

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

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The preceding part under this general title was published in April, 1939 (Bull. Brooklyn Ent. Soc., 34: 92-100). Acknowledgements to collectors of the various species are made following the descriptions of the various novelties and rarities. Except where stated to the contrary, all types are preserved in my personal collection of these flies.

Tipula (Yamatotipula) lanei n. sp.

Allied to *spernax*; general coloration black; wings strongly suffused with dusky, the prearcular region and stigma darker brown; R_{1+2} entire or with tip atrophied; abdomen polished black, the extreme posterior borders of intermediate tergites yellow; male hypopygium with the median lobe of tergite very low and broad.

Male.—Length about 11-12 mm.; wing 10-11 mm.; antenna about 2.7-2.8 mm.

Female.—Length about 14 mm.; wing 10-11 mm.

Frontal prolongation of head black, sparsely pruinose; nasus elongate; palpi black. Antennae black throughout, or, in cases, the pedicel a trifle more reddish; flagellar segments not incised, the bases a little thicker than the apices; longest verticils subequal in length to the segments. Head black; vertical tubercle very low.

Thoracic notum black, subopaque, the parascutella paler; dorsal half of pleurotergite abruptly yellow, the color continued onto the extreme cephalic-lateral portions of the mediotergite. Pleura gray; dorso-pleural membrane buffy. Halteres black. Legs with the coxae and trochanters gray pruinose; remainder of legs black, the femoral bases obscure yellow. Wings with a strong dusky suffusion, the prearcular region and the stigma darker brown; a vague dark cloud on anterior cord; restricted oblitative areas across base of cell *1st M*₂; veins brownish black. Venation: R_{1+2} entire or with the outer end atrophied; cell *1st M*₂ and length of vein M_{3+4} variable.

Abdomen polished black, the extreme posterior borders of the third to fifth tergites yellow; hypopygium black. Male

* Contribution from the Entomological Laboratory, Massachusetts State College.

hypopygium about as in *spernax*; median lobe of ninth tergite very low and broad, without the square lateral shoulders of the more projecting lobe of *spernax*. Inner dististyle without a conspicuous fringe of long setae on outer margin before base. Gonapophyses appearing as flattened spatulate blades.

Habitat: Oregon.

Holotype: ♂, Mount Hood, Government Camp, altitude about 4,000 feet, July 6, 1938 (*Lane*). *Allotopotype*, ♀. *Paratopotypes*, 5 ♂ ♀. Holotype in the United States National Museum.

Tipula (*Yamatotipula*) *lanei* is named in honor of the collector, Mr. Merton C. Lane. It is allied to *T. (Y.) spernax* Osten Sacken, differing in the small size, darkened wings, and the structure of the male hypopygium, as the very low and broad median lobe of the tergite. I place both of these species in the subgenus *Yamatotipula* Matsumura, the assignment being made especially on the structure of the ninth tergite and gonapophyses of the male hypopygium.

***Tipula* (*Vestiplex*) *churchillensis* n. sp.**

General coloration gray, the praescutum with four duller gray stripes that are narrowly bordered by pale brown, the mesal edges of the intermediate pair darker on anterior half; no dark setigerous punctures on praescutal interspaces; legs relatively stout; wing pattern very pale, the Anal cells and those beyond cord virtually immaculate; no dark area beyond arculus; *Rs* less than twice the length of *m-cu*; abdominal tergites brownish gray, the lateral borders pale; ovipositor with cerci brownish yellow.

Female.—Length about 18 mm.; wing 14 mm.

Frontal prolongation of head gray above, paler beneath; nasus small and stout; palpi brownish black. Antennae with basal three segments brown, the pedicel a little more brightened, remainder of flagellum black. Head light gray, with a very narrow, median, brown vitta.

Mesonotal praescutum blue-gray, with four duller gray stripes that are narrowly bordered by very pale brown, the mesal edges of the intermediate pair heavier and more distinct, especially on cephalic half; setigerous punctures of interspaces pale and inconspicuous; posterior sclerites of notum gray, the centers of the scutal lobes darker. Halteres with knobs weakly darkened. Legs relatively short and stout; femora yellow, the tips infuscated; tibiae obscure yellow, the tips narrowly darkened. Wings whitish, with a very restricted brown pattern,

including small clouds at origin of *Rs*, cord, two in outer end of cell *M* adjoining vein *Cu* and one before midlength of cell *Cu*; stigma paler brown; cells beyond cord and Anal cells virtually unpatterned. Venation: *Rs* relatively short, less than twice the length of *m-cu*; R_{1+2} longitudinal in position so cell Sc_2 at margin is only a little less extensive than cell R_2 .

