

NEW NEARCTIC CRANE-FLIES (TIPULIDAE, DIPTERA). PART XIV.

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The preceding part under this general title was published in 1929 (Can. Ent., 61: 15–22). The novelties discussed at this time were included in collections sent to me by my friends, Professor J. Speed Rogers, of the University of Florida, and by Dr. Henry K. Townes, of Cornell University. Except where indicated to the contrary, the types of the new forms are in the collection of Professor Rogers, to be placed eventually in the Museum of Zoology of the University of Michigan. I wish to express my deep thanks to the collectors for the privilege of describing these species.

Tipula (Yamatotipula) succincta n. sp.

Allied to *iroquois*; general coloration light gray, the praescutum with four darker gray stripes that are narrowly bordered by darker; antennal flagellum black; wings with a strong brownish tinge, the cells beyond cord somewhat darker; a narrow dark seam on cord; abdominal tergites brown, the posterior borders of the segments narrowly obscure yellow; male hypopygium with the caudal border of tergite produced into two low submedian lobes that are set with strong black setae; outer dististyle relatively short and broad; inner dististyle on face with a long slender blackened arm; gonapophyses terminating in broadly flattened spatulate blades.

Male.—Length about 11.5–12 mm.; wing 12.5–13 mm.; antenna about 5 mm.

Frontal prolongation of head brownish gray; nasus distinct; palpi dark brown. Antennae with scape and pedicel brownish yellow, flagellum black; flagellar segments only moderately incised. Head brownish gray, clearer gray on the front and anterior vertex; vertical tubercle low.

Pronotum gray, restrictedly darkened medially. Mesonotal praescutum light gray with four darker gray stripes that are narrowly bordered by darker, the mesal edges of the intermediate stripes forming a broad median dark vitta, most distinct on the cephalic third; darkened borders of lateral stripes less evidently indicated; posterior sclerites of notum gray, the scutal lobes with two confluent dark areas; a very poorly indicated central darkening on mediotergite. Pleura light gray, variegated with darker gray on the ventral sternopleurite and meron, and on most of the anepisternum and adjoining portions of the pteropleurite; dorsopleural membrane buffy. Halteres pale reddish brown. Legs with the coxae light gray; trochanters obscure yellow; femora obscure yellow, the tips rather narrowly dark brown; tibiae light brown, the tips darker; tarsi black. Wings with a strong brown tinge, the cells beyond cord somewhat darker but not forming a clearly defined dark wing tip; cells *C* and *Sc* darker brown than remainder of ground; stigma brown; narrow dark seams on anterior cord and even more narrowly on posterior cord; posterior border of wing very narrowly bordered by darker; veins brown. Venation: *Rs* nearly straight, about twice *m-cu*; petiole of cell *M*₁ considerably longer than *m*; *M*₃₊₄ from one-half to three-fifths the length of basal section of *M*₃.

Abdominal tergites brown, the posterior borders of tergites narrowly obscure yellow; sternites yellow; hypopygium darkened. Male hypopygium with the caudal margin of tergite produced into two submedian lobes that are separated by a small but deep U-shaped median notch, the lobes low, densely provided with strong black setae. Outer dististyle relatively short and broad, widest near base, the tip obtuse. Inner dististyle with posterior angle produced into a short black spinous point; face of style below beak with a long slender blackened arm that is nearly as long as the beak itself, weakly dilated at tip. Gonapophyses appearing as flattened spatulate blades, the expanded portions long-oval, subequal in length to the stems. A depressed flattened, pale, median lobe at ex-

treme base of ninth sternite just caudad of margin of eighth sternite, with a still smaller median lobule more distad, at base of sternal incision. Paired setiferous cushions on the ninth sternite, such as are found in *iroquois*, are lacking.

Habitat.—Indiana.

Holotype, ♂, Hanover, Jefferson Co., April 14, 1931 (J. S. Rogers); Collector's No. 139. *Paratopotype*, ♂.

The nearest allies among the described species in eastern North America are *Tipula* (*Yamatotipula*) *brevifurcata* Alexander, of the southern Appalachians, and *T. (Y.) iroquois* Alexander, more widely distributed in mountainous eastern North America. The species are easily distinguished among themselves by the structure of the male hypopygium.

