UNDESCRIBED SPECIES OF TIPULIDAE FROM THE WESTERN UNITED STATES
(Diptera)

PART I

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The novelties discussed herewith are from Oregon and Washington, the former having been taken chiefly by Professor James A. Macnab, of Linfield College, McMinnville, Oregon, and by students of Professor Scullen and Mr. Post, of the Oregon State College. The Washington specimens were generously given to me by the collector, Mr. B. Brookman. Where not indicated to the contrary, the types are preserved in my collection of World Tipulidae.

Limonia (Dicranomyia) illustris Alexander, new species

General coloration buffy yellow, the praescutum without distinct darker stripes; rostrum light yellow; antennae with scape obscure yellow, the remaining segments brown; posterior sclerites of notum darkened, more or less pruinose; halteres with stem whitened, knob dark brown; legs long and slender, yellow, the terminal tarsal segments black; wings light yellow, the oval stigma dark brown, very conspicuous; *Rs* a little less than twice the basal section of R_{4+5}; abdominal tergites brown, paling to yellow on sides.

Female. Length about 8 mm.; wing 8.8 mm.

Rostrum light yellow, nearly one-half the remainder of head; palpi with basal segment yellow, the remainder dark brown. Antennae with scape obscure yellow, remainder brown; flagellar segments oval, rather strongly constricted at the sutures; verticils shorter than the segments; terminal segment pointed, only a trifle longer than the penultimate. Head with front and anterior vertex yellow; posterior vertex darkened and heavily pruinose; anterior vertex (female) nearly three times the diameter of scape.

Pronotum brownish yellow. Mesonotum brownish yellow, the central portion of praescutum weakly darkened but not forming distinct stripes; posterior sclerites of notum similarly darkened. Pleura chiefly buffy, the posterior sclerites, and the pleurotergite more pruinose. Halteres with stem whitened, the knob abruptly dark brown. Legs with coxae and trochanters yellow; remainder of legs long and slender, yellow, the terminal tarsal segments passing into black. Wings strongly tinged with light yellow, the prearcular and costal fields clearer yellow; a large and very con-

spicuous, oval, dark brown stigma; veins brown, more yellowish toward the wing base and in costal field. Venation: *Sc* moderately long, Sc_1 ending shortly beyond origin of *Rs*, Sc_2 opposite origin of *Rs*, the latter a little less than twice as long as basal section of R_{1+5}; free tip of Sc_2 and R_2 in transverse alignment; cell *1st* M_2 about as long as vein M_3 beyond it; *m-cu* long, gently sinuous, at or just beyond the fork of *M*; anal veins nearly parallel at their origins.

Abdominal tergites brown, paling to yellow on sides; sternites fulvus yellow. Ovipositor with genital shield yellow; valves deep reddish horn color; cerci slender, rather strongly upcurved to the acute tips; hypovalvae with a black spot at base.

Habitat. OREGON (YAMHILL COUNTY).

Holotype, ♀, CARLTON, Meadow Lake Road, June 5, 1942 (Fender); Alexander collection, through Professor Macnab.

By Doane's key to the Nearctic species of the subgenus (Ent. News, 19:5-7; 1908), this fly runs to *Limonia* (*Dicranomyia*) *citrina* (Doane), an entirely different species. In its general appearance, especially the conspicuous wing stigma, the fly is more like *L.* (*D.*) *ctenopyga* Alexander or *L.* (*D.*) *melleicauda* (Alexander), but is quite distinct. Both of these latter forms have the male hypopygium unusually complex and it is possible that the male of the present fly will show a comparable condition. Besides the type, three further females from the same date and place were sent by Professor Macnab. These differ sufficiently from the type to make me unwilling to consider them as being conspecific, while at the same time agreeing in most details. In these specimens, three praescutal stripes are more or less developed and vein Sc_1 is definitely longer.

Oxydiscus (Oxydiscus) pacificus Alexander, new species

Size large (wing, male, over 5 mm.); general coloration of thorax yellow, virtually unpatterned; antennae dark brown throughout; tibiae spurred; wings subhyaline, the stigmal area vaguely darkened; relatively abundant macrotrichia in outer cells of wing; cell M_1 present; male hypopygium with the basistyle produced beyond the point of insertion of the dististyles as a long, obtusely-pointed lobe that is provided with unusually strong black setae; blades of gonapophyses relatively narrow; spines of ventral fork of aedeagus relatively short and straight, exceeding the short straight aedeagus.

