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

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The preceding instalment under this general title was published in 1931 (Bull. Brooklyn Ent. Soc., 26: 177-184). Except where stated to the contrary, the types of the novelties herewith described are preserved in my collection, through the friendly interest of the various collectors.

Tipula (Lunatipula) leechi n. sp.

Allied to *macrolabis*; ground-color of mesonotum and pleura light yellow, the praescutum with four narrow bright brown stripes; ground-color of wings light yellow, with a restricted brown pattern; male hypopygium large, the lateral arms of basistyle very stout, with more than the outer half slightly expanded, the dorsal face with a weak carina that extends to apex of arm, making it appear more or less pointed.

Male.—Length about 20 mm.; wing 21 mm.

Frontal prolongation of head brownish ochreous, nasus distinct; basal segment of palpus obscure yellow, the remainder passing to brownish black. Antennae with the basal four segments yellow, the succeeding segments bicolorous, yellow, the basal enlargement brown; outer segments somewhat more uniformly darkened. Head light yellow in front, light brown on posterior vertex.

Mesonotal praescutum with the ground-color light yellow, with four narrow, bright brown stripes, the intermediate pair separated by a ground line nearly as wide as either stripe; each scutal lobe with two small pale brown areas; posterior sclerites of notum and the pleura chiefly yellow pollinose, the scutellum and mediotergite with a vague capillary median dark line. Halteres yellow, the knobs dark brown. Legs with the coxae and trochanters yellow; femora reddish yellow, the tips narrowly darkened; tibiae obscure yellow; tarsi passing into dark brown; tibial spur formula 1-2-2; claws simple. Wings with the ground-color light yellow, the prearcular and costal regions deeper yellow; a restricted brown and whitish pattern; the pale brown areas are evident chiefly as clouds in the apical and caudal portions of wing; a series of four somewhat darker

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brown areas in anterior field of wing, these much smaller and less evident than in *macrolabis*; the whitish areas lie chiefly along both sides of cord and beyond the stigma. Squama with a few setae.

Abdomen yellow, the tergites very narrowly trivittate with dark brown, these delicate lines more or less interrupted at the caudal margins of the segments; extreme caudal and lateral margins of tergites pale; hypopygium large, chestnut-brown. Male hypopygium generally as in *macrolabis* but the lateral arms of basistyle very stout, with slightly more than the distal half a little dilated into a head, the dorsal face of the expanded portion with a gently curved carina that extends to the apex of the head, making it appear acute or subacute.

Habitat: British Columbia.

Holotype: ♂, Vancouver, July 11, 1930 (*Hugh B. Leech*).

Tipula (*Lunatipula*) *leechi* is named in honor of Dr. Hugh B. Leech, of the University of California, to whom I am indebted for numerous interesting species of Tipulidae. The fly is quite distinct from *T. (L.) macrolabis* Loew and *T. (L.) youngi* Alexander in the unusually stout lateral arm of the basistyle, with only the distal half weakly expanded. In *macrolabis*, the outer third of the arm is expanded into a flattened smooth paddle-like blade; in *youngi*, this blade is produced into two acute spinous points. *T. (L.) spectabilis* Doane has long been regarded as being identical with *macrolabis*, the structure of the male hypopygium being very similar in both flies; however, the mesonotum of *spectabilis* is more yellowish than in *macrolabis* and may be found to represent still another closely allied species in this group.

***Pedicia (Pedicia) parvicellula* n. sp.**

Female.—Length about 29 mm.; wing 21.5 mm.

Size and general appearance about as in *P. (P.) margarita* Alexander (Eastern United States). Antennae darker brown throughout. Mesonotal praescutum with the ground-color buffy, with three slightly darker stripes, the median one vaguely divided by a capillary vitta. Postnotal mediotergite and pleurotergite dark brown. Femora obscure yellow, the tips narrowly and gradually infuscated, not abruptly blackened, as in *margarita*. Wings with the dark pattern as in *margarita*, the dark seam along vein *Cu* continued to margin; basal third of costal cell whitened. Venation: Cell M_1 very small, approximately one-third the length of its petiole. Abdominal tergites reddish brown, with a darker brown median stripe that is

narrowly interrupted at the caudal margin of the segments; sternites uniformly reddish brown. Ovipositor with the cerci much longer than in *margarita*, very gently upcurved. The abdominal tergites entirely lack the contrasting pattern of reddish brown and whitish gray characteristic of the three species of Eastern North America, *albivitta* Walker, *contermina* Walker and *margarita* Alexander.

