

NEW PARASITIC HYMENOPTERA FROM THE ORIENTAL ISLANDS

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TWO TEXT FIGURES

This paper contains descriptions of new diapriids, bethylids, and braconids from the Philippine Islands, Borneo, and Singapore. The specimens studied in writing the descriptions were sent to the United States National Museum by Prof. C. F. Baker.

Thanks are due and here recorded to Mr. S. A. Rohwer for permission to study Professor Baker's material, and to Miss Eleanor Armstrong for drawing the head of the new species *Loboscelidia maculipennis*. The other drawings were made by me.

DIAPRIIDÆ

Genus *LOBOSCELIDIA* Westwood

Westwood founded this genus on a single species, *L. rufescens* Westwood, from Sulu Island, southwest of Mindanao, Philippine Islands. Kieffer has described two new ones in his recent monograph of the family Diapriidæ.¹

All the species, including those described in this paper, are from the islands southeast of Asia. *Loboscelidia defecta* Kieffer occurs both in Borneo and in Singapore if my identification is correct. Its type locality is Palawan Island of the Philippine group.

It seems probable that these wasps are myrmecophilous. They have somewhat the habitus of ants and the woolly appearance of the neck is characteristic of many myrmecophiles.

Key to the species of Loboscelidia Westwood.

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|---|-------------------------------|
| Head in front with a hornlike projection..... | <i>L. rufescens</i> Westwood. |
| Head in front without such a projection..... | 1. |
| 1. Basal nervure nearly absent, briefly indicated proximad. | |
| | <i>L. bakeri</i> sp. nov. |
| Basal nervure complete, distinct..... | 2. |

¹ Das Tierreich, Lief. 44 (1916) 14.

2. Body black; parapsidal grooves complete..... *L. nigra* sp. nov.
Body rufous..... 3.
3. Face with a broad, circular, and shallow depression bordered by a sharp carina, the carina nearly touching the eye margin and the anterior ocellus..... *L. antennata* sp. nov.
Face without an area inclosed by a carina..... 4.
4. Parapsidal grooves incomplete..... 5.
Parapsidal grooves complete..... 8.
5. Basal nervure with a sharp bend at distal end.....
L. philippinensis sp. nov.
Basal nervure not sharply bent at distal end..... 6.
6. Pronotum transverse..... 7.
Pronotum a little longer than wide..... *L. inermis* Kieffer.
7. Face with an inconspicuous median furrow; wings conspicuously covered with brown spots and streaks..... *L. maculipennis* sp. nov.
Face with a sharp median carina; each anterior wing with a yellowish band across its middle..... *L. carinata* sp. nov.
8. (4) Scutellum longitudinally striate or punctate..... 9.
Scutellum polished, faintly shagreened or unsculptured..... 10.
9. Mesonotum shorter than the scutellum, its median lobe shagreened; membrane on hind tibia wider than the tibia itself.. *L. collaris* sp. nov.
Mesonotum about as long as the scutellum, its median lobe polished.
L. scutellata sp. nov.
10. Dorsal cervical plate highly arched, not concave..... *L. defecta* Kieffer.
Dorsal cervical plate flattened, concave above..... *L. brunnea* sp. nov.

Loboscelidia bakeri sp. nov.

Male.—Length, 2 to 3 millimeters. Face flattened, smooth, finely shagreened, not carinate laterally, with a short median carina below, antennal ledge, seen from above, bilobed, emarginate medially, perpendicularly declivous in front, seen from the side without an inferior projection; dorsal cervical plate highly arched medially, quadrate, not excavated; cervical membrane just meeting, not overlapping, apparently without pubescence; antennæ as long as the body, slender, of an even thickness throughout; scape with a narrow membrane at base on the outside, a little longer than the three following joints united; joint 2 as long as wide, less than half as long as 3; joints 3 to 12 subequal in length and width, a little over twice as long as wide; joint 13 as long as 2 and 3 united, sharply pointed apically; pronotum about as wide as long, polished, feebly emarginate anteriorly, the posterior angles rather prominent; mesonotum broadly transverse, traversed longitudinally by two parallel parapsidal grooves and by two carinæ, one to each side, bisecting the lateral lobes; these carinæ not complete, obsolete anteriorly; median lobe longer than wide, faintly shagreened; scutellum more or less triangular, polished, its ante-

rior angles elevated, sharp; axillæ not indicated; membranous plates on legs narrow, inconspicuous; abdomen about as long as the thorax, wider, longer than wide; last segment sharply recurved, acute apically; wings large and long, mostly glabrous; maculations as in *L. inermis*; veins similar also but the basal nervure represented only by a stump proximad; radius five times as long as the anterior abscissa of subcosta, beyond the short stump of the basal nervure, nearly vertical; radius oblique, straight. Reddish brown, flecked with large black spots; sutures of thoracic sclerites blackish.

BORNEO, Sandakan (*Baker*), 4 males.

