

Undescribed Species of Crane-Flies from the Western United States and Canada (Dipt.: Tipulidae). Part IV

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The preceding part under this general title was published in ENTOMOLOGICAL NEWS, 56: 126-132, 1945. In the present paper I am describing some additional novelties, almost all from the extensive Melander Collection, particularly rich in species from our northwestern states. Where the species are represented by uniques, Dr. Melander has very generously permitted me to retain the type specimens in my collection of World Tipulidae, a favor for which I express my deepest thanks.

***Limonia* (*Limonia*) *yellowstonensis* new species**

General coloration gray, the mesonotum patterned with dark brown, including three praescutal stripes; antennae black, the bases of the flagellar segments narrowly pale and constricted; knobs of halteres dark brown; legs yellow, the tips of femora narrowly but conspicuously blackened; wings unusually narrow, especially on proximal half; ground color whitish subhyaline, heavily spotted and dotted with brown; Sc_1 ending opposite one-fourth to one-fifth the length of R_s ; $m-cu$ before the fork of M .

♀. Length about 6 - 6.5 mm.; wing 6.2×1.35 - 6.8×1.45 mm.

Rostrum brownish black, sparsely pruinose; palpi black. Antennae chiefly black, the scape weakly pruinose; flagellar segments with their bases narrowly pale, the remainder dark brown, the basal stems of the outer segments becoming more constricted; terminal segment a little longer than the penultimate. Head dark brownish gray, vaguely patterned with darker.

Pronotum gray, patterned with dark brown. Mesonotum gray, the praescutum with three conspicuous black stripes, the median one vaguely split by a capillary paler vitta, this less dis-

tinct in the holotype; scutal lobes likewise conspicuously blackened. Pleura gray; dorsopleural membrane infuscated. Halteres with stem yellow, knob dark brown. Legs with coxae brownish testaceous, the posterior pair paler; trochanters obscure yellow; femora light yellow, the tips narrowly but conspicuously blackened; tibiae yellow, the tips very narrowly and vaguely infuscated; proximal two tarsal segments yellow, the tips darker; outer tarsal segments infuscated. Wings unusually narrow, especially on more than the proximal half; ground color whitish subhyaline, heavily spotted and dotted with brown; the larger areas include, additional to the uniformly darkened stigma, a series of three costal areas, these subequal to or more extensive than the interspaces; third dark area a common one over the origin of *Rs* and fork of *Sc*; besides brown seams over cord, outer end of cell *1st M*₂ and at ends of the veins, numerous brown dots in the cells, all more or less confluent, in the outer medial field unusually extensive and suffusing the veins; veins yellow, brown in the patterned areas. Venation: *Sc* moderately long, *Sc*₁ ending about opposite one-fourth to one-fifth the length of *Rs*, *Sc*₂ faintly indicated to lacking; cell *1st M*₂ nearly as long as vein *M*₁₊₂ beyond it; *m-cu* from about two-fifths to three-fourths its length before the fork of *M*.

Abdominal tergites yellowish brown to dark brown, still darker laterally, the surface more or less pruinose; sternites obscure brownish yellow to light brown.

Habitat.—WYOMING. *Holotype*: ♀, Yellowstone National Park, August 25, 1934 (C. P. Alexander). *Paratopotype*: 1 ♀.

The most similar described species is *Limonia (Limonia) nelliana* (Alexander) from an unknown station in Colorado. This is a larger fly, with broader wings and with vein *Sc* very short, *Sc*₁ ending opposite the origin of *Rs*. The structure of the male hypopygium of *nelliana* shows that it is quite distinct from *L. (L.) venusta* (Bergroth) and allies. The discovery of the male sex of the present fly will be of much interest.

Erioptera (Ilisia) polycantha new species

Allied to *sparsa*; general coloration of mesonotum dark gray,

the posterior sclerites variegated with chestnut brown; basal flagellar segments yellow; legs yellow, the tips of the femora, tibiae and basitarsi infuscated; wings yellow, spotted with brown; male hypopygium with the inner arm of the outer dististyle terminating in a sharp recurved spine, on outer margin of base with several acute spinulose points; phallosome with the lateral apophyses gradually narrowed to acute points.

♂. Length about 5 mm.; wing 6 mm.

Rostrum and palpi brownish black. Antennae with the scape and pedicel light brown, basal flagellar segments yellow, the outer ones infuscated; flagellar segments with the longest verticils unilaterally distributed, exceeding the segments. Head brownish gray.

