

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

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The preceding part under this general title was published in 1941 (*Can. Ent.*, 73: 206-213). In the present instalment, I am discussing species included in extensive series of these flies taken by Mr. H. Elliott McClure at Fort Churchill, Manitoba; by Dr. Mont A. Cazier in California and Nevada; by Mr. and Mrs. John L. Sperry in Montana, Wyoming and New Mexico; by Dr. and Mrs. Henry K. Townes in Washington; and by Mr. John W. Zukel in Idaho. My deepest thanks are extended to all of the above entomologists for the privilege of retaining the types of the new species and for this invaluable co-operation in making known the large and intricate tipulid fauna of the Rocky Mountains and Pacific States and Provinces. The long-term survey of the crane-flies of Western North America is now well under way and very many surprising discoveries have been made.

***Prionocera rostellata churchilliana* n. subsp.**

*Male.* Length about 12 mm.; wing 11.5-12 mm.

*Female.* Length about 13-15 mm.; wing 12 mm.

Frontal prolongation of head short and stout, with short stout nasus; extreme outer margin of prolongation orange; palpi black. Antennae black throughout; flagellar segments only moderately produced. Head black, sparsely pruinose; anterior vertex broad.

Pronotum grayish pruinose, the scutellum and lateral pretergites yellow. Mesonotum gray pruinose, the parascutella, lateral border of mediotergite, and all of the katapleurotergite excepting a dark line above the root of halteres yellow; praescutum with three more darkened stripes that are poorly defined against the ground; in cases, the median stripe divided by a gray central vitta. Pleura chiefly gray pruinose; dorsopleural region buffy yellow; metapleura extensively variegated with yellow. Halteres dark brown, the base of stem restrictedly yellow. Legs with the coxae darkened, gray pruinose; trochanters obscure yellow; legs light brown, the tarsi passing into black. Wings with a weak brown tinge, the costal border a very little darker; stigma pale yellow, inconspicuous; veins brown, more brownish yellow in the brightened areas.

Abdomen gray, the lateral borders of the tergites broadly yellow; a more or less distinct brown mid-dorsal stripe on tergites; hypopygium brownish yellow to yellow. Male hypopygium with the lateral tergal lobes very broad, their lateral portions obtusely rounded, without indication of an oblique carina; median area of tergal border truncate, the notch formed subequal in width to either tergal lobe.

*Habitat.* Manitoba.

*Holotype.* ♂, Fort Churchill, 1941 (H. E. McClure, No. 17 CH 41). *Allotopotype.* ♀, (McClure No. M 22). *Paratopotypes.* 3 ♀♀, one pinned with cast pupal skin.

This *Prionocera* is very different from the various species so far discovered in the Canadian Arctic and I must consider it as being a subspecies of *rostellata* (Doane), described from the mountains of Colorado. As usual in the genus, the conformation of the ninth tergite of the male offers the best characters.

***Prionocera rostellata prominens* n. subsp.**

As in the typical form but differing in details of structure of the male hypopygium. The ninth tergite has the lateral lobes much more conspicuous, subangular, with a ridge or carina extending obliquely down the face of lobe from the caudo-lateral angle.

*Habitat.* Manitoba.

*Holotype.* ♂, Fort Churchill, 1938 (H. E. McClure, No. 3 CH 38).

***Tipula (Trichotipula) cazieri* n. sp.**

Size very small (wing, ♂, under 7.5 mm.); mesonotal praescutum dark brown with a broad, dark gray, median stripe; posterior sclerites of mesonotum with a continuous yellowish white central stripe that is bordered laterally by black; tips of femora narrowly brownish black; wings without dark pattern except for the brown stigma; sparse macrotrichia in outer ends of cells  $R_5$  and  $M_1$ , male hypopygium with the inner dististyle directly produced to an obtuse point.

*Male.* Length about 8 mm.; wing 7.1 mm.; antenna about 3 mm.

