

THE BEETLES OF THE FAMILY CLERIDAE COLLECTED
ON THE MULFORD BIOLOGICAL EXPLORATION OF
THE AMAZON BASIN, 1921-1922

BY EDWARD A. CHAPIN,

Associate Entomologist, United States Department of Agriculture

About two hundred specimens of beetles belonging to the family Cleridae were collected in the course of the field work of the Mulford expedition to the upper Amazon region, nearly all being taken by Dr. W. M. Mann, entomologist of the party. The route of the expedition is shown on the map (fig. 1), which has been adapted from that prepared and published by Dr. T. E. Snyder in his report on the termites. Most of the Cleridae came from two localities, Tumupasa (December, 1921) and Cavinasa (January-February 1922). A few specimens were taken at the following places: Huachi (August-September, 1921), Rurrenabaque (October-December, 1921), Yvon (February, 1922), and Cachuela Esperanza (March, 1922).

The territory surveyed by the Mulford expedition lies to the west and adjoins that which was investigated by the Stanford expedition in 1911. The 12 species of Cleridae obtained by that expedition have been studied and reported on by A. B. Wolcott.¹ Some years before this, 12 species from the western Amazon region were described as new by A. Kuwert,² his material coming mainly through Doctor Staudinger. Twenty species belonging to eight genera are contained in the Mulford collection. These three collections contain no species of Tillinae, 1 genus with 1 species of Hydnocerinae, 1 genus with 6 species of Clerinae, no Thaneroclerinae, 5 genera with 20 species of Epiphloeinae, 2 genera with 3 species of Enopliinae, and 1 genus and species of Korynetinae, or a total of 10 genera and 31 species actually recorded from this region.

¹ Psyche, vol. 19, No. 3, pp. 71-77, pls. 6-7, 1912.

² Ann. Soc. Ent. Belg., vol. 37, pp. 492-497, 1893; vol. 38, pp. 6-13, 1894.

Subfamily CLERINAE

Genus ENOCLERUS Gahan, 1910.

1. ENOCLERUS DICHROUS, new species

Somewhat resembling *E. bellus* (Schenkling). Head castaneous, the vertex and mandibles piceous. Rest of mouth parts, legs, and under parts of thorax dark castaneous. Pronotum testaceous with pinkish reflections except for a transverse blotch of piceous at the middle of the anterior margin. Scutellum black. Elytra pinkish testaceous with violaceous markings. Head finely and sparsely punctured except for a median vertical impunctate area. Vestiture short and sparse with a few longer erect black hairs intermingled. Pronotum slightly broader than long (34-38), punctures sparse and extremely fine except near anterior margin, anterior transverse impression broad and shallow, vestiture similar to that of head. Punctuation of elytra similar to that of pronotum. Elytra pinkish testaceous, each with two large spots of violaceous blue. The anterior spot is quadrate, is two-fifths as long as the elytron and includes the suture, basal margin and humeral callus. The posterior spot conforms in shape to the apical half of the elytron; its anterior margin is straight and transverse and lies at the exact middle of the length of the elytron. The spot fails narrowly to include the suture, more widely the lateral margin. Under parts sparsely pubescent, the abdomen reddish testaceous. Length: 6-7mm. Locality: Tumupasa.

Type and five paratypes.—Cat. No. 29355, U.S.N.M.

One of the paratypes has attained the full coloration of the type, the rest lack the violaceous markings on the elytra.

2. ENOCLERUS INIMICOIDES, new species

Color and markings much as in *E. inimicus* Wolcott. Head, thorax, abdomen and appendages (mostly) black, elytra violaceous with testaceous markings. Head with eyes slightly narrower than the pronotum, finely and densely punctured except for a small median smooth space at the level of the insertions of the antennae. Vestiture of dense gray pile with a few longer erect black hairs. Antennae nearly as long as pronotum, first segment bent and pale beneath, ninth and tenth together equal in length to eleventh. Pronotum slightly broader than long (45-48), finely and densely punctured. Vestiture dense, that of the disk black, that of the anterior portion of the flanks and the anterior transverse impression gray; there are a few gray hairs along the posterior margin. Elytra with punctures which are for the most part much finer than those of the pronotum but which are set with equal density. There are a few erect black hairs on both pronotum and elytra. Scutellum black. Elytra violaceous except for an oblique band of testaceous, equal in width

direction opposite to that of the first and second. It is of equal width throughout its length and connects the sutural and marginal beads. Vestiture fine, not as dense as on the pronotum, black in front of and gray behind the subapical band. Underparts densely clothed with gray hairs. Length: 8.5 mm. Locality: Rurrenabaque.

