

Undescribed Species of Crane-Flies from the Eastern United States and Canada (Dipt.: Tipulidae). Part VI

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The crane-flies discussed at this time were derived from various sources that are acknowledged in connection with each species. The preceding part under this general title was published in ENTOMOLOGICAL NEWS, vol. 40: 44-49; 1929.

Tipula (*Oreomyza*) *broweri* n. sp.

Belongs to the *marmorata* group; allied to *nebulipennis*; femora obscure yellow, the tips blackened, preceded by a subequal clearer yellow ring; wings subhyaline, conspicuously clouded with brown or grayish brown; cell *C* clear, cell *Sc*

only a trifle darkened; abdomen chiefly yellow, the outer segments, including the hypopygium, more variegated with brown; male hypopygium with a rectangular blackened lobe at base of outer dististyle; gonapophyses conspicuous, jutting from the genital chamber, the outer pair narrowed at apex; eighth sternite with a deep median incision, forming two conspicuous yellow lobes that are fringed along their mesal margins with long coarse setae.

♂. Length about 10-12 mm.; wing 11.5-13 mm.

♀. Length about 12-13 mm.; wing 11-12 mm.

Frontal prolongation of head gray; palpi brownish black. Antennae with scape obscure yellow, pedicel orange, flagellum uniformly black; flagellar segments only moderately incised. Head dark gray.

Mesonotal praescutum dark gray with four dark brown stripes, the cephalic ends of the intermediate pair paler, posterior sclerites of notum gray, the scutal lobes weakly darkened. Pleura light gray, variegated with darker gray, especially on anepisternum, ventral sternopleurite and ventral meron. Halteres yellow, the knobs dark brown basally, their apices paling to reddish brown.

Legs with the coxae gray; trochanters yellow; femora obscure yellow, the tips conspicuously blackened, preceded by a subequal clear yellow ring; tibiae and basitarsi brownish yellow, the tips darkened; remainder of tarsi black, claws (♂) with a single basal spine.

Wings subhyaline, clouded with paler brown or grayish brown, the pattern arranged much as in *fragilis* and unusually contrasting for a member of this group of flies; cell *C* clear, cell *Sc* only a trifle darkened; stigma darker brown; veins brown. Venation: *Rs* approximately one-half longer than *m-cu*.

Abdomen chiefly yellow, the first tergite and remainder of pleural region darkened; beyond midlength of abdomen both tergites and sternites more darkened laterally; hypopygium chiefly dark brown, the conspicuous lobes of the eighth sternite and the dististyles extensively yellow. Male hypopygium with the lateral lobes of tergite terminating in short decurved points, the margin of the median notch with microscopic blackened points. Basistyle on mesal edge below insertion of dististyles with a blackened plate or flange. Outer dististyle with a rectangular blackened lobe or flange at base. Inner dististyle relatively narrow, the apex of beak microscopically bidentate.

Gonapophyses conspicuously projecting from genital chamber, the inner pair narrow, tapering to a slender apex, the surface with delicate pale setulae; outer apophyses broad but tapering gradually to a narrow obtuse lobe. Eighth sternite with a deep median incision, forming two conspicuous yellow lobes, their mesal margins with abundant long coarse setae.

Habitat.—MAINE. *Holotype*: ♂, Mount Katahdin, summit, altitude 5,200 feet, September 2, 1939 (A. E. Brower). *Allotopotype*, ♀, with the type. *Paratopotypes*, 11 ♂♂, 1 ♀, altitude 4800-5,200 feet, September 2-3, 1939 (A. E. Brower).

Tipula (Oreomyza) broweri is named in honor of the collector, my good friend, Dr. A. E. Brower, who has added vastly to our knowledge of the insects of Maine. The species is most similar to *T. (O.) nebulipennis* Alexander, of Labrador, Gaspé, and the alpine summits of Mount Washington, New Hampshire, yet is entirely distinct from this, as well as all other members of the group. As common in the Tipulidae, the details of structure of the male hypopygium furnish the most evident specific characters, especially the structure of the dististyles, gonapophyses and the eighth sternite. Dr. Brower found this species in various places between Baxter Spring and the summit, associated with another member of the same group, *Tipula (Oreomyza) insignifica* Alexander, which is an autumnal species known elsewhere only from the alpine summits of the Presidential Range, New Hampshire (Lakes of the Clouds; Alpine Garden; Madison Springs; Star Lake).

The type of *broweri* is preserved in my personal collection of these flies.

(To be continued.)

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Pedicia (Tricyphona) gigantea n. sp.