Type.—Catalogue No. 24315, United States National Museum. Paratype returned to Baker.

Loboscelidia nigra sp. nov.

Female.—Length, 3.60 millimeters. Face finely, obliquely aciculate, with a delicate median carina, and with a lateral carina extending from the malar space to the occiput, nearly touching the eyes medially; ocelli very large, nearly touching one another, the lateral ones less than their diameter from the back of the head; antennal ledge as in *L. bakeri* but more developed below, triangular seen from in front; face below antennæ obliquely striate; antennæ much longer than the body, slender, becoming narrower beyond the third joint; scape thick, broad, carinate, seen from the side three times as long as wide, a little longer than the next two joints united; joint 2 transverse, one-fourth the length of the third, which is a little less than three times as long as wide; joint 13 equal to 12, broadly rounded apically, nearly five times as long as wide; dorsal neckplate highly arched, distinctly longer than wide, with a shallow longitudinal depression; cervical membranes long, golden colored, striated, overlapping the shorter ones projecting from the anterior margin of the pronotum; pronotum transverse, slightly arched anteriorly and posteriorly, not emarginate in front, with two wide, shallow depressions behind; posterior angles of pronotum sharp but not prominent; mesonotum broadly transverse, polished, the posterior angles sharp, projecting over the axillæ; parapsidal grooves complete, parallel; median lobes very little longer than wide; scutellum broad, polished, sloping posteriorly, obliquely striate at the posterior angles; axillæ separated off from the scutellum by pitted sutures; propodeum perpendicular, polished; membranes on the legs inconspicuous, those on the hind legs wider; metatarsus of hind legs bent basally, as long

as the last three joints united; each tarsal claw with a sharp inner tooth; abdomen 6-segmented, as long as the thorax, the last segment punctulate, slightly recurved; wings glabrous, without cilia; basal nervure complete, oblique, the median cell wide; transverse medius as long as the subcosta beyond the basal vein, straight, oblique, not touching the submedius which is only half as long as the subcosta; postmarginal vein one-seventh the length of the radius, the latter straight, oblique, as long as the basal; forewings with a transverse brownish band in the region of the radius; otherwise the wings are hyaline. Black, touched in places with rufous; tegulae reddish, very large, convex, reaching to the apex of the scutellum, truncated apically.

MINDANAO, Dapitan (*Baker*), type. BASILAN (*Baker*), paratype.

Type.—Catalogue No. 24316, United States National Museum.

Loboscelidia antennata sp. nov.

Female.—Length, 2.50 millimeters. Head broadly transverse, much narrower than the thorax, as high as wide; cheeks very wide, wider than the compound eye, sparsely covered with long, erect, white hairs, as is also the rest of the head including the eyes; ocelli large, very close together, the lateral ones less than their diameter apart, more than their diameter distant from the posterior margin of the head; ocelli situated in a large immargined depression; frons, including the bases of the antennae, inclosed by a perfect circle formed by a sharp carina, this carina passing close to the eyes and to the anterior ocellus; inclosed area finely reticulated, subconcave; antennal ledge not prominent, perpendicular in front, truncate below; antennae 13-jointed, short and stout, not as long as the body, sparsely pubescent; scape seen from above like a knife edge, thickened distally, curved, viewed laterally three times as long as wide, oblong, with a narrow hyaline membrane below, as long as the five following joints united; joint 2 a little longer than wide, narrower than 1, slightly wider and shorter than 3; joints 4 and 5 subequal, as long as wide, as wide as 3, cylindrical; joint 6 shorter, transverse; joint 7 shorter than 6, more widely transverse; eighth joint as long as the seventh, wider; joints 9 to 12 about twice as wide as long, narrower than the scape; joint 13 as long as wide, broadly rounded apically, punctate; dorsal cervical plate triangular, narrowed anteriorly, strongly arched above, pubescent, not concave; on the side of this sclerite there is attached a striated membrane of the appearance of

matted hairs, the parts of which curve outward and forward, projecting over a similar but smaller structure on the posterior part of the head; on the pronotum below and behind these head structures is a membrane of much the appearance of the others, the structure of which can be more easily observed; it may be that the matted or woolly appearance referred to above is caused by inner striation of the membrane; pronotum broadly transverse, slightly narrowed anteriorly, not emarginate, its posterior angles sharp; pronotum finely reticulate, with two broad shallow depressions posteriorly; mesonotum a little over half as long as the scutellum, with a broad depression on the outside of each parapsidal groove; median lobe shagreened; scutellum large, transverse, longitudinally carinate, posteriorly shagreened, with a polished median groove; axillæ separated off by deep grooves; postscutellum medially roughened, mostly unsculptured; membranes on tibiæ and tarsi very wide, as wide as or wider than the joints to which they are attached; abdomen as wide as the thorax, shorter; ovipositor projecting, two-thirds as long as the scape; wings glabrous, very large and long, with a brownish band variegated with hyaline across the middle; transverse median nervure shorter than the subcosta beyond the basal, straight, perpendicular; radius three and one-half times as long as the anterior abscissa of the subcosta, nearly straight, oblique, as long as the basal; basal vein curved distad; median cell wide, half as wide as the radius is long; submedius less than half as long as the subcosta.

