NEW OR LITTLE-KNOWN TIPULIDÆ FROM THE PHILIPPINES (DIPTERA), PART III

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Separate from THE PHILIPPINE JOURNAL OF SCIENCE Published by the Bureau of Science of the Philippine Government Manila, P. I. Volume 28, No. 3, November, 1925

> MANILA BUREAU OF PRINTING 1025

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ONE PLATE

The present instalment is based primarily upon some interesting crane-fly material taken in Samar by Mr. Richard C. Mc-Gregor. A few additional specimens are from the vicinity of Manila. The series of specimens labeled "Loquilocon" were collected 11 kilometers east of Wright, Samar, near the settlement called Loquilocon. I am greatly indebted to Mr. Mc-Gregor for his kindness in collecting and submitting these specimens. The types are preserved in my collection.

LIMONIINÆ

Geranomyia cornigera Alexander. Plate 1, figs. 1, 7, and 8.

Geranomyia cornigera ALEXANDER, Insec. Inscit. Menst. 1 (1913) 137-139.

This remarkable crane fly was described from a small series of specimens taken October 22–23, 1912, at Pettit Barracks. Mr. McGregor's material includes two males that were taken at Manila, May 7, 1924. The peculiar characters of a fleshy tubercle, tu, on the vertex and a small median tubercle on the cephalic margin of the mesonotal prescutum are shown in fig. 7.

The venation and wing pattern are shown in fig. 1. These specimens are better preserved than the type series and show that the vein Sc_2 is present but faint, placed a short distance before the origin of Rs, near the center of a dark blotch. Moreover, there is a similar weak supernumerary cross vein in the dark subcostal blotch at middistance between arculus and the origin of Rs.

¹Contribution from the Department of Entomology, Massachusetts Agricultural College.

The structure of the male hypopygium (fig. 8) had not been discussed in the earlier papers. Ninth tergite, t, with the caudal margin evenly rounded, before the margin with a group of about seven large setæ on either side of the median line. Basistyle, b, relatively small, with the usual mesal lobe very large. Ventral dististyle, v, large and fleshy, covered with abundant dense setulæ and much fewer long powerful setæ; rostriform appendage slender, pendant, pale yellow, terminating in several setæ; two spines on style at base of rostrum, the smaller one at base about one-half the length of second which is placed somewhat more basad. Dorsal dististyle, d, moderately curved, the extreme tip narrowed and rather angularly bent. Gonapophyses, g, with the mesal apical angle slender, directed caudad, the tip subacute and directed slightly laterad.

Limonia trigonia samarensis subsp. nov.

Male.-Length, 9 millimeters; wing, 11.5. Agreeing with typical trigonia (Edwards)² of western Sumatra, differing in

Size larger, as shown by the measurements. Mesonotal prescutum shiny dark chestnut brown, the usual interspaces narrowly blackish, the lateral margins of the sclerite broadly dark brown; scutal lobes dark brown, the median area conspicuously paler; scutellum dark; postnotal mediotergite dark brown, with a conspicuous paler median area. Pleura conspicuously yellowish with two broad and conspicuous dark brown longitudinal stripes, the more dorsal passing beneath the wing root and surrounding the base of the halteres. The ventral stripe includes the ventral portions of the sternopleurite. Halteres elongate, dark brown, the base and apex of the stem conspicuously ocherous, the knobs blackish. Wings with the dark costal pattern less extensive, the pale interspaces being more than one-half the width of the dark area immediately distad of it. Abdomen with the broad bases of at least the basal four sternites conspicuously whitish.

SAMAR, Loquilocon, July 3, 1924 (McGregor).

Orimargula philippina Alexander. Plate 1, fig. 2.

Orimargula philippina ALEXANDER, Insec. Inscit. Menst. 5 (1917) 6-7. The unique type of this species was a male from Manila. Mr. McGregor collected a female at Loquilocon, Samar, June 22, 1924, that is in a much better state of preservation than the type and is described herewith as allotypical. The indicated

² Journ. Fed. Malay States Mus. 8 (1919) 15-16.

differences between the two sexes are probably due in large part to the relative condition of the two types.

Female.—Length, about 2.5 millimeters: wing, 3.6. Rostrum and head dark brown. Cervical sclerites elongate, as in Toxorhina and allied genera. Mesonotum dark brown, the scutellum conspicuously pale. Pleura dark brown, with a pale transverse stripe extending from the wing root ventrad across the cephalic margin of the pteropleurite, hypoepimeron, and meron, onto the posterior coxæ which are thus conspicuously paler than the others. Halteres pale brown, the base of the stem conspicuously paler. Legs rather dark brown. Wings as in the type; venation as in fig. 2.