***Tipula* (*Tipula*) *nebulinervis* n. sp.**

Belongs to the *ultima* group, allied to *tennessa*; general coloration of thorax gray, the praescutum with four more reddish brown stripes that are narrowly bordered by darker; antennae short, the basal segments yellow; wings with the ground color grayish subhyaline, the veins broadly and conspicuously bordered by reddish brown to produce a streaked appearance; abdomen obscure yellow, the tergites with a poorly defined, more brownish, median stripe; male hypopygium with basistyles at mesal edge each with a longe, pale, pendulous lobe.

Male.—Length about 16–17 mm.; wing 18.5 mm.; antenna about 3.5 mm.

Frontal prolongation of head yellow, relatively long; palpi obscure yellow, the short terminal segment a little darker. Antennae short, yellow, the outer flagellar segments weakly bicolored; basal enlargement of segments moderately developed; longest verticils a little exceeding the segments. Head brownish gray; vertical tubercle simple, extended in front into a small tubercle.

Pronotum brownish gray, more yellow on sides. Mesonotal praescutum with the color gray, with four more reddish brown stripes that are narrowly and indistinctly bordered by slightly darker brown, especially distinct on the intermediate stripes; scutal lobes reddish brown, the median area more pruinose; posterior sclerites of notum dark gray. Pleura gray, the dorsopleural membrane yellow. Halteres elongate, stem yellow, knob slightly darkened. Legs with coxae light gray; trochanters yellow; femora obscure yellow basally, passing into brown; tibiae and tarsi brown. Wings with the ground grayish subhyaline, the veins broadly and conspicuously margined with more reddish brown, restricting the ground to the centers of the cells and producing a streaked appearance; costal border of wing to wing tip narrowly darker brown, including cell *C*, stigma and cell *R*₂; cell *Sc* more yellowish brown; veins reddish brown. Venation: *R*₁₊₂ preserved; cell *R*₂ narrowed at base; petiole of cell *M*₁ subequal to *m*.

Abdomen, including hypopygium, obscure yellow, the tergites with a poorly defined, more infuscated, median stripe. Male hypopygium with the median emargination of tergite very broad and shallow, the low lobes sinuously and obliquely truncated with only their lateral portions restrictedly blackened. Outer dististyle unusually short and broad, the greatest width of the blade approximately two-thirds the length. Inner dististyle with a conspicuous basal flange or flattened plate, the anterior angle produced into a black spine, the posterior angle into a truncated lobe. Mesal face of basistyle opposite the point of insertion of dististyle produced into a very long, pendulous lobe that bears several unusually long setae at apex.

Habitat.—Florida.

Holotype, ♂, Jackson Co., November 15, 1931 (J. S. Rogers); Collector's No. 12. *Paratopotypes*, 2 ♂ ♂.

Tipula (Tipula) nebulinervis is most closely allied to *T. (T.) tennessee* Alexander, differing conspicuously in the peculiar pattern of the wings, and in the structure of the male hypopygium. Superficially, especially in the pattern of the wings, it resembles *Tipula (Yamatotipula) manahatta* Alexander, of eastern North America.

***Tipula (Lunatipula) mariannae* n. sp.**

General coloration brownish yellow; antennae (male) long, approximately one-half the length of body, the flagellar segments bicolored, with brownish black bases: wings with a strong brownish yellow suffusion, the costal border and stigma still darker; obliterative area before stigma restricted but conspicuous, ending posteriorly in cell 1st M_2 ; no post-stigmal brightening; abdominal tergites obscure yellow, more or less darkened medially, especially the outer segments; male hypopygium with the tergite broadly emarginate medially, produced into two short lateral lobes, the base of the emargination with a small U-shaped notch; eighth sternite simple, the median area with a sparse group of setae but with no lobes or hair-pencils.

Male.—Length about 14 mm.; wing 15.5 mm.; antenna about 7 mm.

Frontal prolongation of head obscure yellow; nasus stout; palpi obscure yellow, the terminal segment darker at tip. Antennae (male) elongate, approximately one-half the length of body; basal three segments yellow; succeeding segments bicolored, the basal enlargement brownish black, the remainder yellow; on outer three or four segments more uniformly darkened; basal enlargements of segments relatively small, the verticils much shorter than the segments. Head light brown, more yellowish in front; a capillary, darker brown, median vitta; vertical tubercle small and simple.

