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UNDESCRIPT SPECIES OF WESTERN NEARCTIC TIPULIDAE (DIPTERA). II.

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The preceding part under this general title was published in The Great Basin Naturalist, 4: 89–100; 1943. The species of crane-flies considered at this time were taken in northeastern California by Professor Arthur W. Lindsey, and in Washington and northern Idaho by Professor Axel L. Melander. Except where indicated to the contrary in the text, the types of these novelties are preserved in my personal collection, a gracious favor on the parts of the collectors for which I am most grateful.

Tipula (Arctotipula) sacra Alexander, sp. n.

Size relatively small (wing, male, 11.5 mm.); general coloration light gray, the praescutum with four more brownish gray stripes; wings brownish gray, virtually unpatterned except for the brown stigma; macrotrichia on certain veins beyond the cord, including the distal section of R₄₊₅, M₁ and M₂; abdominal tergites obscure orange-brown, with a broad dark brown, median stripe; male hypopygium having the ninth tergite with a U-shaped caudal emargination, the lobes obtuse; ventral surface of tergite on either side of median line with a bilobed plate; outer distisstyle moderately flattened, about three times as long as the greatest width; inner distisstyle simple, its beak broadly obtuse, outer margin near base produced into a flattened plate that terminates in two blackened spines.

Male.—Length about 10 mm.; wing 11.5 mm.; antennae about 3 mm.

Frontal prolongation of head relatively short, dark brown above, somewhat paler below; nasus unusually long and powerful; palpi chiefly dark brown, the terminal segment paling to brownish yellow. Antennae with scape obscure yellow, pedicel clearer yellow, flagellum dark brown; proximal flagellar segments short-cylindrical, the basal enlargement very poorly developed; longest verticils about one-fourth longer than the segments. Head gray, the center of posterior vertex brown, the area narrowed in front, broadly expanded behind; anterior vertex broad, approximately six times the diameter of the scape; no evident vertical tubercle.

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Pronotal scutum light gray, infuscated medially; scutellum clear light yellow. Mesonotal praescutum light gray with four more brownish gray stripes that are very vaguely margined with darker; humeral triangle light yellow; vestiture of praescutum pale, short and inconspicuous; posterior sclerites of notum gray; scutum of unique type discolored; parascutella nacreous, the adjoining posterior portions of the scutal lobes yellow; postnotum with lateral borders of mediotergite yellow, the katapleurotergite extensively of this color, only its ventral portion gray pruinose. Pleura chiefly light gray, the extreme dorsal portions of the sternopleurite and meron vaguely still paler gray; dorsopleural membrane clear yellow. Halteres with stem brownish yellow, knob weakly infuscated, its apex a little paler; base of stem restrictedly orange. Legs with coxae light gray, their apices restrictedly obscure yellow, clothed with abundant long white setae from brown punctures; trochanters yellow; femora yellow, their apices dark brown, relatively narrow and subequal on all legs; tibiae obscure brownish yellow, the tips very narrowly darkened; tarsi black; claws (male) with a single tooth. Wings brownish gray, almost unpatterned except for the brown stigma; a faint brown seam along virtually the entire length of vein Cu; obliterator areas very restricted and inconspicuous; veins brown. Macrotrichia of veins beyond cord relatively abundant, appearing as a complete series on distal section of R1.5, on most of veins R2.3 and M1, and with two or three trichia on vein M2. Venation: R1.2 entire; Rs less than twice R2.3 and about twice m-cu; petiole of cell M1 short, somewhat variable, shorter than m.

Abdominal tergites obscure orange-brown, with a broad, dark brown, median stripe, almost continuous on the more proximal segments, the posterior borders of the intermediate segments pale, interrupting the stripe; sternites brown basally, the posterior borders broadly pale; outer segments more uniformly dark brown; hypopygium in large part yellow. Male hypopygium with the ninth tergite transverse, narrowed posteriorly, with nearly the cephalic half darkened, the posterior border broadly yellow; caudal margin with a U-shaped emargination, the lobes low and obtuse; on ventral surface of tergite, on either side of midline, with a pale yellow, feebly sclerotized plate that is unequally bilobed, the posterior arm an acute spine directed caudad and laterad, the cephalic arm obtuse at apex, directed laterad. Outer dististyle relatively narrow, flattened, the length about three times the greatest width which is at near midlength; apex obtuse. Inner dististyle simple, the beak broad, obtuse at tip; outer margin near base produced into a flattened plate that bears two acute spines, the
outer one more slender; margin of style immediately distad of these spines with a group of about six strong setae; outer basal portion of style a low obtuse pale cushion that is densely setuliferous. Aedeagus short, subtended by slender and very inconspicuous gonapophyses.