Habitat: British Columbia.

Holotype: Cypress Creek, Vancouver, August 16, 1931 (*Hugh B. Leech*).

I have little doubt but that this is the species that has been determined by Aldrich (*Psyche*, 7: 202; 1895) as *obtusa* Osten Sacken, from material taken at Lake Union, Seattle, Washington, in late August. His specimen, a male, agrees very closely with the type female described above (Male, length about 28 mm.; wing about 22 mm.). The specimen has the pattern of the abdominal tergites and the wing-markings quite as described above. Aldrich describes the male as having the styli of unusual length, being approximately twice that of *albivitta*. The unusually long cerci of the female of the present fly would seem to be correlated with this elongation of the male styli. *Pedicia obtusa* Osten Sacken (*Bull. U. S. Geol. Survey*, 3: 205-206; 1877) was provisionally defined from a specimen taken near Saucelito, Marin County, California, in the Spring. Later, Osten Sacken (*Psyche*, 7: 229-230; 1895) gave fuller notes on what would seem to represent this same species, taken in Siskiyou County, California, September 27 and October 6; all of these specimens show the dark seam along vein *Cu* ending at the level of the cord, quite as in the Eastern *contermina*. The species here characterized as new has this seam continued to the wing-margin. Although abnormal specimens of *Pedicia albivitta* and *P. rivosus* Linnaeus are occasionally found where there is a difference in the degree of extension of this seam, in large series of specimens it has proved to be a very constant character.

LIMNOPHILA Macquart.

Trichephelia n. subgenus.

Characters as in *Elaeophila* Rondani, differing especially in the possession of numerous coarse macrotrichia in apical cells of wing, from R_3 to M_3 , inclusive. Male hypopygium with the apex of outer dististyle terminating in a long slender black spine.

Type of subgenus.—*Limnophila* (*Trichephelia*) *seticellula* n. sp. (Nearctic Region: Alleghenian Subregion).

Limnophila (Tricepheleia) seticellula n. sp.

General coloration blackish, pruinose, the praescutal stripes more yellowish brown; antennal scape and pedicel brownish black, the flagellum paler; pleura with a black longitudinal stripe; wings yellowish, with a heavy dark brown pattern; apical cells of wing with conspicuous macrotrichia; male hypopygium with the outer dististyle terminating in a long acute spine, with a smaller lateral spine on outer margin at near four-fifths the length.

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

Rostrum and palpi black. Antennae of moderate length, if bent backward extending about to wing-root; scape and pedicel brownish black, flagellum brownish yellow, the outer segments more uniformly darkened; verticils long and very conspicuous. Head blackish, sparsely pruinose.

Ground-color of mesonotum blackish, the praescutum almost covered by three more yellowish brown stripes that are confluent in front, restricting the ground-color to the posterior interspaces and narrow lateral margins behind the pseudosutural foveae; scutellum a little paler than the scutum or mediotergite. Pleura grayish brown, with a complete dorsal longitudinal black stripe, extending from the cervical region to the postnotum and surrounding the root of the halter; ventral sternopleurite blackened. Halteres obscure yellow, the knobs infuscated. Legs with the coxae obscure yellow, the fore coxae darker; trochanters yellow; femora testaceous yellow, the tips blackened; tibiae similar, the tips more narrowly darkened; tarsal segments chiefly obscure yellow, the tips of the individual segments weakly infuscated; legs conspicuously hairy. Wings tinged with yellow, the anterior half somewhat clearer yellow; a heavy, dark brown pattern, including a series of seven costal areas, the third at origin of *Rs*, the fifth stigmal; other clouds along cord, outer end of cell *1st M*₂, fork of *M*₁₊₂, at supernumerary crossvein in cell *M*, and with smaller spots at ends of all longitudinal veins with the exception of *R*₄₊₅, these becoming progressively larger toward the wing-base; a cloud on vein *Cu* just beyond its origin; veins pale, darker in the clouded areas. Macrotrichia in apical cells of wing, as defined under the subgenus. Venation: *Sc*₁ ending shortly before fork of *Rs*; *m-cu* at about one-third the length of the relatively small cell *1st M*₂; cell *M*₁ subequal to its petiole.

Abdomen black, the hypopygium more brownish yellow.

Male hypopygium with the outer dististyle a heavily blackened slender structure, strongly curved to the acute apical spine; on lateral margin at near four-fifths the length of style with a smaller subappressed acute lateral spine.

