

NEW SPECIES OF TWO-WINGED FLIES FROM WESTERN
NORTH AMERICA BELONGING TO THE FAMILY
TIPULIDAE.

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The new species described in this paper were included in very extensive collections made in Alaska by Dr. J. M. Aldrich, and in Western United States, British Columbia and Alaska, by Dr. Harrison G. Dyar. The two collections taken together, which belong to the United States National Museum, constitute one of the most important series of these flies that has yet been brought together from this region. In the present paper a part of the undescribed forms are included. It is hoped that detailed records of all the included species can be brought together and published in a second report on these flies. All types have been deposited in the collection of the United States National Museum.

ORMOSIA DECUSSATA, new species.

Allied to *O. longicornis* (Doane); antennae of male elongate, the flagellar segments attenuated; general coloration of mesonotum brown, the pleural region pale reddish grey; wings with the stigma and costal region pale brown; cell 1st M_2 open; anal veins convergent; male hypopygium with the outer angles of the gonapophyses produced into elongate, curved spines that are feebly decussate at their extreme tips.

Male.—Length about 4.5 mm.; wing, 5.7 mm.

Rostrum and palpi dark brown. Antennae of the male elongate, brown, a little shorter than the body, the flagellar segments attenuated apically. Head greyish brown.

Mesonotum pale greyish brown, the humeral region of the praescutum obscure yellow. Pleura pale reddish grey, the dorso-pleural region more yellowish. Halteres obscure yellow, the knobs darker. Legs with the coxae and trochanters yellow; remainder of the legs brownish yellow, the terminal tarsal segments dark brown. Wings with a pale grey suffusion the stigma and the costal and subcostal cells brownish; veins brown. Venation: r at fork of R_{2+3} ; basal

deflection of R_{4+5} about one-half R_{2+3} ; cell $1st M_2$ open by the atrophy of the outer deflection of M_3 ; basal deflection of Cu_1 immediately before the fork of M ; anal veins convergent.

Abdominal tergites brown, the caudal margin of the segments indistinctly paler; sternites brownish yellow. Male hypopygium with two pleural appendages; outer appendage small, dark-colored; inner appendage pale, the apex irregularly bilobed, the tip of the longest lobe with a few setae. Gonapophyses very powerful, appearing as flattened plates, the outer angles produced caudad and mesad into a long, gently curved spine, the extreme tips being contiguous or feebly decussate on the median line. The apparent ninth sternite (ninth tergite) a broad, pale lobe that is distinctly split medially.

Described from a single male, collected at Ketchikan, Alaska, August 7, 1919 (H. G. Dyar).

Type.—Male, Cat. No. 26078, U.S.N.M.

ORMOSIA CURVATA, new species.

General coloration dark brown; basal segment of antenna indistinctly pale; halteres with yellowish knobs; wings grayish yellow, stigma distinct; cell $1st M_2$ open by the atrophy of the outer deflection of M_3 ; anal veins divergent; male hypopygium with the outer pleural appendage produced into a long, slender curved point; inner pleural appendage with a powerful spine before the tip.

Male.—Length about 4 mm.; wing, 5.4 mm.

Rostrum and palpi dark. Antennae short, dark brown, the basal segment a little paler. Head discolored, dark, with yellow setae.

Mesonotum discolored, excepting the anterior part of the praescutum which is dark brown. Pleura dark. Halteres obscure yellow, the knobs brighter. Legs with the coxae brownish yellow; trochanters yellow; remainder of the legs dark brown, the femora paler basally. Wings with a strong grayish yellow tinge; stigma distinct, brownish; veins brown. Venation: Cell $1st M_2$ open by the atrophy of the outer deflection of M_3 ; anal veins divergent; vein $2dA$ straight.

Abdomen dark brown. Male hypopygium with the pleurites stout; outer pleural appendage relatively small, the mesal face produced into a long slender arm that gradually narrows to the cylindrical, chitinized, curved apex; inner pleural appendage appearing as a straight arm, immediately beyond midlength on the lateral or caudal face bearing a powerful, acute, black spine that is but little shorter than the apex beyond it; apex of the appendage pale, incrassated, with the lateral margins feebly chitinized, provided with a single stout seta. Gonapophyses appearing as slender, straight, chitinized rods, the extreme bases swollen, immediately beyond this enlargement on the lateral face with a small chitinized branch. Lobe of the

ninth tergite (the apparent sternite) narrow basally, gradually widened to the apex which is feebly bilobed.

Described from a single male, collected at Skagway, Alaska, June 3, 1919 (H. G. Dyar).

Type.—Male Cat. No. 26079, U.S.N.M.

ORMOSIA PROXIMA, new species.

General coloration dark brown; wings tinged with brown; stigma distinct; cell *1st M*₂ open by the atrophy of the outer deflection of *M*₃; anal veins feebly convergent but cell *1st A* widest at margin; inner pleural appendage of male hypopygium a flattened blade with the distal margin truncate, irregularly toothed.

