

ENTOMOLOGY.—*New neotropical myrmecophiles*.¹ WILLIAM M. MANN, U. S. National Museum, Washington, D. C. (Communicated by S. A. ROHWER.)

Descriptions of the following new myrmecophilous beetles have been prepared for some time, and duplicate specimens of some of the

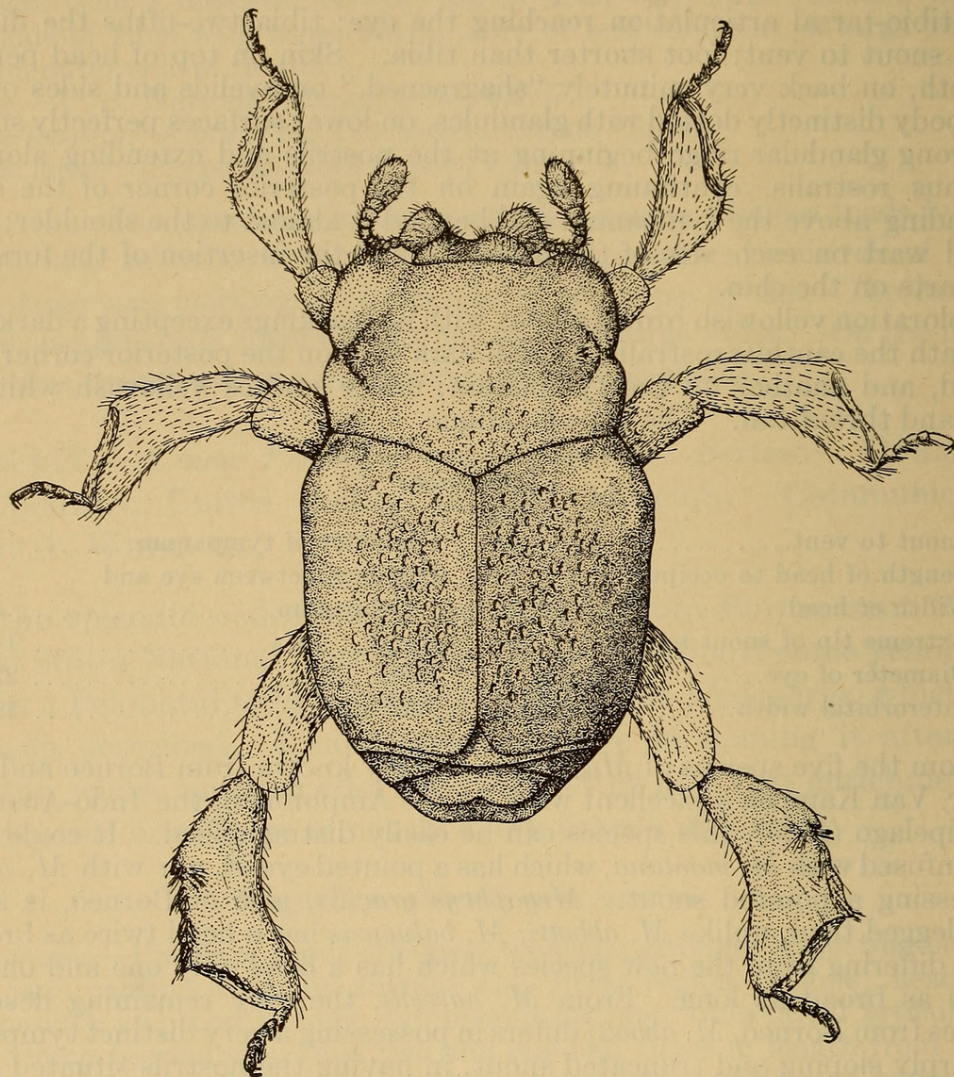


FIG. 1.—*Terapus mexicanus*

species have been sent to various correspondents. With the exception of the new species of *Terapus*, all of the myrmecophiles described in this paper are guests of various species of Army Ants.

