

Excerpt from The Canadian Entomologist, September-October, 1946.

NEW NEARCTIC CRANE-FLIES (TIPULIDAE, DIPTERA): PART XXVII

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The preceding part under this title was published in 1945 (Can. Ent., 77:204-208). The species discussed at this time are chiefly from Oregon, where they were collected by my friends, Dr. James A. Macnab and Mr. Kenneth M. Fender, to whom I am indebted for the privilege of retaining the type materials. Dr. Macnab and Mr. Fender are engaged in detailed studies of this most interesting part of the Coast Range and already have added vastly to our previous knowledge in many groups of insects.

**Limonia (Dicranomyia) anteapicalis n. sp.**

Size large (wing, female, over 8 mm.); general coloration of thoracic notum pale, the praescutum with three poorly-defined more brownish stripes; femora yellow with a narrow but conspicuous subterminal brown ring; wings with a weak brownish yellow tinge, the prearcular and costal fields somewhat clearer yellow; a very restricted brown pattern, chiefly evident at origin of  $R_s$  and outer end of the otherwise pale stigma;  $Sc_1$  more than one-half  $R_s$ ; abdominal tergites weakly infuscated, the posterior lateral angles or even the entire caudal borders more yellowed; cerci very small and slender, hypovalvae long and straight, dark-colored.

*Male.* Length about 6.5 mm.; wing 7.5 mm.

*Female.* Length about 7.5 mm.; wings 8.5 mm.

Rostrum obscure yellow; palpi with first segment yellow, the remainder brownish black. Antennae with scape brownish yellow, pedicel and flagellum brownish black; flagellar segments oval, passing into long-oval; terminal segment about one-fourth longer than the penultimate; verticils subequal to the segments. Head light brown; anterior vertex (female) slightly exceeding twice the diameter of scape.

Pronotum brownish yellow. Mesonotal praescutum with the ground brownish yellow, with three poorly defined more brownish stripes, the median line broader and more conspicuous, the lateral pair very narrow; lateral praescutal border behind the humeri vaguely darkened; posterior sclerites of notum yellow testaceous; scutal lobes patterned with brown. Pleura almost uniformly yellow testaceous. Halteres weakly infuscated, base of stem yellow. Legs with the coxae and trochanters light yellow; femora yellow with a narrow but conspicuous brown subterminal ring that is a little shorter than the yellow apex, somewhat more extensive in the male; tibiae and tarsi obscure yellow, the outer tarsal segments brownish black. Wings with a weak brownish yellow tinge, the prearcular and costal fields somewhat clearer yellow; a very restricted brown pattern that is best-indicated at origin of  $R_s$  and over  $R_2$ , the remainder of stigma pale yellowish brown, only a little darker than the ground; veins brown, brighter in the flavous areas. Venation:  $Sc_1$  ending opposite origin of  $R_s$ ,  $Sc_2$  far from its tip,  $Sc_1$  alone more than one-half  $R_s$ ; free tip of  $Sc_2$  a little more proximal in position than  $R_2$ ; cell 1st  $M_2$  about as long as vein  $M_3$  beyond it;  $m-cu$  one-fourth its own length before fork of  $M$ ; vein 2nd  $A$  gently sinuous.

Abdominal tergites weakly infuscated, more heavily so on outer segments, the posterior lateral angle or even the entire caudal margin more yellow-

ed; sternites and subterminal tergite light yellow. Ovipositor with cerci very small and slender, directed ventrad; hypovalvae much longer and nearly straight, brownish black, restrictedly more blackened at bases.

*Habitat.* Washington, California.

*Holotype.* ♀, Camp Manzanar, Inyo Co., California, altitude about 3,900 ft., July, 1945 (*Joe Mayeda*); through Dr. John A. Comstock. *Allotype.* ♂, Moxee, Yakima Co., Washington, 1,000 ft., in Yakima Valley, July 15, 1941 (*B. Brookman*). *Paratype.* ♀, with the allotype, May 24, 1941 (*B. Brookman*). I am greatly indebted to Messrs. Brookman and Mayeda for the above and other very desirable specimens of Tipulidae.

*Limonia (Dicranomyia) antepicalis* is quite distinct from all other Nearctic species of the subgenus, differing especially in the pattern of the legs and wings and in the structure of the ovipositor, as the very unequal cerci and hypovalvae.

### ***Chionea macnabeana* n. sp.**

Belongs to the *araneoides* group; general coloration light brown; size large (length, female, about 8 mm.); antennae 12-segmented, there being nine segments beyond the fusion-segment; first segment beyond the fusion short-cylindrical, about twice as long as its diameter; succeeding segments gradually longer; verticils of unusual length, those on flagellar segments six and seven exceeding three times the length of the segments, on the terminal one even longer; vestiture of legs consisting of unusually long black bristles; ovipositor with cerci very long and slender, gently upcurved to the acute tips.