STRAITS SETTLEMENTS, Singapore (*Baker*), 1 female.

Type.—Catalogue No. 24317, United States National Museum.

This species is most remarkable and could possibly be placed in a new genus. In its antennal structure it differs from all the other species of *Loboscelidia*.

Loboscelidia philippinensis sp. nov.

Female.—Length, 4 millimeters. Head higher than long, the cheeks not wider than the eyes, without pubescence or with only a few scattered hairs; frons flattened, finely shagreened, bordered laterally by a rounded ridge which extends from the antennal ledge to the occiput; ocelli large, disposed in a low triangle, the lateral ones their diameter apart and their diameter distant from the back of the head; ocelli not situated in a depression, the anterior one-half its diameter or less from the others; antennal ledge bilobed; wider than high seen from in front; dorsal cervical plate regularly arched above, polished,

subconcave, longer than wide, its sides parallel; cervical membranes prominent, not so large as in *L. antennata*, not overlapping, those on the head and neck the longest, evenly corrugated; antennæ slender, as long as the body, the flagellum not narrowing toward tip, all the joints except the first cylindrical; scape with a wide membrane, seen from the side three times as long as wide, not quite as long as the next three joints united; joint 2 as wide as long, half as wide as the scape, one-third as long as 3; following joints to the twelfth subequal to the third, becoming a little shorter toward the tip of the antennæ; joint 13 two and three-fourths times as long as wide, broadly rounded apically, longer than 12; pronotum polished, as wide as long, slightly widened behind, truncated anteriorly, more or less concave in the middle, with an arcuate depression on posterior third; mesonotum polished, more than twice as wide as long, as long as the scutellum, less than half as long as the pronotum; parapsidal grooves deep, incomplete, not present on posterior one-fourth; scutellum a little wider than long, mostly polished and flattened, on the side posteriorly indistinctly striate; axillæ not separated off from the scutellum; postscutellum with a median ridge, either side of which is roughened; abdomen as long as the thorax, not recurved below at tip, polished; wings hyaline, with a brownish band across the middle, a large spot on costal margin at apical third, and dark streaks marking the submarginal and discoidal veins; basal nervure straight to distal third where it makes a sharp bend and enters the subcosta nearly at right angles; transverse median nervure a little shorter than the anterior abscissa of the subcosta, straight; median cell less than half as wide as the radius is long; radius oblique, as long as the basal vein, five times as long as the oblique anterior abscissa of the subcosta; membranes on femora and tibiæ wide but not so wide as in *L. antennata*; metatarsus of hind legs five and one-half times as long as wide, not sharply bent basally, as long as the next three joints united, wider than either; second joint twice as long as wide, wider and longer than the third; third twice as long as wide, wider and longer than the fourth; joint 4 more than half as wide as long, joint 5 three and one-half times as long as wide, narrower than 4, longer than 2; claws sharp, each with a short acute inner tooth. Rufous; femora and tibiæ touched with yellow.

MINDANAO, Ilagan (*Baker*), 2 females (type and paratype); Kolambugan (*Baker*), 2 female paratypes.

Type.—Catalogue No. 24318, United States National Museum. Paratype returned to Baker.

Loboscelidia maculipennis sp. nov.

Female.—Length, 3 millimeters. Head longer than high seen from the side, the cheeks not wider than the eyes; face flattened, deeply excavated in the region of the antennal sockets, carinate laterally, the ridge running from the antennal ledge to the occiput; face striate and aciculate, with a short longitudinal suture in the middle; ocelli not situated in a depression, close together, the lateral ones their diameters apart and their diameters distant from the posterior margin of the head; cheeks

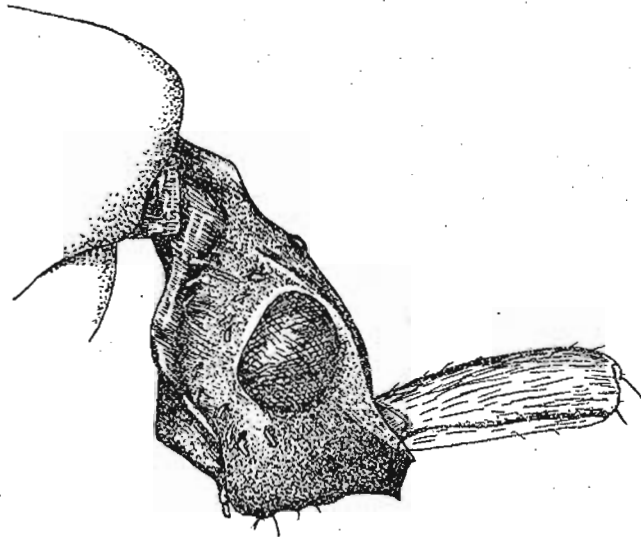


FIG. 1. *Loboscelidia maculipennis* sp. nov.; head, lateral view.