SAMAR, Loquilocon, June 22, 1924 (McGregor); allotype, female.

Eriocera lativentris Bezzi.

Eriocera lativentris BEZZI, Philip. Journ. Sci. § D 12 (1917) 113.

SAMAR, Loquilocon, June 21, 1924 (McGregor), a male.

Two females that are referred to this species were taken at the same station on May 30, 1924. However, these female specimens do not exhibit any dilation of the abdominal segments as does the male and may not be correctly associated.

Eriocera spatulata sp. nov. Plate 1, fig. 5.

Abdomen with the basal half slender, the segments cylindrical, the apical segments dilated into a conspicuous blackened spatula; general coloration gray; legs black; wings strongly suffused with blackish; a discal blotch and bases of the anal cells dirty whitish.

Male.—Length, 13 to 14 millimeters; wing, 11.2 to 12.5. Rostrum and palpi black, the former dusted with gray. Antennæ relatively short; scapal segments dark colored, dusted with gray; flagellum pale yellowish brown, the terminal segments darker; flagellar segments decreasing in length and diameter to the end. Head light gray, with a small vertical tubercle.

Pronotum black, pruinose. Mesonotal prescutum gray, the interspaces with conspicuous erect black setæ; three smooth, darker gray stripes, the lateral ones narrowly margined with blackish, the median stripe broadly divided medially by a blackish line; remainder of mesonotum dark gray, pruinose. Pleura black, sparsely pruinose. Halteres short, stout, black. Legs with the coxæ and trochanters black, the fore coxæ a trifle paler; remainder of legs black, the fore femora a very

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little paler. Wings (fig. 5) with a strong blackish tinge, the base and costal margin darker; a dirty white band crosses cells 1st R_1 , R, and M immediately before the cord; bases of cells 1st A and 2d A extensively dirty white; veins black. Venation: Sc₁ ending opposite midlength of the basal section of R_2 , Sc₂ before the fork of R_{2+3} ; Rs elongate, feebly angulated at origin, a little longer than R; r more than its length beyond the fork of R_{2+3} ; basal section of R_{4+5} about equal to R_{2+3} ; cell M_1 very small, asymmetrical, M_2 being in alignment with M_{1+2} ; cell 1st M_2 relatively small, the proximal end weakly angulated shortly before r-m; m-cu varying in position from before to beyond midlength of cell 1st M_2 , about one-half longer than the distal section of Cu₁; vein 2d A long, sinuous.

Abdomen unique in structure, so far as the family Tipulidæ is concerned, in that the terminal segments are dilated into a spatula, producing an appearance that is suggestive of certain Conopidæ and aculeate Hymenoptera; basal four segments reddish brown, blackened laterally, more narrowly darkened caudally, very slender; the apex of the fourth segment begins to widen out and is blackened; segments 5 to 7 dilated, black; segments 8 and 9 gradually narrowed and shortened, black.

In one paratype, in both wings vein M_1 is deflected cephalad and unites with the tip of vein R_{4+5} , closing cell R_5 .

SAMAR, Loquilocon, June 28, 1924 (McGregor); four males.

Elephantomyia (Elephantomyodes) samarensis sp. nov. Plate 1, fig. 4.

General coloration of the thorax orange-yellow; legs black, the tarsi extensively light yellow; wings subhyaline, cell Sc and the stigma infuscated; cell 2d A very narrow; abdomen black, the base of each segment narrowly yellowish.

Female.—Length, excluding rostrum, 10.5 millimeters; wing, 7.4; rostrum alone, about 8. Rostrum long and slender, brownish black. Antennæ brownish black, the scapal segments a trifle paler; flagellar segments oval; basal flagellar segment about equal in length to the following two taken together, the more distal segments becoming fusiform, all but the basal flagellar segment with long delicate verticils. Head dark brownish gray; vertex between the eyes very narrow.

