and rather sparsely punctate; punctures round, perforate and with the circumference slightly elevated, slightly more dense along the base; viewed laterally the sides are straight, with the anterior angles very acute and not at all rounded, the basal angles being very obtuse and not rounded. Scutellum very small, as wide as long, ogival, slightly concave, with a few very minute punctures. Elytra at base as wide as the pronotum; sides parallel for two-thirds the length from the base and

feebly arcuate; together broadly and very obtusely rounded behind; disk distinctly longer than wide; sides vertical, strongly convex behind, nearly flat in the middle toward base, finely and sparsely punctate; punctures perforate, slightly larger than those of the pronotum, slightly more dense near the scutellum, irregularly distributed; humeral tuberculations strong, narrow; lateral lobes not striate; first and second discal striæ beginning at the base, the former terminating very near, the latter twice as far from the apex; the third beginning at a slight distance from the base, immediately under the humeral tuberculations, and continuing for a distance slightly less than one-third the elytral length. Under surface finely and sparsely punctate. Length 1.4 mm.

California (Dublin, Alameda Co., 1; Paraiso Springs, Monterey Co., 2).

This species is distinguished from the others by its very small size, clear brownish-red color, and very sparse punctuation especially that of the prothorax; it belongs near *californica.*

C. californica Lec.—One specimen of this species was found at Yountville, Napa Co.; it is much larger and more broadly oval than *occidens*, black in color with the prothorax decidedly rugulose and very densely punctate; the scutellum is distinctly wider than long, the elytral surface very highly polished, the pubescence more sparse, and the difference between the density of the pronotal and elytral punctuation much more marked. The first and second striæ of the elytra are not entire as represented by Dr. LeConte; the first terminates very near the apex, and the second at a distance which is much more than twice as great.

PLATYCERUS Geoff.

P. californicus n. sp.—Very convex, slightly oval in outline, highly polished; body reddish-brown; legs paler, dark rufous; elytra with a slightly æneous lustre. Head slightly wider than long; occiput moderately convex; punctures very coarse, rounded, deeply impressed, somewhat irregularly but densely distributed; a small space in the middle of the base impunctate; lateral tuberculations moderate; labrum strongly transverse, short, very coarsely and densely punctate; mandibles small, the left rather strongly toothed, the right extremely obtusely and obsoletely so; antennæ short, slender; basal joint nearly as long as the remainder, second nearly as long as the next two together, much more robust; joints three to seven closely connate; the latter

very slightly wider than long; joints of club equal in width, together distinctly shorter than the preceding six; tenth wider than long, evenly rounded; all three coarsely and rugulosely punctate toward tip and inwardly. Prothorax widest at two-thirds its length from the apex where it is two and one-half times as wide as the head and one-half wider than long; sides at this point strongly arcuate, thence moderately convergent and nearly straight to the apex, more strongly convergent to the basal angles which are slightly prominent, not at all rounded, and before which the sides are rather deeply sinuate; disk coarsely and rather densely punctate very near the sides, elsewhere more finely and very sparsely so, rather strongly convex. Elytra widest at two-thirds their length from the base where they are nearly one-fourth wider than the pronotum and one-third wider than at base; sides rather strongly arcuate posteriorly, strongly convergent toward the apex which conjointly is rather evenly and strongly rounded; disk strongly convex, distinctly striate except very near the sides where the punctures become confused; striæ finely punctate with the interspaces much longer than the punctures; intervals strongly convex, very feebly and indistinctly rugulose, each with a single or partially double row of excessively minute punctures along the middle of its crest. Under surface very coarsely punctate, densely so on the abdomen. Length 9.5 mm.

California (Eureka, Humboldt Co., 1).

The single specimen which was captured in a dusty wagon road, is a female. It is at once distinguishable from any of the others described from North America by its very convex form, partially oval outline, pale color, and very sparse punctuation of the pronotal and elytral disks.

Platycerus Agassii Lec.—One male of this species was taken while flying amongst the undergrowth of a dense redwood forest in the Anderson Valley, Mendocino Co.

The described species of Platycerus occurring within the United States may be classified as follows:

Sides of prothorax not sinuate at the basal angles..... **quercus**
Sides of prothorax more or less sinuate at the basal angles.
  Last joint of the antennal club strongly transverse.
    Elytral striæ very fine, not at all impressed; punctures fine..... **oregonensis**
    Elytral striæ coarse, distinctly impressed; punctures very coarse..... **depressus**
  Last joint of club nearly as long as wide.
    Elytral intervals unequal in width, coarsely, closely and unevenly punctate; elytra moderately convex..... **Agassii**
    Elytral intervals equal in width, very minutely, sparsely and sub-serially punctate; elytra strongly convex.... **californicus**

ADDITIONAL NOTES.

I.

Among the many extraordinary errors made by Dr. Horn in his recent synonymical list (Ent. Amer. I, p. 108), there is perhaps none so remarkable as that relating to a species which was described by me under the name *Notoxus delicatus*, and which is there stated to be a synonym of *N. Pilati* Laf. *N. monodon* Fabr., of which *N. Pilati* is considered a variety, is, as well known, a single-banded species, the band crossing the elytra slightly behind the middle and being produced forward for a short distance along the suture. The principal distinguishing feature of the variety *N. Pilati* is, according to La Ferté's description, which is before me, the disintegration of this single band into three spots, one sutural and two transversely elongated lateral spots. Again, one of the chief reasons influencing La Ferté in its separation, is the fact that it is a local form, being only found on the small Island of Galveston, in the Gulf of Mexico and off the coast of Texas. On the other hand *N. delicatus* is not a single-banded species in any sense, but has two distinct and entire transverse bands, the anterior one being in advance of the position occupied by the single band of *monodon*, and the second between this and the elytral apices. In other words the style or general character of the maculation is of such an entirely different order, that we cannot imagine any mutation from one to the other; *N. delicatus* is also much smaller than *N. monodon*, or its variety *Pilati*.

