

NEW SPECIES OF JAPANESE CRANE-FLIES

PART I

(Diptera, Tipulidæ)

By CHARLES P. ALEXANDER

The following undescribed species of Japanese Tipulidæ were sent to me by Mr. Ryoichi Takahashi, who collected them in the vicinity of Tokyo. I wish to express my thanks to Mr. Takahashi for this and other very valuable crane-fly material. The types are preserved in the collection of the writer.

Genus ERIOPTERA Meigen

Subgenus EMPEDA Osten Sacken

Erioptera (Empeda) japonica, new species.

General coloration gray; antennæ brownish black throughout; wings light gray, the stigma a little darker; Sc_1 unusually long for an *Empeda*; R_2 generally parallel to R_3 ; cell 1st M_2 open.

Female.—Length, 5 mm.; wing, 5.2 mm.

Rostrum and palpi dark brown. Antennæ brownish black throughout. Head light gray.

Pronotum gray. Mesonotum gray, the praescutum with three ill-defined brownish gray stripes, the lateral and anterior margins indistinctly flesh-colored. Pleura light gray pruinose. Halteres light brown, the knobs darker. Legs with the coxæ gray; trochanters light brown; remainder of the legs brown. Wings light gray, the stigma indistinctly darker; veins dark brown; veins with rather long and conspicuous macrotrichia. Venation: Sc_1 ending a little beyond two-thirds the long and nearly straight Rs ; Sc_2 unusually far from the tip of Sc_1 for a member of this subgenus, Sc_1 alone being but little shorter than the deflection of Cu_1 and longer than that section of R_2+3 before r ; r on R_2+3 at about one-third its length; R_2 running generally parallel to R_3 and but little shorter than this vein, so that cell 2nd R_1 at the wing-margin is about equal to cell R_2 ; cell 1st M_2 open; basal deflection of Cu_1 at the fork of M .

Abdomen dark brown. Ovipositor with the valves horn-colored, the tergal valves rather strongly upcurved, the tips acute.

Habitat.—Japan.

Holotype, ♀, Tokyo, December 3, 1919 (R. Takahashi).

Genus PSILOCONOPA Zeterstedt

Psiloconopa verna, new species.

General coloration black; lateral margins of the pronotal scutellum and the posterior margin of the mesonotal scutellum yellowish; knobs of the halteres conspicuously bright yellow; wings grayish subhyaline; cell 1st M_2 open by the atrophy of m ; abdomen black, the caudal margins of the segments yellow.

Male.—Length, about 3.5 mm.; wing, 4 mm.

Rostrum and palpi black. Antennæ black, the flagellar segments oval. Head black.

Pronotum black, the lateral margins of the scutellum bright yellow. Mesonotum black, sparsely brownish pollinose; posterior margin of the scutellum obscure yellow; postnotum deep black. Pleura black; a tiny yellow spot at the wing-root. Legs entirely black. Halteres black, the base of the stem more brownish, the knobs conspicuously light yellow. Wings grayish subhyaline; veins dark brown. Venation: Sc long, Sc_1 extending to opposite midlength of R_2+3 ; Sc_2 far before the tip of Sc_1 , the latter vein alone being but little shorter than Rs ; Rs long, straight; R_2+3 short, a little longer than the deflection of R_4+5 ; r on R_2 about its own length beyond the fork of R_2+3 ; cell 1st M_2 open by the atrophy of m ; basal deflection of Cu_1 subsinuuous, located at the fork of M ; fusion of Cu_1 and M_3 about equal to the basal deflection of the latter; anal veins divergent.

Abdomen black, the posterior margins of the tergites yellow, narrow and less distinct on the basal tergites, very distinct on segments 6 to 8; sternites similar but with the yellow margins very narrow and indistinct; hypopygium small, black.

Holotype, ♂, Tamagawa, Tokyo, Japan, March 20, 1920 (Ryoichi Takahashi).

Genus CLADURA Osten Sacken

Cladura nipponensis, new species.

Head dark gray; antennal flagellum dark brown; legs pale brown, the tips of the femora and tibiæ scarcely darkened; abdomen dark brown; male hypopygium with the pleurites long and slender, nearly twice as long as the small pleural appendage.

Male.—Length, about 5.3–5.5 mm.; wing, 6.5–6.7 mm.

Rostrum and palpi pale brown. Antennæ with the scapal segments pale brown, the long-oval flagellar segments dark brown; flagellum with thirteen segments, the basal fusion-segment composed of two segments, equaling in length the second and third taken together. Head dark gray.

