

NEW OR INSUFFICIENTLY-KNOWN CRANE-FLIES
FROM THE NEARTIC REGION (TIPULIDAE,
DIPTERA).

PART II.

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The new species described at the present time were included in material sent to me for identification by Miss Helen E. Sweet, taken at and near Claremont, California, and discussed in detail in her study on *Artemisia* and its ecological relationships (Journal of Entomology and Zoology, Pomona College, 1930); in a large and important collection of crane-flies taken in the highest mountains of Colorado by Mr. Charles F. Clagg; and in a small but highly interesting series of Tipulidae sent to me by Mr. Charles W. Johnson. The types of the species, with the exception of *Oropeza johnsonella*, are preserved in the author's collection.

Mr. Fred W. Edwards, of the British Museum of Natural History, has made a critical study of the hitherto unrecognizable species of Nearctic *Tipula* described by Francis Walker in 1848 and 1856 and as a result the identity and synonymy of almost all of these species has been settled. This study has resulted in the changing of name of several of our best-known species of the genus. I am very deeply indebted to Mr. Edwards for the opportunity of publishing these changes of names at this time. In the following list, the earliest name is the correct one in all instances:

<i>albilatus</i> Walker (1848)	= <i>abdominalis</i> (Say) (1823).
<i>borealis</i> Walker (1848)	= <i>hebes</i> Loew (1863).
<i>disjuncta</i> Walker (1856)	= <i>taughannock</i> Alexander (1915).
<i>dorsimacula</i> Walker (1848)	= <i>angustipennis</i> Loew (1863).
<i>duplex</i> Walker (1848)	= <i>cincticornis</i> Doane (1901), <i>mingwe</i> Alexander (1915).
<i>furca</i> Walker (1848)	= <i>bella</i> Loew (1863).
<i>glomerata</i> Walker (1848)	= <i>arctica</i> Curtis (1831).
<i>platymera</i> Walker (1856)	= <i>tesselata</i> Loew (1863), <i>labradorica</i> Alexander (1915).

* Contribution from the Entomological Laboratory, Massachusetts Agricultural College.

<i>simulata</i> Walker (1856)	= <i>trivittata</i> Say (1823).
<i>triplex</i> Walker (1848)	= <i>inermis</i> Doane (1901), (? <i>umbrosa</i> Loew, 1863).

In addition to the above, *Tipula resurgens* Walker (1848) is almost certainly *T. latipennis* Loew (1864).

Tipula jacobus n. n.

In 1848, Walker described *Tipula filipes* as new. In 1909, Johnson identified *filipes* as being one of the larger and commoner species in Eastern North America and the name being pre-occupied by *Tipula filipes* Fabricius (1805), he renamed the species *Tipula perlongipes*. Mr. Edwards now informs me that the crane-fly described by Walker and renamed by Johnson is an entirely different species from the Eastern American species that has been passing under the name of *perlongipes*. I therefore name this well-known fly as above, the species being dedicated to my friend and co-worker, Professor James Speed Rogers. The present species has been earlier discussed and figured (Alexander, Crane-flies of New York, I, p. 952, fig. 268; 1919).

Tipula mesotergata n. sp.

General coloration reddish brown, gray pruinose; male hypopygium of moderate size; ninth tergite large, the lateral angles produced caudad into short broad bispinous plates; caudal margin of tergite between the lateral lobes nearly transverse; eighth sternite with the lateral lobes low.

Male.—Length about 16 mm.; wing 14.5 mm.

Frontal prolongation of head long, yellow; nasus small; palpi with the basal segment yellow, the remainder passing into dark brown. Antennae with the scape yellow; flagellum broken. Head reddish brown, dusted with gray; a narrow median brown vitta on anterior portion of vertex.

Mesonotum reddish brown, with a gray pruinosity; median region of scutum behind the suture with a semicircular yellow area; postnotum yellowish gray. Pleura yellowish gray, the dorsopleural region more yellowish. Halteres yellow, the knobs infuscated. Legs with the coxae yellowish gray; trochanters yellow; femora yellow, the tips narrowly and vaguely darkened; terminal tarsal segments blackened. Wings yellowish gray, the base and costal region more yellowish; stigma yellowish brown; antestigmal oblitative areas narrow but extensive, extending from before the stigma, across cell 1st M_2 into cell M_3 .

Abdominal tergites yellow, with indications of three darker longitudinal stripes, the caudal margins of the segments narrowly yellow, becoming broader and more conspicuous on the subterminal segments; hypopygium of moderate size, reddish. Male hypopygium with the tergite large, the lateral angles produced caudad into short broad plates, the apices of which are obliquely truncated and unequally bispinous, the outer spine stouter; caudal margin of tergite between nearly transverse, the median portion elevated into two barely evident yellow tubercles. Basistyle entire, the dorsal portion greatly narrowed. Outer dististyle small and slender. Inner dististyle with the basal portion separated from the main body of the style by a deep notch, the apex of this slender basal portion terminating in two or three spinous points. Ninth sternite with a quadrate median notch. Eighth sternite with the caudal margin subtransverse to broadly and weakly emarginate, the lateral angles produced into low lobes that are directed mesad and caudad; on either side of the median line of the sternite a small brush of golden-yellow setae, these decussate across the midline.