Male.—Length about 4 mm.; wing, 5 mm.

Rostrum and palpi dark brown. Antennae short, dark brown throughout. Head dark gray.

Mesonotum and pleura dark brown, without distinct markings. Halteres brown, the knobs conspicuously yellowish. Legs with the coxae and trochanters yellowish brown; remainder of the legs dark brown, only the femoral bases a little paler. Wings tinged with brown, the stigma darker; veins dark brown. Venation: Cell *1st M*₂ open by the atrophy of the outer deflection of *M*₃; basal deflection of *Cu*₁ at or immediately beyond the fork of *M*; Anal veins slightly convergent, vein *2d A* being feebly sinuous on its distal third; cell *1st A* is much wider at the margin than at any point elsewhere.

Abdomen dark brown. Male hypopygium with two pleural appendages, the outer one larger, near the apex with two acute black horn-like spines and a brown lobe that is densely set with conspicuous setiferous punctures; inner appendage smaller, appearing as a blade with a short, curved base, the distal margin truncated and irregularly but conspicuously toothed. Gonapophyses conspicuous, appearing as powerful black horns that taper gradually to the acute tips which are inclined slightly mesad; at base of each apophyse a short, straight spine. Penis-guard a long, slender rod that juts beyond the level of the apophyses.

Described from three males, collected at Skagway, Alaska, June 3, 1919 (H. G. Dyar).

Type.—Male, Cat. No. 26080, U.S.N.M.

ORMOSIA FUSCOPYGA, new species.

Belongs to the *deviata* group; head brownish gray; mesonotum dark brown; thoracic pleura and sternum gray pruinose; halteres with the knobs dark brown; wings pale brownish subhyaline, with conspicuous veins; abdomen and hypopygium dark brown.

Male.—Length about 3.5 mm.; wing, 4.2–4.3 mm.

Rostrum and palpi dark brown; antennae short, pale brown throughout; flagellar segments with elongate verticils. Head dark brownish gray.

Pronotal scutellum conspicuously pale yellow. Mesonotum dark brown, the humeral region paler brown. Pleura and sternum conspicuously gray pruinose. Halteres yellow, the knobs dark brown. Legs with the coxae and trochanters obscure brownish yellow; remainder of the legs brown; legs relatively long and slender. Wings pale brownish subhyaline; stigma conspicuous, brown; veins dark brown, conspicuous. Venation as in *O. stylifer* Alexander but the cells distad of the cord are not quite so deep.

Abdomen dark brown, including the hypopygium. Male hypopygium very similar to that of *O. stylifer*; pleural appendages larger and more conspicuous, the apices of both more obtuse.

Described from three males, collected at Clío, Plumas County, California, July 9, 1916 (H. G. Dyar).

Type.—Male, Cat. No. 26081, U.S.N.M.

ERIOPTERA ALDRICHI, new species.

Allied to *E. katmai* Alexander; halteres pale, the knobs faintly darkened; head blue-gray; wings faintly tinged with brown; stigma elongate, dark brown; vein *2d A* subsinuous, ending beyond mid-length of *Rs*; male hypopygium concolorous with the remainder of the abdomen; outer pleural appendage slender, the apex acute; inner pleural appendage deeply bifid, the lateral arm strongly curved, the mesal arm slender, pale, terminating in a single powerful seta; gonapophyses appearing as small, blackened plates that are shorter than the penis-guard.

Male.—Length about 5 mm.; wing, 6.5 mm.

Rostrum and palpi black. Antennae black, the first scapal segment dusted with gray. Head clear blue-gray above, duller gray on the genae.

Pronotum clear gray; a setiferous area on either side of the scutum. Mesonotal praescutum gray with four brown stripes that tend to become confluent, only the lateral margins remaining of the ground-color; pseudosutural foveae elongate, black, conspicuous; scutum light gray medially, the centers of the lobes brown; scutellum light gray, the margins weakly infuscated; postnotum gray. Pleura clear gray, the mesosternum and mesepimeron with conspicuous, elongate, white setae. Halteres pale, the knobs weakly infuscated. Legs with the coxae light gray; trochanters brown; remainder of the legs black. Wings fully developed, faintly tinged with brown, the costal and subcostal cells a little more yellowish; stigma elongate, dark brown; veins dark brown, *Sc* yellowish. Venation: *Sc*₁ ending just before *r*; *Sc*₂ faint, opposite three-fifths the length of *Rs*; *R*₂₊₃

about equal to the first section of R_2 and a little longer than the deflection of R_{4+5} ; basal deflection of Cu_1 at the fork of M ; vein $2d$ A feebly sinuous, longer than usual in this group, ending beyond midlength of R_s .

