

## Undescribed Species of Crane-flies from the Eastern United States and Canada (Dipt.: Tipulidae).

### Part V.

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The novelties discussed in this installment were collected chiefly in Florida by my colleague, Professor J. Speed Rogers, of the University of Florida. A few additional species taken by myself in New York and New England are included. The striking new *Ulolomorpha* from Florida is of especial interest.

#### *Limonia* (*Limonia*) *novae-angliae* n. sp.

General coloration yellow, the praescutum with narrow black stripes on the interspaces; knobs of halteres brownish black; femora yellow, the tips black, preceded by a clearer yellow ring; wings with three large brown areas in cell *R*, the second at the origin of *R*<sub>s</sub>, the third at the stigma; *R*<sub>2</sub> subequal to *R*<sub>1+2</sub>.

♂. Length about 7.5-8 mm.; wing 8-9 mm.

Rostrum and palpi black. Antennae with the scape brownish yellow, the flagellum black, with long verticils. Head brown above, obscure yellow beneath.

Pronotum dark brown, yellowish laterally. Mesonotal praescutum obscure brownish yellow, with four narrow black lines that margin the yellow stripes, the intermediate pair paler to subobsolete on the posterior half; lateral dark stripes crossing the suture onto the scutal lobes; scutellum pale; postnotal mediotergite chiefly pale, dark laterally. Pleura chiefly pale, variegated with small dark spots. Halteres yellow, the knobs brownish black. Legs with the coxae and trochanters yellow; femora yellow, the tips blackened, preceded by a slightly wider clearer yellow ring, with vague indications of a second dusky ring immediately proximad of this; tibiae yellow, the bases very narrowly, the tips more extensively blackened; tarsi black. Wings yellow, the costal region clearer; three conspicuous brown areas in the radial field, the first post-arcular, the second, roughly circular to subquadrate, at origin of *R*<sub>s</sub>, the third area at stigma, almost entire; conspicuous and extensive greyish clouds in all cells beyond the stigma, the radial clouds interrupted by yellowish marks in the ends of the cells; cells *M*, *Cu* and the Anal cells more extensively variegated; veins dark brown, the costal and subcostal veins more yellowish. Venation: *R*<sub>2</sub> subequal to *R*<sub>1+2</sub>; *m-cu* before the fork of *M*.

Abdomen brownish yellow, the basal rings of the tergites

somewhat clearer yellow; hypopygium obscure yellow. Male hypopygium with the dististyles separated only at tips. Gonapophyses slender, the apex with a microscopically spiculate cone, not with a tuft of setae as in *cinctipes* and allies.

*Habitat.* — MASSACHUSETTS. *Holotype*: ♂, Chesterfield Gorge, West Chesterfield, altitude 850 feet, August 2, 1928 (C. P. Alexander). *Paratopotype*, ♂. Type in the author's collection.

While this paper was going through the press, Mr. F. W. Edwards of the British Museum (Natural History) informs me that he collected a few additional specimens of the present species at Tuxedo Park, New York, August 27-28, 1928. Mr. Edwards notes that this was the commonest species of *Limonia* on the wing at that date.

*Limonia novae-angliae* is readily told from *L. cinctipes* (Say), to which it is apparently most closely allied, by its small size, darkened halteres and very distinct hypopygium. The wings of the types show abnormalities of venation, with adventitious crossveins and spurs, together with other malformations.

LIMONIA (*Limonia*) ROGERSIANA *longistylata* n. subsp.

♂. Length about 5.5 mm.; wing 6.2 mm.

Generally similar to typical *rogersiana* (Alexander) of the southeastern United States (*Ent. News*, 37: 45-46; 1926), differing especially in the larger size and details of structure of the male hypopygium.

Mesonotal praescutum with only the median praescutal stripe well-indicated. Wings with *R*<sub>s</sub> longer and the basal section of *R*<sub>4+5</sub> shorter, the former approximately three times the latter; *m* very long and arcuated, much exceeding the basal section of *M*<sub>3</sub>. Male hypopygium with the basistyles very elongate, as in the group, the ventral-mesal lobe conspicuous, with elongate setae. Dististyle single, narrowed outwardly, at apex a slender chitinized spine. Apex of each gonapophysis microscopically serrulate, more distinctly so than in *rogersiana*.

*Habitat.*—FLORIDA. *Holotype*, ♂, "Camp Torreya", Liberty Co., April 26, 1924 (J. S. Rogers); No. 5. Type returned to Professor Rogers.