***Terapus mexicanus*, new species**

Length 2 mm.

Brownish red, shining. Head sparsely, coarsely and irregularly punctate, and with short and fine erect hairs, clypeus and labrum smooth, front rather

¹ Received Aug. 25, 1926.

strongly concave and at middle with an impressed line extending to base of labrum; sides in front of eyes thickly margined, the margins diagonal above and extending forward as very fine carinae bordering the median impressed line; clypeus transversely concave. Pronotum with sparse irregular punctures, coarsest along the basal border; transverse, broadest behind, anterior border broadly emarginate at middle; anterior corners rounded, posterior corners broadly angulate, sides bilobed, the anterior lobe the longest of the two and the inner surface of both impressed, bordering a nearly flat triangular area in the middle of which is a rounded tubercle bearing a thin brush of yellow trichomes; median surface evenly convex. Elytra longer than broad, humeri gibbous, basal margin with several short, shallow impressions; surface with abundant elongate punctures, coarser than on pronotum. Propygidium transversely hexagonal, divided at middle by a bi-arcuate line, the upper surface flat, the lower surface roundly elevated at sides and concave at middle; surface very sparsely punctate. Pygidium a little broader than long, sparsely and finely punctate. Keel of prosternum as broad in front as behind, sides very feebly arcuate, nearly parallel, obtusely margined, the margins rounding and converging in front becoming almost obsolete, at middle posterior border broadly emarginate, surface finely and densely punctate and distinctly concave; a feeble transverse impression at base of lobe, which is finely punctate and shining, and, at anterior border, entire. Mesometasternum without dividing line; anterior border and sides with a fine margin, the anterior border biconcave, narrowly arcuate at middle, sides nearly straight. Legs broad, anterior femora stout, dorsal edge straight, ventral concave, tibiae broadly triangular, the basal half of outer border arcuate, apical half nearly straight, with a few very small, widely separated spines; middle femora longer, tibiae elongate triangular, the basal edge feebly concave, longer than the apical, which is more concave and separated from it by an angle; posterior femora broad, rather compressed, with a strong, transverse truncated lobe at base of dorsal border, ventral border concave at middle, rounded at base, tibiae broad and flattened, lower border concave at middle, upper border with the basal portion nearly two times as long as the apical, projecting and rounded at middle, separated from the anterior edge by an angle.

Type locality.—Mexico, San Diego Cocula, Jalisco, Guadalajara.

Host.—*Pheidole kingi* Pergande.

Type and paratypes.—Cat. No. 29051 U. S. N. M.

Described from five specimens (one type) taken by the writer with host ant, which nests in populous colonies common on moist slopes.

The legs, the elytra, the sculpture and color are entirely different from the other species of *Terapus* to which I assign this species on account of the structure of the head and thorax. It has no close relationship with *T. mnriszechi*.

The pilosity is fine and very short above, equally fine but longer on the legs. There is a distinct though thin line of golden trichomes on the apical half of the upper edge of the basal part of the posterior tibiae.

***Ecitophya rapaxae*, new species**

Length 6 mm.

Opaque, dark brown to black, apical half of gaster, ventral surface of thorax, the coxae and trochanters lighter. Moderately fine and very dense punctation on head, body and appendages; elytra also finely tuberculate. Hairs coarse, erect, mainly black, but some with brownish reflections.

Head a little longer than pronotum, broadest just posterior to eyes from where the sides converge to the straight posterior border which is less than one-half as broad as the front between the eyes; vertex convex; front behind eyes with longitudinal impression at middle. Clypeus very strongly carinate at middle for two-thirds its length, anterior margin nearly straight. Eyes convex. Basal antennal joint two times as thick and two-thirds as long as the third, second joint about as long as broad, third joint longer than the fourth and fifth together, joints 3 to 9 nearly three times as long as broad; penultimate joint as long as the terminal, which is obliquely connate at tip. Pronotum only slightly broader than head including eyes, broadest behind middle, anterior angles and border broadly rounded, sides, posterior to middle feebly concave and divergent, posterior angles narrowly rounded, hind margin broadly convex; disc at middle narrowly and strongly impressed longitudinally, the impression somewhat broadened anteriorly; sides broadly and shallowly concave. Elytra broader than pronotum and much longer than broad, humeri broadly and posterior angles narrowly rounded, sides nearly straight, posterior border emarginate. Abdomen but little broader than elytra and shorter than head and thorax together. Legs very long and slender, with the posterior basitarsi nearly as long as the remaining joints together.

