

**NEW OR INSUFFICIENTLY-KNOWN CRANE-FLIES
FROM THE NEARCTIC REGION (DIPTERA,
TIPULIDAE). PART XI.¹**

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The preceding part of this series of papers was published in 1949 (Bull. Brooklyn Ent. Soc., 44: 98-104). The crane-flies discussed herewith are from Oregon where most of the species were taken by Mr. Kenneth M. Fender, who has added vastly to our knowledge of the insect fauna of the state. Acknowledgements to collectors of other material are made in connection with the various species concerned. The types of the novelties are preserved in my personal collection through the appreciated kindness of the collectors. A detailed report on the crane-flies of Oregon has been completed and should appear in press in due course. This list now embraces some 315 species of Tipuloidea and is one of the four largest state lists as known to this date.

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

General coloration gray, the praescutum with four brown stripes the intermediate pair widely separated; antennae with scape and pedicel light yellow, flagellum brownish black; vertex with a central brown line; femora weakly darkened, the tips brown; wings with a weak brownish gray tinge, very vaguely patterned with brown; obliterative band before cord relatively conspicuous; abdomen yellow, both tergites and sternites conspicuously trivittate with brown, the median stripe broader and virtually continuous; male hypopygium with the caudal border of tergite produced into four lobes, the lateral pair long and slender, the intermediate ones shorter; inner dististyle complex, the beak very slender, the outer basal lobe a long flattened blade that is dilated on the basal half, thence narrowed into a long slender apical portion; eighth sternite bearing two flattened lobes that are provided with a brush of unusually long yellow setae, these roughened by small lateral hairlike projections.

Male.—Length about 15 mm.; wing 14.5 mm. antenna about 4.5 mm.

Frontal prolongation of head infuscated, weakly pruinose above, more obscure yellow on sides, relatively long, subequal in length to

¹Contribution from the Department of Entomology, University of Massachusetts.

the remainder of head; nasus elongate; palpi dark brown. Antennae (male) of moderate length, as shown by the measurements; scape and pedicel light yellow, flagellum brownish black; flagellar segments only moderately incised, subequal in length to the longest verticils. Head light gray, the vertex with a brown central line.

Pronotum gray, variegated with brown. Mesonotal praescutum gray, with four brown stripes, the intermediate pair separated by a ground vitta that is about two-thirds as wide; lateral stripes slightly broader than the intermediates; posterior sclerites of notum gray, each scutal lobe with two confluent brown marks; a brown depression at base of scutellum on either side; mediotergite with a blackish area on either side on cephalic half. Pleura and pleurotergite clear gray; dorsopleural region more buffy. Halteres broken. Legs with the coxae light gray; trochanters yellow; femora obscure yellow basally, more infuscated beyond, the tips brown; tibiae brown, the tips more narrowly darkened; tarsi dark brown; claws (male) toothed. Wings with a weak brownish gray tinge, very vaguely patterned, including the medium brown stigma and very small clouds over the origin of R_s and the anterior cord; obliterative band before cord relatively conspicuous, extending into base of cell M_3 ; no distinct post-stigmal brightening; space above stigma more yellowed; veins brown. Venation: R_s about three times R_{2+3} ; R_{1+2} entire; petiole of cell M_1 shorter than m ; M_{3+4} subequal to or shorter than basal section of M_{1+2} .

Abdomen yellow, both the tergites and sternites conspicuously trivittate with brown, the median stripe broader and virtually continuous; hypopygium relatively large, brownish yellow to weakly infuscated. Male hypopygium with the ninth tergite large, transverse; caudal border with four lobes, the sublateral or outer pair appearing as a long slender rod, the tip obtuse, blackened; intermediate lobes much shorter, blackened, their tips obtuse; margin between the lobes produced into a low pale triangular blade on either side of the midline. Outer dististyle an unusually small pale blade, flattened and moderately elongate, the upper edge with three black setae, the remainder of surface glabrous. Inner dististyle of peculiar conformation; what seems to represent the normal beak is slender, straight, subtended above by a pale membranous dorsal crest; posterior portion of main body of style produced into a flattened blade that is unequally bispinous, the upper arm a strong erect spine, the lower one a small triangular point; outer basal lobe very conspicuous, appearing as a flattened blade that is longer than the remainder of style, dilated on basal half and here provided with

numerous long pale setae, thence narrowed into a more slender apical portion, the whole bent forwards over the main body of style. Gonapophyses paired, each half terminating in a long decurved point. Eighth sternite bearing a flattened lobe or blade on either side of midline, each bearing a brush or tuft of very long yellow setae that are very conspicuously roughened by lateral hairlike projections to produce an unusually fuzzy appearance.