Mesonotum pale yellowish testaceous, the praescutum with three confluent, darker brown stripes. Pleura pale yellowish testaceous. In the paratype the praescutum is not so dark in color. Halteres pale. Legs with the coxæ and trochanters pale; femora brownish yellow, the bases more yellowish, the tips scarcely darker; tibiæ pale brown, the tips narrowly and indistinctly darkened; tarsi dark brown; pubescence of the legs not conspicuous. Wings nearly hyaline, the base and cells C and Sc more yellowish; veins brown; macrotrichia on the veins of moderate length only. Venation: Sc_1 ending beyond the fork of R_2+3 , Sc_2 a very little before this fork; r somewhat indistinct; R_2+3 about equal to that section of R_2 before r ; fusion of M_3 and Cu_1 about equal to the outer deflection of M_3 alone; petiole of cell M_1 about equal to the basal deflection of Cu_1 ; 2nd *Anal* vein ending about opposite the base of Rs .

Abdomen dark brown throughout. Male hypopygium with the pleurites very long, cylindrical, the single pleural appendage only a little more than half the length of the pleurite, slender, tapering gradually to the apex; gonapophyses in the form of slender, chitinized hooks.

Habitat.—Japan.

Holotype, ♂, Tokyo, November 16, 1919 (R. Takahashi).

Allotopotype, ♀, December 9, 1919.

Paratopotype, ♂, November 16, 1919.

Cladura autumnæ, new species.

Head and antennæ yellow; general coloration yellow, the mesonotum without darker markings; femora and tibiæ yellowish, narrowly tipped with dark brown; abdomen obscure yellow, the tergites indistinctly ringed basally with brown; male hypopygium with the pleurites and appendage stout.

Male.—Length, 5.5–6 mm.; wing, 7–8 mm.

Female.—Length, about 6 mm.; wing, 7.8 mm.

Generally similar to *C. nipponensis*, differing as follows:

Larger. Antennæ pale, with long, black verticils, the terminal three or four segments darker. Head obscure yellowish.

Thorax shiny yellow, the mesonotum without distinct darker markings. Legs with the femora and tibiæ yellow, the tips narrowly but conspicuously dark brown; legs clothed with rather conspicuous, semi-erect hairs. Wings subhyaline; veins dark brown, with long, conspicuous macrotrichia. Venation: Sc_2 far before the fork of R_2+3 ; basal deflection of Cu_1 usually at or before the fork of M , the fusion of M_3 and Cu_1 being extensive.

Abdomen obscure yellow, the tergites indistinctly ringed basally with brown. Male hypopygium with the pleurites short and stout, the single pleural appendage very short and stout, the rounded apex densely set with numerous short spinous setæ. Outer gonapophyses shaped like broad, flattened wings, the outer margin fimbriate, the two apophyses together appearing somewhat like a bird in flight.

Habitat.—Japan.

Holotype, ♂, Meguro, Tokyo, October 22, 1919 (R. Takahashi).

Allotopotype, ♀.

Paratopotype, ♂.

This species is also very close to *Crypteria japonica* Alex., which is very probably likewise a *Cladura*. This latter species is still known only from the type females and the male will be necessary to secure an exact definition of the characters. *C. japonica* (Alex.) has the wings distinctly although faintly tinged with yellowish; the macrotrichia on the veins are shorter

and relatively inconspicuous; Sc_2 is almost opposite the fork of R_2+3 ; cell 1st M_2 broader and the basal deflection of M_1+2 consequently longer; basal deflection of Cu_1 some distance beyond the fork of M as in *C. nipponensis*. In both *C. autumnæ* and *C. japonica*, the second anal vein adds between one-fourth and one-half the length of the long sector.

Genus TIPULA Linnaeus

Tipula tokionis, new species.

Female.—Length, 25 mm.; wing, 20.5–21.5 mm.

Superficially very similar to *T. saitamae* Alexander (Japan) from which it differs as follows:

Head much darker brownish gray. Pronotum not yellow but distinctly suffused with brown. Mesonotal praescutum without the grayish cast in *T. saitamae*. Legs with the tips of the femora and tibiæ narrowly but distinctly darkened. Wings with the ground-color more grayish than yellowish. Abdominal tergites with a broad, blackish sublateral stripe on either side. Ovipositor with the tergal valves slender, almost straight; sternal valves very broad and compressed, the tips evenly rounded.

Habitat.—Japan.

Holotype, ♀, Tokyo, September 15, 1919 (R. Takahashi).

Paratopotype, ♀, August 16, 1919.