Type locality.—Cachneta Esperanza, Rio Beni, Bolivia.

Type.—Cat. No. 29052 U. S. N. M.

Host.—*Eciton rapax* Smith.

A single specimen found by the writer in a file of the ants.

This species is closest to *Ecitophya simulans* Wasm., but distinct in the structure of the head, which is comparatively broad in front and strongly narrowed behind, its more convex eyes, more elongate elytra and coarser punctuation.

***Ecitomorpha melanotica*, new species**

Length 3.75 mm.

Opaque black, appendages dark fuscous; evenly cribrate-punctate, more finely and shallowly on abdomen.

Hairs erect, black, long and finely tipped, moderately abundant, shorter and stiffer, semi-erect and more abundant on appendages.

Head more than twice as long as broad and a little broader behind than in front, sides feebly convex; front shallowly impressed at middle between eyes; vertical region feebly convex. Clypeus convex, anterior border broadly emarginate. Antennae long, thickened apically, the basal joint thick and convex at sides, shorter than joints 2 and 3 together, second joint a little more than half as long as the third and as long as the fourth, joints 4-10 gradually increasing in length and thickness and all distinctly longer than broad, the terminal one and one-third times as long as the penultimate and slightly narrower, slightly arcuate, narrowed and rounded apically. Pronotum a little shorter than in *E. arachnoides*, the median longitudinal impression strong, the lateral depressions very feeble. Elytra together a little broader than their length at suture, anterior and posterior corners broadly rounded, sides nearly straight, posterior border rather strongly emarginate at middle. Abdomen convex, elongate, as broad in front as behind, sides slightly arcuate.

Type locality.—Mixco, Guatemala.

Host.—*Eciton burchelli* var. *infumatum* Wheeler.

Type.—Cat. No. 29053 U. S. N. M.

Described from a unique specimen, collected by the writer as the result of an hour's watch of an army of the ants.

This is distinct from *Ecitomorpha arachnoides* Wasm. in having a shorter, broader head, more narrowly compressed between the eyes, and in its more slender antennal joints. The impressions on the sides of pronotum are more feeble than in *E. arachnoides*.

***Mimeciton antennatus*, new species**

Length 2.10 mm.

Yellowish brown, abdomen darker; subopaque, finely rugulose-punctulate, more finely and shallowly on the abdomen, which is moderately shining. Pile and pubescence very fine and silky, yellow in color, moderately abundant on head, body and appendages.

Head from the front, quadrate, about one and two-thirds times as long as broad, sides and posterior border straight, cheeks swollen, front between the antennal foveae strongly elevated and subcarinate, triangular in front and continuous with clypeus, the surface of which is flattened and the anterior border truncate; outer border of antennal foveae strongly margined. Mandibles thick basally, sharply pointed at tips. Antennae long and rather stout, their scapes longer than the head, of nearly uniform thickness and slightly arcuate; second joint broad, somewhat compressed and curved, longer than joints 3-4-5 together; joint 3 transverse, joints 4 to 9 gradually increasing in length and thickness, those anterior a little longer than broad; terminal joint longer than the preceding two together, shallowly constricted in front of middle, rounded at tip. Pronotum about two times as long as broad, broadest and with sides rounded in front, impressed shallowly and transversely near middle. Elytra without indication of suture, longer than broad, posterior border deeply emarginate, with the sides extending as vertical, rather thick lamellae, projecting and obtuse at tips and entirely concealing from the side the short abdominal peduncle. Abdomen very convex, strongly incrassate behind, shortly and narrowly pedunculate in front. Legs long and slender; joints of posterior tarsi very long.