Abdomen dark brown, sparsely pruinose; hypopygium concolorous. Male hypopygium with the ninth tergite appearing as a very large and flattened plate as in this group of species, the apex with a broad V-shaped notch, the lobes rounded. Pleurites comparatively stout, the ventral apical angle produced caudad into a fleshy lobe that is clothed with pale, erect setae; outer pleural appendage a slender, nearly chitinized arm that tapers to the acute apex, the outer or lateral margin microscopically squamulose; inner pleural appendage shorter, deeply bifid, the lateral arm a chitinized, strongly curved hook, the mesal arm pale yellow, straight and slender, terminating in a single powerful seta, the cephalic margin of the arm with a slight, wing-like expansion. Gonapophyses appearing as small, flattened plates, the mesal margin straight or nearly so, the apices obliquely subtruncate, the lateral margins rounded. Penis-guard a little longer than the apophyses, the apex strongly curved.

Described from a single male, collected at Valdez, Alaska, June 8, 1921 (J. M. Aldrich).

Type.—Male, Cat. No. 26082, U.S.N.M.

A female taken on the same day, at the type-locality, may belong here but the second anal vein is short and straight as usual in the group, ending before one-third the length of R_s .

This interesting crane-fly is dedicated to the collector, Dr. J. M. Aldrich. It is possible that this group of crane-flies may more correctly be referred to the genus *Psiloconopa* Zetterstedt.

ERIOPTERA ALASKENSIS, new species.

Allied to *E. angustipennis* Alexander; halteres pale yellow; wings long and narrow; male hypopygium reddish brown; outer pleural appendage of the hypopygium dilated apically into a broad, triangular blade; inner appendage a straight arm, the narrow blackened apex with one seta; gonapophyses slender, straight, the slightly enlarged tips with abundant short setae.

Male.—Length about 4.8 mm.; wing, 6 mm.

Rostrum and palpi dull gray. Antennae black, the basal segment gray pruinose. Head gray.

Mesonotal praescutum dull gray with four brown stripes, the lateral pair subobsolete; pseudosutural foveae very conspicuous, black; tuberculate pits likewise conspicuous, black; scutum dull gray, the centers of the lobes weakly infuscated; scutellum dull gray; postnotum brownish gray. Pleura dark, heavily yellowish gray pruinose. Halteres pale yellow. Legs with the coxae and

trochanters light gray pruinose; remainder of the legs black. Wings long and narrow, slightly less so than in *E. angustipennis* Alexander (Canadian North-west Territories), faintly tinged with brown; cells *C* and *Sc* a little more yellowish; stigma lacking; veins dark brown, *Sc* more yellowish. Venation: *Sc*₁ ending just before *r* which is very faint; *R*₂₊₃ from two to four times the deflection of *R*₄₊₅ and one-half longer than the first section of *R*₂; basal deflection of *Cu*₁ at or just before the fork of *M*; fusion of *M*₃ and *Cu*₁ variable, from one to nearly two times the basal deflection of *Cu*₁; vein *2d A* short and straight ending just beyond the origin of *Rs*.

Abdomen dark, conspicuously dull gray pruinose; hypopygium conspicuously reddish brown. Male hypopygium with the ninth tergite relatively small with a deep U-shaped median notch, the lobes with conspicuous setae. Pleurites slender, the ventral angle not so conspicuously produced as in related species; outer pleural appendage a powerful arm that rapidly narrows to the subacute black apex, the outer face microscopically squamulose, the mesal or inner face near midlength dilated into a conspicuous, elongate-triangular blade that is about as long as the apex itself; viewed laterally the entire distal end of the appendage appears triangularly dilated; inner pleural appendage a straight rod, the apex subtruncate and narrowly blackened, bearing a single seta. Penis-guard and gonapophyses slender, straight, subequal in length, the apophyses pale with the heads slightly enlarged, bearing on the mesal apical angle and along the mesal margin abundant short setae.

Described from two males collected by J. M. Aldrich in Alaska: one at Valdez, June 8, 1921, the other at Camp 327, Alaska Engineer Commission, (since named Windy, a siding on the Alaska Railroad), July 12, 1921.

Type.—Male, Cat. No. 26083, U.S.N.M.

ERIOPTERA (ERIOPTERA) DYARI, new species.

Allied to *E. villosa* Osten Sacken; eyes of male widely separated by the vertex; vertex yellow with a brown spot; general coloration pale brown, variegated with sulphur-yellow; male hypopygium with the inner pleural appendage curved before the tip, the apex suddenly narrowed into a powerful spine; outer gonapophyses cultriform.

Male.—Length about 5.2 mm.; wing 6.5 mm.

Rostrum and palpi dark brown. Antennae light brown; eyes of the male not conspicuously enlarged, widely separated by the vertex. Head yellow, the center of the vertex with a conspicuous brown spot.

Pronotum yellow, infuscated medially. Mesonotal praescutum very pale brownish, sparsely pollinose, the lateral margins and

humeral regions light sulphur-yellow; scutum with the median area light brown, the lobes yellow with the centers narrowly infuscated; scutellum pale brown, the caudal margin conspicuously light yellow; postnotum light brown, the anterior lateral angles yellowish. Pleura whitish yellow, the mesepisternum and the mesosternum faintly darkened. Halteres yellow. Legs relatively slender, obscure yellow, the tarsi infuscated. Wings with a yellowish suffusion, the stigmal region slightly darker; veins pale brown.