Habitat.—Northern Idaho.

Holotype, ♂, Priest Lake, Tule Bay, Bonner Co., August 22, 1920 (Melander).

Tipula (Arctotipula) sacra is quite distinct from the other regional members of the subgenus, including two larger species with patterned wings, T. (A.) semidea Alexander and T. (A.) twogwoteena Alexander, and two further species of entirely different color and structure, T. (A.) absaroka Alexander and T. (A.) plutonis Alexander. The fly is more like certain of the arctic and subarctic members, as T. (A.) aleutica Alexander, T. (A.) besselsi Osten Sacken, and T. (A.) besselsoides Alexander all differing among themselves in hypopygial characters. The present fly superficially resembles a species of the genus Prionocera Loew. At this time it may be noted that various species hitherto referred to this latter genus without question are in reality modified species of the genus Tipula and would apparently fall within the limits of Arctotipula without serious changes in the subgeneric definition. The species concerned are Prionocera parrioides (Alexander), of Arctic Alaska, and P. fuscipennis (Loew), widespread across the entire northern United States and adjacent Canada. In transferring the latter species to Tipula, the name is preoccupied by the earlier Tipula fuscipennis Curtis, and the fly will have to be known by its later name and supposed synonym, Tipula (Arctotipula) illustris Doane.

Limnophila (Elaeophila) modoc Alexander, sp. n.

General coloration of mesonotum dark gray, the praescutum with four scarcely defined, more plumbeous gray stripes; pseudosutural foveae black, conspicuous; femora yellow, the tips narrowly brownish black; wings whitish subhyaline, patterned with dark brown, the areas confined to the vicinity of the veins; m-cu at near two-fifths the length of cell 1st M2; male hypopygium with the dorsal crest of outer dististyle relatively high, entirely smooth, on its outer portion sloping gradually down to the body of style, not forming a projecting point: inner dististyle at apex broad and obtuse.

Male.—Length about 6.5 mm.; wing 7.5 mm.; antennae about 1.3 mm.
FEMALE.—Length about 7 mm.; wing 7.5 mm.

Rostrum and palpi brownish black. Antennae with scape and pedicel dark brown, flagellum paler brown; basal flagellar segments oval, the outer ones more elongate; longest verticils fully one-half longer than the segments; verticils of more proximal segments unilaterally distributed. Head brownish gray; anterior vertex relatively broad, in male about three times the diameter of scape.

Pronotum brownish gray, the scutellum and anterior pretergites somewhat brighter. Mesonotal præscutum dark gray with four scarcely defined, more plumbeous gray stripes; pseudosutural foveae black, conspicuous; posterior sclerites of notum dark leaden gray. Pleura dark plumbeous gray, somewhat brightened on the dorsal sternopleur-ite; dorsopleural membrane brownish yellow. Halteres yellow. Legs with coxae and trochanters reddish yellow; femora yellow, the tips rather narrowly but conspicuously brownish black, the amount subequal on all legs; tibia yellow, the extreme tips not or scarcely darkened; basal tarsal segments yellow, the outer ones more infuscated, wings with the ground whitish subhyaline, patterned with dark brown, the areas relatively small and restricted to the vicinity of the veins, as follows: Over h and arculus, sending a spur along vein Cu for a distance; midway between arculus and origin of Rs, not quite reaching C, behind extending to near midwidth of cell R; a rectangular area at origin of Rs; fork of Sc, extending caudal to Rs; stigma; narrow but very conspicuous seams over cord and outer end of cell 1st M2; fork of M1,2; marginal clouds on veins K3, K4, M2 to Cu, inclusive, and over 2nd A; veins yellow, darker in the patterned areas. Venation: Sc1 ending shortly before fork of Rs, Sc2 a short distance from its tip; Rs long, square and spurred at origin; R2 shorter than R1,2; m-cu at near two-fifths the length of cell 1st M2.