Abdominal segments almost uniform brownish gray, the lateral borders of tergites paling to buffy, the dorsal surface not or scarcely striped; extreme caudal borders of outer segments pale. Ovipositor with cerci pale brownish yellow, relatively broad and flattened, the tips obtusely rounded, the margins serrulate.

Habitat: Manitoba.

Holotype: ♀, Fort Churchill, July, 1934 (*A. M. Heydweiller*); from Ward's Natural Science Establishment, through Mr. Post.

Tipula (Vestiplex) churchillensis is most nearly related to *T. (V.) arctica* Curtis, differing especially in the small size and coloration of the thorax and wings. The praescutal punctures are inconspicuous, while the wing pattern is very pale, almost as in the otherwise distinct *T. (V.) serrulata* Loew.

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

Allied to *duplex*; size small (wing, male, about 12 mm.); general coloration yellow; wings with cell 1st M_2 relatively small, pentagonal; male hypopygium with the lateral lobes of tergite broad; outer dististyle nearly cylindrical; gonapophyses appearing as simple spines; major setae of eighth sternite reduced in number.

Male.—Length about 11 mm.; wing 12 mm.

Female.—Length about 16 mm.; wing 13 mm.

Frontal prolongation of head yellow; nasus relatively short; palpi yellow. Antennae yellow, the flagellar segments beyond the second bicolored, the basal enlargements weakly darkened. Head light brown.

Mesonotum chiefly brownish yellow, the praescutal stripes scarcely differentiated; pleura pale yellow. Halteres with stem yellow, knob weakly darkened. Legs with coxae and trochanters pale yellow; remainder of legs obscure yellow to brownish yellow, the outer tarsal segments a little darker. Wings with a strong brown tinge, the cells beyond the cord darker; stigma still darker brown; a conspicuous white obliterative band before cord, extending from before stigma into base of cell M_3 ; veins brownish yellow. Venation: Cell 1st M_2 relatively small, pentagonal in outline, shorter than in *duplex*.

Abdomen, including hypopygium, yellow, without distinct markings. Male hypopygium much as in *duplex*, differing as follows: Notch of tergite deeper, the lateral lobes broader, with more evident shoulders. Outer dististyle more slender and more nearly cylindrical. Gonapophyses simple, the tips acute, not bidentate as in *duplex*. Eighth sternite with lateral lobes less conspicuous, with the major setae on either side reduced to one or two in number.

Habitat: Illinois.

Holotype: ♂, University of Illinois Woods, near Urbana; larva in soil, March 7, 1937; emerged in laboratory, April 20, 1937 (Sarah E. Jones). *Allotopotype*: ♀, same data; pupated March 7, 1937, emerged April 16, 1937. *Paratopotype*: ♂, pupa in soil, March 7, 1937, emerged April 16, 1937; 1 additional broken specimen, sex uncertain. Types in author's collection, through kindness of collector.

Tipula (*Lunatipula*) *dupliciformis*, while closely allied to *T. (L.) duplex* Walker (*mingwe* Alexander, *cincticornis* Doane), is quite distinct in the small size, venation, and especially, in the details of structure of the male hypopygium.

***Limnophila* (*Prionolabis*) *oregonensis* n. sp.**

Size small (wing, male, 8 mm. or less); general coloration black; halteres elongate, stem white, knob infuscated; femora and tibiae brown, the tips narrowly more blackened; wings relatively broad, whitish subhyaline, sparsely patterned with brown; cell 1st M_2 short and broad, cell M_1 subequal to or shorter than its petiole; male hypopygium with the outer dististyle conspicuously pectinate, gonapophyses appearing as slender rods, incurved at distal two-thirds of length.

Male.—Length 5.5–6.5 mm.; wing 7–8 mm.

Rostrum dull black; palpi black. Antennae 16-segmented, black. Head black.