and malar space polished, sparsely covered with curious, short, club-shaped hairs of a silvery color; antennal ledge long, prominent, not thick, rounded in front; dorsal cervical plate flattened, quadrate, the membrane not conspicuous, extending down upon the cheeks, not touching the pronotal membrane which is ear-shaped, prominent; antennæ longer than the body, the joints beyond the scape cylindrical, equally wide; scape three times as long as wide, narrowed slightly proximad, with a narrow membrane beneath; pedicel as wide as long, one-third as long as joint 3, which is subequal to 12; in one antenna joint 10 is subconcave below and in the other antenna joint 10 is concave above (probably an abnormal condition); joint 13 three

times as long as wide, rounded apically; pronotum wider than long, polished, concave above, truncated anteriorly; pronotum sloping abruptly anteriorly; mesonotum polished, shaped as in *L. philippinensis*, as wide as the scutellum; parapsidal grooves incomplete, not indicated behind; scutellum transverse, polished, flattened, striate behind on the sides; axillæ partly separated off by deep grooves; postscutellum polished medially, not ridged; abdomen as in *philippinensis*; wings maculated as in *philippinensis*; basal nervure slightly bent at distal two-fifths; membranes on femora and tibiæ narrow, inconspicuous; front tarsi as in *philippinensis*. Body entirely rufous, the thoracic sutures blackish.

BORNEO, Sandakan (*Baker*), 1 female.

Type.—Catalogue No. 24319, United States National Museum.

This species may be the same as *L. philippinensis* but seems to be distinct. Intermediate forms are unknown, and it seems best to separate what seem to be the extremes.

Loboscelidia carinata sp. nov.

Female.—Length, 3 millimeters. Differs from *L. maculipennis* in a few minor particulars: face more strongly striate and granulose medially, with a sharp median carina; basal nervure bow-shaped, not so distinctly angulate; anterior wing hyaline, with a yellowish band across its middle.

STRAITS SETTLEMENTS, Singapore (*Baker*), 1 female.

Type.—Catalogue No. 24320, United States National Museum.

Loboscelidia defecta Kieffer.

In the lot received from Professor Baker is a series of fifteen specimens representing this species. Two were collected at Singapore, and the rest at Sandakan, Borneo. They agree very well with the original description.² Sometimes the anterior abscissa of the subcosta is present, but very short. Kieffer's figure shows the maculation of the wings very nicely. In some of the specimens at hand the spots are indistinct and merge together, or they are pale and hard to trace.

Loboscelidia brunnea sp. nov.

Female.—Length, 3 millimeters. Closely related to *L. defecta* Kieffer from which it differs as follows: Frons polished, shining, not shagreened, with the lateral ridges higher and sharper, and with a sharp median ridge on lower half; dorsal cervical plate

² Das Tierreich, Lief. 44 (1916) 18.

wider than long, distinctly concave above, smooth and shining; pronotum more strongly arched in front, depressed behind the cervical plate, across the middle a little wider than long; axillæ more sharply set off from the scutellum by deep grooves; radial nervure distinctly shorter than the basal, oblique; anterior abscissa of subcosta present, much shorter than the radius.

BORNEO, Sandakan (*Baker*), 1 female.

Type.—Catalogue No. 24321, United States National Museum.

Loboscelidia collaris sp. nov.

Female.—Length, 2.2 millimeters. Head as long as high, mostly without pubescence; frons flattened, scarcely excavated below, finely and evenly shagreened, carinate laterally, with the carina becoming obsolete above, not distinct on the vertex; cheeks and malar space finely shagreened; lateral ocelli their diameter distant from each other and from the back of the head; antennal ledge short, bilobed as seen from above, with a lower projection, the whole structure of a triangular shape when observed from in front; above the clypeus is an acute median carina; antennæ longer than the body, slender, the joints beyond the first subequal in width; scape compressed, slightly narrowed basally, seen laterally three times as long as wide, as long as the next three joints united; joint 2 as wide as long, nearly half as long as 3; joints 3 to 12 subequal in length and width; joint 13 longer, almost as long as 2 and 3 united, subacute apically; dorsal cervical plate longer than wide, slightly narrowed anteriorly, strongly arched above; space between the head and thorax filled by the golden lobes of the woolly substance noted in my description of *L. antennata*; the membranes overlap one another and the result is a billowy appearance; pronotum wider than long, truncate anteriorly, flattened posteriorly, more or less arched in front, with two broad, shallow depressions behind the middle; mesonotum three times as wide as long, shorter than the scutellum, the median lobe shagreened, the lateral ones sharply carinate on the outside, each with a submarginal depression; parapsidal grooves complete; scutellum flattened, longitudinally striate; axillæ separated off by deep furrows; postscutellum with a low ridge medially, polished; abdomen as in *L. defecta*; wings hyaline, with a brownish band across the middle of each, and with a pale brown spot behind the band along the costal margin; basal nervure slightly curved distally, as long as the radius, four times as long as the anterior abscissa of the subcosta; nervulus shorter than the