Size very large (wing 23 mm.); mesonotum light gray, the praescutum with four very distinct brown stripes; halteres yellow; femora obscure yellow basally, passing into brown at near midlength, the tips blackened; wings with a brownish yellow tinge, with a scarcely indicated dark seam on *r-m*; Sc_2 opposite origin of *Rs*; R_{2+3+4} present, in oblique alignment with *r-m*.

Sex? Wing 23 mm.

Rostrum gray; palpi with basal two segments yellow, outer segments dark brown. Antennae with scape gray pruinose; pedicel brownish black, flagellum broken. Head light gray.

Mesonotum light gray, the praescutum with four very distinct brown stripes, the intermediate pair narrowly separated by an obscure line of the ground color; lateral stripes more grayish brown than the intermediate pair; scutellum paler gray. Pleura clear gray. Halteres yellow, the knobs undarkened.

Legs with the coxae light gray pruinose; trochanters obscure yellow; femora obscure yellow on basal half, passing into brown outwardly, the tips blackened; tibiae obscure brownish yellow, the tips narrowly brownish black; tarsi black.

Wings with a brownish yellow tinge, the prearcular and costal portions more saturated yellow; stigma deeper yellow; a very narrow to scarcely indicated dark seam on *r-m*; veins dark brown, a little brighter in the flavous portions. Venation: Sc_2 opposite origin of *Rs*, the latter long, angulated at origin, in longitudinal alignment with R_5 ; R_{2+3+4} present, in oblique alignment with *r-m* and about one-half as long; cell 1st M_2 elongate; cell M_1 with petiole subequal to *m*; *m-cu* a short distance beyond fork of *M*.

Abdomen broken beyond the second segment; basal tergite light yellow on sides and on cephalic portion, the remainder dark brown; second tergite with lateral border pale yellow; basal ring bright yellow, the extreme cephalic portion and a narrow sublateral stripe dark brown; posterior ring chiefly occupied by two nearly confluent brownish black stripes; basal

two sternites chiefly pale. From the nature of the tergal pattern, it is probable that the succeeding tergites are uniformly darkened or with a very restricted median brightening only.

Habitat. — NORTH CAROLINA. *Holotype*: Sex? Black Mountains, May 23, 1912 (Wm. Beutenmuller); in the Academy of Natural Sciences, Philadelphia, from the Dietz Collection.

I am greatly indebted to Mr. Rehn and Mr. Cresson for the privilege of describing the very interesting species here considered. In December, 1912, I spent a most pleasant week with Dr. and Mrs. Dietz at Hazleton and together we examined the extensive Beutenmuller collection made the preceding spring in the Black Mountains of western North Carolina. Outstanding in this rich material was the single specimen upon which the above species is based; it is my recollection that the specimen then possessed an abdomen and that it represents the male sex. The specimen still bears the label "*Pedicia* sp." in my writing affixed at that date. Among all other regional species of *Tricyphona* the fly stands out by its great size, which rivals or exceeds that of species in the typical subgenus *Pedicia*, all of which have the characteristic dark pattern of the wings. Among the known species of *Tricyphona* within our limits, the fly comes closest to *P. (T.) auripennis* (Osten Sacken) but is amply distinct in its coloration, venation and unusual size.

***Chionea stoneana* n. sp.**

Size small (length, about 4 mm.); general coloration dark brown, the antennae, legs and palpi brownish black; antennae 5-segmented, with only two flagellar segments beyond the fusion; male hypopygium with the gonapophyses protruding from the genital chamber as parallel darkened rods; ovipositor with cerci compressed, the lower edge conspicuously arcuate.

♂. Length about 4 mm.

♀. Length about 4-4.2 mm.

General coloration (in alcohol) dark brown, the abdominal membranes paler; antennae, palpi and legs brownish black. Antennae 5-segmented, with only two flagellar segments beyond the fusion-segment, the total length of these free segments subequal to the length of the fusion. Maxillary palpi

with terminal segment short-oval, obtusely rounded at apex. Legs with femora moderately incrassated, the setae abundant but not as erect and conspicuous as in *alexandriana*. Male hypopygium with gonapophyses protruding from the genital chamber as parallel, darkened rods that are straight or nearly so throughout their length. Ovipositor with cerci subacute at tips, more compressed-flattened and with ventral edge more arcuate than in *alexandriana*; hypovalvae obtuse at tips.

Habitat.—ILLINOIS. *Holotype*: ♀, on microscope slide, Urbana, December 11, 1938, in mouse nest (P. C. Stone); Collector's No. 220. *Allotopotype*, ♂, on microscope slide, in nest of field mouse, *Microtus ochrogaster* Wagner, December 16, 1939. *Paratopotypes*, 1 ♀, in alcohol, January 12, 1939, in mouse nest. 1 ♂, 1 ♀, February 2, 1940. I am indebted to the collector for the privilege of retaining the type male and female. The paratypes are preserved in the State Natural History Collection, Urbana, and in the Museum of Comparative Zoology.

