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

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The preceding parts under this general title were published in 1930 (BULL. BROOKLYN ENT. SOC., 25: 71-77; 276-282). The types of the species collected by Dr. G. C. Crampton and the writer are preserved in my collection. The type of *Limonia subapicata* has been returned to Dr. J. Speed Rogers. The very interesting series of Tipulidae collected by Mr. Owen Bryant in British Columbia and Alberta has been returned to Mr. Bryant. My sincere thanks are extended to the above-mentioned entomologists for their continued co-operation in making known the crane-fly fauna of the Nearctic region.

Dolichopeza (Oropeza) tridenticulata n. sp.

Male.—Length about 10 mm.; wing 11 mm.

Described from alcoholic specimens.

Closely related to *obscura*, differing especially in the structure of the male hypopygium. Antennae dark brown. Mesonotum dark reddish brown, the pleura still darker. Legs with the tarsi a little paler than the tibiae. Wings suffused with brown, the oval stigma slightly darker brown; paler areas before and beyond the stigma and across the base of cell 1st M_2 . Abdominal segments brownish yellow, conspicuously ringed with dark brown on the incisures, on the sternites the bases of the segments more broadly darkened than the apices. Male hypopygium with the central portion of the tergal margin produced into a small rectangular area that bears three small chitinized points; lateral arms of tergite evenly rounded at tips. Inner dististyle very broad, weakly bidentate at tip, one of the points being a small blackened spine. Outer dististyle and gonapophyses much as in *obscura*.

Habitat: Massachusetts.

Holotype: alcoholic ♂, Goshen, Hampshire Co., July 1, 1931 (G. C. Crampton).

Dolichopeza (Oropeza) tridenticulata is most closely allied to *D. (O.) obscura* (Johnson), differing very conspicuously in the details of structure of the male hypopygium, notably the median

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toothing and obtuse lateral arms of the tergite, and the very broad inner dististyle. Besides the type, a few additional females were taken. Dr. Crampton reports the species as being very common in a darkened shed.

Limonia (Limonia) subapicata n. sp.

Belongs to the *apicata* group; mesonotal praescutum polished yellow, with a broad black median stripe; lateral margins of praescutum blackened; wings grayish subhyaline, the stigma long-oval, pale brown.

Male.—Length about 5–5.5 mm.; wing 5.2–6 mm.

Antennae black throughout; flagellar segments oval, with verticils that slightly exceed the segments. Head black, very sparsely pruinose.

Pronotum dark medially, paler laterally. Mesonotum polished yellow, with a conspicuous median black stripe that is widened at the suture; lateral margins of praescutum behind the pseudosutural foveae conspicuously blackened; scutal lobes blackened; median region of scutum and the scutellum more brownish testaceous; postnotal mediotergite dark brown. Pleura testaceous brown, darkest on the anepisternum, and, in some cases, the ventral sternopleurite; in other cases, the latter region is distinctly yellow. Halteres pale, the knobs weakly darkened. Legs with the coxae and trochanters yellow; femora black, the bases yellowish; remainder of legs black. Wings grayish subhyaline; stigma long-oval, pale brown; no darkening in outer radial field; veins dark brown. Venation: Sc_1 ending about opposite three-fourths the length of R_s , Sc_2 close to its tip; R_s weakly angulated at origin; free tip of Sc_2 and R_2 in nearly transverse alignment; $m-cu$ at or close to fork of M .

Abdominal tergites brown; basal sternites yellow, the outer segments dark brown; lateral line narrowly dark brown; hypopygium brownish yellow. Male hypopygium very much as in *apicata*, differing only in details. Lobules at proximal end of basistyle very similar in both species; subapical lobes on same face having setae and spines much less developed, the elongate paired spinous setae of *apicata* here being a single, small, gently curved spine. Outer margin of dististyle with the crest of blackened spines low and depressed.

Habitat: Florida.

Holotype: ♂, Gainesville, Alachua Co., May 10, 1930 (J. S. Rogers); Collector's No. 644. *Paratypes*: several ♂♂.