Frontal prolongation of head pale yellow above, darker on sides; nasus very long, tufted with yellow setae; palpi black. Antennae with scape and pedicel pale yellow, flagellum black; flagellar segments cylindrical, the basal swellings not indicated; verticils shorter than the segments. Head yellowish white; anterior vertex broad, the tubercle low; lateral portions of posterior vertex strongly infuscated.

Pronotum yellow, darkened sublaterally. Mesonotal praescutum with the ground color dark brown, with a broad, dark gray, median stripe, the lateral stripes very ill-defined and encroached upon by the dark ground color; humeral and lateral borders of praescutum, with the pretergites, yellowish white; posterior sclerites of notum dark gray, variegated by brownish black; a continuous yellowish white central stripe begins on the extreme posterior portion of praescutum, extending to three-fourths the length of the mediotergite where it narrows to a point; pale stripe bordered laterally by a more intensely blackened margin; parascutella dark. Pleura yellowish white, conspicuously patterned with brownish gray, especially on anepisternum, ventral sternopleurite, dorsal and ventral pteropleurite, and on the ventral pleurotergite, the dark color about equal in extent to the pale ground; dorsopleural membrane whitened. Halteres infuscated, base of stem restrictedly yellow. Legs with the coxae weakly infuscated; trochanters obscure yellow; femora obscure yellow, the tips very narrowly brownish black, the amount subequal on all legs; tibiae brown, the tips darker; tarsi brownish black; claws (♂) simple. Wings with a strong and almost uniform brownish tinge, the centers of the cells beyond cord a little streaked with dusky, this bordered on either side by paler; prearcular field yellowish; stigma brown, oval, distinct; ante- and post-stigmal whitish spots conspicuous; a very restricted isolated oblitative area from the extreme outer end of cell  $R$ , across base of cell 1st  $M_2$  into extreme base of cell  $M_3$ ; veins brown. Macrotrichia of cells very restricted, including series in centers of outer ends of cell  $R_5$  and  $M_1$ , stigma with about three trichia. Venation:  $R_s$  arcuated, shorter than cell 1st  $M_2$ ; cell  $M_1$  about four times its petiole; cell 1st  $M_2$  long and narrow; cell  $M_4$  deep;  $M_3+4$  shorter than basal section of  $M_1+2$ .

Abdominal tergites extensively obscure light yellow in central portion, with conspicuous sublateral brown stripes that are very narrowly interrupted on the basal rings; lateral borders of tergites pale; sternites obscure testaceous yellow, the outer segments weakly darkened; hypopygium brown. Male hypopygium with the caudal border of tergite with a broad U-shaped notch, the border with a very sparse armature of delicate and spinous setae. Inner dististyle only a trifle longer than the outer style, narrowed outwardly, the obtuse tip not bent at a strong angle to the remainder of style; basal portion of inner style with a group of strong curved setae, the narrowed outer portion with numerous straight setae of various lengths, a row of four or five near outer border longest.

*Habitat.* Southern Nevada (Clark Co.).

*Holotype.* ♂, Kyle Canyon, Mount Charleston, May 25, 1940 (Mont Cazier).

I take great pleasure in naming this interesting fly in honor of the collector, to whom I am indebted for several western Tipulidae of unusual interest. This is one of the smallest species of the genus known in the entire World, being much smaller than any hitherto made known from the Nearctic fauna. The species is closest to *Tipula* (*Trichotipula*) *apache* Alexander, differing in the tiny size, details of coloration, and the structure of the male hypopygium, especially the tergite and inner dististyle.

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

General coloration dark gray, the praescutum with four entire darker stripes; antennae (♂) relatively long, black throughout; legs chiefly blackened, the femoral bases brightened; wings grayish subhyaline, cells *C* and *Sc*, together with a seam along vein *Cu*, darker; stigma small, brown; abdominal tergites black, the lateral and posterior borders yellow, this becoming very extensive on outer segments, the hypopygium and preceding segment almost uniformly yellow; male hypopygium with the ninth tergite trilobed, the median lobe small, densely setuliferous; eighth sternite unarmed.

*Male.* Length about 13-14 mm.; wing 13.5-14 mm.; antenna about 6 mm.

