

UNDESCRIBED SPECIES OF TIPULIDAE FROM THE
WESTERN UNITED STATES Part IV

(Diptera)

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The preceding part under this title was published in the *Pan-Pacific Entomologist*, 23: 91-96; 1947. The species discussed herewith are all from California and Oregon and were collected by Mr. Kenneth M. Fender and the writer, chiefly during 1948. The types of the species are preserved in my collection. My deepest thanks and appreciation are extended to Mr. Fender for his most enthusiastic and successful efforts to make known the rich Tipulid fauna of Oregon.

Dicranoptycha melampygia Alexander, new species

General coloration dark gray, including the pleura; praescutum with four poorly defined darker stripes; tips of the femora and tibiae darkened; wings brownish yellow, the prearcular and costal fields a little clearer yellow; abdomen, including hypopygium, brownish black; outer dististyle of male hypopygium gradually narrowed into a slender apical spine, the outer margin of style with numerous strong spines extending almost to the base.

Male. Length about 8.5-9 mm.; wing 8-8.5 mm.

Rostrum black, pruinose; palpi black. Antennal scape and pedicel obscure yellow, flagellum black. Head uniformly dark gray.

Thorax dark gray, the praescutum with four darker stripes, the intermediate pair more distinct; posterior sclerites of notum and the entire pleura clearer gray. Halteres with stem yellow, knob weakly infuscated. Legs with coxae yellow, the fore pair a trifle darker; trochanters yellow; femora yellow basally, with about the outer third more darkened, gradually becoming brownish black; tibiae pale brown, the tip narrowly darkened, the base less evidently so; tarsi passing into black. Wings weakly brownish yellow, the prearcular and costal fields a little clearer yellow; veins pale brown, the trichia darker brown; costal fringe of male relatively long and dense. Venation: Sc1 ending just beyond level of fork of Rs, Sc2 near its tip; Rs slightly less than twice the basal section of R4+5; m-cu about two-thirds its length beyond the fork of M.

Abdomen, including hypopygium, brownish black. Male hypopygium with the tergal arms of moderate length, the flange on the concave margin back from the acute tip relatively short, only about one-third the total length of the arm. Outer dististyle grad-

usually narrowed into a slender apical spine, the outer margin with numerous strong spines that extend almost to the base. Inner dististyle entirely darkened, its apex obtusely rounded. Phallosome without conspicuous projections, the general outline obtuse.

Holotype, ♂ PRAIRIE CREEK STATE PARK, HUMBOLDT CO., CALIFORNIA, August 11, 1948 (C. P. Alexander). *Paratypes*, ♂ ♀, Peavine Ridge, Yamhill Co., Oregon, July 12, 1945, July 3, 1946 (K. M. Fender); ♂, Zena, Eola Hills, Polk Co., Oregon, June 5, 1948 (K. M. Fender).

The only generally similar regional species is *Dicranoptycha nigrogenualis* Alexander, which differs in the coloration of the wings and legs, and in the structure of the male hypopygium, particularly of the outer dististyle and phallosome.

Dicranoptycha stenophallus Alexander, new species

Thoracic dorsum almost uniformly gray, the praescutal stripes virtually lacking, the sternopleurite paler; wings with a brownish tinge; costal fringe of male short but dense; abdominal tergites brown, the subterminal segments scarcely more darkened, hypopygium yellow; male hypopygium with the outer dististyle relatively short and stout; aedeagus unusually small and slender, smooth, the tip decurved.

Male. Length about 8-10 mm.; wing 8-10 mm. *Female*. Length about 11-12 mm.; wing 9.5-10 mm.

Rostrum dark brown; palpi black. Antennae with the scape and pedicel yellow, flagellum black; flagellar segments cylindrical, shorter than the verticils. Head gray.

Thoracic dorsum almost uniformly gray, the praescutal stripes lacking or very indistinct. Pleurotergite and dorsal pleurites light gray, the latter with a short brown mark on the ventral anepisternum; ventral pleurites, especially the sternopleurite, paling to brownish yellow, sparsely pruinose. Halteres yellow, knob infuscated. Legs with the coxae yellow, pruinose; trochanters yellow; remainder of legs obscure yellow, the outer tarsal segments darkened. Wings with a brownish tinge, the costal border slightly more saturated, brownish yellow; veins pale brown. Costal fringe of male short but dense. Venation: Rs a little longer than cell 1st M₂; m-cu one-half to two-thirds its length beyond fork of M.

Abdominal tergites brown, the sternites a little paler, the subterminal segments slightly to scarcely darker; hypopygium yellow. Male hypopygium with the tergal arms pale, unusually long and slender, the tips acute and microscopically roughened. Outer dististyle relatively short and stout, the apical spine moderately long; spines of outer margin subappressed but conspicuous, including approximately the distal two-thirds, weak to obsolete on

the lower face of style. Inner dististyle flattened, the tip obtuse; surface, and especially the lower margin, with long pale setae, the longest only a little shorter than the diameter of the style. Phallosome distinctive, including an oval central structure and a low, weakly divided lobe with several pale punctures; aedeagus small but elongated and slender, smooth, the decurved tip pale.