Abdominal tergites indistinctly bicolored, obscure yellowish brown on more than the basal half of segment, the broad tips dark brown; segments seven and eight more uniformly brownish black; hypopygium light brown. Male hypopygium with the outer dististyle moderately wide, terminating in a slender spine, the distal portion, especially the outer crest, with microscopic appressed denticles; inner margin with fewer teeth, the more basal of these very low and obtuse; dorsal crest relatively high, entirely smooth, on its outer portion sloping gradually down to the body of style, without a projecting point or tooth, as in other related species. Inner dististyle at apex very broad and obtuse, provided with very long setae.

Habitat.—Northeastern California.
Holotype, ♂, Davis Creek, Modoc Co., altitude 5,000 feet, July 11, 1922 (Lindsey). Allotopotype, ♀.

The present fly is most similar to *Limnophila* (*Elaeophila*) *aldrichi* Alexander, and its subspecies *aldrichi* *alexander* Alexander, differing in the smaller size, slight details of coloration, and in the structure of the male hypopygium, particularly of the dististyles, as indicated above.

**Gonomyia** (*Idiocera*) *lindseyi* Alexander, sp. n.

Belongs to the *serguttata* (*blanda*) group; mesonotal praescutum and scutum gray, traversed by an intermediate pair of longitudinal brown stripes; thoracic pleura conspicuously striped with yellowish white; femora and tibiae yellow, the tips weakly infuscated; wings whitish subhyaline, patterned with brown; Sc long, Sc1 ending about opposite midlength of Rs; R1.2 and R3 confluent at margin; male hypopygium with the outer lobe of basistyle obtusely rounded at apex; outer dististyle a sinuous blackened rod, constricted on its basal third; intermediate style a little longer, its tip acute, bearing a small erect black spine on face at near midlength; aedeagus at apex terminating in a small yellow crook.

**Male.**—Length about 5.5 mm.; wing 6.5 mm.

**Female.**—Length about 6.5 mm.; wing 7 mm.

Rostrum and palpi black. Antennae brownish black, the scape yellow at base and above; flagellar segments oval, the outer ones more elongate. Head yellow, the center of vertex extensively infuscated; anterior vertex relatively wide, about twice the diameter of scape, a little wider in the female.

Pronotum light gray medially, more infuscated toward the sides, the extreme margin light yellow; pretergites light yellow. Mesonotal praescutum gray, with a pair of brown stripes extending the whole length of the sclerite, the humeral region more yellowed; pseudosutural foveae horn-yellow; lateral praescutal borders clearer gray, narrowly bordered internally by very vague indications of the usual lateral stripes; scutum medially obscure brownish fulvous, the extreme central portion narrowly more darkened, the central portion of each lobe traversed by the brown stripes above described, the outer part of lobe gray; scutellum infuscated medially, the posterior border reddened; mediaptergite with central portion brownish gray, with a conspicuous pale yellow spot on cephalic lateral portion, this extended cephalad over the anapleurotergite; katapleurotergite brownish gray. Pleura brownish gray, with a broad, yellowish white, longitudinal stripe extending from the fore coxae across the dorsal sternopleurite, ventral
pteropleurite and metapleura; dorsopleural membrane yellow. Halteres with stem yellow, the extreme base very weakly darkened, knob brownish black. Legs with the fore and middle coxae whitened, posterior coxae more infuscated; trochanters obscure yellow; femora and tibiae yellow, the tips narrowly and weakly infuscated; tarsi dirty white basally, the tips blackened. Wings whitish subhyaline, the base even more whitened; a conspicuous brown pattern, arranged as in the *blanda* group, including areas over *h*., arculus, origin of *Rs*, fork of *S克莱*, stigma, elements of cord, fork of *M₁,₂* and outer ends of cells *R₃* and *R₁*; veins brownish yellow, dark brown in the patterned areas; *S克莱* and pre-arcural veins almost white. Venation: *S克莱* long, *S克莱₁* ending about middle-length of the long *Rs*, *S克莱₂* near its tip; *Rs* angulated to square at origin; *R₁,₂* and *R₃* confluent at margin, closing cell *R₁*; cell 2nd *M₂* longer than its petiole; *m-cu* nearly twice its length before the fork of *M*.