*Female.* Length about 8 mm.; wing rudimentary; antenna about 1.5 mm.

General coloration of entire body and appendages light brown.

Terminal segment of palpus cylindrical, about one-fourth longer than the penultimate. Antennae 12-segmented, relatively long; fusion-segment of flagellum a low truncated cone; second segment short-cylindrical, about twice as long as its diameter; succeeding segments gradually longer, the third about one-third longer than the second; verticils of segments of unusual length, at near midlength of organ (about flagellar segments six and seven, including the fusion-segment), the longer verticils exceeding three times the length of the segments; terminal segment about two-thirds the penultimate, the verticils exceedingly lengthened. Head above with strong erect or slightly proclinate setae.

Legs with the vestiture consisting of unusually long powerful black bristles, stronger on the upper surface, the sides more nearly destitute of setae. Ovipositor with cerci very long and slender, gently upcurved to the acute tips.

*Habitat.* Oregon.

*Holotype.* ♀ on slide, Wilson River, Tillamook burn, northwest of Forest Grove, altitude 2,125 ft., February 8, 1946 (*J. A. Macnab*); area badly burned over in 1933, 1939 and 1945; type captured in a snowstorm on about 20 inches of snow.

This interesting species is named for the collector, Dr. James A. Macnab, who has sent me numerous Tipulidae from the Coast Range. The most similar Nearctic species are *Chionea albertensis* Alexander and *C. primitiva* Alexander. The former, known from the Canadian Rockies, differs in the smaller size and the 11-segmented antennae, with the relative proportions of the basal flagellar segments quite different. The eastern *primitiva* likewise has 12-segmented antennae, differing in the smaller size, shorter cerci, and in the longer and more delicate vestiture of the legs. The present fly is one of the largest species of the genus so far made known.

### ***Ormosia (Rhypholophus) fugax* n. sp.**

Allied to *oregonica*; general coloration of mesonotum gray, the humeral and lateral portions of the praescutum yellow; wings brownish yellow, stigma

and a vague seam along cord darker brown; male hypopygium with the gonapophyses bispinous, the outer arm stout, simple, the inner one much more slender; apical arms of aedeagus short, less than the outer spine of the gonapophysis.

*Male.* Length about 5.5 mm.; wing 6 mm.

Rostrum and palpi black. Antennae with scape and pedicel brown, flagellum black; flagellar segments subcylindrical to truncate-fusiform; longest verticils exceeding the segments. Head gray.

Pronotum yellow above, gray on sides. Mesonotal praescutum gray, the humeral and lateral portions yellow, enclosing the dark brown pseudosutural foveae; posterior sclerites of notum brownish gray, the scutellum somewhat paler brown; mediotergite on sides restrictedly yellow, the pleurotergite chiefly of this color. Pleura obscure yellow, with a very sparse grayish bloom. Halteres yellow. Legs with the coxae yellow, sparsely pruinose; trochanters yellow; remainder of legs brown, the femoral bases obscure yellow; tarsi passing into black. Wings brownish yellow, the prearcular and costal fields a trifle more brightened; stigma and a vague seam along cord darker brown; veins brown, more yellowed in the brightened areas. Venation: Cell 1st  $M_2$  relatively small, subequal to or shorter than the distal section of vein  $M_3$ ; vein 2nd  $A$  strongly sinuous on almost the outer half.

Abdomen brown, the hypopygium more yellowish brown. Male hypopygium with the lobes of the outer dististyle not greatly disproportionate in length, the inner one stouter. Gonapophysis bispinous, the outer arm stout, simple, the inner one much more slender, especially the straight outer spine which is about one-half longer. Apical arms of aedeagus short, less than the outer spine of the gonapophysis.

*Habitat.* Oregon (Yamhill Co.)

*Holotype.* ♂, Peavine Ridge, near McMinnville, altitude 605 ft., September 18, 1945 (*Fender*); Fender Station No. 3. *Paratopotype.* 1 ♂, September 10, 1945.

Very close to *Ormosia (Rhypholophus) oregonica* Alexander, differing chiefly in slight details of the male hypopygium, particularly the stout simple outer arm of the gonapophysis. More material of *oregonica* may show that the present fly is a form of this species.