Holotype, ♂, MADRONA CAMP, SISKIYOU NATIONAL FOREST, DEL NORTE CO., CALIFORNIA, August 1, 1946 (C. P. Alexander). *Allotype*, ♀, Little Phillips Creek, above Elgin, Blue Mts., Umatilla Co., Oregon, 2850 ft., July 2, 1948 (C. P. Alexander). *Paratypes*, ♂, with the allotype; ♂ ♀, Langdon Lake, Blue Mts., Umatilla Co., Oregon, 4995 ft., August 17, 1948 (C. P. Alexander); ♂ ♀, Peavine Ridge, Coast Range, Yamhill Co., Oregon, Stations 1, 2 and 3, July 11-12, 1945, May 20, June 20, July 3, August 13-20, and September 13, 1946; July 3, 1947; July 16, 1948 (K. M. Fender); Humbug Mountain State Park, Curry Co., Oregon, August 11, 1948 (K. M. Fender); State Line Creek, Curry Co., Oregon, August 9, 1948 (Alexander & Fender); Castle Crags State Park, Shasta Co., California, 2050 ft., August 13, 1948 (C. P. Alexander).

While similar in its general appearance to species such as *Dicranoptycha occidentalis* Alexander and *D. spinosissima*, new species, the present fly is quite distinct in the structure of the male hypopygium, as described.

Dicranoptycha spinosissima Alexander, new species

General coloration of head and thorax gray, the praescutum with two poorly indicated brown stripes; legs yellow, the outer tarsal segments brownish black; wings narrow, yellowish gray, costal fringe of male long; abdomen brown, the subterminal segments brownish black; male hypopygium with the lateral tergal arms unusually slender; outer dististyle long and slender, at tip narrowed into a black spine, the outer surface of apical third with microscopic spines; apex of inner dististyle obliquely truncated; phallosome produced into two slender rods that are expanded into pale membrane densely set with minute spinous points.

Male. Length about 9-10 mm.; wing 9 x 2 mm. *Female*. Length about 10 mm.; wing 10 mm.

Rostrum gray; palpi black. Antennae with the scape infuscated, pruinose, pale at outer end; pedicel yellow, flagellum black; flagellar segments cylindrical, shorter than the verticils. Head light gray.

Pronotum gray, the scutellum more obscure yellow. Mesonotum gray, the praescutum with faint indications of two pale brown intermediate stripes; humeral region paler gray, enclosing the

black pseudosutural foveae. Pleura gray, the dorsal pleurites darker than the ventral sternopleurite; dorsopleural membrane buffy. Halteres pale brown, the base of stem yellow. Legs with the coxae yellow, the fore and middle pairs slightly more pruinose; remainder of legs yellow, the outer tarsal segments brownish black. Wings narrow, tinged with grayish yellow, the prearcular and costal fields slightly clearer yellow; veins pale brown. Costal fringe of male relatively long and conspicuous. Venation: Rs shorter than cell 1st M2; -cu gently sinuous, at near one-third the length of cell 1st M2.

Abdomen brown, the subterminal segments deepening to brownish black; hypopygium obscure yellow. Male hypopygium with the lateral lobes of the tergites low and tumid, the tergal arms unusually slender, their tips paling into membrane. Outer dististyle unusually long and slender, the tip abruptly narrowed into a straight black spine, the outer surface of the apical third with microscopic suberect to appressed spinulae. Inner dististyle shorter, the tip obliquely truncate. Phallosome distinctive, at apex produced into two slender rods that expand into pale membrane that is densely set with acute spinous points, these directed clockwise, those of the inner edge being directed outward, those of the outer margin more retrorse.

Holotype, ♂, HATCHET PASS, near Burney, SHASTA CO., CALIFORNIA, 4000 ft., July 9, 1947 (C. P. Alexander). *Allotype*, ♀, Little Phillips Creek, above Elgin, Blue Mts., Umatilla Co., Oregon, 2850 ft., July 2, 1948 (C. P. Alexander). *Paratype*, ♂, with allotype.

The most similar regional species are *Dicranoptycha occidentalis* Alexander and *D. stenophallus*, new species, which, while generally similar in appearance, differ very conspicuously in the structure of the male hypopygium.

Limnophila amabilis Alexander, new species

Praescutum gray pruinose, with a narrow black median stripe; basal two segments of antennae blackened, the flagellum with the more basal segments brownish yellow; halteres yellow; legs yellow, the femoral tips and tibial bases and tips blackened; wings pale yellow with a heavy brown spotted pattern; abdomen black; male hypopygium with the outer dististyle dilated at base, gradually narrowed into a long apical spine, before midlength on ventral side bearing a lateral tooth or flange, the style entirely glabrous.

Male. Length about 7-7.5 mm.; wing 6.5-7 mm.; antenna about 1.2 mm. *Female*. Length about 9-10 mm.; wing 8-8.5 mm.

Rostrum black, grayish pruinose; palpi black. Antennae short; scape black, pedicel brownish black, flagellum brownish yellow, the outer segments darker; basal flagellar segments subglobular to short-oval, with short verticils; outer segments more elongate,

more or less dilated at near midlength where they bear long conspicuous verticils. Head dark, more pruinose on front and orbits.