Pronotum dull black, the scutellum more brownish. Mesonotum almost uniformly black, without marked pruinosity; posterior margins of scutal lobes and the parascutella paler. Pleura black. Halteres elongate, stem whitish, knob infuscated. Legs with the coxae brownish black; trochanters brownish yellow; femora and tibiae brown, the tips narrowly more blackened; tarsi black. Wings relatively broad, when compared with *barberi*; whitish subhyaline, sparsely patterned with brown, including the stigma and seams at origin of *Rs*,

cord, outer end of cell 1st M_2 and a broad seam along vein Cu ; veins light brown, darker in the clouded areas. Venation: R_{2+3+4} a little longer than basal section of R_5 ; cell 1st M_2 short and broad; cell M_1 subequal to or shorter than its petiole; $m-cu$ at near midlength of cell 1st M_2 .

Abdomen black, the hypopygium a very little brightened. Male hypopygium with the tergal lobes triangular in outline, separated by a U-shaped notch. Outer dististyle conspicuously pectinate, with approximately eight teeth in addition to the terminal spine. Inner dististyle terminating in an obtuse fleshy lobe, before apex on outer face bearing a blackened two-armed structure, the inner arm narrower and more spinous. Gonapophyses appearing as slender rods, strongly incurved at distal two-thirds. Aedeagus compressed on basal portion, the apex long-extended.

Habitat: Oregon.

Holotype: ♂, Boyer, May 24, 1936 (*J. A. Macnab*). *Paratopotypes*: 6 ♂♂, May 16–24, 1936, June 7, 1937.

Limnophila (*Prionolabis*) *oregonensis* is readily distinguished from the other small western Nearctic *Prionolabis* L. (*P.*) *barberi* Alexander, by the elongate halteres, broad whitish wings, and, especially, the structure of the male hypopygium, notably the pectinate outer dististyles.

Lipsothrix nigrilinea (Doane).

1900. *Limnophila nigrilinea* Doane; Journ. N. Y. Ent. Soc., 8: 190, plate 8, fig. 2 (venation).

The unique type, a female, was from Olympia, Washington, now preserved in the United States National Museum. A male specimen at hand shows that the species is not a *Limnophila* but a member of the genus *Lipsothrix* Loew, where it is well-distinguished from the approximately one dozen species hitherto made known by the very large size and, especially, by the conspicuous macrotrichia in the cells of the distal fourth of wing. I describe this male as allotype.

Allotype.—*Male*: Length about 11 mm.; wing 12 mm.; antenna about 4 mm.

Antennae relatively long, as shown by the measurements; flagellar segments cylindrical; verticils short, much shorter than the segments. Head obscure yellow, the occiput darkened. Praescutal stripes entirely confluent to form a black discal

shield. R_s even longer and straighter than in the type; R_{2+3} a little longer than R_2 alone. Male hypopygium yellow.

Allotype: ♂, Alsea Mount, Oregon, altitude 1,000 feet, June 2, 1929 (*H. A. Scullen*); allotype in collection of Oregon Agricultural Experiment Station.

The relatively long antennae in the male sex are likewise found in two species in Eastern Asia, *Lipsothrix mirabilis* Alexander and *L. pluto* Alexander.

Erioptera (*Ilisia*) *zukeli* n. sp.

Female.—Length about 6.5 mm.; wing 6 mm.

Generally similar to *E. (I.) sparsa* Alexander (California), differing especially in the coloration and pattern of the wings. Wings with the ground-color brownish yellow to pale brown rather than clear yellow, as in *sparsa*; a heavy pattern of darker brown spots and seams; veins beyond cord with conspicuous dusky seams; main stem of vein *Cu* before *m-cu* with a series of four or five brown clouds, contiguous or nearly so; R_s with similar clouds, especially near base; Anal cells conspicuously washed with brown, including cell *1st A* and a large brown cloud at near midlength of vein *2nd A*; axillary margin in cell *2nd A* seamed with brown; veins brown, only the interspaces of the costal portion more yellow. Venation: R_{2+3+4} short, subequal to basal section of R_5 ; *m-cu* about two-thirds its length before the fork of *M*; cell *2nd A* narrower than in *sparsa*.

Habitat: Idaho.

Holotype: Alcoholic ♀, Coeur d'Alene, April 27, 1937 (*Zukel*).

I take great pleasure in naming this fly in honor of my former student, Mr. John W. Zukel, to whom I am indebted for several interesting Tipulidae from Idaho.