Frontal prolongation of head black, the dorsal surface pruinose, with conspicuous black setae; nasus distinct; palpi brownish black. Antennae black throughout; relatively elongate (♂), a little less than one-half the length of wing; flagellar segments moderately incised; verticils shorter than the segments. Head brownish gray, the front and narrow orbits clearer gray; head provided with abundant long black setae.

Pronotum dark gray, the lateral portions of scutellum restrictedly brightened. Mesonotal praescutum brown with four entire brownish black stripes; setae yellow, conspicuous; posterior sclerites of notum dark gray. Pleura gray, the dorsopleural membrane and an area surrounding the posterior thoracic spiracle yellowish. Halteres brown, the knobs a little darker. Legs with the coxae dark gray; trochanters black; femora brownish yellow, the tips broadly blackened, more extensive on the fore legs where the distal third or more is included, on the middle and posterior pair involving, in cases, the outer fourth, in other cases much more extensive: tibiae and tarsi black; claws simple. Wings grayish subhyaline, almost immaculate; stigma small, brown; cells *C* and *Sc* a little darkened, especially the latter; a scarcely indicated dark seam on anterior cord; a distinct brown wash along vein *Cu*, involving cell *Cu*<sub>1</sub> and adjoining portions of cell *M*; veins dark brown, *Sc* and the prearcular veins more brownish yellow. Venation: *Rs* more than one-half longer than *m-cu*; cell *M*<sub>1</sub> normally petiolate, in the holotype sessile; *m-cu* at or just beyond the fork of *M*<sub>3+4</sub>, the basal section of *M*<sub>4</sub>, when present, vertical.

Abdomen with tergites black, the basal one more pruinose; lateral tergal borders broadly obscure yellow, the posterior margins of the second and succeeding tergites yellow, very narrow on the basal segments, becoming more extensive outwardly, the seventh tergite with about the outer half yellow; eighth and ninth tergites uniformly yellow; sternites blackened medially, the lateral borders of the exposed outer segments very broadly yellow; ninth sternite with conspicuous black spots or dashes. Male hypopygium with the ninth tergite conspicuously trilobed, the lateral lobes longer and broader than the median one, their subglabrous tips narrowly obtuse; median lobe slender, conspicuously setulose. Outer dististyle a moderately broad pale spatula. Inner dististyle broadly flattened, the margins obtuse; outer basal lobe moderately large, its apex more

sclerotized and weakly toothed. Basistyle produced at apex into a triangular point or blade; mesal face of basistyle bearing a cylindrical lobe tipped with abundant long yellow setae. Eighth sternite unarmed.

*Habitat.* Wyoming-Montana Border.

*Holotype.* ♂, Beartooth Mountains, Frozen Lake, altitude about 10,000 feet, August 9, 1941 (J. L. & G. H. Sperry). *Paratopotypes*, 2 ♂♂, with type; 3 ♂♂, altitude about 10,800 feet, August 1, 1942 (J. L. & G. H. Sperry). *Paratypes*, Quad Creek, Beartooth Mountains, altitude 10,000-10,200 feet, August 15-19, 1942, and Frozen Lake, August 13, 1942 (J. L. & G. H. Sperry; Dan Lindsley), several additional specimens.

I take very great pleasure in naming this interesting alpine *Tipula* in honor of the Sperrys, most capable collectors and students of the Lepidoptera. The paratopotypes were in association with *Tipula (Oreomyza) neptun* Dietz, another arctic-alpine species of the genus. I consider that the nearest described relative of the present fly is *Tipula (Lunatipula) disjuncta* Walker, of northern and northeastern North America, which differs in all details of coloration of the body and appendages, and in the details of structure of the male hypopygium.

### ***Tipula (Lunatipula) polycantha* n. sp.**

General coloration brownish gray, the praescutum with four conspicuous grayish brown stripes that are narrowly bordered by darker brown; basal segments of flagellum bicolored; femora obscure yellow, the tips narrowly brownish black; wings medium brown, conspicuously cross-banded by two narrow whitish areas, the first before level of origin of *Rs*, the second at cord; male hypopygium with the outer dististyle conspicuously expanded into an obliquely triangular blade; eighth sternite large and sheathing, the posterior margin on either side armed with from seven to nine strong, flattened, paddle-like spines, their tips truncate.