### ***Ormosia (Ormosia) epsilon* n. sp.**

Allied to *perspectabilis*; size large (wing, male, usually over 5 mm.); general coloration of mesonotum brown, the pleura yellow; antennae (male) elongate, only a little shorter than the body; wings with the stigma brown, relatively conspicuous; vein 2nd  $A$  strongly sinuous on its outer half; male hypopygium with the inner dististyle narrowed at apex, on outer margin with a stout black spine; phallosomic structure large and conspicuous, Y-shaped, each arm bispinous.

*Male.* Length about 4.5-6 mm.; wing 4.6-7.5 mm.; antenna about 4-5 mm.

Rostrum brownish testaceous; palpi black. Antennae (male) elongate; scape and pedicel brown, flagellum black; flagellar segments elongate-subcylindrical, more enlarged at base, thence gradually narrowed to the apex; verticils basal, shorter than the segments, subequal in length to the sparse outspreading pale pubescence. Head dark gray.

Pronotum gray, narrowly bordered by paler; pretergites light yellow. Mesonotum chiefly brown, the humeral and lateral regions of praescutum restrictedly obscure yellow; pseudosutural foveae and tuberculate pits black. Pleura yellow, the more dorsal sclerites weakly infuscated. Halteres yellow. Legs with the coxae and trochanters yellow; femora obscure yellow, the tips restrictedly infuscated; tibiae brown; tarsi passing into black. Wings whitish subhyaline, the prearcular and costal fields restrictedly more yellowed; stigma brown, relatively

conspicuous; vague seams along cord, *Cu* and  $R_5$ ; veins dark brown, paler in the more brightened fields. Macrotrichia of cells abundant, paler in color than the veins. Venation:  $R_2$  a trifle longer than  $R_{2+3}$ ; cell open by atrophy of basal section of  $M_3$ ; *m-cu* at fork of *M*; vein 2nd *A* strongly sinuous on outer half.

Abdomen, including hypopygium, dark brown. Male hypopygium with the tergite elongate, narrowed outwardly, the apex with a deep median notch; lateral lobes long and conspicuous, densely provided with long scabrous setae. Basistyle at apex produced into a lobe. Outer dististyle with its outer surface blackened, microscopically scabrous, the entire lower face paler, with scattered microscopic setae. Inner dististyle broad basally, narrowed at apex, the upper margin at point of narrowing produced into a stout black spine. Outer gonapophysis appearing as a strong blackened horn, the lower margin with sparse coarse serrations. Phallosomic structure very conspicuous; central organ more expanded outwardly and divided into two powerful arms, each of which is bispinuous, the spines acute, nearly alike, the inner or apical one more darkened.

*Habitat.* Oregon (Yamhill Co.)

*Holotype.* ♂, Peavine Ridge, near McMinnville, altitude 605 ft., September 24, 1945 (Fender); Fender Station No. 3. *Paratopotypes.* 2 ♂♂, October 11, 1945.

The present fly is allied to species such as *Ormosia* (*Ormosia*) *lanuginosa* (Doane) and *O. (O.) perspectabilis* Alexander, differing very conspicuously in the structure of male hypopygium, especially the phallosomic structure.

### ***Molophilus (Molophilus) oregonicolus* n. sp.**

Belongs to the *gracilis* group, *pubipennis* subgroup; size small (wing, male, under 3 mm.); general coloration of entire body black, the anterior pretergites obscure yellow; antennae short, flagellar segments oval, with long verticils and a very inconspicuous pubescence; halteres with whitened knobs; legs black; wings with a strong blackish tinge, the prearcular and basal fields more whitened; vein 2nd *A* short, ending some distance before level of *m-cu*; male hypopygium entirely blackened; basistyle short and compact; outer dististyle strongly curved, with about five strong teeth on the concave margin; inner dististyle very narrow; phallosomic structure with several scattered pale setae on apical portion.

*Male.* Length about 2.8 mm.; wing 2.9 mm.

Rostrum and palpi black. Antennae black throughout, short; flagellar segments oval, with long conspicuous verticils and a short scarcely visible pubescence. Head black, somewhat discolored in the type.

Pronotum black, the restricted anterior pretergites obscure yellow. Mesonotum black, more or less discolored and possibly somewhat pruinose in fresh specimens. Pleura uniformly black. Halteres with stem dirty white, the knobs conspicuously clear white. Legs black. Wings small, with a strong blackish tinge, the prearcular and basal costal fields more whitened; veins and macrotrichia pale brown. Venation:  $R_2$  lying opposite or immediately beyond *r-m*; petiole of cell  $M_3$  about one-third the cell or more than three times *m-cu*; vein 2nd *A* only gently sinuous, ending some distance before the level of *m-cu*.