Abdomen brownish yellow. Male hypopygium generally similar to that in *E. villosa* Osten Sacken; outer pleural appendage blackened on the outer half, not blade-like; inner pleural appendage much shorter, at the curved tip suddenly narrowed into a powerful spine of which the apex only is darkened. Outer gonapophyses chitinized, cultriform, the tips acute; inner apophyses shaped like shepherd's crooks.

Described from a single male, collected at Gold Lake Camp, Plumas County, California, July 22, 1916 (H. G. Dyar).

Type.—Male, Cat. No. 26084, U.S.N.M.

Erioptera dyari is a very distinct species of the genus. It is dedicated to the collector, Dr. Harrison G. Dyar.

ERIOPTERA (ERIOPTERA) DILATATA, new species.

Allied to *E. villosa* Osten Sacken; eyes of the male very large, contiguous or nearly so; general coloration reddish brown, the pronotum and lateral margins of the mesonotal praescutum obscure yellow; male hypopygium with the inner pleural appendage dilated into a triangular blade at apex; gonapophyses small, covered with microscopic spinulae.

Male.—Length 5 mm.; wing 6 mm.

Female.—Length 5.4 mm.; wing 6.8 mm.

Rostrum and palpi brown. Antennae dark brown. Head light fawn-colored, more yellowish adjoining the inner margins of the eyes. Eyes of the male very large, contiguous.

Pronotum yellowish. Mesonotum reddish brown, the lateral margins of the praescutum, especially the humeral regions, yellowish. Pleura light purplish brown. Halteres yellowish. Legs with the femora brownish yellow, the tips narrowly darkened; remainder of the legs obscure brownish yellow, the terminal tarsal segments dark brown. Wings with a brownish yellow tinge, paler than in *E. villosa*, the stigma and apical region not conspicuously darkened.

Abdomen of male dark brown, of female obscure yellow, narrowly trilineate with brown above. Male hypopygium with the inner or shorter pleural appendage conspicuously dilated into a triangular blackened blade at tip, the apex slight produced, at the caudal angle

of the blade with a short, stout spine. Lateral gonapophyses small, flattened, the surface with microscopic spinulae.

Described from two males and one female, collected at Missoula, Montana, July 6, 1917 (H. G. Dyar).

Type.—Male, Cat. No. 26085, U.S.N.M.

GONEMPEDA, new subgenus.

Characters as in the subgenus *Empeda* but vein R_2 oblique in position, straight, cell R_2 being short-triangular as in *Gonomyia*; cell 1st M_2 closed.

Type of the subgenus.—*Erioptera flava* Schummel (Palearctic).

In the subgenus *Empeda* [type, *Erioptera (Empeda) stigmatica* (Osten Sacken)], veins R_2 and R_3 run generally parallel to one another and cell R_2 is not as in *Gonomyia* but more nearly, as in *Erioptera* although much shorter. Other species definitely referable to *Gonempeda* are *E. (G.) nyctops* Alexander (Eastern United States) and the species described herewith as *E. (G.) burra*.

ERIOPTERA (GONEMPEDA) BURRA, new species.

Head yellow, the vertex with a reddish brown area; mesonotum reddish brown; wings nearly hyaline; veins distinct, brown; *Sc* long; R_2 oblique; cell 1st M_2 closed; vein $2d A$ straight.

Female.—Length about 3.8 mm.; wing 4.2 mm.

Rostrum yellow; palpi pale brown. Antennae brown. Head yellow, the vertex with a conspicuous brown median area.

Pronotal scutum brown, the scutellum yellow. Mesonotum reddish brown, the praescutum of the type somewhat discolored. Pleura yellow. Halteres pale, the knobs dark brown. Legs with the coxae and trochanters yellow; remainder of the legs brown. Wings nearly hyaline; veins distinct, brown. Venation: *Sc* long, Sc_1 ending opposite r ; Sc_2 rather far from the tip of Sc_1 , Sc_1 alone a little longer than the basal deflection of Cu_1 ; Rs long, gently arcuated; r a little more than its own length beyond the fork of R_{2+3} ; R_2 oblique, about as long as the second section of R_{2+3} ; cell 1st M_2 closed; basal deflection of Cu_1 at about one-fourth the length of cell 1st M_2 ; vein $2d A$ straight.

Abdomen brown; ovipositor with the elongate valves reddish horn-color.

Described from one female collected at Tahoe City, California, June 20, 1920 (H. G. Dyar).

Type.—Female, Cat. No. 26086, U.S.N.M.

GONOMYIA (GONOMYIA) POLIOCEPHALA, new species.

General coloration yellow, variegated with brown; head brownish gray; thoracic pleura yellowish white striped with brownish gray; Sc_1 ending opposite the origin of Rs ; male hypopygium with the

penis-guard long, slender, straight, the extreme tip slightly decurved; gonapophyses slender, straight.