Thorax of unique type somewhat discolored, general coloration apparently medium brown or yellowish brown, with indications of four darker stripes; scutellum and mediotergite more yellowish, the former with a slight central darkening. Pleura obscure yellow. Halteres with stem obscure yellow, knob darkened basally, pale at apex. Legs with coxae and trochanters yellow; femora obscure yellow, clearer basally, somewhat darker on apical portion; tibiae obscure brownish yellow; tarsi passing into black; claws simple. Wings with a strong brownish yellow suffusion; cells *C* and *Sc*, together with the stigma, still darker brown; prearcular field clearer yellow; a restricted obliterative streak before stigma, extending from before stigma along anterior cord into base of cell 1st M_2 ; no post-stigmal brightening; veins yellowish brown. Venation: *Rs* about one-half longer than *m-cu*; extreme tip of R_1+2 atrophied; cell 1st M_2 long, widest across base; petiole of cell M_1 long, approximately three times *m*, cell M_4 deep, M_3+4 shorter than or subequal to basal section of M_1+2 .

Abdominal tergites obscure yellow, with a median dark stripe, on the outer segments this becoming broader and more distinct, on the third and succeeding segments including the posterior tergal borders; subterminal segments more extensively darkened; basal sternites obscure yellow, outer segments more darkened; hypopygium chiefly pale. Male hypopygium with the caudal margin of tergite broadly emarginate, produced into short lateral lobes, medially with a small U-shaped notch. Ventro-mesal region of basistyle produced into low, broad, darkened lobes that are set with long white setae; suture of basistyle extensive, obliterated dorsally. Outer dististyle small, the outer blade narrow. Inner dististyle with the beak very broad and obtuse, more or less blackened; a strong triangular black tooth below the beak; outer lobe of style large and conspicuous. Eighth sternite simple, the caudal margin transverse, with a sparse group of moderately long setae on the median area but without lobes or hair-pencils.

Habitat.—Florida.

Holotype, ♂, Marianna, Jackson Co., April 13, 1928 (J. S. Rogers); Collector's No. 2.

Tipula (Lunatipula) mariannae is quite distinct from all members of the subgenus in the southeastern United States. It seems closest to *T. (L.) disjuncta* Walker, differing conspicuously in the coloration and structure of the antennae, and in the structure of the male hypopygium.

***Dicranota (Plectromyia) townesi* n. sp.**

Size large (wing, male, over 6 mm.); general coloration grayish brown, the praescutum with three conspicuous dark brown stripes; antennae 13-segmented, black throughout; legs brownish black; wings with a weak brown tinge, the costal border and stigma a trifle darkened; venation of radial field variable, with cell R_3 ranging from short-petiolate to sessile; abdomen brown, the tergites darker; male hypopygium with the tergite very strongly produced medially, the lateral arms obtusely rounded at tips; interbases bidentate at tips.

Male.—Length about 5.8–6 mm.; wing 6.2–6.5 mm.

Rostrum and palpi black. Antennae short, 13-segmented, black throughout; basal flagellar segment elongate, narrowed basally; succeeding two or three segments nearly globular; outer segments passing into oval. Head dark.

Pronotum brown. Mesonotal praescutum grayish brown, with three conspicuous, dark brown stripes, the median one broad; centers of scutal lobes darkened; posterior sclerites of notum chiefly dark brown. Pleura light brown, the ventral sternopleurite darker. Halteres with stem pale, knob darkened. Legs with coxae and trochanters pale brown; remainder of legs brownish black. Wings with a weak brownish tinge, the costal border and stigma a trifle darker; veins brown. Venation: Cell R_3 broadly sessile (R_4+5 present) to short-petiolate (R_2+3+4 present), this condition unusually variable for a single species; cell M_3 longer than its petiole. In one wing of the paratype, there is a faint adventitious crossvein in cell R_1 , as in *Dicranota*.

Abdomen brown, the tergites somewhat darker; hypopygium dark. Male hypopygium with the median area of tergite strongly produced into an obtusely rounded lobe, much more conspicuously so than in *confusa* or *modesta*, but less so than in *petiolata*; lateral tergal arms appearing as flattened blades, their apices obtusely rounded. Interbases bidentate at tips, the teeth slightly unequal. Aedeagus in part strongly blackened.

Habitat.—South Carolina.

Holotype, ♂, Greenville Co., April 9, 1932 (H. K. Townes). *Paratopotype*, ♂; *paratype*, 1 ♂, on microscope slide, Greenville Co., altitude 2,400 feet; Rogers Collection, No. 1295. Type in my collection, through generosity of Dr. Townes.