Habitat: South Carolina, North Carolina.

Holotype: ♂, River Falls, near Greenville, South Carolina, altitude 3000 feet, July 1, 1931 (*Henry K. Townes, Jr.*). *Allotopotype*: ♀, with the type. *Paratypes*, several of both sexes, in collections of Alexander, Rogers and Townes, with following data: Greenville Co., ravine on north end of Paris Mt., Greenville Co., alt. 1600 ft., April 29, 1932 (Townes, No. 17). Ravine on north-east side Paris Mt., altitude 1400 ft., May 6, 1932 (Townes, No. 20). Between Boy Scout Camp at Calahan Mt. and Saluda Falls, altitude 1200–1700 ft., June 2, 1932 (Townes, No. 26). Big Pisgah Mt., Haywood Co., North Carolina, stream by side of road, altitude 4000 ft., July 19, 1932 (Townes, No. 3).

The present fly is amply distinct from all known members of the subgenus *Elaeophila* in the setiferous outer cells of wing and in the structure of the outer dististyle of the male hypopygium.

***Limnophila (Idioptera) mcclureana* n. sp.**

Mesonotal praescutum and scutum dark, the posterior sclerites of mesonotum paler; pleura with a darker transverse girdle of mesepisternum; wings with a restricted dark pattern, the areas broadly pale in centers, margined with darker; no extensive darkening at arculus; band at origin of *Rs* narrow and interrupted; abdomen yellow, the subterminal two segments blackened.

Male.—Length 11–12 mm.; wing 8–8.5 mm.; antenna 4.8–5 mm.

Described from alcoholic specimens.

Rostrum and palpi black. Antennae black throughout, in male less than one-half the length of body; flagellar segments subcylindrical, the longest verticils less than one-half the segments. Head dark.

Mesonotal praescutum and scutum dark, probably pruinose in fresh specimens; posterior sclerites of notum paler. Pleura pale, the propleura and mesepisternum darker, especially the latter, where a dark transverse girdle is produced; posterior sclerites of pleura pale. Halteres pale, the knobs weakly darkened. Legs with the fore and middle coxae yellow; femora yellow, the tips broadly blackened; tibiae yellow, the tips more

narrowly blackened; tarsi black. Wings with the ground-color pale yellow; a restricted darker pattern, including a narrow broken fascia at level of origin of *Rs*, including separate areas at origin of *Rs*, supernumerary crossvein in cell *M* and tip of vein *2nd A*; a second narrow band at cord; fasciae broadly pale buffy in centers, narrowly margined with dusky; outer end of cell *1st M*₂ and marginal spots on veins *M*₄ and *1st A*; a tiny dark spot at arculus; stigma solidly darker brown; wing-tip narrowly and solidly darkened; cells *C* and *Sc*₁, especially the former, uniformly brownish yellow to pale brown; veins yellowish brown. Venation: *Rs* square and spurred at origin; *m-cu* at near midlength of cell *1st M*₂.

Abdomen elongate, yellow, the subterminal two segments blackened; pleural membrane narrowly darkened. Male hypopygium with the outer dististyle more acutely pointed than in *fasciata* but less so than in *fasciolata*.

Habitat: Manitoba.

Holotype: Alcoholic ♂, Fort Churchill, July 20, 1936 (*McClure*); Coll. No. 4 Ch 68. *Paratopotypes*, 3 alcoholic ♂♂, July 13–20, 1936; Coll. Nos. 4 Ch 54, 68.

Limnophila (Idioptera) mcclureana is named in honor of the collector, Mr. H. Elliott McClure, of the Iowa State College. The fly is more closely related to the European *L. (I.) fasciata* (Linnaeus) than to the Nearctic *L. (I.) fasciolata* Osten Sacken but is amply distinct from both in the wing-pattern and coloration of the abdomen.

Erioptera (Psiloconopa) lacustris n. sp.

General coloration dark gray; palpi, antennae and legs black; halteres dusky; wings with a strong blackish tinge; veins almost without macrotrichia; veins *R*₃ and *R*₄ upcurved at margin; male hypopygium with a single simple dististyle, its margin with peg-like spines; interbase slender, needle-like.

Male.—Length about 3.5–3.8 mm.; wing 4–4.5 mm.

Rostrum gray; palpi black. Antennae short, black throughout. Head gray; anterior vertex broad.