Pronotum yellowish brown. Mesonotum orange or orangeyellow, the scutellum and postnotal mediotergite more infuscated. Pleura testaceous yellow to orange. Halteres long and slender, black. Legs with the coxæ and trochanters concolo-

rous with the pleura; femora and tibiæ black, the extreme bases of the former narrowly paler; basitarsi black, the tips abruptly light yellow, this including a little more than one-fourth the segment; segments 2 and 3 concolorous; segments 4 and 5 dark brown. Wings subhyaline, cell Sc and the stigmal region, which includes cells Sc₁ and 2d R₁, dark brown; veins dark brown. Venation (fig. 4): Sc_1 ending shortly before the fork of Rs, Sc. at its tip; Rs very strongly arcuated to weakly angulated at origin, cell 1st R₁ being very wide; cell 2d R₁ abruptly reduced to a linear strip occupied by the stigma, gently widened outwardly; R2+3 perpendicular at origin, in alignment with r-m, beyond the base bent at a right angle, with what seems to represent r as a spur at the bend, this delimiting the proximal end of the stigma; R_{4+5} in direct alignment with Rs, the veins at the end of the sector thus forming a cross; cell 1st M, rectangular; m-cu a little more than one-half its length beyond the fork of M; distal section of Cu₁ shorter than m-cu; distance on margin between Cu₁ and 1st A about equal to the distal section of Cu₁; cell 2d A reduced to a narrow linear strip.

Abdomen black, the basal third or less of each segment conspicuously bright yellow. Ovipositor with the long straight valves rusty horn colored.

SAMAR, Loquilocon, July 2, 1924 (McGregor); a female.

The subgenus *Elephantomyodes* $^{\circ}$ was erected by me for the Formosan *E. major* Alexander. The group includes a number of Oriental and Australasian species. The present fly is distinguished from the other known species by the very narrow cell 2d A, in conjunction with the cruciform arrangement of the veins at the fork of the sector.

Styringomyia mcgregori sp. nov. Plate 1, figs. 3 and 9.

Mesonotal prescutum ashy gray with linear black interspaces posteriorly; legs uniformly dark brown; wings yellowish subhyaline, immaculate; vein 2d A elongate, not incurved to the anal margin.

Male.—Length, 6 to 6.5 millimeters; wing, 4 to 4.8.

Female.—Length, about 4 millimeters; wing, about 4.

Rostrum and palpi brown. Antennæ brown. Head brown, the orbits and anterior part of the front broadly and conspicuously whitish; genæ and postgenæ darkened.

³ Ann. Ent. Soc. Am. 16 (1923) 64.

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Pronotum light yellow, indistinctly darkened medially. Mesonotal prescutum light ashy gray, narrowly lined posteriorly with darker, these lines representing the usual interspaces; lateral margins of prescutum narrowly but conspicuously more yellowish; scutal lobes darkened; scutellum conspicuously yellow medially, the sides and the parascutella darker; postnotal mediotergite gray with a narrow yellowish median line. Pleura dark, the base of the wing more yellowish. Halteres pale brown, the knobs somewhat darker. Legs dark brown, without markings. Wings yellowish subhyaline, immaculate; veins a trifle darker colored. Venation (fig. 3): Vein 2d A elongate, running straight to the margin, ending some distance beyond the origin of Rs.

Abdomen pale yellowish brown, the lateral margins narrowly darker colored; sternites more yellowish; hypopygium brownish testaceous. Male hypopygium (fig. 9) with the basistyles, b, produced caudad into a long fingerlike lobe which bears several elongate setæ, the two that are more nearly apical in position somewhat stouter, the subterminal setæ on mesal face long and slender, curved. Dististyles, d, complex, the mesal lobe very extensive, densely set with powerful, recurved bristles, the style terminating in a powerful, blackened, gently curved spine. What seems to be an interbasal process, i, appears as a gently curved, cylindrical, blackened rod.

LUZON, Manila, October 1, 1924 (*McGregor*); a male. A pair in copula at light on October 2, 1924.

Styringomyia mcgregori is very distinct from all described species in the cinereous mesonotum, the uniformly dark brown legs, and the subhyaline, unmarked wings, with vein 2d A long and running straight back to the anal margin. The only other known species having the latter character are S. venusta Loew (fossil in copal) and S. bipunctata Edwards (Queensland). The present species is unusually primitive in the scarcely modified apices of the basistyles of the male hypopygium. This very interesting fly is named in honor of the collector, Mr. Richard C. McGregor, to whom I am indebted for many favors in the past.

TIPULINÆ

Pselliophora præfica fenestrella subsp. nov.

Female.—Length, about 20 millimeters; wing, 20.5. Agreeing with typical *præfica* Bezzi in its general black coloration, differing in the following respects: Branches of the flagellar segments relatively elongate, stout. Wings dark brown, all of the cells of the wing with the exception of Sc and 2d R_1 with conspicuous pale gray centers, restricting the ground color to uniform conspicuous seams to all the veins and as a margin of equal width that completely encircles the wing.