Habitat: California.

Holotype: ♂, Claremont, on *Artemisia tridentata* (H. E. Sweet); Collector's No. 28.

Tipula mesotergata is apparently most closely related to *T. sternata* Doane, differing in the structure of the male hypopygium.

Tipula sweetæ n. sp.

Male.—Length about 13 mm.; wing 10–11 mm.

Female.—Length about 14 mm.; wing 11.5 mm.

Allied and generally similar to *Tipula californica* (Doane) (*Pachyrhina californica* Doane, 1908), differing very conspicuously in the structure of the male hypopygium.

Size smaller. First flagellar segment entirely black. Head, thorax, abdomen and wings almost exactly as in *californica*.

Male hypopygium with the tergite large, the caudal margin with a narrow U-shaped median notch, the lateral angles of each lobe further produced into an acute spine. Basistyle entire. Lower dististyle conspicuously hairy, the distal third narrowed into a spine. Eighth sternite produced medially into two lobes that are separated by a deep V-shaped median notch, the mesal edges of the lobes conspicuously fringed with long yellow setae. *T. californica* has the hypopygium conspicuously larger, the tergite with a very broad U-shaped notch, the lateral lobes thus formed blunt, on ventral margin

before apex with a small black spinous point. Lower dististyle much longer, glabrous.

Habitat: California.

Holotype: ♂, Claremont, 1929 (H. E. Sweet); Collector's No. 42. *Allotopotype:* ♀, *Paratopotypes*, 4 ♂♂; Collector's No. 32.

I take great pleasure in naming this species in honor of the collector, Miss Helen E. Sweet.

Oropeza johnsonella n. sp.

Size small (wing, ♂, under 10 mm.); mesonotum reddish brown, the brown praescutal stripes relatively indistinct; halteres dusky; legs pale brown, the tarsi a little paler; male hypopygium with the inner dististyle a flattened blade, the apex subtruncate, on outer margin near base with a small setiferous tubercle; gonapophyses recurved, tipped with acute spines.

Male.—Length about 8 mm.; wing 9.8 mm.

Frontal prolongation of head and palpi dark brown. Antennae (♂) relatively elongate, if bent backward extending to beyond the base of abdomen; scape honey-yellow; first flagellar segment short, the remaining segments passing into brown. Head dark brown.

Mesonotum reddish brown, the praescutum with three indistinct darker brown stripes. Pleura light brown, with vaguely indicated darker areas on anepisternum, ventral sternopleurite and ventral pleurotergite. Halteres dusky, the base of stem yellow. Legs with the coxae yellow, infuscated at base; trochanters yellow; a single (posterior) leg remains, pale brown, the tarsi a trifle paler, more yellowish brown. Wings tinged with brown, the stigma darker brown; veins brown. Venation: Cell M_1 about one-half longer than its petiole.

Abdominal segments ringed with brown and yellow, the apices of the segments paler than the bases. Male hypopygium with the lateral portions of the tergite produced into conspicuous setiferous shoulders, the intermediate margin very gently crenulate; ventro-lateral arms of tergite strongly curved, slender, not expanded outwardly, the apex acute or subacute. Outer dististyle a little longer than the inner dististyle, cylindrical, not dilated at base. Inner dististyle a flattened blade, near base on outer margin with a small tubercle set with conspicuous setae; apex of style subtruncate. Gonapophyses recurved, setiferous, the tips set with several acute spines.

Habitat: Eastern North America.

Holotype: ♂, Riverton, New Jersey, August, 1911 (*C. W. Johnson*). Type returned to Mr. Johnson.

This interesting *Oropeza* is named in honor of Mr. C. W. Johnson, distinguished authority on the American species of the genus. In its small size and general appearance, *Oropeza johnsonella* agrees most closely with *O. rogersi* Alexander, differing in the structure of the male hypopygium, especially the inner dististyle, which bears a setiferous tubercle on outer margin beyond base.

This type of structure is found in the Nearctic species only in *O. subalbipes* Johnson, an otherwise very different fly.

***Cylindrotoma pallescens* n. sp.**

General coloration pale yellow, the usual black areas entirely replaced by very pale rufous, scarcely evident against the ground-color; antennae pale yellow.

Female.—Length 11 mm.; wing 10 mm.

Antennae pale yellow, the terminal segment darkened; flagellar segments a little shorter than in *splendens*. Head brownish gray, more yellowish behind.

Thorax pale yellow, the very pale rufous areas scarcely indicated against the ground-color. Halteres pale yellow. Legs pale yellow, the femoral tips a little darkened; last tarsal segment darkened. Wings yellow, stigma barely evident; veins pale brown, those in the prearcular and costal regions clearer yellow. Venation: *Rs* relatively short, about one-fifth longer than *R*₃, arcuated at origin; *m* at fork of *M*₁₊₂ or beyond on *M*₂.

Abdomen yellow.

Habitat: Colorado.