Habitat: Oregon (Josephine County).

Holotype: ♂, O'Brien, Siskiyou National Forest, altitude 1475 feet, along roadside, March 24, 1940 (R. L. Post, Zelna Maris and Marshall Ross).

This distinct fly seems to be most nearly allied to species such as *Tipula* (*Lunatipula*) *diabolica* Alexander and *T. (L.) perfidiosa* Alexander, differing most evidently in the very peculiar structure of the male hypopygium. I am indebted to Professor Post for this and other rare and interesting Tipulidae from Oregon.

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

Mesonotum chiefly brownish yellow, very sparsely pruinose; antennae brown throughout; halteres short; legs pale brown, the outer tarsal segments more darkened; wings subhyaline, stigma faintly indicated; male hypopygium with the tergite transverse, the caudal margin broadly emarginate, the lateral lobes low; basistyle without accessory lobules; ventral dististyle about twice as extensive as the basistyle; rostral spines long and slender, slightly exceeding the prolongation; aedeagus deeply bilobed.

Male.—Length about 6.5 mm.; wing 7 mm.

Rostrum and palpi brown. Antennae brown throughout; flagellar segments short-oval to subcylindrical. Head brown above.

Pronotum brown. Mesonotum chiefly brownish yellow, with a very sparse pruinosity, the anterior part of the praescutum a trifle darker. Pleura and pleurotergite more yellowed. Halteres short, infuscated, the base of stem yellow. Legs with all coxae and trochanters light yellow; remainder of legs pale brown, the outer tarsal segments more infuscated. Wings subhyaline, the stigma very weakly more darkened; veins pale brown. Venation: Sc short, Sc_1 ending a distance before origin of R_s about equal to $r-m$, Sc_1 alone nearly three times Sc_2 ; cell 1st M_2 large, nearly as long as the distal section of vein M_{1+2} ; $m-cu$ at or close to the fork of M .

Abdomen, including hypopygium, pale brown. Male hypopygium with the tergite transverse, the caudal margin broadly emarginate, the lateral lobes low; margin with three separate groups

of setae, those of the median group smaller. Basistyle with ventromesal lobe simple; no distinct accessory lobule as in *acerba*, *citrina* and *fulva*. Dorsal dististyle a slightly arcuated slender pale rod, the tip narrowed and bent at a right angle into a straight black spine. Ventral dististyle fleshy, its total area somewhat less than twice that of the basistyle; rostral prolongation darkened, relatively stout, the outer margin gently convex to the blunt tip; rostral spines arising from two very closely approximated basal tubercles, placed at the extreme base of the prolongation; spines black, long and slender, slightly exceeding the prolongation in length. Gonapophysis with mesal-apical lobe blackened, gently curved to the acute tip, the concave margin with one or two weak denticles. Aedeagus at apex deeply bilobed by a median notch.

Habitat: Oregon.

Holotype: ♂, Three Rivers, Grand Ronde-Tillamook Highway, Coast Range, May 23, 1948 (K. M. Fender).

While generally similar to *Limonia* (*Dicranomyia*) *fulva* (Doane) and some allied species, the present fly is distinct in the hypopygial characters, as described.

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

Generally similar to *vulgata*; mesonotum yellow, the praescutum with three black stripes; antennae with scape yellow, the remainder black; wings whitish subhyaline, the stigma conspicuous; cell M_2 open by the atrophy of m ; male hypopygium with the ninth tergite broadly emarginate, the obtuse lobes with broadly thickened margins; ventral dististyle slightly smaller than the basistyle; rostral prolongation long, with two long spines that are subequal to the prolongation; mesal-apical lobe of gonapophysis a slender curved blackened spine; aedeagus unusually long and slender, directed ventrad, blackened.

Male—Length about 5.5–5.8 mm.; wing 6–6.5 mm.

Rostrum light yellow; palpi darker. Antennae with the scape yellow, remainder of organ black; flagellar segments oval, with long verticils, the segments well-separated. Head dark gray; anterior vertex broad.