Abdomen, including hypopygium, black. Male hypopygium with the basistyle short and compact, the apical lobe relatively stout, about as long as the basal portion of style; mesal lobe at near midlength of style, provided with about 18 blackened spinose setae, their tips drawn out into hairlike points. Outer dististyle strongly curved, somewhat as in *spiculatus*, the lower or concave face with about five strong denticles. Inner dististyle much smaller, very narrow, the width at midlength about one-fourth the length; outer half of style with microscopic denticles, more appressed on outer face. Phallosomic structure oval, the apex with several scattered pale setulae. Aedeagus relatively short, about one-half longer than the apical lobe of basistyle.

*Habitat.* Oregon (Yamhill Co.)

*Holotype.* ♂, Peavine Ridge, near McMinnville, altitude 605 ft., June 2, 1945 (*Fender*); Fender Station No. 3.

*Molophilus (Molophilus) oregonicolus* is best told by its almost uniform black coloration, short antennae, black legs and conspicuously whitened knobs of the halteres. Among the described dark-colored species, it superficially resembles *M. (M.) rostriferus* Alexander, but the hypopygium is quite different.

### ***Molophilus (Molophilus) suffalcatus* n. sp.**

Belongs to the *gracilis* group, *pubipennis* subgroup; allied to *falcatus*; general coloration of body dark brownish gray or plumbeous; antennae (male) elongate; halteres uniformly pale yellow; wings pale yellow, conspicuously striped with brown, especially as seams along veins *Cu* and *m-cu*; male hypopygium with the apical spine of the outer dististyle short; inner dististyle with numerous erect spicules on the lower face.

*Male.* Length about 4.5-5 mm.; wing 5.5-6 mm.; antenna about 2.8-3 mm.

*Female.* Length about 5.5 mm.; wing 6 mm.

Rostrum and palpi black. Antennae (male) unusually long; segments elongate-fusiform, each with a single unilaterally arranged verticil and abundant subequal or longer pale erect setae. Head gray.

Pronotum dark brown, the scutellum and pretergites testaceous yellow. Mesonotum almost uniformly dark brownish gray, without pattern; pseudosutural foveae black; humeral region of praescutum restrictedly yellow. Pleura dark plumbeous gray; dorsopleural membrane dark. Halteres uniformly pale yellow. Legs with the fore coxae darkened, remaining coxae and all trochanters yellow; fore femora chiefly blackened, the bases restrictedly paler, involving about the proximal third or less; middle and hind femora obscure yellow, the tips broadly blackened, including about the outer fourth or fifth; tibiae yellowish brown, the tips narrowly brownish black; tarsi passing into black. Wings with the ground color pale yellow, the prearcular and costal fields more saturated yellow, a diffuse brown pattern, including washes in outer radial field, a conspicuous seam for almost the whole length of vein *Cu*, including also *m-cu*, and a strong axillary darkening, including all of cell 2nd *A* and adjacent parts of 1st *A*; veins pale, darker in the patterned areas. Venation:  $R_2$  lying just beyond the level of *r-m*; petiole of cell  $M_3$  nearly three times *m-cu*; vein 2nd *A* long and sinuous, the cell narrow, especially on its outer portion, the vein ending some distance beyond *m-cu*, about opposite one-third to one-fourth the length of the petiole of cell  $M_3$ .

Abdomen, including hypopygium, brownish black to black. Male hypopygium of the general type of *falcatus* but differing in details, especially of the outer dististyle. Basistyle with the peglike spines of mesal lobe congregated into a compact group. Outer dististyle with the narrowed outer portion short, less than the enlarged base and usually only from one-half to two-thirds as long. Inner dististyle much smaller, the spiculate points small, more numerous on the lower face. Phallosomic plate with dense pale setulae over most of the surface. In *falcatus*, the outer dististyle is long-produced into a slender spine that is much longer than the enlarged base, in cases twice this length; the inner dististyle is of different shape, with the spicules restricted to the upper surface.

*Habitat.* Oregon, British Columbia.

*Holotype.* ♂, Metolius River, Jefferson Co., Oregon, June 14, 1945 (*Fender*). *Allotopotype.* ♀, pinned with type. *Paratypes.* ♂ ♀, Peavine Ridge, Yamhill Co., Oregon, on sword fern, May 3-16, 1945 (*Fender*); 1 ♂, Steelhead, British Columbia, May 28, 1933 (*Hugh B. Leech*).

The nearest ally of the present fly is *Molophilus (Molophilus) falcatus* Bergroth (Alaska, southward along the Rocky Mountains to Wyoming), which differs in the structure of the male hypopygium, as compared above.