Holotype: ♀, Ute Pass, Williams Fork Range, Grand Co., altitude 10,500 feet, July 16, 1929 (*C. F. Clagg*).

Cylindrotoma pallescens is apparently most closely allied to *C. splendens* Doane, being distinguished by the almost uniformly pale yellow coloration, the dark areas being replaced by very pale rufous. The wings are fully colored and the fly is apparently not a teneral individual. The left wing of the type shows a weak trace of an adventitious crossvein in cell *R*₅, in alignment with *m*, thus suggesting the condition found in *Cyttaromyia*.

***Tricyphona claggi* n. sp.**

Belongs to the *diaphana* group; general coloration gray, the praescutum with four brown stripes; antennae 12-seg-

mented; wings cream-colored, with a restricted brown pattern; cell *M*₁ lacking; cell 1st *M*₂ closed.

Male.—Length about 7 mm.; wing 7.5 mm.

Rostrum gray; palpi brownish black. Antennae 12-segmented, black throughout; flagellar segments nearly globular, gradually decreasing in size outwardly, the terminal segment smallest. Head light gray.

Pronotum gray, the anterior notum infuscated. Mesonotal praescutum light gray, with four conspicuous brown stripes, the intermediate pair ending some distance before the suture; lateral stripes narrower, reaching the suture; scutum gray, the lobes with barely indicated dark markings; posterior sclerites of mesonotum gray, the parascutella darker. Pleura gray. Halteres pale, the knobs infuscated. Legs with the coxae pruinose; trochanters obscure yellow; femora obscure yellow, passing into brown at tips; tibiae and tarsi dark brown, the outer segments of the latter blackened. Wings cream-colored, with a restricted brown pattern, including a cloud at origin of *Rs*, the stigma and anterior cord, narrower seams on posterior cord and outer end of cell 1st *M*₂; radial field beyond cord vaguely suffused with brown; veins much darker than the ground-color, especially those beyond the cord. Venation: *R*₄₊₅ distinct; cell *M*₁ lacking; cell 1st *M*₂ closed; *m-cu* just before midlength of cell 1st *M*₂.

Abdomen gray, the hypopygium somewhat brighter. Male hypopygium with the lateral appendages of the tergite appearing as conspicuous curved flattened blades, the tips acute. Interbasal spines about one-half the length, slender, strongly curved.

Habitat: Colorado.

Holotype: ♂, Bobtail Creek, Grand Co., altitude 11,000 feet, July 20, 1929 (*C. F. Clagg*).

Tricyphona claggi is named in honor of the collector, Mr. Charles F. Clagg, to whom I am greatly indebted for numerous crane-flies from Colorado and the Philippines. The species is obviously allied to *T. diaphana* (Doane), *T. frigida* Alexander, and *T. exoloma* (Doane), differing conspicuously from all allied forms by the lack of cell *M*₁ of the wings.

***Limnophila claggi* n. sp.**

Coloration of mesonotal praescutum and scutal lobes polished black; antennae of male elongate; thoracic pleura

heavily pruinose; male hypopygium with the outer dististyle slender, the apex bidentate.

Male.—Length about 6 mm.; wing 6.2 mm.

Rostrum and palpi black. Antennae (♂) black throughout, elongate, if bent backward extending about to the base of abdomen; intermediate flagellar segments with the ventral face protuberant; flagellar segments gradually decreasing in size outwardly, the last segment small. Head black, pruinose.

Interspaces of mesonotal praescutum and the scutal lobes polished black, the lateral margins of the former and median area of the latter pruinose; remainder of mesonotum black, sparsely pruinose. Pleura black, heavily pruinose. Halteres pale yellow. Legs with the coxae gray pruinose; trochanters black; femora yellow, the tips blackened, most extensive on the fore legs where a little more than the outer third is included, narrower on the middle and hind femora; tibiae brownish black; tarsi black. Wings whitish subhyaline, the base and costal region more yellowish; stigma oval, pale brown; vague brown clouds along vein *Cu* and the cord; veins brown. Venation: *Sc*₁ ending just before the fork of *Rs*, *Sc*₂ at its tip; *Rs* angulated at origin; veins *R*₃ and *R*₄ strongly divergent, cell *R*₃ at margin wider than cell *R*₄; cell *M*₁ about twice its petiole; *m-cu* at midlength of cell 1st *M*₂.

Abdomen black, pruinose; hypopygium black. Male hypopygium with the outer dististyle a slender blackened rod, the base wider, the apex bidentate, the lower tooth slightly larger. Gonapophyses appearing as large flattened plates, the margin with conspicuous appressed teeth. Aedeagus elongate.

Habitat: Colorado.

Holotype: ♂, Bobtail Creek, Grand Co., altitude 11,000 feet, July 20, 1929 (C. F. Clagg). *Paratopotype*: ♂.

Limnophila claggi is dedicated to the collector of the type material, Mr. Charles F. Clagg. The species differs from the small polished black species resembling *munda* Osten Sacken by the elongate antennae of the male and the structure of the hypopygium. The fly is doubtfully referable to the subgenus *Priolabis* Osten Sacken.