I take great pleasure in naming this interesting species in honor of the collector, Dr. Henry K. Townes, who has secured many rare and interesting crane-flies in North and South Carolina. The very strongly produced median area of the tergite, with simple, obtusely rounded tergal arms, readily separates this fly from the other regional species of the subgenus that have the median lobe of the tergite obtusely rounded, including *Dicranota (Plectromyia) confusa* Alexander and *D. (P.) modesta* (Osten Sacken). The paratype has the median tergal lobe even more strongly produced than in the holotype, and in the slide mount of the hypopygium the apices of the lateral tergal arms appear somewhat more angulate, this appearance perhaps due to the method of mounting. Superficially, the hypopygium is much like that of *Dicranota (Rhaphidolabis) cayuga* (Alexander) but the dististyle is different and the tergite much more strongly produced medially.

***Erioptera (Erioptera) leptostyla* n. sp.**

Male.—Length about 5.5 mm.; wing 5 mm.

Described from the unique type, cleared and mounted on a microscope

slide. General coloration evidently pale green, as in the *chlorophylla* group. Eyes of male very large, contiguous on dorsal surface of head. Halteres and legs pale. Wings uniformly pale, including the veins which are ill-delimited against the ground. Male hypopygium with the outer dististyle a simple slender rod that is almost straight and of virtually the same diameter throughout its length, the tip being subequal in diameter or even a little dilated, obtusely rounded. Inner dististyle fused basally with the outer, appearing as a strong simple rod, shorter than the outer style, strongly curved in a semicircle, the acute darkened tip directed cephalad; surface of style with microscopic setigerous punctures but otherwise unarmed. Gonapophyses appearing as strong curved chitinized hooks, their margins smooth.

Habitat.—Michigan.

Holotype, ♂, on a microscope slide, Washtenaw Co., August 23, 1921 (J. S. Rogers); Collector's No. 226.

Among the described species of the *chlorophylla* group, the present fly is closest to *Erioptera* (*Erioptera*) *chlorophylloides* Alexander and *E. (E.) gaspeana* Alexander, agreeing in the simple dististyles and uniformly smooth blackened horns of the gonapophyses. It differs very evidently in all details of structure of the male hypopygium.

***Erioptera* (*Erioptera*) *chlorophylloides orthomera* n. subsp.**

Characters as in typical *chlorophylloides* Alexander, differing in the structure of the male hypopygium, especially of the gonapophyses. The latter appear as slightly flattened, nearly straight blades, the tips acutely pointed and narrowly blackened. In typical *chlorophylloides*, the apophyses appear as slender, curved horns, broad at base, thence gradually narrowed to the long slender spinous points, with nearly the distal half of the entire structure blackened.

Habitat.—Connecticut.

Holotype, ♂, State Line Pond, Stafford Springs, altitude 910 feet, June 14, 1933 (C. P. Alexander); author's collection.

The present insect was found associated with the typical form in a boggy woods.

***Molophilus* (*Molophilus*) *sparus* n. sp.**

Male.—Wing 4 mm.

Known to me only from the type slide on which the wings and male genitalia are preserved. Wings with a brownish tinge, the basal portions a little brightened; veins and macrotrichia brown. Venation: R_2 and *r-m* in transverse alignment; petiole of cell M_3 nearly twice *m-cu*; vein 2nd *A* strongly sinuous, ending beyond level of posterior end of *m-cu*. Male hypopygium with the beak of basistyle a straight black spine. Outer dististyle with arms long, the outer only moderately expanded. Basal dististyle a moderately long, simple rod, gently sinuous, narrowed gradually to the long acute point; on outer face of distal third with several appressed teeth; no basal spine as in *novacaesariensis*. Phallosomic plate broad, the apex very obtuse to truncate.

The nearest relative is *Molophilus* (*Molophilus*) *novacaesariensis* Alexander, which was taken on the same day and at the same place as the present fly. From the structure of the male hypopygia, I would consider the two flies to be distinct without question. In *novacaesariensis*, the basal dististyle is a much longer, more slender rod, nearly straight, with very sparse and small, nearly apical denticles; in addition, there is a single, larger, nearly erect spine just beyond base of style, in cases this latter bifurcated at tip, in others simple; phallosomic plate much narrower, the tip obtuse.

Habitat.—Florida.

Holotype, ♂, microscope slide, Alachua Co., March 8, 1925, (J. S. Rogers); Collector's No. 164.