Type.—Cat. No. 29356, U.S.N.M.

Compared with a paratype of *E. inimicus* Wolcott the present species is much larger, its thorax is broader than long instead of the reverse, the palpi are dark instead of light, the second oblique band is not of equal width throughout and the subapical band is of equal width throughout its length.

In the original description of *E. inimicus*, the thorax is said to be broader than long. Measurements of a paratype give the ratio of length to breadth as 38–35.

3. ENOCLERUS FLAVIBASIS, new species

Somewhat similar to *E. laticinctus* (White). Black, elytra with basal half except the scutellar region testaceous, scutellar region and apical half violaceous black. Head finely and rather densely punctured, punctures near frontal margin slightly more coarse, front with two shallow impressions. Vestiture sparse, mostly gray. Antennae much shorter than the pronotum, black; first segment pale beneath, last segment very slightly longer than the two preceding together. Pronotum slightly broader than long (40–43), finely and rather densely punctured, the punctures slightly more coarse near the anterior margin; anterior transverse impression shallow, arcuate across the disk with the convexity posterior, laterally the impression is filled with whitish pubescence. There are a few white hairs posteriorly, otherwise the vestiture is black. Scutellum black. Elytra with extremely fine punctures, these rather more densely set on the posterior than on the anterior half. Anterior half, except for the immediate scutellar region, whitish testaceous. Scutellar region and posterior half violaceous black. Vestiture fine, short and dense, each hair concolorous with the surface from whence it arises. Underparts of thorax and abdomen black with bluish reflections, legs black. Abdomen sparsely, thorax more densely and legs very densely set with whitish hairs. Length: 7.5 mm. Locality: Rurrenabaque.

Type and paratype.—Cat. No. 29357, U.S.N.M.

Subfamily HYDROCERINAE

Genus HYDROCERA Newman, 1838

4. HYDROCERA IUACHIANA, new species

Form of *H. haematica* Gorham. Above testaceous with darker and lighter markings, underparts piceous black, legs pale. Head uniform dark testaceous, punctation fine and sparse on vertex, rather more

dense on front. Front densely clothed with depressed silvery pubescence. Antenna with basal segment and extreme apex of club pale, intermediate segments deep gray-brown. Mouth parts pale except for the piceous mandibles. Pronotum very slightly broader than long (19–20), widest at apical third, anterior transverse impression distinct but broad, disk transversely wrinkled anteriorly, punctures very fine and very sparse. Lateral dilations prominent, each carrying a single deep round pit; the anterior one of the usually present pair is obsolete. Color dark testaceous, flanks, except for the lateral dilations, piceous. Scutellum dark. Elytra widely separated apically, humeral callosities square and prominent, apices coarsely serrate, the serration continued along the sutural and lateral margins for a short distance, surface coarsely but not densely punctured. Color brownish testaceous, each elytron with a circular whitish spot at middle of length, the diameter of the spot almost equal to the breadth of the elytron; just before and behind the pale spot along the suture the elytron is infuscate. Vestiture pale, erect and sparse. Underparts sparsely covered with silvery pubescence. Terminal tergite of male roughly triangular with the apex truncate; it carries a poorly-defined median longitudinal carina. Fifth sternite much broader than last tergite, with a broad and deep triangular emargination, its edges tumid, the surface densely punctured and clothed with long hairs. Tarsal claws with very small basal tooth. Length: 4 mm. Locality: Huachi.

Type.—Cat. No. 29358, U.S.N.M.

Subfamily EPIPHLOEINAE

Genus PLOCAMOCERA Spinola, 1844

5. PLOCAMOCERA CONFRATER Kuwert

Plocamocera confrater KUWERT, 1893, Ann. Soc. Ent. Belg., vol. 37, p. 496.

Plocamocera confrater, var. *similis* KUWERT, Ann. Soc. Ent. Belg., vol., 37, p. 497.

Plocamocera confrater, var. *sericelloides* KUWERT, Ann. Soc. Ent. Belg., vol. 37, p. 497.