subcosta beyond the basal, a trifle shorter than the anterior abscissa; submedian very short, much less than half as long as the subcosta; hyaline plates on femora and tibiae very wide, on hind legs wider than the joints to which they are attached; metatarsus of hind legs four times as long as wide, slightly bent near the base, distinctly shorter than the three following joints united; joint 5 as long as 3 and 4 united, nearly four times as long as wide. Rufous; margin of the pronotum and the tegulae in part blackish.

STRAITS SETTLEMENTS, Singapore (*Baker*), 1 female.

Type.—Catalogue No. 24322, United States National Museum.

Loboscelidia scutellata sp. nov.

Female.—Length, 3 millimeters. Differs from *L. collaris* as follows: Head higher than long, covered with long silvery hairs below; cheeks polished, as wide as the eyes; face strongly shagreened, with a median carina below; carinae on the sides of the face sharp, extending to the occiput; ocelli very close together, the lateral ones less than their diameter from each other and from the posterior margin of the head; scape less than three times as long as wide, a little shorter than joints 3 and 4 united; joint 2 as wide as long; joint 3 as wide as 2 and any of the joints following it, two and one-half times as long as the second joint; following joints becoming gradually longer and narrower, the middle ones slightly curved; joint 13 as long as 2 and 3 united, five times as long as wide, subacute at tip; dorsal cervical plate scarcely narrowed anteriorly, longer than wide, with a shallow median depression; pronotum a little wider across the middle than long, somewhat wider posteriorly, polished; mesonotum shining, two and one-half times as wide as long, as long as the scutellum; parapsidal grooves complete, the median lobe subconcave; scutellum finely longitudinally striate; axillae separated off by deep grooves; postscutellum slightly elevated medially, polished; wings subhyaline, darker around the radius; nervulus longer than the anterior abscissa of the subcosta, straight; basal nervure nearly straight, slightly curved distad, as long as the radius; anterior abscissa of subcosta longer, about half as long as the subcosta before the latter forks, straight; plates on femora and tibiae narrow, not wider than the joints to which they are attached; metatarsus a little over four times as long as wide, nearly as long as the next three joints united. Coloration as in *L. collaris* sp. nov.

BASILAN (*Baker*), type. MINDANAO, Surigao (*Baker*), 1 paratype. Five specimens received.

Type.—Catalogue No. 24323, United States National Museum. Paratype returned to Baker.

BETHYLIDÆ

Lestodryinus stantoni Ashmead.

Dryinus stantoni ASHMEAD, Proc. U. S. Nat. Mus. 28 (1904) 134 (♀).

Prodryinus stantoni (Ashmead) KIEFFER, André, Spec. Hym. Eur. 9: 498; Das Tierreich, Lief. 41 (1914) 53.

Runs in Kieffer's key³ to *L. perkinsi* Kieffer and differs from that species as follows: Frons with many variously curved longitudinal carinæ, and with a high and sharp median ridge below the anterior ocellus, clothed with short silvery hairs; clypeus wider than long, wide anteriorly, the two teeth rounded and far apart; mandibles blackish medially, brown basally, and with rufous teeth; first and second antennal joints yellowish brown; 3 to 9 black; joint 9 one and one-half times as long as wide; joint 10 yellow, longer than 9, slightly narrowed distally; mesonotum two-thirds as long as the pronotum, measuring the latter from its anterior border to the apices of the lateral lobes, finely granular, somewhat more coarsely so posteriorly, densely covered with short silvery hairs; postscutellum granular, half as long as the scutellum; upper face of propodeum bordered posteriorly by a low ridge and with another ridge immediately in front of the other; distal part of radius hardly longer than the proximal part; postmarginal short, not well pigmented, much shorter than the parastigma; legs rufous, variegated considerably with blackish; middle and posterior tibiæ, metatarsus, and last tarsal joint piceous; other tarsal joints reddish; front femora gradually narrowed distally, thick basally, brown; front coxæ hardly over half as long as the femora, brown with yellow markings; lateral claw of chela with a row of nine widely separated white spines, the distal tooth minute, hard to see; last segment of abdomen thickly covered with short white hairs on apical half; abdomen mostly black, the last segment yellowish brown.

Length, 4.5 millimeters.

LUZON, Manila.

³ Das Tierreich, Lief. 41 (1914) 20.

Type.—Catalogue No. 8000, United States National Museum. Redescribed from the type specimen in the United States National Museum.