Pronotum brownish black, pruinose. Mesonotal praescutum grayish pruinose, with a narrow but conspicuous black median stripe, narrowed behind; pseudosutural foveae black, relatively large. Pleura black, sparsely pruinose; dorsopleural membrane dusky. Halteres pale yellow. Legs with the coxae black, sparsely pruinose; trochanters obscure yellow; femora light yellow, the tips abruptly blackened, the amount subequal on all legs and involving about the distal eighth; tibiae yellow, the extreme base and slightly broader apex black; basal three tarsal segments yellow, the tips narrowly darkened; outer two tarsal segments brownish black; tibial spurs black. Wings pale yellow, the costal region clearer yellow; a heavy brown spotted pattern, arranged much as in certain species of *Elaeophila*, the markings restricted to the vicinity of the veins, as follows: Arculus; origin of Rs; midway between the two latter; a more or less developed spot on Rs; cord and outer end of cell 1st M2; fork of M1+2; and as a series of marginal spots, largest over Sc and at the wing tip where the individual spots tend to become confluent; paler brown washes in cells M, Cu and the Anals; axilla narrowly darkened; veins brown, yellow in the clearer yellow parts. Venation: Sc1 ending about opposite the fork of Rs, Sc2 at its tip; Rs long, angulated and slightly spurred at origin; inner ends of cells R4, R5 and 1st M2 in approximate transverse alignment; R2+3+4 subequal to basal section of R5; vein R2+3 perpendicular at origin, with a short spur at the bend; cell M1 subequal to or shorter than its petiole; M-cu at from one-third to midlength of cell 1st M2; anterior arculus preserved.

Abdomen, including hypopygium, black. Male hypopygium with the central region of the tergite only moderately produced. Basistyle unarmed. Dististyles terminal in position, the outer dilated at base, gradually narrowed into a long slender apical spine, before midlength on ventral side bearing a lateral tooth or flange, the style entirely glabrous. Inner dististyle broadly flattened, dark colored. Aedeagus long, provided with a subtending flange. Gonapophyses appearing as simple flattened clubs.

Holotype, ♂, HATCHET PASS, near Burney, SHASTA CO., CALIFORNIA, 4000 ft., July 9, 1947 (C. P. Alexander). *Allotopotype*, ♀. *Paratopotypes*, 4♂, ♀.

This unusually beautiful and distinct fly is named for Mrs. Charles P. Alexander, using the Latinization of her given name, Mabel. While superficially resembling some species of the subgenus *Elaeophila*, especially in the wing pattern, the fly is entirely distinct from all other members of the genus *Limnophila* so far described. Of the various subgenera the species fits most nearly into *Phylidorea* but from the basic plan of the male hypopygium can scarcely be placed therein.

THE DIPTERA COLLECTED ON THE COCKERELL
AND HUBBELL EXPEDITIONS TO HONDURASPart I: STRATIOMYIDAE, TABANIDAE,
AND ACRO CERATIDAE¹

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During the winter of 1946-47, Professor and Mrs. T. D. A. Cockerell visited the Escuela Agrícola Panamericana, Zamorano, Honduras, for the purpose of studying the insect fauna. Through their own efforts and those of students of the school, whom they interested in the project, they collected widely in the various orders. The present paper is based on a part of their Diptera, augmented by collections which T. H. Hubbell sent me for study. Dr. Hubbell visited various areas in Honduras in 1923, and in 1948 he revisited that country, on which occasion some time was spent at Zamorano.

STRATIOMYIDAE

Hoplitimya mutabilis (Fabricius), 1787, Mantissa Insectorum, vol. 2, p. 331 (*Stratiomys*). Zamorano, thicket, 2650 ft., July 29, 1948 (T. H. Hubbell), no. 162, 1 female; Dept. Choluteca, 3776 ft., El Chinchayote, Sa. de Colón, E. of San Francisco, July 31, 1948 (Hubbell).

Hermetia illucens (Linnaeus), 1758, Systema Naturae, 10th ed., p. 589 (*Musca*). Zamorano, November, 1946 (Vidales), Nov. 23, 1946 (G. Cisneros), and Aug. 6 and 22, 1948 (Hubbell), 5 females; Tela, Lancetilla, July 28, 1948 (Hubbell), 1 female.

Hermetia flavipes Wiedemann, Aussereuropaische Zweiflügelige Insekten, 1830, vol. 2, p. 26. Tela, Guaimas Dist., May 2, 1923 (Hubbell), no. 442, 1 male.

Hermetia albitalarsis Fabricius, 1805, Systema Antliatorum, p. 63. Tela, Lancetilla Creek, March 11, 1923 (Hubbell), 1 female; Tela, Lancetilla, July 28, 1948 (Hubbell), 1 specimen, damaged.

Chrysochlorina varia (Curran), 1929, Amer. Mus. Novitates, no. 339, 1 p. 3 (*Chrysochlora*). Ridge between La Montañita and

¹I am grateful to Dr. Cornelius B. Philip for reviewing the Tabanidae section of this paper and for making some valuable suggestions on it.