Abdomen brownish black, the caudal borders of the basal and intermediate segments rather broadly and very conspicuously light yellow, producing rings; outer segments more uniformly darkened; hypopygium with the proximal portions of the basistyle infuscated, the outer parts yellow; in female, the genital shield and bases of the valves brownish black, the tips of the cerci paler. Male hypopygium with the outer lobe of basistyle obtusely rounded at tip, not acutely pointed, as in *brookmani* and *californica*; what appears to represent an inner lobe is very large and flattened, fully as long as the outer lobe. Outer dististyle a simple sinuous blackened rod, constricted on basal third, gradually narrowed to the acute tip; intermediate style a little longer, nearly straight, narrowed to the acute tip, on face of blade at near midlength with a small erect black spine; inner style about one-half as long as the last, appearing as a nearly straight rod, before apex a trifle expanded, thence narrowed to the acute, narrowly darkened tip. Aedeagus at apex terminating in a small yellow sclerotized crook. Ninth tergite with the caudal margin convexly rounded, moderately thickened, densely provided with short setae.

Habitat.—Northeastern California.

Holotype, ♂, Davis Creek, Modoc Co., altitude 5,000 feet, July 11, 1922 (Lindsey). Allotopotype, ♀.

I am very pleased to name this fly for the collector, Professor Arthur Ward Lindsey, of Dennison College, to whom I am greatly indebted for various species of Tipulidae. In the structure of the male hypopygium, especially of the dististyles, the species is entirely different from all other regional members of the group, being most similar to
Gonomyia (Adiocera) brookmani Alexander and G. (I.) californica Alexander but entirely distinct.

Erioptera (Mesocyphona) melanderiana Alexander. sp. n.

General coloration gray, the praescutum with two brown longitudinal stripes; thoracic pleura dark gray, with an obscure yellow longitudinal stripe; legs almost uniformly darkened; wings weakly tinged with brown, unpatterned; cell 1st M2 closed.

Male.—Length about 3.5 mm.; wing 4 mm.

Female.—Length about 4 mm.; wing 4.8 mm.

Rostrum brown, palpi brownish black. Antennae with scape brown, pedicel brownish black, flagellum very pale brown; flagellar segments oval, the more proximal ones crowded, the outer segments elongate-oval; verticils long and conspicuous. Head dark brown, pruinose.

Pronotum brown and light yellow; pretergites yellow. Mesonotal praescutum gray with a conspicuous, dark brown, longitudinal stripe on either side of the wider gray median vitta; tuberculate pits lying entirely in the central gray stripe, on a transverse level with the black pseudosutural foveae; scutum gray, the mesal edge of each lobe dark brown; scutellum weakly infuscated at base, paling to obscure yellow outwardly; mediotergite gray on central portion, paling to obscure yellow on sides. Pleura and pleurotergite chiefly dark gray, with an obscure yellow, longitudinal stripe, extending from behind the fore coxae across the dorsal sternopleurite and pteropleurite to the base of abdomen, passing beneath the wing-root; dorsopleural region broadly yellow. Halteres with stem pale yellow, knob weakly darkened. Legs with the coxae and trochanters brownish yellow, the fore coxae somewhat darker; remainder of legs almost uniformly darkened, the femoral bases slightly brightened, toward the tips becoming vaguely more darkened but not forming a ring. Wings with a weak brownish tinge, unpatterned; prearcular field paler; veins pale brown. Venation: Sc1 ending nearly opposite R2; Rs relatively long, subequal to vein R3; cell 1st M2 closed, m transverse, basal section of M2 subequal in length, oblique, cell 1st M2 shorter than any of the veins beyond it; m-cu at the fork of M; vein 2nd A sinuous on its outer third.