In the Mulford collection there are nine specimens of the genus *Plocamocera*, all of which I refer to this species. No two are exactly alike, either in the coloration of the ventral surface or in the elytral pattern. In length the specimens range from 3 mm. to 6 mm. The smallest, the largest, and two specimens intermediate in size were taken at Cavinás, the rest of the lot came from Tumupasa. One specimen is almost entirely pale beneath and fits the description of *P. confrater*, var. *sericelloides* Kuwert, another agrees well with the description of *P. confrater*, var. *similis* Kuwert; however, the series shows such a gradual increase in the extent of the dark coloration from that of var. *sericelloides* Kuwert to that of the typical *confrater* Kuwert that it does not seem of any use to preserve these varietal names.

Genus **EPIPHLOEUS** Spinola, 18416. **EPIPHLOEUS TRICOLOR** Kuwert

Epiphloeus tricolor KUWERT, 1893, Ann. Soc. Ent. Belg., vol. 37, p. 493.

Fifty-six specimens of this species were collected by the members of the party at Tumupasa. There is little variation displayed except that of size. The length is from 4.5 mm. to 7.5 mm.

7. **EPIPHLOEUS BAKERI** Wolcott

Epiphloeus bakeri WOLCOTT, 1912, Psyche, vol. 19, p. 74, pl. 6, fig. 5.

This species was collected only at Cavinass, where 17 specimens were obtained. The length is from 6.5 mm. to 7.5 mm.; otherwise the only noteworthy variation is in the extent of the white vestiture along the suture. In some specimens the suture is very narrowly edged, in others more widely.

8. **EPIPHLOEUS DEBILIS** Kuwert

Epiphloeus debilis KUWERT, 1893, Ann. Soc. Ent. Belg., vol. 37, p. 493.

This species is represented in the collection by three specimens, all from Cavinass. The length varies from 5.5 mm., to 7 mm., and some difference in the extent of the dark coloration of the hind femora is exhibited.

9. **EPIPHLOEUS TIBIALIS** Kuwert

Epiphloeus tibialis Kuwert, 1893, Ann. Soc. Ent. Belg., vol. 37, p. 495.

Collecting at Tumupasa yielded three specimens of this species. There is no apparent variation among them.

10. **EPIPHLOEUS IRACUNDUS** Wolcott

Epiphloeus iracundus WOLCOTT, 1912, Psyche, vol. 19, p. 74, pl. 7, fig. 1.

A single specimen from Tumupasa is virtually identical with a paratype of this species, which is very close to and possibly identical with *E. sexplagiatus* Kuwert.

11. **EPIPHLOEUS MICACEUS**, new species

Near *E. tricolor* Kuwert. Head castaneous, front moderately finely and very densely punctured, vertex with a central impunctate area, occiput finely wrinkled. Antenna with the basal segment pale, the rest piceous, all but the last three shining. Palpi pale, the apices of the terminal segments dark. Pronotum broader than long (25-36), anterior half of the disk strongly asperate, posterior half of disk and the flanks finely punctate, median portion of the disk strongly elevated. Color piceous; on each side of disk, reaching from anterior to posterior margins, there is a narrow stripe of rufotestaceous. Vestiture dense and depressed, yellow. Elytra coarsely and sparsely punctured, the punctures becoming more fine and more crowded toward the apices. Color piceous, each elytron with two rufotestaceous spots, one basal, the other median. The basal spot includes the entire basal margin and humeral callus and is prolonged posteriorly

a short distance, thence turning and almost reaching the suture. The median spot is transversely oval, not reaching either the lateral or the sutural margin. Vestiture dense, depressed, golden except for antemedian, postmedian, and apical spots of black. Underparts of the thorax piceous, of the abdomen rufotestaceous. Legs rufotestaceous, femora and tibiae with piceous markings. Length: 6–7 mm. Localities: Tumupasa, Cavinasa.

Type and seventeen paratypes.—Cat. No. 29359, U.S.N.M.

This species is described from seventeen specimens from Tumupasa and one from Cavinasa. The type is a male from Tumupasa. It is distinguished from *E. tricolor* Kuwert by the asperate pronotum, the absence of the subapical pale spot, and the much greater extent of the pale hairs on the elytra.