Pronotum light brown medially, darker on sides; scutellum and pretergites light yellow. Mesonotum chiefly dark gray, the praescutum with indications of a darker plumbeous gray central stripe; pseudosutural foveae and tuberculate pits black; posterior sclerites of notum chiefly dark gray, the posterior border of scutellum, most of the parascutella, and the broad lateral borders of the mediotergite more chestnut brown. Pleura chiefly brownish gray, the propleura extensively obscure yellow, concolorous with the dorsopleural membrane. Halteres uniformly pale yellow. Legs with the coxae and trochanters brownish yellow; femora, tibiae and basitarsi yellow, the tips infuscated, slightly more extensively so on femora; remainder of tarsi dark brown. Wings with the ground color yellow, restrictedly but handsomely patterned with brown, including spots as follows: At *h*; arculus; origin of *Rs*; *Sc*₂; marginal areas at ends of all longitudinal veins excepting *R*₅ and *1st A*, largest at *R*₁₊₂, *R*₃ and *2nd A*; an oblique seam on anterior cord from *C* to *r-m*, widest in front; other seams over *m-cu*, *m* and as a spot on basal section of *M*₃; veins yellow, dark brown in the patterned fields. Venation: *Sc*₂ about opposite one-third *Rs*; *R*₂ and *R*₂₊₃ subequal; cell *1st M*₂ elongate, the basal section of *M*₃ more than twice *m*; *m-cu* transverse, almost its own length before the fork of *M*; vein *2nd A* nearly straight, the anal veins divergent.

Abdomen, including hypopygium, dark brown. Male hypopygium with the dististyles virtually terminal in position, the mesal portion of basistyle slightly produced beyond their bases. Outer dististyle profoundly bifid, the outer arm a long brownish yellow, paddle-like blade; inner arm blackened, gradually narrowed to a sharp recurved spine, on face of style before midlength with a strong black spine; besides the above, outer margin of the basal half with four or five small erect spinulose points. Inner dististyle relatively narrow, entirely fleshy. Phallosome with the lateral apophyses appearing as broad black plates, gradually narrowed to acute points, the outer margin microscopically serrulate or roughened; inner apophyses appearing as short slender black spines that are directed strongly laterad.

Habitat.—WASHINGTON. *Holotype*: ♂, Quilcene, Jefferson Co., July 24, 1917 (A. L. Melander).

The most similar species is *Erioptera (Ilisia) sparsa* Alexander, of California, which has the details of the male hypopygium, particularly the outer dististyle and the phallosome, entirely different. The unusually spinose inner arm of the outer style is distinctive.

Ormosia (Ormosia) hispa new species

Belongs to the *manicata* group; general coloration of mesonotum reddish brown, of pleura and abdomen more yellowed; wings whitish subhyaline, the stigmal region faintly more darkened; R_2 very oblique; male hypopygium with the tergal lobes unusually dilated; phallosome very large, complex and heavily sclerotized; furcula widely expanded toward apex, deeply forked, the arms truncate at tips and provided with numerous microscopic spinulae; near midlength of phallosome with a very high crest or flange.

♂ Length about 4.5 mm.; wing 5.1 mm.; antenna about 0.75 mm.

Rostrum brownish yellow; palpi medium brown. Antennae short; scape light brown, pedicel large, pale yellow, flagellum

brown; flagellar segments elongate, slightly dilated before mid-length and here provided with long conspicuous verticils, these exceeding the segments in length. Head light reddish brown.

Pronotum and pretergites yellow. Mesonotum chiefly reddish brown, the surface gray pruinose, especially on the posterior sclerites; lateral portion of praescutum restrictedly more yellowed. Pleura chiefly reddish yellow. Halteres relatively elongate, stem pale yellow, knob weakly more darkened. Legs with coxae and trochanters yellow; remainder of legs broken. Wings whitish subhyaline, the prearcular and costal regions slightly more yellowed; stigmal region faintly more darkened; veins brown, yellow in the brightened fields. Venation: Sc_1 ending just before the unusually oblique R_2 , Sc_2 about opposite one-fifth to one-sixth the length of the long R_s ; cell M_2 open by the atrophy of the basal section of M_3 ; $m-cu$ close to the fork of M ; Anal veins divergent.