Although close to the typical form, *longistylata* certainly appears to be distinct, especially in the structure of the dististyles

of the male hypopygium. In *rogersiana*, the apex of the style is abruptly narrowed into a long, finger-like lobe, with two or three long setae close to the tip. The coloration of the allotype female of *rogersiana* is darker, with the three praescutal stripes better indicated, and this latter may be found to be a still different race or species. The present species belongs to a group that is well-developed in Tropical America (*basistylata* Alexander, *hoffmani* Alexander, *apicata* Alexander, and others).

*Dactylolabis supernumeraria* n. sp.

♂. Length about 7-8 mm.; wing 8-9 mm. ♀. Length about 8 mm.; wing about 8.5-9 mm.

Generally similar to *D. montana* (Osten Sacken), differing especially in the thoracic coloration and the venation.

Antennae a little longer, the outer flagellar segments correspondingly lengthened; antennae black, the basal segment a little pruinose. Head clearer grey. Mesonotal praescutum dark brownish grey, the four stripes poorly delimited against this background; in *montana*, yellowish grey, the stripes very conspicuous and well-defined. Pleura dark, pruinose, the pteropleurite paler. Wings with cell  $M_1$  much longer than its petiole; cell 1st  $M_2$  long, exceeding  $M_3$  beyond it; a supernumerary crossvein in cell  $R_3$ , opposite or just proximad of  $R_2$ .

*Habitat*.—New York, New England. *Holotypes* ♂, Wilmington Notch, Adirondacks, NEW YORK, June 13, 1927 (C. P. Alexander). *Allotopotype*, ♀. *Paratopotype*, ♂. *Paratypes*, ♂ ♀, Smuggler's Notch, Green Mts., VERMONT, June 15-20, 1927 (C. P. Alexander). Type in the author's collection.

The specimens of *Dactylolabis montana* mentioned by Osten Sacken (Mon. Dipt. North America, 4: 228; 1869) as having adventitious crossveins in the submarginal cell presumably refer to the present species. The recently described *D. corsicana* Edwards (Corsica) similarly possesses a supernumerary crossvein in cell  $R_3$  and Mr. Edwards tells me that the character was constant in the numerous specimens observed. Other species of the genus possess this character, but in some of the far northern species, as *D. rhicnoptiloides* Alexander, the crossvein tends to be evanescent. The present species was found commonly in the Green Mts., Vermont, and this feature of a supernumerary crossvein was quite constant.

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*Pilaria arguta* n. sp.

Antennae ( $\delta$ ) short; mesonotal praescutum shiny brown, more yellowish laterally; wings relatively narrow, with a strong brownish suffusion; cell  $M_1$  present.

$\delta$ . Length 7.2-7.5 mm.; wing 8-8.5 x 1.95-2 mm.

Rostrum obscure brownish yellow; palpi dark brown. Antennae ( $\delta$ ) short, if bent backward extending approximately to opposite wing-root; scapal segments obscure brownish yellow, the second darker at tip; flagellum brownish black, the verticils long and conspicuous. Head obscure reddish brown, the postgenae infuscated.

Mesonotal praescutum shiny yellow laterally, the disk behind more infuscated; posterior sclerites of mesonotum infused. Pleura yellow. Halteres dirty white, the knobs darker. Legs with the coxae and trochanters yellow; remainder of legs yellowish brown, the terminal tarsal segments darker; basal setae of femora short and subspinous. Wings relatively narrow, with a strong brownish suffusion, the oval stigma a little darker than the ground-color; veins dark brown. Venation:  $Sc_1$  ending about opposite three-fourths to four-fifths the length of the long  $Rs$ ,  $Sc_2$  at its tip;  $R_{2+3+4}$  subequal to or longer than  $R_3$ ;  $R_2$  just beyond the fork of  $R_{2+3+4}$ ; cell  $M_1$  subequal to its petiole;  $m-cu$  at or beyond midlength of cell 1st  $M_2$ .

Abdomen obscure yellowish brown, fringed laterally with conspicuous setae.

*Habitat*.—FLORIDA. *Holotype*:  $\delta$ , Newman's Lake, Alachua Co., April 6, 1928 (J. S. Rogers); No. 230. *Paratype*,  $\delta$ , Marianna, Jackson Co., April 13, 1928 (J. S. Rogers); No. 3. Type returned to Professor Rogers.

*Pilaria arguta* is allied to *P. recondita* (Osten Sacken), differing especially in the smaller size and narrow wings.

*Pilaria vermontana* n. sp.