Abdomen chiefly dark brown, including most of the hypopygium. Male hypopygium of the normal type of the subgenus. Two disti-styles, the outer one profoundly bifid, its base dilated; both branches slender, the outer one more so, at its apex terminating in four or five short crowded teeth; inner or axial branch gradually narrowed to the acute tip; inner style of about the same shape and curvature as the
inner branch of the outer style, its lower or concave margin on distal half with about five small scattered denticles. Gonapophyses appearing as flattened pale blades, a little dilated on distal half, the tips acute; surface of blades with faint longitudinal striolae.

Habitat.—Washington.

Holotype, ♂, Mount Rainier, Paradise Park, August 1917 (Melander). Paratopotype, ♀, Mazama Ridge, July 23, 1922 (Melander); in Melander Collection.

This unusually distinct fly is dedicated to Dr. Axel Leonard Melander, who has added vastly to our knowledge of distribution of the Diptera throughout the United States. The species is entirely different from all others in the Nearctic region, especially in the unpattered wings and closed cell 1st M2.

*Ormosia (Ormosia) pugetensis* Alexander, sp. n.

Belongs to the *similis* group; general coloration light brown; antennae (male) elongate, approximately two-thirds the length of the body, the individual flagellar segments strongly narrowed outwardly; wings with cell M2 open by the atrophy of the basal section of M2; anal veins confluent or subparallel on their outer portions; male hypopygium with the margins of the tergal lobes erose, with conspicuous setae; gonapophyses black, both pairs simple and acutely pointed, the outer pair unusually long and slender.

*Male.*—Length about 5 mm.; wing 5.2 mm.; antenna about 3.5 mm.

Rostrum brown, palpi relatively elongate, darker brown. Antennae (male) elongate; scape dark brown, pedicel obscure brownish yellow, flagellum dark brown; flagellar segments elongate, the proximal half of each dilated, thence narrowed very gradually to the apex, on the more basal segments, the stem restrictedly darkened at tip. Head dark gray.

Pronotum and pretergites obscure yellow, the former narrowly more reddened medially. Mesonotum light brown to medium brown, the tuberculate pits and pseudosutural foveae black; posterior sclerites of notum more strongly infuscated on central portions, the mediogale paling to yellow on sides; pleurotergite yellow. Pleura uniformly yellow. Halteres with stem pale, knob weakly infuscated. Legs with the coxae and trochanters yellow; remainder of legs brownish yellow to light brown, the outer tarsal segments more strongly infuscated. Wings broad, with a weak brownish tinge, the narrow costal border and the stigma darker brown; veins brown. Venation: Sc2 opposite midlength of Rs; R2.3 subequal to R2; cell M2 open by the atrophy of
basal section of $M_3$; $m-cu$ at fork of $M$; vein 2nd $A$ strongly sinuous on its outer half, narrowing cell 1st $A$.

Abdomen, including hypopygium, dark brown. Male hypopygium with the tergite conspicuous, its caudal border deeply emarginate, the lateral lobes divergent, their margins irregular or erose, fringed with long setae. Dististyles almost as in other species of the group. Gonapophyses distinctive, two on either side, both pairs heavily blackened; outer pair appearing as unusually long and slender curved spines, directed mesad; inner or more cephalic apophyses shorter and stouter but likewise acutely pointed. The gonapophyses are of quite different conformation from those of either decussata or longicornis.

**Habitat.**—Western Washington.

**Holotype,** ♂, Puget, Thurston Co., July 4, 1925 (Melander).

*Ormosia (Ormosia) pugetensis* is most similar to *O. (O.) decussata* Alexander and to what I have determined as being *O. (O.) longicornis* (Doane), possibly erroneously (not having been able to examine the type). The present fly is readily told from these forms by the structure of the male hypopygium, particularly the gonapophyses.

**Molophilus (Molophilus) subnitens** Alexander, sp. n.

Belongs to the *gracilis* group, *nitidus* subgroup; size large (wing, male, 6 mm. or more); general coloration of body and appendages black; knobs of halteres light yellow; male hypopygium with mesal lobe of basistyle produced into two small acute spines; inner dististyle with the long arms diverging only slightly, one arm dark-colored and paddle-like, less than twice as wide as the yellow second arm.

**Male.**—Length about 5.2 - 5.6 mm.; wing 6 - 6.8 mm.; antenna about 1.5 - 1.7 mm.

Characters generally as in *nitidus*, differing especially in the structure of the male hypopygium.