Lestodryinus kiefferi sp. nov.

Female.—Length, 6.5 millimeters. Head a little over two-thirds as long as wide, flat above, its posterior margin acute, straight; head strongly excavated below the upper posterior margin, attached to the thorax at its ventral surface, wrinkled and with a rather deep longitudinal furrow below; frons shagreened, with many wavy longitudinal wrinkles, and with a median carina; hind margin of eyes projecting beyond the head posteriorly; median carina not reaching the clypeus; clypeus granular, wider than long, bidentate at apex, the emargination arcuate; malar space two-thirds the length of the clypeus, longitudinally striate; mandibles 4-dentate, the lower tooth the longest; maxillary palpi 5-jointed, brown; fifth joint hardly longer than the fourth, yellow, blunt apically; labial palpi 3-jointed, brown; first joint three times as long as wide, devoid of pubescence, as long as the second; second joint scarcely longer than wide, flattened, densely covered with long white hairs; third joint much longer, threadlike, nearly as long as the first two united, finely pubescent; scape more than twice as long as the pedicel; scape and pedicel united not quite three-fifths the length of joint 3; joint 3 scarcely widened apically, less than twice as long as 4; joints 8 to 10 yellow; 10 longer than 9, as long as 7, blunt apically; pronotum mostly granular, finely pubescent, somewhat elevated posteriorly, without a transverse incision anteriorly; mesonotum rugose, inconspicuously pubescent, the parapsidal grooves complete but shallow and nearly lost in the rough sculpture; scutellum rugose, with a deep narrow depression across its base, the depression divided medially by a narrow partition; propodeum irregularly reticulate, a condition similar to that found in *Psilodryinus reticulatus* sp. nov.; propodeum rounded apically, somewhat excavated behind, the excavation bordered on each side by a longitudinal ridge; abdomen as long as the thorax, somewhat flattened; the last two segments compressed, the seventh more strongly so than the sixth; segments 1 to 5 finely granular, opaque, sparsely pubescent; 6 shining, with a few large scattering punctures; segment 7 triangular seen from the side, rounded apically, like a knife edge seen from above, finely and closely pubescent and punctate; seventh tergite very small, triangular, with a row of

long black hairs on each side posteriorly; ovipositor projecting the length of the sixth tergite, yellow, the sheaths brown; wings hyaline, with two brown transverse bands, the inner one narrow and inconspicuous, the outer one broad and well defined; radius not half complete, well pigmented, not much longer than the basal; nervulus interstitial with the basal, narrowly interrupted before it reaches the medius; legs long; front coxa as long as the metatarsus, not so thick as the femur; trochanter narrower than the coxa, two-thirds as long; femur as long as the coxa and trochanter united; a trifle longer than the tibia; metatarsus longer than all the following joints united; joint 4 flattened, longer than 2 and 3 united; inner claw of chela about as long as joints 2 to 4 united, furnished inside with a double row of short thorns; outer claw slightly curved, with a row of thorns inside claws on middle and hind legs with an inner tooth basally. Black; mandibles, antennal socket, last three antennal joints, chela, metatarsus of anterior legs apically, and the other tarsal joints entirely, last segment of abdomen, rufous for the most part.

LUZON, Mount Maquilang (*Baker*).

Type.—Catalogue No. 24324, United States National Museum.

This species, known from a single specimen, differs from *L. luzonicus* Kieffer in the color of the antennae and in having the radius shorter. Other differences occur and may be recognized by comparing my description with Kieffer's.⁴

Psilodryinus thoracicus sp. nov.

Female.—Length, 5 millimeters. Very closely related to *P. sumatranus* of Enderlein, from which it differs as follows:

Distance of lateral ocelli from each other more than half their distance from the anterior one; posterior margin of pronotum not emarginate, the lateral lobes not in evidence; elevation on posterior lobe of pronotum with many transverse carinae anteriorly; wings colored with a light brown; first abscissa of cubitus, discoideus, first recurrent, and subdiscoideus visible as white lines in the semiopaque transverse wing band; basal vein well pigmented to distal third; cubitus and subdiscoideus visible as brownish lines distad of the whitish transverse band, not reaching the wing margin; legs dull reddish except as follows: Anterior trochanters, tibiae basally, most of femora, posterior metatarsus except at apex, middle and hind tibiae,

⁴ Das Tierreich, Lief. 41 (1914) 24.

metatarsi, and last joint of tarsi dark brown or fuscous; fourth joint of posterior tarsi considerably longer than 2 and 3 united, two-thirds as long as the first; lateral claw yellow, unarmed except for a short tooth subapically; head and thorax closely covered with short silvery hairs.

PALAWAN, Puerto Princesa (*Baker*), 1 female.

Type.—Catalogue No. 24325, United States National Museum.

Psilodryinus reticulatus sp. nov.