12. EPIPHLOEUS PILOSUS, new species

Brown, elytra variegated with dark brown, golden brown and white hairs. Head red-brown, vertex and occiput piceous, finely and very densely punctured, a small impunctate spot on the vertex between the eyes. Vestiture sparse, golden brown, mainly concentrated near the eyes, antennae, and above mouth. Antennae reaching to beyond the base of the pronotum, first and fourth to eighth segments pale, the remaining segments piceous. Pronotum broader than long (20–26), anterior half of the disk asperate, the asperations tending to form transverse ridges, posterior half of the disk finely punctulate, flanks rather coarsely and very densely punctured. Median portion of the disk strongly elevated, its posterior two-thirds and the flanks piceous, lateral portions of the disk and the anterior margin rusty brown; vestiture sparse, golden brown. Elytra coarsely, irregularly punctured, the punctures separated one from another by a distance equal to their diameter, densely clothed with a mixture of dark brown and golden brown depressed hairs, with a few white hairs which tend to form three ill-defined transverse fasciae dividing the length of the elytra into fourths. Underparts piceous and shining, legs pale, femora and tibiae broadly annulate with piceous. Length: 5 mm. Locality: Tumupasa.

Type.—Cat. No. 29360, U.S.N.M.

Obviously related to *E. obscurus* Kuwert but differing from that species in the total absence of white hairs on the head and thorax and in the dark underparts of the body.

Genus PHYLLOBAENUS Spinola, 1844

13. PHYLLOBAENUS MANNI Wolcott

Phyllobaenus manni WOLCOTT, 1912, Psyche, vol. 19, p. 73, pl. 6, fig. 4.

Three specimens from Tumupasa belong to this species. The determination was verified by Wolcott, who kindly compared one of the specimens with the type. The length varies from 5.5 mm. to 7 mm.

Genus PYTICEROIDES Kuwert, 1894

Since there has been some confusion as to the status of this genus since it was originally proposed by Kuwert³ it seems best to redescribe it more completely.

Generic diagnosis: Epiphloeinae; head narrow, eyes large but not very prominent, finely granulate, ocular emargination anterior and moderately deep. Labrum bilobed. Antennae of nine segments, the first long, somewhat bent, the second slightly longer than broad and about one-third as long as the first, third shorter than the second and somewhat flattened, fourth to sixth transverse, each shorter than the one preceding, seventh to ninth broad and flat, each longer than the second to sixth together. End segments of all palpi cylindro-acuminate. Pronotum nearly equilateral, slightly constricted anteriorly, widest behind the middle, tactile hairs as usual in this subfamily. Elytra long, very slightly wider posteriorly, punctures in rows, those near suture sometimes slightly confused. Legs moderately long, tarsal claws with broad basal tooth.

Type of genus.—*Pyticeroides arrogans* Kuwert, 1894.

Gahan⁴ has suggested that this genus is possibly equal to *Ellipotoma* Spinola, 1844. That genus was described as having the terminal segments of the labial palpi broadly securiform, not at all as in the species described above. Since the form of the labial palpi was specifically mentioned in Kuwert's diagnosis and since the present species agrees perfectly with his description as far as it goes it seems best to treat the two genera as distinct and valid.

14. PYTICEROIDES MANNI, new species

Slender, slightly broader behind. Eyes, antennae, terminal segments of palpi, and elytra black, rest of insect reddish-testaceous, the underparts sometimes infuscate. Head with the front slightly concave, sparsely punctured below the level of the antennal insertions, above densely and rather finely punctured; between the eyes there is a narrow vertical space devoid of punctures that extends onto the occiput. Pubescence sparse. Antennae reaching beyond the base of the pronotum, first segment in part or entirely pale, first six segments polished, last three segments dull. Pronotum slightly broader than long (17–20), anterior transverse impression shallow, surface more shining and more sparsely punctured than that of the front above the antennae, flanks rather more coarsely punctured than the disk, discal tactile setae arising from deep circular pits, which are separated by little more than one-half the breadth of the pronotum. Scutellum black, semicircular. Elytra nearly five times longer than the pronotum, each with ten rows of deep, almost quadrate

³Ann. Soc. Ent. Belg., 1894, vol. 38, p. 7.

⁴Ann. Mag. Nat. Hist., 1910, ser. 8, vol. 5, p. 73.

punctures, the intervals on the disk more than the width of a puncture and finely punctulate, puncture rows becoming confused beyond the apical fifth, first row (from suture) somewhat irregular. Pubescence sparse, gray, depressed. Underparts highly polished, very finely and very sparsely punctured. Length: 4–6 mm. Locality: Cavinás.

Type and fifteen paratypes.—Cat. No. 29361, U.S.N.M.