Pronotum dull black medially, yellowed on the sides. Mesonotum obscure yellow, the praescutum with three black stripes, the interspaces distinct; scutal lobes similarly blackened; scutellum brownish black, parascutella yellow; mediotergite obscure yellow, darker behind. Pleura and pleurotergite yellow, the ventral sternopleurite weakly darkened. Halteres with stem yellow, knob infus-

cated. Legs with the coxae and trochanters yellow; remainder of legs obscure yellow, the outer tarsal segments blackened; claws long, with a single slender basal spine. Wings whitish subhyaline, the prearcular and costal fields a trifle more yellowed; stigma oval, rather dark brown, conspicuous; veins brown, paler in the brightened fields. Venation: Sc_1 ending opposite the origin of R_s , Sc_2 some distance from its tip so Sc_1 alone is approximately one-half as long as R_s ; cell M_2 open by the atrophy of m ; $m-cu$ longer than the distal section of Cu_1 , close to the fork of M .

Abdominal tergites dark brown; sternites and subterminal segment yellow; hypopygium chiefly darkened. Male hypopygium with the ninth tergite broadly emarginate, the obtuse lobes with broadly thickened margins, the setae restricted to this portion. Basistyle with the ventromesal lobe oval. Dorsal dististyle a long slender curved rod that narrows very gradually into a long slender spine. Ventral dististyle slightly smaller than the basistyle; rostral prolongation long, with two long spines, these subequal in length to the prolongation, without basal tubercles; the more basal spine placed low down on face of prolongation, the outer one closer to the upper margin. Gonapophysis with mesal-apical lobe a slender curved blackened spine. Aedeagus unusually long and slender, blackened, directed ventrad and very conspicuous; tip narrowed, not bifid.

Habitat: Oregon (Yamhill County).

Holotype: ♂, Willamette River, 2 miles south of Dayton, June 24, 1948 (K. M. Fender). *Paratopotype*, 1 ♂.

Generally similar to *Limonia (Dicranomyia) vulgata* (Bergroth), differing in the details of coloration and structure of the male hypopygium, particularly the ninth tergite, ventral dististyle, gonapophysis and aedeagus.

***Limnophila (Phylidorea) pacalis* n. sp.**

Mesonotum obscure brownish yellow, the praescutum with a poorly defined brown central stripe; antenna beyond the scape obscure brownish yellow; femora yellow, all with a pale brown subterminal ring that is wider than the pale apex; wings yellow, unpatterned except for a black spot at outer end of the otherwise deep yellow stigma; male hypopygium with the tergal lobes conspicuous, separated by a U-shaped notch; gonapophysis terminating in a simple spearlike point.

Male.—Length about 9 mm.; wing 9.5 mm.

Female.—Length about 11–12 mm. wing 10.5–11 mm.

Rostrum black, sparsely pruinose; palpi black. Antennae with scape black; remainder of organ obscure yellow, the outer flagellar segments more obscured; basal flagellar segments oval, the outer ones subcylindrical; verticils long and conspicuous. Head dark gray.

Pronotum infuscated medially, obscure yellow on sides. Mesonotal praescutum obscure brownish yellow, with a poorly defined brown central stripe, best-indicated in front, the lateral stripes sometimes faintly indicated; posterior sclerites of notum chiefly brownish yellow, the mediotergite somewhat more grayish on central portion. Pleura brownish yellow. Halteres with stem pale, knob weakly infuscated. Legs with all coxae and trochanters yellow; femora yellow, all legs with a pale brown subterminal ring, the pale apex much narrower; in the more heavily patterned specimens the darkened rings are virtually terminal in position; tibiae yellow, the tips very narrowly darkened; tarsi obscure yellow, the outer segments brownish black. Wings yellow, cells *C* and *Sc* even more saturated; no pattern except for a tiny dark spot at outer end of the otherwise deep yellow stigma; veins brown, those in the costal field yellowed. Venation: Petiole of cell *M*₁ subequal to or shorter than the cell.

Abdomen reddish yellow, the subterminal segments black; genital shield of female, as well as the male hypopygium, yellowed. Male hypopygium with the lobes of the tergite conspicuous, separated by a U-shaped median notch, the surface with numerous pale setae. Setae of the basistyle unusually long and numerous, pale. Inner dististyle with the apical narrowed portion a little shorter than the base. Gonapophyses of moderate length, gradually narrowed outwardly, at apex a trifle expanded into a simple spearlike point.

Habitat: Oregon (Umatilla County).

Holotype: ♂, Langdon Lake, Blue Mountains, altitude 4990 feet, August 17, 1948 (C. P. Alexander). *Allotopotype*: ♀. *Paratopotypes*: 5 ♀♀; *paratypes*, ♂♀, Tollgate (Langdon Lake Postoffice), July 17, 1948 (M. C. Lane).

Most similar to *Limnophila (Phylidorea) flavipila* Doane and *L. (P.) snoqualmiensis* Alexander, differing in the details of coloration and of the male hypopygium.