Female.—Length, 6.5 millimeters. General structure as in *P. thoracicus* sp. nov.; face with many parallel longitudinal ridges which extend back on the occiput, with a median carina; interocellar space traversed by several of the facial carinae; clypeus rounded apically, shagreened; labial palpi 3-jointed, short; joint 1 twice as long as wide, as wide as 2 but a little longer, not quite as long as 3; 3 blunt at apex, much narrower than 1 or 2, threadlike; maxillary palpi 5-jointed; first joint twice as long as wide, half as long as 2, as wide as 2 distally; joint 2 widened apically, a little shorter than 3 but much wider; joint 3 as wide as 4 or 5, as long as 5, a little longer than 4; joint 5 pointed apically, threadlike; scape twice as long as the pedicel; pedicel over twice as long as wide, wider than joint 3; joint 3 very long, over two and one-half times as long as the scape, very slender, widening distally; joint 4 nearly two-thirds as long as 3, a little longer than 5; joint 6 half as long as 4, four times as long as wide, following joints except the tenth becoming gradually shorter; joint 10 as long as 7, blunt apically; pronotum closely punctulate, very little longer than wide, somewhat narrower than the thorax, highly elevated behind the horseshoe-shaped incision, the elevation anteriorly with a few sharp transverse carinae; mesonotum with two diverging carinae in the position usually occupied by the parapsidal grooves, with a median carina; inclosed areas finely punctate, covered with short white hairs; scutellum with four foveae basally, the lateral ones the largest, with longitudinal and transverse carinae intersecting; propodeum evenly convex, covered with small polygonal areas bordered by curved raised lines, without pubescence; legs black except the lateral claw of the chela; front coxae long, reaching a little behind the posterior margin of the prosternum, densely pubescent beneath; front trochanters long, curved medially, thickened distally, half as long as the femora; femora a little longer than the tibia, thicker, narrowed distally; tibiae gradually narrowed proximally; posterior metatarsus not

quite half as long as the tibia, equaling in length the distance from the base of the fourth joint to the apex of the fifth; fourth joint much longer than the second and third united, widened distad; median claw of chela as long as joints 1 to 4 united, with a row of short white plates below; lateral claw yellow, bare, curved behind the middle, narrow, as long as joints 1 and 2 united, with a short tooth before the apex; legs entirely covered with a short white pubescence; tarsal claws sharp, without teeth; wings as in *P. thoracicus*, but with a narrow transverse band in the region of the radius and with the radius a little shorter; it can be clearly seen that the darker color of the wings is due to the presence of pigment in the hairs; abdomen rather long, sharply pointed and narrowed toward apex, polished, sparsely covered with short white hairs; first segment bell-shaped, of the form found in the wasps of the subgenus *Odynerus*; sixth segment shorter than the fifth, longer below than above; ovipositor projecting the length of the last tergite. Body black; antennæ at tip and abdomen at base and apex touched with rufous.

LUZON, Los Baños (*Baker*), 2 females.

Type.—Catalogue No. 24326, United States National Museum.

One specimen has the ovipositor more in evidence. The abdominal segments are telescopic and so the relative proportions vary considerably.

Genus NEOANTEON novum

Head transverse, wider than the thorax, margined and slightly arcuate posteriorly; face convex; cheeks rather wide, narrower than the eyes; eyes large, bare, converging slightly anteriorly; ocelli present, arranged in a small triangle; clypeus transverse; mandibles 4-dentate, the second and fourth teeth the largest; upper tooth a little longer than the third; maxillary palpi 5-jointed; antennæ 10-jointed, joints 3 to 9 of somewhat similar shape and size; thorax short, wider than high, scarcely longer than wide; mesonotum transverse, longer than the pronotum, with the parapsidal grooves briefly indicated anteriorly, far apart; pronotum inconspicuous seen from above, somewhat constricted medially; scutellum transverse, unarmed, with a narrow and deep fovea across its base; propodeum areolated, with ten inclosed spaces, declivous, with a broad vertical impression laterally; abdomen small, with a long petiole, constricted below between the petiole and the second sternite; wings normally developed, maculate; venation generally as in *Anteon*

Jurine; radius with proximal abscissa straight, a trifle longer than the distal abscissa which is slightly curved, almost reaching the wing margin; submedian cell nearly as long as the median, the nervulus oblique; brachius short, well pigmented basally; basal vein shorter than the first abscissa of the radius, abruptly angulate before it attains the subcosta; prostigma absent, parastigma half-elliptical, shorter than the basal nervure; hind wings without a cell; legs moderately long; metatarsus of hind legs longer than the fourth joint which is longer than 2 and 3 united; claws of chela strongly curved, short, the inner one with a broad blunt tooth medially, and the outer one with a rather long sharp tooth below at distal third; otherwise the claws are unarmed; claws of middle and hind legs sharp, without dentition.

This genus comes closest to *Anteon*. It differs principally in its pedicellated abdomen and in the peculiar structure of the chelæ which are devoid of bristles and lamellæ. The venation also offers minor differences.