General coloration of the entire body black, the surface nitidous or subnitidous. Palpi, antennae and legs black. Halteres with stem black, knob light yellow. Wings a strong blackish suffusion; $R_{2+3}$ long, from one-third to one-half longer than the basal section of $R_5$; $m-cu$ oblique, angulated below midlength.

Male hypopygium approximately as in *nitidus* but differing in all details. Furcula of ninth tergite with the arms separated by a relatively broad U-shaped notch that is wider than either arm, the latter approximately as long as the width of the stem across its base. Basistyle with dorsal lobe a long, very slender spine; mesal lobe bearing two small acute spines that are separated by a U-shaped notch. Outer dististyle
a simple rod, dark brown and stouter on its basal two-thirds, thence narrowed into a long, gently curved black spine. Inner dististyle with arms diverging at only a slight angle, one arm tipped with yellow, the other paddle-shaped, uniformly darkened, subequal in length to and less than twice as wide as the second arm. In nitidus, the stem of the tergal furcula is much narrower across base; basistyle with a single mesal spine, but this of unusual length and slenderness; apical arms of inner dististyle greatly disproportionate in width, the broader one being approximately three times as wide as the narrow blade.

**Habitat.**—Eastern Washington.

**Holotype,♂,** Valleyford, Spokane Co., May 29, 1921 (Melander); in Melander Collection. **Paratopotype,♂,** in author’s collection.

From the other large-sized member of the subgroup, *Molophilus* (*Molophilus*) nitidus Coquillett, the present fly differs in the hypopygial characters as above outlined. I now know nitidus from western Washington, western Oregon and northwestern California (Humboldt Co.; type-locality).

*Molophilus* (*Molophilus*) nitidulus Alexander, sp. n.

Belongs to the *gracilis* group, nitidus subgroup; size relatively small (wing, male, about 5 mm.): general coloration black, the lateral angles of the pronotal scutellum obscure orange-yellow; knobs of halteres yellow; male hypopygium with the furcula of the ninth tergite having short and broad arms; dorsal lobe of basistyle very slender, needle-like; mesal lobe bearing two small and inconspicuous, unequal spines, one short and peglike; outer dististyle a straight blade, flattened and twisted at near midlength; inner dististyle with both apical arms short and broad.

**Male.**—Length about 4.5 – 4.6 mm.; wing 4.9 – 5.1 mm.

Rostrum and palpi black. Antennae black throughout, short; flagellar segments oval, the outer ones more elongate. Head black, the surface sparsely pruinose.

Pronotum black, the lateral angles of the scutellum obscure orange-yellow. Mesonotum black, the surface subnitidous; pseudosutural foveae and tuberculate pits black. Pleura and pleurotergite black, sparsely pruinose. Halteres with stem light brown, knob light yellow. Legs with the coxae and trochanters black; remainder of legs brownish black. Wings with a strong blackish tinge, the veins darker than the ground; a whitish streak along vein *M* to beyond its fork. Venation: *R*₂ lying shortly beyond the level of *r-m*; *R*₂₃ arcuated, in the paratype angulated and short-spurred; petiole of cell *M*₃ a little longer
than the sinuous m-cu; vein 2nd A moderately sinuous, terminating opposite the posterior end of m-cu.

Abdomen, including hypopygium, dark brown. Male hypopygium having the general structure of the nitidus group, differing from all allied species in the details. Furcula of the ninth tergite with the arms shorter and broader than in other species, each about as long as the width across the base of the stem. Basistyle with its dorsal lobe very slender, almost needle-like, from a dilated basal portion, at its origin bent at virtually a right angle; mesal region of style bearing two spines, one a small, inconspicuous, slender one, the second still smaller, peg-like. Outer dististyle a straight blade, flattened and twisted at near midlength, thence narrowed to the acute tip. Inner dististyle with both apical blades short and broad.

Habitat.—Eastern Washington.


Molophilus (Molophilus) nitidulus is well-distinguished from the other described members of the nitidus subgroup by the relatively small size and by the hypopygial characters, as above defined. It is perhaps closest to M. (M.) millardi Alexander, of southern California.