Male.—Length about 4.8 mm.; wing 5.5 mm.

Rostrum light yellow; palpi dark brown. Antennae dark brown throughout. Head brownish gray.

Pronotum yellow, brown medially. Mesonotal praescutum brown, the lateral margins and humeral regions broadly yellow; pseudosutural foveae elongate, shiny brown; remainder of the mesonotum brown, the median area of the scutum, posterior margins of each scutal lobe and the caudal margin of the scutellum obscure yellow; yellow postnotum grayish pruinose caudally. Pleura yellowish white with a conspicuous, dorsal, brownish gray stripe extending from above the fore coxa caudad to the lateral sclerites of the postnotum, passing above the base of the halteres; sides of the mesosternum brownish gray, the yellowish white stripe between the brownish gray areas broad; median area of the mesosternum broadly yellow. Halteres elongate, brown, the base of the stem yellow. Legs with the coxae obscure yellow, the bases more or less infuscated; trochanters testaceous; remainder of the legs brown, darker distally. Wings with a faint grayish tinge; stigma brown; veins dark brown. Venation: Sc_1 ending opposite the origin of R_s , Sc_2 at its extreme tip; R_s long, arcuated, about equal² to or a little longer than R_{2+3} ; R_2 straight; deflection of R_{4+5} very short; basal deflection of Cu_1 beyond the fork of M , the distance about equal to two-thirds the basal deflection of M_{1+2} .

Abdominal tergites brown; sternites obscure yellow. Male hypopygium with the pleurites relatively long and stout, the outer caudal angle produced into a blunt lobe; two pleural appendages, the outer appendage elongate, slender basally, near midlength dilated into an oblique blade; inner pleural appendage a flattened subcircular blade, the caudal margin produced into a powerful, straight, black spine, the proximal end produced into a short lobe that bears two powerful setae. Penis-guard long and slender, extending caudad beyond the level of the pleural appendages, straight, the small pale apex slightly decurved, hood-shaped; gonapophyses appearing as two small, slender, blackened rods at about midlength of the guard and appressed to it.

Described from two males, collected at Clio, Plumas County, California, July 9, 1916 (H. G. Dyar).

Type.—Cat. No. 26087, U.S.N.M.

RHABDOMASTIX (SACANDAGA) BOREALIS, new species.

Antennae black, the basal segment obscure yellow; pronotal scutellum yellow; mesonotal praescutum dark brown; pleura brownish yellow, variegated with dark brown; femora dark brown, the

bases narrowly paler; wings tinged with gray; stigma lacking; R_2 very short, the tip less than its own length from the tip of R_1 .

Female.—Length, 5.8 mm.; wing, 7 mm.

Rostrum yellowish testaceous; palpi dark brownish black. Antennae with the first scapal segment obscure yellow, the remainder of the organ black. Front yellow; vertex dark brown, dusted with yellowish gray.

Pronotum yellow, broadly dark brown medially; scutellum conspicuously yellow. Mesonotal praescutum dark brown, without conspicuous markings; tuberculate pits large, shiny, separated from one another by a distance a little greater than the diameter of one; scutellum obscure brownish yellow; postnotum similar, the posterior half dark brown. Dorso-pleural membrane conspicuously yellow. Pleura brownish yellow, variegated with dark brown, this latter appearing as an interrupted longitudinal stripe. Mesosternum dark brown. Halteres pale brown, the knobs conspicuously pale whitish yellow. Legs with the coxae brown; trochanters yellowish brown; femora dark brown, the bases narrowly paler; tibiae pale brown, tipped with darker brown; tarsi dark brown. Wings with a faint gray tinge; stigma lacking; veins dark brown. Venation: Sc_1 ending just before three-fourths the length of R_s , Sc_2 faint, some distance from the tip of Sc_1 , the latter alone nearly twice the basal deflection of Cu_1 ; r lacking; R_2 very short, nearly perpendicular to the end of R_{2+3} , at the margin not far from the tip of R_1 , the space on costa between R_1 and R_2 being a little less than R_2 ; R_2 a little less than one-fourth R_3 ; R_{2+3} a very little longer than R_3 alone, the latter gently arcuated; veins issuing from cell *1st* M_2 relatively long, gently arched as in the genus; basal deflection of Cu_1 about its own length beyond the fork of M .

Abdomen pale brown; base of the ovipositor yellow. Ovipositor with the tergal valves elongate, slender, horn-colored.

Described from one female, collected at Hurricane, Alaska, July 15, 1921 (J. M. Aldrich).

Type.—Female, Cat. No. 26088, U.S.N.M.

LIMNOPHILA (NEOLIMNOPHILA) ULTIMA ALASKANA, new subspecies.

Similar to typical *ultima* Osten Sacken, differing as follows:

Wings conspicuously broader in both sexes and more nearly hyaline; stigma pale but distinct. Male hypopygium with the pleurites much longer and more slender; outer pleural appendage with the straight basal portion very long in proportion to the curved apical hook. The smaller of the two spines at the base of the pleurites is much longer and more conspicuous than in typical *ultima*.