The genotype is from the Philippine Islands and may be known under the name:

Neoanteon rubrica sp. nov.

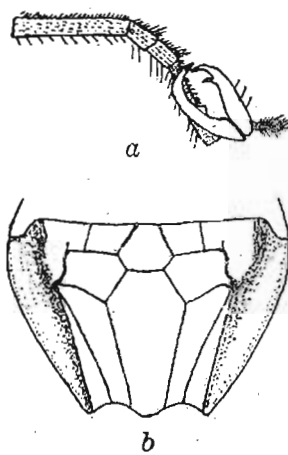


FIG. 2. *Neoanteon rubrica* sp. nov.; a, anterior tarsus, lateral view; b, propodeum, dorsal view.

Female.—Length, 3 millimeters. Entire body shining, without strong sculpture, finely and sparsely pubescent; face with scattered punctures, with a median carina extending from the anterior ocellus to the clypeus; subconvex, rounded anteriorly; scape short, nearly as long as joints 3 and 4 united; joint 2 a little shorter than 3; joints 3 to 6 subequal, a little longer but no wider than joints 7 to 9; joint 10 longer, broadly rounded apically; mesonotum with a few scattered punctures; propodeum areolated as shown in fig. 2; abdomen as long as the head and thorax united, depressed, mostly without pubescence; petiole slender, seven times as long as wide, as long as the propodeum;

second tergite scalelike, longer than the petiole, broadly rounded apically, its sides extending around the base of the petiole in a wide subhyaline plate; third segment as long as all the follow-

ing united, shorter than the second; segment 4 longer than 5; segment 6 compressed, a little longer than the fourth; anterior coxa as long as the pronotum, densely pubescent below; femur longer than the coxa and trochanter united, wider than the coxa; tibia as long as the first three tarsal joints united, its distal spur blunt, finely pubescent; metatarsus twice as long as the next two joints united, about six times as long as wide; joints 2 and 3 equal, as long as wide; empodium half as long as the fourth joint; wings smoky, with three transverse brown bands, one through the basal, one through the radius, and the other near the apex. Rufous; scape, pedicel, base of third joint, joints 7, 8, and 9, clypeus, mandibles except the teeth, and all the legs straw-colored; antennal joints, other than those mentioned above, dark brown.

LUZON, Los Baños (*Baker*), 2 females.

Type.—Catalogue No. 24327, United States National Museum.

BRACONIDÆ

Helorimorpha fumipennis sp. nov.

Female.—Length, 4.5 millimeters. Head as wide as the thorax, twice as wide as long, strongly punctate, a white hair issuing from each puncture; middle of face somewhat less strongly punctate; clypeus broadly transverse, slightly and broadly emarginate apically, flattened, finely punctate; mandibles long, the upper tooth longer than the lower, very sharply pointed; antennæ originating above the middle of the face, as long as the body, all the joints subequal in width, cylindrical; scape punctate, more than twice as long as wide; joint 2 a little longer than wide; 3 narrowed basally, as long as the scape; following joints to the seventeenth becoming gradually shorter; joint 18 as long as 7, sharply pointed apically, two and one-half times as long as wide; face with a sharp keel between the antennæ; aperture inclosing antennal socket opening upward, circular; thorax short, two-thirds as wide as long, as high as wide, marked all over with large, shallow, five- or six-sided pits bordered with low rounded ridges; parapsidal grooves not indicated; propodeum quadrate, broadly and shallowly excavated on its posterior face; first abdominal segment six-sevenths as long as the thorax, slender, curved, gradually widened apically, much narrower than the hind coxæ; abdomen entirely polished, the segments beyond the first forming a solid piece, as long as the thorax; wings brownish, hyaline apically, basally (including the entire basal cell), and medially in a narrow band dividing

the first cubital cell and the second discoidal at base; veins brown; first transverse cubitus straight, as long as the second abscissa of the cubitus; first abscissa of the radius straight, as long as the second abscissa and second transverse cubitus united, the latter a little longer than the former; discoidal vein short beyond the second transverse cubitus, represented by a long brown streak distally; third abscissa of radius straight, reaching the postmarginal which extends slightly beyond their junction. Body shining black; legs yellowish brown to piceous, the coxæ and most of hind legs darker; antennæ yellowish brown basally, piceous toward the apex.

Male.—Length, 4.5 millimeters. Differs little from the female. Only by the slightly extruded genitalia can I determine one specimen as the male. The ovipositor may be seen in the type by the use of the highest power of the binocular microscope. It is nearly concealed beneath the overhanging edges of the apical sternites.

MINDANAO, Dapitan (*Baker*), 2 specimens.

Type.—Catalogue No. 24328, United States National Museum.

This species differs from *H. fisheri* and *H. brasiliensis* in having the body black, and from *H. egregia*, the genotype, in having the wings tinged with brown.