The closest ally in the *apicata* group is *L. (L.) apicata* (Alexander) which differs in the pattern of the mesonotum, the strongly infumed wing-tips, and the details of structure of the male hypopygium. The fly is entirely different from the only other regional member of the group, *L. (L.) rogersiana* Alexander.

***Tricyphona rubiginosa* n. sp.**

General coloration reddish brown, sparsely pruinose; antennae black throughout, 16-segmented; wings with a deep fulvous tinge; venation of radial field very variable, cell R_3 being short-petiolate to broadly sessile; cell M_1 present; cell M_2 open by atrophy of m ; male hypopygium with two dististyles.

Male.—Length 6–7.5 mm.; wing 6.5–7.5 mm.

Female.—Length 7.5 mm.; wing about 7 mm.

Rostrum and palpi black. Antennae black throughout, 16-segmented, the segments short-oval, with short verticils. Head brownish gray.

Mesonotum reddish brown, sparsely pruinose, the praescutum with a slightly darker median brown stripe; a deep pit on parascutella on either side of scutellum. Pleura reddish brown, overcast by gray. Halteres pale yellow, the large knobs weakly infuscated. Legs with the coxae reddish gray; trochanters yellow; remainder of legs brown, the terminal segments passing into dark brown. Wings relatively narrow, with a deep fulvous suffusion, iridescent, the stigmal region more suffused; veins deep yellow. Venation: Sc_1 ending shortly beyond the level of cord, Sc_2 a distance before origin of Rs greater than the length of the latter vein; forking of Rs variable, in some cases with a short R_{2+3+4} that is a little shorter than the basal section of Rs , in other cases, even on the two wings of a single specimen, cell R_3 narrowly to broadly sessile by the obliteration of R_{2+3+4} ; cell M_1 present; cell M_2 open by the atrophy of m ; $m-cu$ oblique, more than one-half its length beyond the fork of M .

Abdominal tergites brownish gray, the sternites more brownish yellow, the caudal margins of the segments infuscated, on the subterminal segments including the entire sclerite; hypopygium obscure yellow. Male hypopygium relatively large, the tergite broad, its caudal lobe transverse to very feebly emarginate; lateral arms of tergite pale, at ends irregularly bifid, the principal arm a powerful curved point. Basistyle at apex produced laterad into a slender lobe. Dististyles two, a longer foot-shaped lobe, in addition to the usual oval lobe set with abundant short spinous setae.

Habitat: British Columbia, Alberta.

Holotype: ♂, Laggan, Alberta, July 16, 1928 (Owen Bryant); Collector's No. B-28-5. *Allotype*: ♀, Ptarmigan Pass, Laggan, Alberta, altitude 6000-7000 feet, July 23, 1928 (Owen Bryant). *Paratopotypes*: 2 ♂♂, with the type; *paratype*: 1 ♂, Hector, British Columbia, on dry red rock, July 15, 1928 (Owen Bryant); Collector's No. B-28-1.

Tricyphona rubiginosa is very different from all described species of the genus. The venation of the radial field is unusually plastic, and, if this were needed, furnishes additional evidence that the interpretation of this field as given by the writer in recent papers is the correct one.

The very excellent field notes taken by Mr. Bryant are given herewith. These observations pertain likewise to *Ornithodes harrimani* Coquillet and *Phyllolabis bryantiana* n. sp.

"B-28-1. Hector, B. C., July 15, 1928. On face of rock-cut beside road between Wapta Camp (and Lake) and high bridge over outlet to lake. Mostly in hollows in rock and where rock was actually wet. Many actually in behind falling water so that one had to reach a tube in through the water to get them. Speckled-winged ones mostly on dry moss or on dry rock. This species (*Limonia sciophila*) and the reddish ones with coppery wings (*Tricyphona rubiginosa* n. sp. and *Phyllolabis bryantiana* n. sp.) occurred more commonly on rock across the bridge, with springs trickling down over it. The three large spotted ones (*Ornithodes harrimani* Coq.) were on this rock where this was overhung several inches by moss with water dripping from it. A few about pier-head of bridge. The reddish ones occurred on this rock where this was dry and showed an especial fondness for rock with a good deal of red color in it, which made them very hard to see. All those on wet rock, with the three *Ornithodes* mentioned, were quite easily caught by putting the tube over them. The red ones on dry rocks were more scary. About 4 P. M. mostly in shade and some in quite dark recesses, the reddish ones more in the light. Some on vegetation about pier-head, perhaps after being disturbed." Other Tipulidae under this number included *Limonia* (*Dicranomyia*) *morioides* (O.S.), *Elliptera astigmatica* Alex., *Tricyphona aperta* Coq., *Dicranota* (*Rhaphidolabis*) *subsessilis* (Alex.), *Molophilus colonus* Bergr., and *Rhabdomastix* (*Sacandaga*) *subcaudata* Alex.