I take unusual pleasure in dedicating this interesting crane-fly to the collector, Mr. Philip C. Stone, who discovered the materials upon which the species is based while making a study of the arthropoda in the nests of the Prairie Field Mouse. *Chionea stoneana* is most generally similar to *C. alexandriana* Garrett (Proc. Ent. Soc. Washington, 24: 62-64; 1922) of western North America. Both species have the number of antennal segments much reduced, in the present form there being only five, with two simple segments beyond the fusion-segment. Although *C. alexandriana* was described as having five antennal segments, material at hand shows six segments in the male, there being three segments beyond the fusion; in the female, the most basal of these three segments is apparently only partially separated from the fusion.

The present case shows the greatest reduction in number of antennal segments as yet discovered in the genus or in the entire family Tipulidae. Kratochvil (Bull. Soc. Ent. France, 1936: 250) has arranged the western Palaerctic species of *Chionea* into two groups, one of which, the *Chionea brachycornæ* (more correctly *brachyceræ*) includes those species with

six or seven antennal segments. The definition should be modified to include the 5-segmented condition of the present fly.

Erioptera (Ilisia) sweetmani n. sp.

General coloration of mesonotal praescutum orange-yellow, with indications of four more reddish brown stripes on posterior half; pleura light gray, striped longitudinally with dark brown, the latter color also including the lateral margin of the praescutum and scutum; femora chiefly blackened, the bases of fore femora and a post-medial ring on all legs yellow; tibiae uniformly yellow; wings light yellow, restrictedly patterned with dark brown, including a narrow but entire band at cord; *m* lying far distad; male hypopygium with the tergite bearing a median oval spatulate lobe that is provided laterally with long spinous setae; shoulders of tergite with groups of smaller spines.

♂. Length about 4.5 mm.; wing 5.5 mm.

Rostrum gray; palpi black. Antennae with scape blackened; succeeding segments yellow, the outer flagellar segments passing into brown; basal flagellar segments subcylindrical, the outer segments more elongate; longest verticils unilaterally distributed. Head brownish gray.

Pronotum yellowish gray medially, blackened on sides. Mesonotal praescutum clear orange-yellow, with indications of four more reddish brown stripes, especially evident on the posterior half of sclerite, the lateral margin of praescutum and scutum conspicuously brownish black; pseudosutural foveae and humeral pits pale; scutum and scutellum brownish gray, the scutal lobes a little darker; postnotum grayish brown. Pleura light gray, striped longitudinally with brown, including a dorsal line from the fore coxae across the ventral anepisternum onto the dorsal pteropleurite; meral region extensively darkened; dorso pleural membrane yellow. Halteres uniformly yellow.

Legs with the coxae gray; trochanters grayish yellow; femora chiefly blackened, the proximal fourth of fore pair obscure yellow; all femora with a narrow yellow ring beyond midlength, this narrowest on the fore and middle legs, broader on the posterior pair where it equals in extent the outermost black ring; extreme tips of femora brightened; tibiae and tarsi uniformly light yellow, only the outer tarsal segments darkened.

Wings light yellow, restrictedly patterned with dark brown spots, including a narrow but entire band at cord, ending at

vein Cu ; other spots at origin of R_s , Sc_2 , midlength of vein Cu , fork of M_{3+4} , m and a marginal series at ends of all longitudinal veins, smallest on R_4 , larger on the anal veins; veins yellow, darkened in the clouded areas. Venation: m lying far distad, the outer section of vein M_3 less than twice m alone.

Abdomen dark brown, sparsely pruinose; hypopygium dark. Male hypopygium with the tergite distinctive; a medial oval spatulate lobe that is provided along its lateral margins with long spinous setae, the longest about one-third the length of the lobe; apex of lobe obtusely rounded; lateral shoulders of tergite on either side of median lobe with additional strong spinous setae. Outer dististyle relatively stout but regular in outline, without an outer lobe as in *armillaris*. Inner dististyle with apical blade narrow, much more so than in *lævis*. Gonapophyses appearing as slender black horns, the tips converging toward the midline, without a serrulate dilation before apical spine, as in *armillaris*.

Habitat.—GEORGIA. *Holotype*: ♂, Toccoa Falls, Stephens County, on cañon rocks and cliffs, April 19, 1939 (H. L. Sweetman).

I am very pleased to name this interesting and unusually beautiful crane-fly in honor of my colleague at the Massachusetts State College, Dr. Harvey L. Sweetman. In its genitalic characters, it is quite distinct from *Erioptera* (*Ilisia*) *armillaris* Osten Sacken and *E. (I.) lævis* Alexander, both of northeastern North America.