Mesonotum dark gray, the central portion of praescutum a little darker but without distinct stripes. Pleura dark gray. Halteres dusky. Legs black throughout. Wings with a strong blackish tinge, the stigmal region darker but not clearly delimited; veins darker brown. Macrotrichia almost lacking on veins, even the costal series limited in number. Venation: *Sc*

relatively short, Sc_1 ending about opposite the fork of R_s ; R_{2+3} subperpendicular, shorter than R_2 ; veins R_3 and R_4 rather strongly upcurved at margin; R_{2+3+4} about twice R_2 alone; outer medial veins deflected rather strongly caudad; cell M_3 subequal in length to its petiole; $m-cu$ shortly beyond fork of M ; vein *2nd A* straight.

Abdomen black, sparsely gray pruinose; hypopygium large, black. Male hypopygium with a single dististyle, this simple, broad at base, narrowed outwardly, the apex and lower margin with a single row of peg-like spines. Mesal face of basistyle with abundant erect coarse setae; apex of mesal face produced into a slender finger-like lobe. Interbase a slender needle-like spine. Aedeagus long, slender, straight.

Habitat: Michigan (Northern Peninsula).

Holotype: ♂, Raco, on shores of Lake Superior, May 9, 1935 (J. R. Gross); in U. S. N. M. Collection. Paratopotypes, numerous ♂♂.

Erioptera (Psiloconopa) lacustris was included in material kindly submitted to me for examination by Dr. Alan Stone, of the United States National Museum. The species is quite distinct from all other generally similar forms in the venation, unusually reduced trichiation of the wing-veins and the single simple dististyle of the male hypopygium. The most similar species are *E. (P.) laticeps* (Alexander) and *E. (P.) pilipennis* (Alexander), both of the Pacific Coast states.

***Erioptera (Psiloconopa) churchillensis* n. sp.**

General coloration yellow, variegated with brown; head dark, the front and orbits pale; praescutum with three brown stripes, the median one more deeply colored in front; pleura narrowly lined with brown; R_{2+3+4} short, about one-half longer than the basal section of R_5 ; cell *1st M*₂ open.

Female.—Length about 8 mm.; wing 5 mm.

Described from an alcoholic specimen.

Rostrum and palpi black. Antennae 15-segmented, black throughout; flagellar segments oval, the outer ones not abruptly smaller, as in *Trimicra*. Head dark brown, the front and broad orbital region light gray, the latter decreasing in width behind.

Pronotum yellow, narrowly dark brown medially. Mesonotal praescutum yellow, with three brown stripes, the median one slightly darker and wider on anterior half, paler behind;

lateral stripes paler brown; scutum yellow, each lobe with two conspicuous, confluent, dark brown areas; scutellum yellow, with a capillary brown median vitta that extends forward onto the median area of scutum; mediotergite dark brown, the antero-lateral portions broadly yellow. Pleura yellow, narrowly lined longitudinally with brown, including a very restricted line on the ventral anepisternum and a more extensive ventral stripe, involving the prosternum, ventral sternopleurite and meron. Halteres pale, the knobs dusky. Legs with the coxae and trochanters yellow; femora brownish yellow, the tips passing into brown; tibiae similar, the tips more narrowly darkened; tarsi black; legs with relatively short setae only. Wings with a yellowish tinge; veins brown, R_2 and $m-cu$ more conspicuously and narrowly seamed with brown; a pale brown seam below tip of R_{1+2} , demarking the outer end of the yellow stigmal area. Venation: Sc_1 ending just before level of R_2 , Sc_2 at near midlength of the distance between origin of R_s and tip of Sc_1 ; R_{2+3+4} short, about one-half longer than the basal section of R_5 ; cell *1st* M_2 open, the distal section of vein M_3 lying free in the membrane in the unique type, probably connecting with M_{1+2} in normal specimens; $m-cu$ oblique; cell *2nd* A wide, the distal third of the vein sinuous, quite as in *angularis*.

Abdomen chiefly brown, the incisures paler.

Habitat: Manitoba.

Holotype: Alcoholic ♀, Fort Churchill, July 10, 1936 (*McClure*); Coll. No. 12 Ch 45.

The nearest ally of the present fly seems undoubtedly to be *Erioptera* (*Psiloconopa*) *angularis* (Alexander) of Utah, which has the venation of the radial field of the wing quite distinct. I am now considering these two species to belong to *Psiloconopa* Zetterstedt rather than to *Trimicra* Osten Sacken. It should be noted that very recently Dr. Fred W. Edwards has placed *Trimicra* as a subgenus of *Erioptera*.