"B-28-5. Laggan, Alberta, July 16, 1928. Tipulids, etc., on

face of rock and in large holes in rock face. Cliff at southwest end of Lake Louise, altitude 5700 feet. Part of these taken 100 feet above lake at top of slide where water is flowing down and a large cavern is made by a large slice of rock which has separated from the main body and leans against it. Others less than 10 feet above lake. Rocks quartzite, red, purple and various colors, stained in places with iron (and copper?). *Ornithodes* seem to be fond of getting into dark places, all being found in big holes, in comparative darkness, 4-6 P. M., dull day, sun behind mountain." Besides the records for *Ornithodes harrimani* and *Tricyphona rubiginosa*, Mr. Bryant had included under this number *Limonia* (*Limonia*) *sciophila* (O. S.), and *Elliptera astigmatica* Alex.

Dactylolabis hudsonica n. sp.

General coloration brown, the praescutal stripes very ill-defined and inconspicuous against the ground-color; femora light brown, the tips paling to yellowish; wings with a heavy grayish brown pattern, arranged as in the *montana* group; no supernumerary crossvein in cell *R*; *m-cu* beyond the fork of *M*, in most cases the distance more than one-half the crossvein itself; male hypopygium with the basistyles dark brown.

Male.—Length about 6.5 mm.; wing 8-8.5 mm.

Female.—Length about 6.5-7 mm.; wing 7.5-8 mm.

Head dark, covered with a yellowish gray pollinosity.

Mesonotal praescutum brown, sparsely pollinose, the brown stripes ill-defined, especially the lateral pair; intermediate stripes becoming divergent to nearly obsolete on cephalic portion. Pleura more pruinose. Legs with the femora light brown, the tips paling to yellowish; tibiae and tarsi brown. Wings with a heavy brownish gray pattern, the areas arranged as in the *montana* group. Costal fringe and vestiture of veins consisting of delicate setae. Venation: No supernumerary crossvein in cell *R*₃; *m-cu* beyond the fork of *M*, in most specimens the distance more than one-half the length of the crossvein.

Abdomen dark brown, the caudal margins of the sternites pale. Male hypopygium with the basistyles dark brown.

Habitat: Quebec (Gaspé).

Holotype: Percé, June 28, 1931 (C. P. Alexander). *Allotopotype*: ♀, June 30, 1931. *Paratopotypes*: 4 ♂♀, June 28-30, 1931.

The specimens were not especially lithophilous, as is the case in other members of the *montana* group. Most of the individuals

were swept from rank herbage growing in the partly dry bed of a mountain stream.

***Phyllolabis bryantiana* n. sp.**

General coloration reddish; antennae black; wings with a strong brownish yellow suffusion, the oval stigma a trifle darker; male hypopygium with the appendage of the ninth sternite very broad, flattened, profoundly bifid; inner dististyle a simple clavate rod; gonapophyses very elongate, stylet-like; cerci of ovipositor slender, with entire margins.

Male.—Length about 6 mm.; wing 7.5–8 mm.

Female.—Length about 7.5 mm.; wing 8 mm.

Rostrum and palpi black. Antennae dark brown to black throughout; flagellar segments oval, gradually decreasing in size outwardly. Head dark gray; anterior vertex relatively narrow.