Type locality.—Tena, Ecuador.

Host.—*Eciton (Labidus) praedator* F. Smith.

Type and paratypes.—Cat. No. 29054 U. S. N. M.

Described from five specimens (one type) taken by F. X. Williams, Feb. 24, 1923, in marching files of the host ant.

This species differs from *Mimeciton pulex* Wasm. and *Mimeciton zikani* Wasm., both of which also live with *Eciton praedator*, in being more opaque, in its shorter and broader head with the front more elevated between the antennal insertions, and in the form of the second antennal joint. This is peculiar being narrow basally, clavate anteriorly and broader than the following joints, quite scapiform in itself, and as long as the following three joints together.

CEPHALOPLECTINAE

Cephaloplectus trilobitoides, new species

Length 1.75 mm.

Dark reddish brown, form broad, pubescence short, whitish, moderately abundant, pilosity long and fine, suberect, arranged in about ten longitudinal rows; abdomen rather thickly pilose, apical segment at base with several stiff, though slender, dark, needle-like hairs as long as the segment itself.

Head above about four times as broad as long. Pronotum transverse, a little longer than the elytra; posterior corners strongly projected and acute; posterior border straight at middle. Elytra transverse, little narrowed behind, sides moderately arcuate, posterior corners slightly projecting and rounded, border straight. Abdomen tapering, last segment quadrate, truncate apically. Labrum transverse, rounded at sides. Penultimate joint of maxillary palpi elongate, cylindrical. Mesosternum roundly and rather narrowly emarginate behind.

Type locality.—Esquintla, Guatemala.

Type.—Cat. No. 29055 U. S. N. M.

Host.—*Eciton coecum* Mayr.

Related to *Cephaloplectus quadriglume* Wasm., but smaller and proportionately broader and with the posterior corners and pronotum much longer and more acute. Described from a single specimen collected by the writer.

Cephaloplectus flavus, new species

Length 2.25–2.50 mm.

Pale yellow-brown throughout, feebly shining; head above, thorax and elytra rather densely covered with short and fine yellowish pubescence and with abundant, regular, long, stiff very finely tipped sloping hairs; abdomen and ventral surface of thorax with recumbent pilosity.

Labrum nearly twice as broad as long, sides arcuate, anterior border shallowly emarginate. Penultimate joint of maxillary palpi cylindrical, three times as long as broad. Mentum quadrate, transverse. Antennae flattened, basal joint short, club not sharply distinct from remainder of antennae, intermediate joints very strongly transverse. Pronotum distinctly longer than elytra, convex, sides arcuate, posterior corners angulately produced. Elytra transverse, posterior corners and border broadly arcuate. Abdomen strongly tapering, tip narrow and truncate. Prosternum shallowly concave between coxae and a little behind, then convex; posterior border strongly, arcuately emarginate.

Type locality.—Hamburg Farm, Santa Clara, Costa Rica.

Type and paratype.—Cat. No. 29056 U. S. N. M.

Host.—*Eciton*.

Differs from *Cephaloplectus quadriglume* Wasm. in its more slender form, smaller size and pale coloration. Described from two specimens collected by F. Nevermann, one selected as type.

Cephaloplectus mus, new species

Length of head, thorax and elytra 2.25 mm. (abdomen strongly contracted). Broadly oval, convex, moderately shining, coriaceous; rather heavily

pubescent and with abundant, slanting, acute, yellowish hairs; color dark brownish red.

Head above a little less than four times broader than long. Pronotum rather strongly convex above, broader than long and distinctly longer than the elytra, posterior corners projecting and subangulate. Scutellum large and triangular, less than two times as broad as long. Elytra at base as broad as pronotum, sides feebly arcuate, posterior corners very broadly rounded, posterior border straight. Ultimate abdominal segment narrowly rounded at middle. Labrum and mentum transverse. Prosternum broadly and shallowly impressed posterior to coxae, flat behind, posterior border deeply and rather narrowly excavated.