Another singular error is that concerning *Eumicrus punctatus* of the Scydmænidæ, which, according to Dr. Horn, is synonymous with *Cholerus Zimmermanni* Schaum. I have before me the original description of Schaum of his *Scydmænus Zimmermanni*, and quote the following passages with their equivalents from the description of *E. punctatus* (Cont. II, p. 86):

S. Zimmermanni Schaum.—Thorax latitudine longior, ante basin utrinque obsolete bifoveolatus. Coleoptera in medio thorace dimidio latiora, tota crebre subtiliter punctata. Long. $\frac{7}{8}$ lin.

Carolina.

E. punctatus Casey. — (Prothorax); disk not foveate along the base but narrowly and feebly eroded Elytra widest in the middle, where they are nearly twice as wide as the latter (pronotum), coarsely, rather strongly and somewhat densely punctate. Length, 1.4 mm.

Michigan.

It will be readily seen that *E. punctatus* is a more robust species than the one described by Schaum, and that the elytral punctuation is probably much finer in the latter; the length, $\frac{7}{8}$ of a line, is also somewhat greater than 1.4 mill. In *E. punctatus* there are no basal foveæ as in *E. vestalis* and *Cholerus Zimmermanni*, but instead a feebly and irregularly eroded line extending across the pronotum, parallel to and very near the basal margin. These differences alone are sufficient proof that the two species are different and show most conclusively, either that the specimen with which Dr. Horn compared my type was not the true *Zimmermanni* of Schaum, or that the comparison was very hastily made.

The most positive proof of the mutual distinctness of these species, however, is found in the antennal structure. In *E. punctatus* the antennæ are strongly geniculate, precisely as in *E. vestalis*, while as *S. Zimmermanni* has been placed in Cholerus Thom., characterized by its straight antennæ, it is to be presumed that these organs are at least not strongly geniculate in that species.

There are many errors similar to these in the synonymical list referred to, which will be corrected at a future time; probably more than two-thirds of the synonyms proposed are incorrect, and will appear most obviously so to those taking sufficient interest to compare the original descriptions; a few of these are noted in the present paper under the genus Actidium.

II.

The word genus, in the present state of entomological science, scarcely admits of a satisfactory definition, but in

general terms may be stated to be an aggregate of species possessing in common a character, or a certain assemblage of characters, considered by its author to be of sufficient stability and persistence to distinguish it as an isolated group. I say "considered by its author," because it is this individuality in the opinion of specialists on the one hand, and our imperfect knowledge of nature on the other, which prevent the assignment of a definite weight or value to the characters which have been adopted in the separation of genera as they at present exist; these in many cases have been founded upon comparatively trivial characters, and more or less on the score of convenience. In fact when the Coleoptera have been exhaustively collected, it will probably be found that all genera are more or less arbitrary divisions, as species must in many cases be discovered with intermediate characters, of whatever nature these may be, showing a gradual progression from one to another. In short, that there is no such thing in nature as a rigorously limited aggregate of species, is, I believe, a widely accepted opinion; therefore all genera must be more or less artificial and instituted primarily in order to secure a natural and systematic arrangement and succession of the species, and incidentally to enable these to be easily identified.

If this be granted there can, in the opinion of the writer, be no valid reason for the rejection of the genus Hemistenus Mots. (Areus Cas.). This is surely an instance where a division on the score of convenience is greatly to be desired, and is at the same time fairly warrantable from structural considerations. That there are a few forms which are intermediate and as it were connecting links between the genera Stenus and Hemistenus, is, as above indicated, no more than must be expected, and even with these intermediate forms (which, however, are not very evident in the American fauna), the two genera are apparently much more definite than a multitude of those which already exist, and which are considered well established, especially many of the Harpalinide genera.

III.

In the table given on page 285 of the present paper the species designated *Homalium fucicola* should be read *H. algarum*, under which name it has been described on page 316. The name *fucicola* has been employed by Kraatz for an Icelandic species which, although placed by Gemminger and Harold as a synonym of the Swedish *læviusculum* Gyll., may nevertheless prove to be a distinct species.

IV.

Polyphylla marginata is not described at present, further investigation being deemed necessary to establish its validity.

EXPLANATION OF THE PLATE.

Fig. 1—*Colusa eximia* Cas.
Fig. 2—*Pontomalota opaca* Lec.
2 a—Maxilla and maxillary palpus.
2 b—Ligula and labial palpus.
2 c—Mesosternal process.
Fig. 3—*Platyusa sonomæ* Cas.
3 a—Maxilla and maxillary palpus.
3 b—Ligula and labial palpus.
3 c—Mesosternal process.
Fig. 4—*Bryonomus canescens* Mann.—Maxilla and maxillary palpus.
4 a—Labial palpus.
Fig. 5—*Cafius* (*Remus*) *decipiens* Lec.—Maxilla and maxillary palpus.
5 a—Labial palpus.
Fig. 6—*Phucobius simulator* Sharp—Maxilla and maxillary palpus.
6 a—Labial palpus.
Fig. 7—*Orus punctatus* Cas.—Pronotum.
7 a—Maxilla and maxillary palpus.
7 b—Ligula and labial palpus.
7 c—Antenna and right mandible.*
Fig. 8—*Actidium robustulum* Cas.
Fig. 9—*Actidium granulosum* Cas.
Fig. 10—*Actidium attenuatum* Cas.
Fig. 11—*Euscaphurus saltator* Cas.—Head and antenna.
11 a—Maxillary palpus.
11 b—Labial palpus.

*The left mandible has not been examined.