Pronotum testaceous brown. Mesonotum brown, the praescutum darker brown medially in front; no tuberculate pits; pseudosutural foveae pale; scutellum more yellowish. Pleura chiefly reddish yellow. Halteres pale, the knobs dusky. Legs with the coxae and trochanters yellow; femora yellow, passing into brown at tips; tibiae and tarsi passing through brown to darker brown. Wings with a strong brownish yellow suffusion, the oval stigma a trifle darker; veins yellowish brown. Venation: Sc_1 ending about opposite one-third the length of R_{2+3+4} , Sc_2 near its tip; Rs shorter than R_{2+3+4} ; $m-cu$ at or before the fork of M_{3+4} .

Abdominal tergites dark brown; hypopygium black, the styli and appendage of ninth sternite yellow; sternites testaceous yellow. Male hypopygium with the outer apical angle of basistyle produced into a stout lobe that is about as long as the outer dististyle. Outer dististyle a bilobed structure, the outer lobe expanded and truncate at apex. Inner dististyle a simple pale clavate rod, with abundant erect setae over the entire surface except the inner or cephalic margin. Appendage of ninth sternite very broad, flattened, profoundly bifid. Stylet-like spines of the gonapophyses very long and slender, exceeding in length and slenderness all other species in this faunal region. Ovipositor with the tergal valves (cerci) relatively long and slender, nearly straight, the ventral margin untoothed.

Habitat: British Columbia.

Holotype: Hector, on dry red rock, July 15, 1928 (Owen Bryant); Collector's No. B-28-1. *Allotopotype*: ♀. *Paratopotypes*: 9 ♂♀.

Phyllolabis bryantiana is named in honor of the collector, Mr. Owen Bryant. The fly is very different from all other described species in the Nearctic Region. The conditions under which the fly was taken are discussed under *Tricyphona rubiginosa* n. sp.

***Phyllolabis lagganensis* n. sp.**

General coloration dark brown; wings tinged with gray; costal region of male dilated before stigma; R_{2+3+4} short, not exceeding one-half of R_3 alone; male hypopygium with the appendage of the ninth sternite very large, prow-shaped; basistyles complicated by an unusual development of apical and mesal lobes; inner dististyle much larger than the outer; gonapophyses long and slender.

Male.—Length about 6 mm.; wing 6.8-7 mm.

Rostrum and palpi black. Antennae of moderate length, if bent backward not attaining the wing-root, brown throughout; flagellar segments oval to long-oval, with numerous verticils that slightly exceed the segments. Head gray.

Mesonotum dark brown, with a sparse gray pruinosity, the pleura paler, especially the dorsal portions and the pteropleurite. Halteres yellow, the knobs infuscated. Legs with the coxae and trochanters yellow; remainder of legs light brown, the terminal tarsal segments darkened. Wings tinged with gray, the oval stigma slightly darker; veins brown. Costal region just before stigma strongly dilated, this presumably a special character of the male sex. Venation: Sc_1 ending about opposite midlength of R_{2+3+4} unusually short, about one-half R_3 alone; inner end of the relatively short and wide cell 1st M_2 arcuated.

Basal abdominal tergites blackened, the intermediate tergites brown, the subterminal segments with a conspicuous black subterminal ring. Male hypopygium large and unusually complicated in structure. Appendage of ninth sternite very large, in dried specimens forming a prow-shaped structure, on slides appearing as flattened blades, each with a lateral lobule as base. Basistyle produced into lobes, the most conspicuous being three on apical and lateral portions, and three others on mesal face. Outer dististyle relatively small, beak-like. Inner dististyle a very large flattened blade, the apex long-produced. Gonapophyses very long and slender, much as in *bryantiana* but slightly shorter and more slender.

Habitat: Alberta.

Holotype: ♂, Laggan, July 16, 1928 (Owen Bryant). *Paratype*: ♂.

Phyllolabis lagganensis is very different from the other known species of the genus (eight recent, one fossil in Baltic Amber), all of which are available to me for comparison. The characters of the male hypopygium in the present species are unusually complex and difficult of description. The shortness of R_{2+3+4} distinguishes this species from all other described Nearctic species, but is approached by *macrura* (Siebke) of northern Europe and by two Himalayan species described by the writer. Whether the curious dilation of the costal region is a sexual character only remains to be discovered. The genus *Phyllolabis* is new to the Canadian fauna.