Type locality.—Mera Oriental, Ecuador.

Type and paratype.—Cat. No. 29057 U. S. N. M.

Host.—*Eciton vagans* Smith.

Described from two specimens (one type) taken Feb. 1923 by F. X. Williams in files of the host ant.

This is larger than *Cephaloplectus quadriglume*, the elytra are distinctly broader, the pubescence above much thicker, the scutellum is also proportionately large, in *C. quadriglume* very small.

***Cephaloplectus pusillus*, new species**

Length 1.60 mm.

Pale yellow-brown, shining; pubescence very short and white, not dense; surface finely coriaceous, sparsely punctate, each puncture with a long and fine, nearly erect pale yellow hair.

Head above four times as broad as long; labrum and mentum transverse, flat. Pronotum transverse, distinctly longer than elytra, posterior corners projecting and acute. Elytra individually broader than long, posterior corners less broadly rounded than in *Cephaloplectus flavus*. Last abdominal segment truncate. Abdomen rather thickly pilose and with a few coarser, erect hairs, all golden yellow in color. Mesosternum rather broadly emarginate.

Type locality.—Hamburg Farm, Santa Clara Province, Costa Rica.

Type.—Cat. No. 29058 U. S. N. M.

Host.—*Eciton*.

This species resembles *Cephaloplectus flavus*, but has the posterior angles of the pronotum much more elongate and arcuate, the elytra are much broader (in *C. flavus* each is distinctly longer than broad), and the erect hairs on the dorsal surface are sparse but longer and more erect. Described from a single specimen collected March 3, 1925, by F. Nevermann.

***Eulimulodes*, new genus**

In habitus and general structure resembling *Cephaloplectus* but differing in the maxillary palpi and antennae. The maxillary palpi have the first joint very small, the second about as long as the third, slender basally, triangularly clavate and somewhat compressed apically; the third joint is elongate oval and compressed, obliquely truncate at apex; the terminal joint is thickly subulate. The basal antennal joint is large and nearly as long as the remaining part of antennae excluding the club, the following joints are small and

submoniliform; the club is large and strongly compressed, composed of two broad segments, the apical slightly the longest. The remainder of head and the prosternum are very similar to these parts in *Cephaloplectus*.

Genotype.—*Eulimulodes mexicanus*, new species.

***Eulimulodes mexicanus*, new species**

Length 2 mm.

Brownish red. Broadly oval, tapering behind, coriaceous, closely seriolately pilose, the pile short and appressed, pale yellow, almost white; surface moderately shining.

Portion of head visible from above three times as broad as long, its anterior border forming an even arc with the sides of pronotum; labrum slightly transverse, a little broader behind than in front, sides straight, anterior border shallowly emarginate and with an impressed space near margin. Penultimate joint of maxillary palpi broad, subovate and compressed, terminal joint subulate and about three-eighths as long as the penultimate. First antennal joint nearly as long as side of labrum, club oval, strongly flattened, the two joints subequal in length and very much broader than the moniliform joints between it and the basal. Pronotum a little broader than long, about as long as elytra, strongly convex, sides arcuate, posterior corners moderately produced and narrowly rounded, posterior border nearly straight. Scutellum very broadly triangular. Elytra at base a little narrower than pronotum, together broader than long, narrowed behind; posterior corners broadly rounded, border nearly straight. Abdomen moderately tapering, apical segment shallowly emarginate at tip; dorsal surface with abundant, recumbent, long and fine black hairs. Ventral surface shining, pilosity longer, finer and less appressed than on dorsal surface. Prosternum broadly convex except between coxae, where it is flatter, triangulately emarginate behind.

Type locality.—Ixthan, Nayarit, Mexico.

Type and paratype.—Cat. no. 29059 U. S. N. M.