Described from one male and four females: the male collected at Healy, Alaska, July 24, 1921 (J. M. Aldrich); the females at Flat, Alaska, August 5, 1919 (U. S. Biol. Surv., A. H. Twitchell).

Type.—Male, Cat. No. 28089, U.S.N.M.

Paratypes are in the collection of the U. S. Biological Survey and of the writer.

It should be noted here that this group of flies will probably be found to be more closely related to *Cladura* and *Crypteria* than they are to *Limnophila*. European representatives of the group have recently been discovered.

LIMNOPHILA EUXESTA, new species.

General coloration polished black, the mesonotal praescutum with three narrow interspaces of yellowish gray pollen; remainder of the mesonotum and pleura with a gray pruinosity; halteres yellow; wings with a faint yellowish tinge; stigma small, brown; *r* near the tip of R_1 ; R_{2+3} long; basal deflection of Cu_1 a short distance beyond the fork of M ; male hypopygium with the pleurites stout, the single pleural appendage slender, chitinized.

Male.—Length 12 mm.; wing 11.6 mm.

Female.—Length 14 mm.; wing 11.5 mm.

Rostrum and palpi black. Antennae black, short in both sexes, the first scapal segment sparsely pollinose. Head shiny black, the front and a band across the vertex connecting the eyes yellowish gray pruinose. Head strongly narrowed behind.

Mesonotal praescutum shiny black with a triton-shaped yellowish gray pruinose area, the central arm occupying the median line of the body, the outer arms lying parallel and close to the median vitta, these areas occupying the interspaces between two linear intermediate and two broad lateral stripes that are polished black; median area of scutum, most of the scutellum and the postnotum heavily yellowish gray pruinose. Pleura black, sparsely pruinose. Halteres pale yellow throughout. Legs with the coxae black, gray pruinose; trochanters obscure yellow; femora black, the bases conspicuously yellow, narrowest on the fore legs, slightly broader on the posterior legs; remainder of the legs black. Wings with a faint yellowish tinge, cells *C* and *Sc* slightly brighter; stigma small, oval, brown; very narrow and indistinct brown seams along the cord and outer end of cell *1st M*₂; veins dark brown. Venation; *Sc* long, Sc_1 extending to beyond the fork of *Rs*, Sc_2 at the extreme tip of Sc_1 , *Rs* long, angulated and spurred at origin; R_{2+3} long, about twice as long as the deflection of Cu_1 ; inner end of cell R_2 pointed; *r* near tip of R_1 , the latter beyond it about one and one-half *r*; cell M_1 present, its petiole about equal to or one-half longer than the basal deflection of Cu_1 , the latter rather close to the inner end of cell *1st M*₂, the distance about equal to or less than *r-m*.

Abdomen dark brown, sparsely pruinose; hypopygium shiny black. Male hypopygium with the pleurites very short and stout, contiguous

on the median line, the dorsal apical portion produced dorsad and proximad into very stout cylindrical lobes, the apices of which are contiguous at the median line, the bases widely separated; the slender, shiny pleural appendage is almost straight, broad-based, the extreme tip curved, these appendages decussate across the median line. Ninth tergite almost straight across or the margin even feebly concave. Ovipositor black basally, the long valves reddish horn color.

In the holotype, the left wing has cell *1st M*₂ open by the atrophy of the outer deflection of *M*₃.

Described from two males and two females: one specimen of each sex (type and allotype) from Longmire Springs, Mount Rainier, Washington, June, 1917 (H. G. Dyar); the other pair from Prospect, Oregon, May 23-29, 1921 (H. G. Dyar).

Type.—Male, Cat. No. 26090, U.S.N.M.

LIMNOPHILA RUBIDA, new species.

General coloration shiny reddish; legs yellow, the tips of the femora conspicuously blackened; bases and apices of the tibiae narrowly blackened; wings brownish fulvous, stigma pale; *Rs* long, angulated at origin; *r* at tip of *R*₁.

Male.—Length about 9 mm.; wing 9.3 mm.

Rostrum and palpi brown. Antennae with elongate basal segment of the scape brownish black; second segment black; flagellar segments dark brown. Head dark brown, paler behind.

Mesonotal praescutum shiny reddish orange with a narrow black median vitta that occupies the anterior half of the sclerite; remainder of the mesonotum reddish yellow, the postnotum indistinctly and narrowly darkened medially. Coloration of the pleura obscured by glue. Halteres broken. Legs with the coxae and trochanters reddish orange; femora obscure yellow, the tips rather broadly and conspicuously black, the amount equal on all the legs; tibiae brownish yellow, narrowly blackened both at base and apex; tarsi dark brown. Wings with a strong brownish fulvous tinge; stigma small, barely indicated; veins pale brown. Venation: *Sc* long, *Sc*₁ extending to just beyond the origin of *R*₂₊₃; *Sc*₂ at tip of *Sc*₁; *Rs* elongate, longer than *R*₂ alone, angulated at origin; *R*₂₊₃ equal to the basal deflection of *Cu*₁; *r* at tip of *R*₁; cell *M*₁ about as long as its petiole; basal deflection of *Cu*₁ before one-third the length of cell *1st M*₂.