General coloration brown; antennae of moderate length in both sexes, in the male extending approximately to the base of the abdomen; wings with a pale brown tinge, the relatively small oval stigma only a little darker; cell  $M_1$  present.

$\delta$ . Length about 7.5-8.5 mm.; wing 8-9 mm.

$\varphi$ . Length about 8 mm.; wing 9.5 mm.

Rostrum and palpi dark brown. Antennae dark brown, of moderate length, in male if bent backward extending approximately to the base of the abdomen; flagellar segments cylindrical, with verticils that are shorter than the segments. Head dark greyish brown.

Mesonotum pale testaceous brown, the posterior sclerites darker brown. Pleura more yellowish than the notum. Halteres pale, the base of the stem restrictedly yellow. Legs with the coxae and trochanters yellow; femora brownish testaceous, the tips darkened; tibiae and tarsi passing into darker brown. Wings with a pale brown tinge, the relatively small oval stigma hairy, only a little darker than the ground-color; veins dark brown. Venation:  $Sc_1$  a short distance before the fork of  $R_s$ ,  $Sc_2$  at its tip;  $R_s$  elongate, gently arcuated at origin;  $R_2$  oblique, at fork of  $R_3+4$ ; cell  $M_1$  present, varying from subequal to much longer than its petiole;  $m-cu$  at or shortly beyond mid-length cell  $1st M_2$ . Wings broader than in *tenuipes*.

Abdominal tergites dark brown, the sternites somewhat paler; hypopygium obscure yellow.

*Habitat*.—VERMONT. *Holotype*: ♂, Woodcrest Farm, near Stowe, at foot of Mt. Mansfield, in a sphagnum bog, altitude 1000 feet, June 22, 1927 (C. P. Alexander). *Allotopotype*: ♀, June 22, 1927. *Paratopotype*: ♂, June 24, 1927. Type in the author's collection.

*Pilaria vermontana* is somewhat intermediate in its characters between *P. tenuipes* (Say) and *P. recondita* (Osten Sacken). The antennae are conspicuously shorter than in *tenuipes* but much longer than in *recondita* and allies. It is probable that the present species, like *P. stanwoodae* (Alexander), will be found to be confined to the vicinity of bogs.

#### *Ulomorpha rogersella* n. sp.

General coloration shiny coal-black, the ventral pleurites reddish yellow; fore femora extensively blackened, the remaining femora yellow; wings yellowish, the veins broadly seamed with darker; cell  $M_1$  lacking.

♂. Length about 5.5 mm.; wing 6 mm.

♀. Length about 8 mm.; wing about 7.5 mm.

Rostrum and palpi black. Antennae black throughout, the verticils elongate. Head shiny black.

Mesonotum shiny coal-black. Pleura black, the ventral sternopleurite and meron pale reddish yellow, with a microscopic appressed silvery pubescence. Halteres pale brownish yellow, in the female the knobs more infuscated. Legs with the coxae and trochanters obscure yellow; fore femora with the distal two-thirds black, the base light yellow, the segment weakly clavate; remaining femora obscure yellow, the base a trifle clearer; tibiae and tarsi pale yellowish brown, the distal tarsal

segments infuscated; legs conspicuously hairy. Wings with a yellowish ground-color, the veins broadly seamed with brownish to produce a more or less distinct streaked appearance; stigma oval, a trifle darker than the brown seams; veins brown. Macrotrichiae of the cells abundant, including all cells beyond cord, as well as the distal ends of cells *R*, *M*, *Cu* and *1st A*. Venation: *Sc*<sub>2</sub> at tip of *Sc*<sub>1</sub>, ending about opposite two-thirds to three-fourths the length of *Rs*; *Rs* relatively long, strongly arcuated to angulated and short-spurred at origin; cell *R*<sub>3</sub> sessile; cell *M*<sub>1</sub> lacking; cell *1st M*<sub>2</sub> elongate-rectangular, *m-cu* at near two-fifths its length.

Abdomen shiny coal-black, the intermediate sternites a little brightened. Ovipositor with the tergal valves long and slender, pale horn-yellow, gently upcurved.

*Habitat*.—FLORIDA. *Holotype*: ♂, Marianna, Jackson Co., April 13, 1928 (J. S. Rogers); No. 847, study-specimen. *Allotopotype*: ♀. *Paratopotype*: ♂, No. 3. Type returned to Professor Rogers.

*Ulomorpha rogersella* is very distinct from the only other known Eastern species, *U. pilosella* Osten Sacken. It is named in honor of the collector, Professor J. Speed Rogers, who has done more than any other person to make known the Tipulid fauna of the southeastern United States.