Host.—*Eciton* (*Acamatus*) *wheeleri* Emery.

Described from two specimens (one type) taken with the host, out from beneath a stone, by the author.

Cephaloplectus godmani Sharp from Panama is a much larger species and the pronotum is proportionately longer. *Cephaloplectus quadriglumis* Wasm. which lives with *Eciton quadriglume* Hal. is similar in habitus but lighter in color and above with erect hairs, lacking in *Eulimulodes mexicanus*. The emargination of the posterior margin of prosternum is more broadly angulate and all of these have the third joint of the maxillary palpus long and slender and the antennal joints broad.

This species resembles an exceedingly large *Limulodes* and sufficient material for dissection may show a close relationship between the two.

***Xenocephalus lucidus*, new species**

Length 3.5 mm.

Yellowish brown, minutely and sparsely punctate and shining, a few delicate striolae visible on front margin of head, without hairs above.

Form elongate, strongly convex above. Head from above four times as broad as long, arcuate in front and behind, with small, lumate portions of the eyes visible at sides. Pronotum transverse, at middle slightly shorter than

elytra, anterior border broadly emarginate, anterior corners rounded, sides arcuate, posterior corners slightly projecting and more narrowly rounded than the anterior ones; posterior border feebly arcuate. Elytra at base as broad as pronotum, transverse, sides, seen from directly above, nearly straight and parallel, very slightly projected and rounded at posterior corners, posterior border feebly sinuate. Abdomen at base a little narrower than elytra, moderately tapering, posterior corners of dorsal sclerites angulate, penultimate sclerite with six triangular teeth at apex. Head from beneath rather flat between eyes. Labrum transverse, strongly emarginate anteriorly. Eyes large, more than twice as long as broad and with very large facets. Antennae barely reaching anterior margin of head, basal joint two-thirds as long as eye, somewhat compressed, second joint cylindrical and two times as long as broad, remaining joints, except the terminal, transverse and forming a compressed club, terminal broadly oval and shorter than the two preceding joints together. Maxillary palpi elongate, second joint arcuate, clavate at apical half, third joint as long as second, slender, feebly thickened toward apex, fourth joint thickly subulate, two-thirds as long as the third. Legs short and strongly compressed.

Type locality.—Hamburg Farm, Santa Clara Province, Costa Rica.

Type and paratype.—Cat. no. 29060 U. S. N. M.

There are sparse microscopic hairs, barely visible, at the lateral and posterior margins of the elytra, more at the apices of the dorsal abdominal sclerites, otherwise the dorsal surface is glabrous. On the ventral surface and legs there is rather sparse and fine yellowish pilosity and at the apices of the abdominal segments a few erect, stiff black hairs.

This is an unusually narrow species. Described from two specimens collected by F. Nevermann, one being selected as type.

PROCEEDINGS OF THE ACADEMY AND AFFILIATED SOCIETIES BIOLOGICAL SOCIETY

693D MEETING

The 693d meeting was held in the assembly hall of the Cosmos Club April 24, 1926 at 8:10 p.m., with President OBERHOLSER in the chair and 61 persons present. New members elected: JAMES O. MALONEY, S. PRENTISS BALDWIN (life member).

C. W. TOWNSEND described a recent trip with T. GILBERT PEARSON through the southern states in search of birds. They visited Miss ABBIE AUDUBON, 90 years old, the granddaughter of AUDUBON. At King Ranch, Texas, an unsuccessful search was made for the whooping crane. The quail study station in southern Georgia, in charge of Mr. STODDARD, was visited, and a call was made upon ARTHUR WAYNE at Mt. Pleasant, S. C. In Florida, roseate spoonbills, limpkin, and everglade kites were seen.

A. WETMORE gave an account of an egg recently laid at the Zoological Park by a California condor. Three birds of this species have been at the Zoo for many years. The two eggs laid in previous years have been accidentally broken by the birds. The egg laid this year was put under a hen, but did not



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