SAMAR, Loquilocon, June 18, 1924 (McGregor); a female.

Pselliophora tigriventris sp. nov. Plate 1, fig. 6.

Allied to *P. gaudens* (Walker); general coloration orange; head scarcely variegated with darker; mesonotal prescutum with three brownish black stripes; halteres orange with brownish black knobs; legs black, the femoral bases conspicuously orange, broadest on the posterior legs; all tibiæ with white subbasal rings; wings black, the base broadly and conspicuously orangeyellow; a triangular paler yellow discal blotch; abdomen orange, the segments conspicuously cross-banded with black.

Female.—Length, about 20 millimeters; wing, 17.5. Frontal prolongation of head yellow, blackened laterally; palpi dark brown, the third segment more yellowish. Antennæ with the scapal segments yellow; basal segment of flagellum elongate, obscure yellow, the ventral face infuscated; the terminal ten flagellar segments dark brown, gradually becoming shorter and more crowded, the terminal segment very small. Head orangeyellow, the occiput darkened behind.

Pronotum orange, the sides narrowly blackened. Mesonotal prescutum orange, with three conspicuous brownish black stripes that are contiguous near the suture, which is conspicuously blackened medially; scutum orange, each lobe with two brownish black spots on anterior half; scutellum orange, the parascutella black; postnotal mediotergite orange, narrowly margined anteriorly and posteriorly with brownish black, the latter marking extending onto the postnotal pleurotergite and completely surrounding the base of the halteres. Pleura orange-yellow. conspicuously variegated with brownish black markings, these including spots on the propleura, dorsopleural membrane, a spot on pteropleurite immediately ventrad of the wing root, and some smaller ventral markings. Halteres conspicuously orange, the knobs brownish black. Legs with the fore and middle coxæ extensively infuscated, the posterior coxæ largely obscure orange; trochanters obscure orange; fore and middle femora black, the bases conspicuously orange, this narrowest on the fore femora, a little more extensive on the middle femora

where about the basal third is included; posterior femora orange with less than the apical third blackened; tibiæ black, each with a conspicuous white subbasal ring, approximately equal in extent on all the legs or that of the fore tibia a trifle wider; tarsi black. Wings (fig. 6) blackened, the base broadly and conspicuously bright orange-yellow; a roughly triangular discal area of a paler shade of yellow, this including portions of cells 1st R₁, R, M, 1st M₂, and the extreme proximal ends of cells R₃, M₃, and M₄; pale brownish white washes in cells Cu and 1st A on either side of vein 1st A; veins dark brown, more orange-yellow in the flavous basal and discal areas. Venation: Sc₁ preserved; cell M₁ narrowly sessile; m-cu immediately beyond the fork of M₃₊₄.

Abdomen orange, each tergite with a broad, conspicuous, black ring across the middle, leaving the base and apex broadly of the ground color; on tergite 7, the pale apex decreases in extent, on tergites 8 and 9 being replaced by black. Basal shields of ovipositor conspicuously blackened. Ovipositor straight, brownish black, the tips of the valves narrowly brightened.

SAMAR, Loquilocon, June 13, 1924 (McGregor); a female.

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ALEXANDER: TIPULIDÆ, III.]

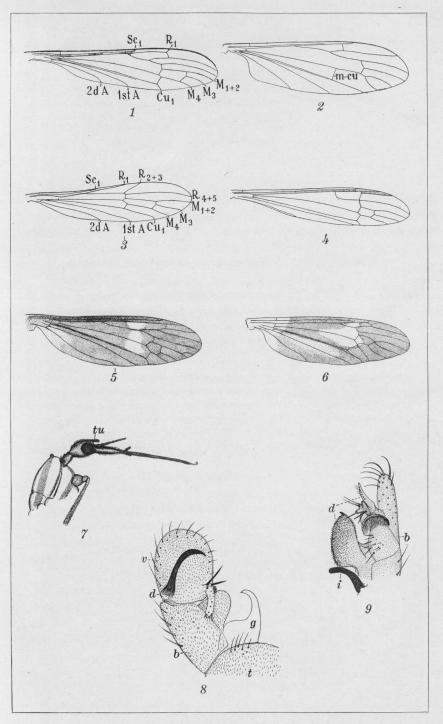


PLATE 1.