*Male.* Length about 18 mm.; wing 20 mm.; antenna about 4.8 mm.

Frontal prolongation of head light brown, very sparsely pruinose; nasus elongate, tufted with golden setae; palpi dark brown. Antennae (♂) of moderate length, if bent backward extending approximately to the wing-root; scape and pedicel obscure brownish yellow; basal flagellar segments bicolored, dark brown basally, the remainder yellow; third and succeeding flagellar segments more uniformly dark brown; flagellar segments moderately incised; verticils longer than the segments. Head light gray, slightly infuscated behind each antennal base and on the low vertical tubercle; a capillary brown median vitta on vertex.

Pronotum brownish gray, dark brown medially. Mesonotal praescutum brownish gray with four conspicuous grayish brown stripes that are narrowly bordered by darker brown; intermediate pair slightly widened and approaching one another at near one-third the length of sclerite; posterior segments of notum brownish gray; each scutal lobe with two dark brown areas, the posterior one much larger; scutellum and mediotergite with a capillary brown median line. Pleura chiefly pale, sparsely pruinose; dorsopleural membrane buffy. Halteres with stem obscure yellow, brighter at base; knob dark brown, its apex a trifle paler. Legs with the coxae brownish yellow; trochanters obscure yellow; femora obscure yellow, the tips narrowly brownish black, the amount subequal on all legs; tibiae and basitarsi light brown, the outer tarsal segments passing into black; claws (♂) with a single conspicuous tooth. Wings medium brown, handsomely crossbanded by two narrow whitish areas, prearcular and costal fields more yellow; first crossband before level of origin of *Rs*, extending from *R* to the posterior margin at end of vein 2nd *A*, interrupted by the dark cell *Cu*, sending a spur distad in cell *R* to the origin of *Rs*; second band at cord, extending from

vein  $R$  to the posterior margin in cell  $M_4$ ; an incomplete white band near bases of cells  $Cu$  to  $2nd A$ ; outer ends of cells  $R_3$  and  $R_5$  whitened, with subbasal spots in cells  $M_1$  and  $2nd M_2$ , more or less distinctly connected with the pale band at cord; extreme outer end of cell  $M_3$  whitened; stigma brown, its proximal end paling to yellow; veins brown, paler in the more yellowish areas. Venation:  $R_{1+2}$  entire;  $R_s$  fully twice the length of  $m-cu$ .

Abdominal tergites weakly intuscutated, the lateral and posterior borders paler; sternites more brownish yellow, the lateral portions clearer yellow; hypopygium large, chiefly brownish yellow. Male hypopygium with the caudal border of tergite narrowed outwardly, with a deep rectangular notch, the lobes thus formed flattened, with gently rounded mesal edges; base of notch very slightly produced; dorsal surface of tergite with a conspicuous median furrow, the edges of which bear numerous strong spinous setae. Outer dististyle conspicuously expanded into an obliquely truncated blade. Inner dististyle compact, the crest produced backward into a pale tail-like blade; outer basal lobe pale, relatively simple, narrowed outwardly, the outer face with several very long erect setae, the base with a dense group of shorter delicate setae. Gonapophyses appearing as conspicuous curved blades, narrowed to long spinous points. Eighth sternite very conspicuous, large and sheathing, the posterior margin of either side armed with from seven to nine strong flattened paddle-like spines, their tips truncate, decussate at midline with their mates of the opposite side of incision.

*Habitat.* New Mexico (Sandoval County).

*Holotype.* ♂, Frijoles Canyon, Bandolier National Monument, June 22, 1942 (J. L. & G. H. Sperry).

This very distinct crane-fly requires no comparison with any other species so far made known. The wing-pattern is somewhat as in *Tipula (Lunatipula) vittatipennis* Doane, 1912 (*albovittata* Doane, 1901, preoccupied) but the two species are entirely distinct in other regards.