Abdomen conspicuously reddish, unmarked. Male hypopygium with the mesal apical angle of the pleurite produced into short blunt lobes; pleural appendage very long and slender, broad-based, tapering rapidly to the slender apex, the margins smooth.

Described from a single male, collected at Prospect, Oregon, May 23, 1921 (H. G. Dyar).

Type.—Male, Cat. No. 26091, U.S.N.M.

The general appearance of this fly is very much like a *Phylidorea*, allied to *L. (P.) adusta* Osten Sacken, but the elongate sector would indicate that such a subgeneric reference would be incorrect.

LIMNOPHILA OCCIDENS, new species.

Male.—Length 6.8 mm.; wing 8.5 mm.

Female.—Length about 7 mm.; wing 9 mm.

Closely related to *L. brevifurca* Osten Sacken (Eastern North America), from which it differs as follows:

Size very notably larger. Thorax reddish brown, only sparsely pruinose, the reddish color showing through and giving the body a reddish cast. Wings with a strong yellow tinge.

Described from one male and one female; the former collected at Seattle, Washington, June 19, 1917 (H. G. Dyar); the latter at Gold Lake Camp, Plumas County, California, July 22, 1916 (H. G. Dyar).

Type.—Male, Cat. No. 26092, U.S.N.M.

The general appearance of this fly is very different from *L. brevifurca* but a critical comparison shows that they are unquestionably closely allied though distinct. The structure of the male hypopygium is the same in both species. Both species belong to the *nemorialis* group of the genus.

PILARIA MICROCERA, new species.

Closely related to *P. tenuipes* (Say); antennae of the male short; thoracic stripes confluent, dark brown; abdominal tergites and hypopygium brownish black.

Male.—Length 7.6–8 mm.; wing 10–10.5 mm.

Very similar to *P. tenuipes* (Say), with the following exceptions:

Antennae of the male short, if bent backward barely reaching the wing-root. Thoracic stripes very distinct, dark brown, confluent. Wings a little broader than in *P. tenuipes* but narrower than in *discicollis* (Meigen); *r* on R_2 immediately beyond the base; basal deflection of Cu_1 at about two-thirds the length of cell 1st M_2 . Abdominal tergites and the hypopygium almost black, the basal sternites paler brown with testaceous incisures.

The general resemblance of this species to *P. tenuipes* is very marked, in spite of the short antennae. The wings are conspicuously narrower than in the European *P. discicollis* (Meigen).

Described from two males (one teneral), collected at Prospect, Oregon, May 23, 1921 (H. G. Dyar).

Type.—Male, Cat. No. 26093, U.S.N.M.

TRICYPHONA RAINIERIA, new species.

General coloration dark brown, gray pruinose, the mesonotal praescutum with four conspicuous black stripes; wings yellowish, the

stigma dark brown; cord and outer end of cell $1st M_2$ seamed with paler brown; cell R_4 very short-petiolate; basal deflection of Cu_1 at about two-fifths the length of cell $1st M_2$.

Male.—Length, 10.5 mm.; wing, 11.6 mm.

Rostrum and palpi dark brown. Antennae short, dark brownish black. Head dark, brownish gray pruinose.

Mesonotal praescutum gray pruinose with four conspicuous black stripes, the intermediate pair separated from one another only by a capillary gray line, these stripes becoming obliterated before the suture; scutum dull gray, the lobes marked with darker; scutellum pale, light gray pruinose; postnotum dark, gray pruinose. Pleura dark, gray pruinose. Halteres obscure yellow, the knobs dark brown. Legs with the coxae gray pruinose; trochanters yellowish brown; femora obscure yellow, the tips broadly dark brown; remainder of the legs dark brown. Wings with a yellowish tinge; stigma dark brown; conspicuous paler brown clouds along the cord and on m ; very indistinct seams along the longitudinal veins; veins dark brown. Venation: R_s long, angulated and spurred at origin; R_{2+3} a little shorter than R_s , R_2 contiguous with the extreme tip of R_1 ; $r-m$ at midlength of the deflection of R_{4+5} ; petiole of cell R_4 very short; cell M_1 present, its petiole longer than the cell; cell $1st M_2$ closed, comparatively small, subrectangular, widened distally; m and outer deflection of M_3 subequal; basal deflection of Cu_1 at about two-fifths the length of the cell. In one wing of the type, R_2 is a short distance from the tip of R_1 ; in this same wing there is an adventitious crossvein in cell R_3 just before midlength of R_{2+3} .

Abdomen dark brown, sparsely gray pruinose; hypopygium rather large, dark colored.

Described from two males collected at Longmire Springs, Mt. Rainier, Washington, June, 1917 (H. G. Dyar).