This species agrees rather well with the description of the type of the genus except for color. However, it appears to be quite a different insect.

Genus ICHNEA Castelnau, 1836

15. ICHNEA SERICEA (Klug)

Enoplium sericeum KLUG, 1842, Clerii, p. 373, pl. 2, fig. 16.

Apparently a common species. Forty-four specimens were taken at Tumupasa, four at Cavinás, and one at Rurrenabaque. The specimens are remarkably alike in all respects except size. Size variation is from 7 mm. to 9 mm.

16. ICHNEA MARGINELLA (Klug)

Enoplium marginellum KLUG, 1842, Clerii, p. 376.

A single specimen was taken at Yvon. It agrees with Klug's description in all points except the color of the scutellum, which is dark in this case. The thoracic ratio is 24–23.

17. ICHNEA ROSEICOLLIS Kuwert

Ichne roseicollis KUWERT, 1894, Ann. Soc. Ent. Belg., vol. 38, p. 9.

Somewhat resembles the preceding but is separated from it easily by the thoracic ratio (23–26). The amount of dark color on the pronotum varies quite considerably, in two specimens examined it is almost lacking. The length of the smallest specimen in the Mulford collection is 6.5 mm., that of the largest, 8 mm. Six specimens of this species were obtained at Tumupasa.

18. ICHNEA HUMERALIS, var. IRRITA Wolcott

Ichne humeralis, var. *irrita* WOLCOTT, 1912, Psyche, vol. 19, p. 76, pl. 7, fig. 4.

Two specimens, both of which I refer to this species, were taken by the expedition. One from Cachuela Esperanza is but 5.5 mm. long, the other is from Cavinás and measures 9 mm. Except for size there is nothing to separate the two. Though the lateral margin is pale for but a short distance behind the humeral angle, they compare so favorably with a specimen of *irrita* Wolcott from the type series that I have no hesitation in so identifying them.

19. ICHNEA STRIATICOLLIS Kuwert

Ichne striaticollis KUWERT, 1894, Ann. Soc. Ent. Belg., vol. 38, p. 11.

This species resembles strongly a lycid of the genus *Calopteron* and is more properly a member of the genus *Ichne* than any of

those previously mentioned. In fact, it is quite evident that a division of *Ichnea* along the lines proposed by Gorham in the *Biologia Centrali-Americana* is necessary. Eleven specimens of this species were taken, seven at Tumupasa and two each at Yvon and Cachuela Esperanza. There is considerable variation in size, the smallest and largest specimens, both from Tumupasa, measuring, respectively, 6 mm. and 10.5 mm. There is also a very interesting color variation displayed. All of the specimens from Tumupasa have antennae which are entirely black, and of these, four have the tarsi entirely black. The remaining three specimens from Tumupasa have the third to fifth tarsal segments pale. The Yvon and Cachuela specimens are similar to these last mentioned in tarsal coloration but all have the apical half of the terminal segment of the antenna pale. This last color phase is as described in the original reference to the species. There is also some variation in the extent of the pale coloration on the under side.

Subfamily ENOPLIINAE.

Genus *CREGYA* LeConte, 1861. (*GALERUCLERUS* Gahan, 1910)

20. *CREGYA* *POSTICALIS*, new species

Shining brownish-black; head except occiput, flanks of prothorax, extreme apices of elytra, femora and basal halves of tibiae pale. Head finely but not densely punctured, sparsely pubescent, occipital spot extending forward onto the vertex, antennae ten-segmented, dark except for the first segment which is pale beneath. Pronotum slightly longer than broad (25-24), sharply dilated at the sides just behind the middle, surface polished; on disk the punctation is very fine and sparse, on the flanks coarse and moderately dense. Flanks narrowly behind, more broadly in front, pale testaceous; disk narrowly in front, behind including the entire base, brownish-black. Elytra coarsely punctured on the basal two-thirds, very finely punctulate on apical third; the coarse punctures are in rows on disk, they are confused on the flanks. Vestiture sparse and erect, pale. The underpart of the pro- and meso-thoraces pale, metathorax dark, abdomen castaneous. Legs pale, anterior femora with dark spot at apices, anterior tibiae dark externally, middle tibiae dark at apices, all tarsi dark. Length: 5 mm. Locality: Rurrenabaque.

Type.—Cat. No. 29362, U.S.N.M.

Nearest allied to *C. frontale* (Kuwert) from which it differs in the arrangement of the dark and light areas.