### ***Pedicia (Tricyphona) townesiana* n. sp.**

Size relatively small (wing, ♂, 8 mm.); general coloration of mesonotum pale brownish yellow, without markings; antennae very short, subbasal flagellar segments short and crowded; wings subhyaline;  $R_{4+5}$  unusually long, about one-half as long as either  $R_4$  or  $R_5$ ; cell  $M_3$  very deep, vein  $M_{3+4}$  correspondingly shortened; male hypopygium with the interbasal rod long and slender, with numerous strong scattered setae over most of the length.

*Male.* Length about 7 mm.; wing 8 mm.; antenna about 0.7 mm.

Rostrum and mouthparts obscure yellow; palpi darker. Antennae (♂) very short; scape yellow, remainder of organ brownish black; subbasal flagellar segments short and crowded. Head obscure brownish yellow, the surface very sparsely pruinose; center of the broad vertex weakly darkened.

Pronotum yellow. Mesonotum very pale brownish yellow, without markings. Pleura more reddish yellow. Halteres with stem yellow, knob weakly darkened. Legs with coxae reddish yellow; trochanters yellow; femora, tibiae and basitarsus obscure yellow, the tips weakly darkened; outer tarsal segments more uniformly dark brown. Wings relatively narrow, subhyaline, the restricted prearcular field pale yellow; stigma very pale brown, inconspicuous; veins dark brown, more yellow in the prearcular field. Venation:  $R_s$  strongly arcuated to feebly angulated, shorter than  $R_{2+3}$ ;  $R_2$  nearly perpendicular, subequal to  $R_{1+2}$ ;  $r-m$  connecting with  $R_s$  very shortly before the fork;  $R_{4+5}$  unusually long, about two-thirds  $R_{2+3}$  or approximately one-half of either  $R_4$  or  $R_5$ ;  $m$  beyond fork of  $M_{1+2}$  on  $M_2$ , cell  $1st M_2$  thus long and narrow;  $M_{3+4}$  very short, cell  $M_3$  very deep, vein  $M_4$  alone longer than  $R_s$ ;  $m-cu$  at near two-thirds the length of  $M_{3+4}$ ; cell  $2nd A$  relatively narrow.

Abdominal tergites dark brown medially, yellow on sides; basal sternites yellow; outer segments, including hypopygium, uniformly brownish black. Male hypopygium with the tergite extensive; caudal margin truncate with two widely separated rounded knobs. Basistyle with the interbasal rod long and slender, only a little shorter than the basistyle itself, strongly arcuated; apex a trifle expanded just before the acute terminal pale spine; surface of interbase with numerous strong scattered setae for almost their entire length. Dististyle very low and appressed to apex of basistyle, set with abundant short blackened pegs.

*Habitat.* Washington.

*Holotype.* ♂, Mount Rainier, altitude 5,300 feet, August 15, 1940 (H. & M. Townes).

This unusually distinct species is named in honor of the collectors, Dr. and Mrs. Henry K. Townes, to whom I am deeply indebted for specimens of Tipulidae from the Southern Appalachians and from the Pacific Coast. The fly is entirely distinct from any of the numerous Nearctic species of the subgenus so far discovered. The shape of the interbase is more as in certain species in Eastern Asia, as *Pedicia (Tricyphona) formosana* (Alexander) and *P. (T.) yakushimana* (Alexander) but in all other regards there is no close relationship.

### ***Dactylolabis adventitia* n. sp.**

Mesonotal praescutum dark gray with four narrow dark brown stripes; wings yellowish, heavily patterned with brown; dark cloud at origin of *Rs* crossing cell *R* into cell *M*, not quite reaching vein *Cu* behind; setae of costal fringe long and abundant; a supernumerary crossvein in cell *R*<sub>3</sub>; cell 1st *M*<sub>2</sub> relatively small; *m-cu* at or very close to fork of *M*.

*Male.* Length about 6.5-7 mm.; wing 8-8.2 mm.

*Female.* Length about 6.5-7 mm.; wing 7-8 mm.