Abdomen, including hypopygium, chiefly yellow. Male hypopygium with the tergal lobes even more dilated than in *manicata* and allies. Both dististyles unusually narrow, the outer style arcuated, its distal half with microscopic setulae; inner style subequal in length, nearly straight, the length about six times the diameter at midlength, the apex obliquely truncated. Phallosome unusually large, complex and heavily sclerotized; furcula widely expanded at apex, the two arms with numerous microscopic spinulae, especially along the margins of the notch, the apices obliquely truncated; at near midlength of phallosome with a very high crest or flange; what appears to represent the aedeagus originates still more basad, bifurcate at its tip.

Habitat.—WASHINGTON. *Holotype*: ♂, Puget, Thurston Co., July 4, 1925 (A. L. Melander).

Ormosia (Ormosia) hispa is entirely different from the other species of the *manicata* group, especially in the very distinct phallosome of the male hypopygium. The other species, *O. (O.) manicata* Doane (*deviata* Dietz, *fuscipyga* Alexander) and *O. (O.) modica* Dietz (*stylifer* Alexander) of North

America, and *O. (O.) subdeviata* Alexander, of Japan, are all much more closely allied among themselves. *O. (O.) profunda* Alexander, of western North America, is even more isolated and generalized but from the structure of the phallosome I believe should be referred to this group of *Ormosia*.

Molophilus (Molophilus) distilobatus new species

Belongs to the *gracilis* group, *pubipennis* subgroup; general coloration of mesonotum reddish brown, variegated with yellow; antennae short, the more proximal flagellar segments with very long verticils; legs yellow, tips of femora and tibiae inconspicuously darkened; wings grayish yellow; male hypopygium with the basistyle unusually long, the lobes lying far distad; mesal lobe with the blackened spinous setae all near apex of lobe; a supplementary slender flattened blade at edge of mesal lobe; both dististyles pointed at their tips; phallosome with long pale setae.

♂. Length about 4.5 mm.; wing 5 mm. antenna about 1.1 mm.

Rostrum light brown; palpi black. Antennae short; basal segments yellow, outer ones passing into pale brown; the more basal segments with unusually long verticils, the longest about twice the segments, those of the outer segments smaller; remaining vestiture of segments abundant but pale and inconspicuous. Head above chiefly dark brownish gray, the anterior and posterior portions yellowed.

Pronotum yellow, vaguely more darkened medially above; pretergites yellow. Mesonotum reddish brown, very sparsely pruinose, the humeral region extensively light yellow, the extreme lateral borders back to the suture very narrowly so; scutellum infuscated, its posterior border narrowly obscure yellow; postnotum infuscated, the suture between mediotergite and pleurotergite conspicuously yellow. Pleura chiefly reddish brown, more heavily darkened on the anepisternum, the remainder more or less variegated by yellow. Halteres with stem whitened, its outer portion weakly infuscated, apex of knob

light yellow. Legs with coxae reddish yellow; trochanters yellow; remainder of legs yellow, the tips of the femora somewhat extensively but very vaguely darkened, of the tibiae more narrowly so; outer tarsal segments brownish black. Wings grayish yellow, the prearcular and costal fields clear light yellow; veins brownish yellow, macrotrichia brown. Venation: R_2 virtually in alignment with $r-m$; petiole of cell M_3 about twice $m-cu$; vein $2nd\ A$ sinuous, narrowing the cell on outer half, ending about opposite one-third the length of the petiole of cell M_3 .

Abdominal tergites brown, with narrowly pale posterior borders; sternites more yellowed. Male hypopygium with the basistyle unusually long, the lobes lying far distad, including both the ventral and mesal ones, both on the same general level and terminating before the tips of the dististyles. On edge of mesal lobe a small and relatively slender flattened lobe, its surface with rather numerous setae on the outer portion, the apex and inner edge of the blade glabrous; main portion of mesal lobe broad, with about 18 black spinous setae, all placed near the apex. Outer dististyle moderately curved, slender, narrowed to the acute tip, the outer margin with a few appressed spines. Inner dististyle longer, strongly bent beyond midlength, narrowed to the long apical spine, the ventral margin of outer half with coarse conspicuous spines; face of style near midlength with a few very long setae. Phallosome broad, subacute at apex, the surface with numerous long pale setae.

Habitat.—OREGON. *Holotype*: ♂, Viento, Wasco Co., July 1, 1917 (A. L. Melander).

From the other regional members of the *pubipennis* subgroup having short antennae in the male sex, the present fly differs somewhat conspicuously in the structure of the male hypopygium, particularly of the basistyle and its lobes. It is most similar to *Molophilus* (*Molophilus*) *spiculatus* Alexander, yet entirely distinct.