Type.—Male, Cat. No. 26094, U.S.N.M.

The nearest ally of *Tricyphona rainieria* in America is apparently *T. auripennis* (Osten Sacken) of Northeastern North America.

RHAPHIDOLABIS (RHAPHIDOLABIS) STIGMA, new species.

General coloration brownish black, gray pruinose, the praescutum with three brownish black stripes; antennae with 12, 13, or 14 segments, the number remarkably variable, the flagellar segments short-cylindrical, crowded; wings faint brownish gray; stigma conspicuous, dark brown; R_s angulated at origin; cell R_3 sessile; cell M_1 present; cell $1st M_2$ open.

Male.—Length, 6.5 mm.; wing, 8.5–8.8 mm.

Female.—Length, 6.6 mm.; wing, 9.5 mm.

Rostrum and palpi dark brown. Antennae short in both sexes, the number of segments variable, ranging from 12 to 14; antennae

dark brown, the second scapal segment paler apically; flagellar segments short-cylindrical, crowded. Head dark with a yellowish gray pruinosity.

Mesonotal praescutum yellowish gray with three conspicuous dark brown stripes; remainder of mesonotum dark brownish black. Pleura gray. Halteres pale yellowish testaceous, the knobs darker. Legs with the coxae gray; trochanters obscure yellow; legs brownish black, the femoral bases obscure brownish yellow. Wings with a faint brownish gray tinge; stigma very conspicuous, dark brown; veins dark brown. Venation: Sc_1 ending opposite one-third the length of R_{2+3} ; R_s long, angulated and sometimes slightly spurred at origin; cell R_3 broadly sessile; R_2 about its own length from the tip of R_1 ; deflection of R_{4+5} a little shorter than $r-m$; deflection of R_5 angulated; cell M_1 present; cell 1st M_2 open; first section of M_3 about one-half the fusion of Cu_1 and M_3 .

Abdomen dark brown, gray pruinose. Male hypopygium with the pleurites stout, the outer angles produced caudad into a blunt, weakly spinous lobe; two pleural appendages, both small, the outer appendage flattened, pale; inner appendage oval in outline, the apex with large, conspicuous spines. There are no apparent developments from the base of pleurites as in other species of the genus. Anal tube broadly rounded at apex.

Habitat.—Washington, Colorado.

Described from 10 males and females collected at Longmire Springs, Mount Rainier, Washington, June, 1917 (H. G. Dyar); and one female from Boulder, Colorado (T. D. A. Cockerell).

Type.—Male, Cat. No. 26095, U.S.N.M.

TIPULA PEREXIGUA, new species.

Size very small (wing female, 8 mm.); antennal scape yellow; head gray; mesonotum yellow with pale brown stripes; wings brownish gray, the stigma darker brown; abdominal tergites obscure yellow, marked medially with darker brown; valves of ovipositor comparatively short and very compressed.

Female.—Length 8.8 mm.; wing 8 mm.

Frontal prolongation of the head obscure yellow; nasus distinct; palpi reddish brown basally, the terminal segments passing into dark brown. Antennae with the scape and first flagellar segment light yellow; remaining flagellar segments brown, the basal enlargements a little darker brown. Head light gray, the center of the vertex faintly infuscated.

Pronotum yellow, narrowly infuscated medially. Mesonotum gibbous; praescutum yellow with three pale brown stripes, the median stripe indistinctly split behind; scutum yellow, each lobe with a

large brown area; scutellum pale brown, sparsely pruinose, with a capillary brown median vitta; postnotum sparsely pruinose. Pleura pale, sparsely pruinose. Halteres brown, the base of the stem yellowish. Legs with the coxae yellow, sparsely pruinose; trochanters obscure yellow; femora yellow, the tips narrowly infuscated; tibiae brownish yellow, the tips narrowly darkened; tarsi brownish black, the bases of the metatarsi paler. Wings with a brownish gray tinge the stigma darker brown, oval; a faint brown spot at origin of *Rs* and an indistinct seam along the cord; whitish oblitative areas before and beyond the stigma, and across the base of cell *1st M*₂; veins dark brown. Venation: *Sc*₂ ending opposite two-thirds of the length of the *Rs*; distal section of *R*₂ entirely preserved; petiole of cell *M*₁ about two-thirds the length of *m*; cell *1st M*₂ elongate, the sides parallel; cell *2nd A* narrow.

Abdominal tergites obscure yellow, each tergite with the base dark brown, sending caudad a median extension toward the posterior margin; basal sternites dark brown apparently discolored; terminal sternites yellow. Ovipositor with the tergal valves comparatively short and compressed, the apices obtuse, the two valves forming a V-shaped trough; sternal valves still shorter, very compressed.

Described from a single female collected at Missoula, Montana, July 6, 1917 (H. G. Dyar).

Type.—Female, Cat. No. 26096, U.S.N.M.

Tipula perexigua is the smallest Nearctic *Tipula* and one of the smallest Tipuline crane-flies so far made known.