Rostrum and palpi black. Antennae with scape brownish black; remainder of organ black; flagellar segments oval, the longest verticils subequal to or shorter than the segments. Head brownish gray; setae and setigerous punctures conspicuous.

Pronotum chiefly brown, restrictedly pruinose. Mesonotal praescutum dark gray with four narrow but conspicuous dark brown stripes, the surface entirely opaque; scutum dark gray, the lobes with poorly differentiated dark brown areas; scutellum darkened basally, obscure testaceous yellow on posterior portion; postnotum heavily gray pruinose. Pleura dark brown, dark gray pruinose; dorsopleural membrane yellowish brown. Halteres uniformly pale yellow. Legs with the coxae brownish gray basally, the outer portion more yellowish; trochanters brownish yellow; femora obscure yellow, the tips very narrowly and weakly darkened; tibiae pale brown; tarsi brownish black. Wings yellowish, heavily patterned with brown, the spots arranged more or less as in *montana* and allies; dark cloud at origin of *Rs* crossing cell *R* into cell *M*, not quite reaching vein *Cu* behind; cells beyond cord and in the Anal field more or less washed with brown; veins brown, paler in the interspaces, especially in the costal field. Setae of costal fringe long and abundant in both sexes. Venation: *R*<sub>2+3+4</sub> short to very short; a supernumerary crossvein in cell *R*<sub>3</sub>, usually just beyond the level of *R*<sub>2</sub>, in cases a short distance basad of this point; cell 1st *M*<sub>2</sub> relatively small, subequal to or shorter than vein *M*<sub>4</sub> beyond it; *m-cu* at or very close to fork of *M*, in cases a short distance before this point.

Abdomen dark brown, the outer segments, including hypopygium, more blackened.

*Habitat.* Idaho (Nez Perces Co.).

*Holotype.* ♂, Lewiston, April 23, 1938 (J. W. Zukel). *Allotopotype*, ♀. *Paratopotypes*, 1 ♂, 1 ♀.

*Dactylolabis adventitia* is closest to *D. supernumeraria* Alexander, of northeastern North America, differing conspicuously in the wing pattern and venation. This latter species has  $R_s$  and cell 1st  $M_2$  considerably longer than in the present fly. In southern Europe, various other species of the genus occur that have a supernumerary crossvein in cell  $R_3$ , as in the case of the two Nearctic forms above mentioned.

***Dactylolabis hortensia sparsimacula* n. subsp.**

*Female.* Length about 11 mm.; wing 9.5 mm.

Similar to typical *hortensia* (Alexander), described from British Columbia (Proc. Acad. Nat. Sci. Philadelphia 66:591-592; 1914), differing especially in the larger size and in details of coloration.

Head and pronotum clear ashy gray. Mesonotal praescutum with the interspaces conspicuously grayish yellow, contrasting conspicuously with the clear gray of the remainder of notum; praescutal stripes narrow, polished black, the median one on cephalic portion slightly divided by a line of yellow pollen; scutum similarly grayish yellow pollinose, the lobes vaguely marked with darker but not polished; posterior sclerites of notum and the pleura clear gray. Halteres pale yellow throughout. Legs with all coxae gray pruinose; femora brownish yellow, the tips slightly more darkened; tibiae and basitarsi brownish yellow, the tips very narrowly but abruptly darker. Wings with the ground color yellow, the prearcular field brighter yellow; a restricted but relatively conspicuous pale brown pattern, including areas at origin of  $R_s$ , cord, outer end of cell 1st  $M_2$ , and fork of  $M_{1+2}$ , in certain areas best indicated by a deepening in color of the veins. Venation:  $R_2$  more nearly perpendicular than in typical *hortensia*; *m-cu* about one-third its length before the fork of  $M$ .

Abdominal tergites dark brown to brownish black; sternites yellow.

*Habitat.* Washington.

*Holotype.* ♀, Mount Rainier, altitude 5,700 feet, July 8, 1940 (H. & M. Townes).

In the typical form, the ground color of the mesonotum is uniformly light gray, without the distinct yellow pollen of the present fly; coxae yellow; wings unpatterned.