Male. Length about 4.5 mm.; wing 5.4 mm.

Rostrum light brown; palpi darker. Antennae dark brown throughout, 16-segmented; basal three flagellar segments enlarged,

the second and third more or less fused, possibly indicating the beginnings of a fusion segment; succeeding segments passing through oval to elongate-oval, with verticils that much exceed the segments. Head dark brown; anterior vertex about three times the diameter of scape.

Thorax almost uniform polished yellow, the central portion of praescutum a trifle more darkened but not forming an evident stripe. Halteres elongate, yellow, the knobs darkened. Legs with the coxae and trochanters pale yellow; remainder of legs brownish yellow, the terminal tarsal segments blackened; tibial spurs of middle and hind legs long and distinct (fore legs broken); claws simple. Wings whitish subhyaline, the stigmal area vaguely darkened; veins obscure yellow; trichia dark. Macrotrichia of outer cells relatively abundant, from cells R_2 to *Cu*, inclusive. Venation: Sc_1 ending just before level of fork of *Rs*, Sc_2 about one-third as long as Sc_1; *Rs* long; R_{2+3+4} about two and one-half times the basal section of R_5; R_2 faint, apparently placed a little more than its own length beyond fork of R_{2+3+4}; cell M_1 present, about one-third its petiole; *m-cu* beyond mid-length of cell *1st* M_2.

Abdomen dark brown, the posterior borders of the more proximal sternites paler; hypopygium yellow. Male hypopygium with the basistyle produced beyond point of insertion of the dististyles as a strong, stout lobe, much longer and stouter than in *americanus*, obtuse at apex, provided with unusually strong and powerful blackened setae. Outer dististyle unusually slender, at apex with a major axial spine, with a smaller subapical outer spine and a series of microscopic denticles on inner or lower margin before apex. Inner dististyle very obtuse at apex. Gonapophyses appearing as relatively narrow, subcultriform blades, narrower than in *americanus*. Ventral fork of aedeagus with the spine widely separated at base, nearly straight, simple and unusually short. Aedeagus shorter and stouter than either spine, in *americanus* longer than the spine and gently sinuous.

Habitat. OREGON (YAMHILL COUNTY).

Holotype, ♂, CARLTON, Meadow Lake Road, June 5, 1942 (Fender); Alexander Collection, through Professor Macnab.

The present species is the first member of the genus to be discovered in the western Nearctic region. It is most similar to the eastern Nearctic *Oxydiscus* (*Oxydiscus*) *americanus* (Alexander), differing especially in the larger size, body coloration, and, especially, the structure of the male hypopygium, as compared above. All of the known American species show strong hypopygial characters. Besides the four known at present from the eastern Nearctic, a few others are now known from Mexico, southward to Ecuador.

Dactylolabis postiana Alexander, new species

General coloration brownish black, the praescutum yellow pollinose, with four very distinct blackened stripes; halteres yellow; wings pale yellow, with a very heavy brown pattern, the total amount of dark being approximately equal to the pale ground; dark areas in part ocelliform; marginal areas at ends of longitudinal veins, lacking only on veins R_5 and M_1, becoming very large in the cubital and anal fields; a supernumerary crossvein in cell R_3, in transverse alignment with R_2; R_{2+3+4} longer than *m-cu*.

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

Rostrum and palpi black, the former sparsely pruinose. Antennae black; flagellar segments oval, the two or three proximal flagellar segments with short pale apical necks; longest verticils a little shorter than the segments. Head dark brown, the front, posterior orbits and genae light gray.

Pronotum brown, with a narrow median blackish line, the posterior border of sclerite more extensively blackened. Mesonotal praescutum yellow pollinose, with four very distinct black stripes, the intermediate pair narrow; scutal lobes extensively blackened; scutellum and postnotum pruinose, the ground color of the former dark brown. Pleura and pleurotergite heavily gray pruinose; dorsopleural membrane brown behind the spiracle, with a yellowish spot immediately ventrad of the latter. Halteres pale yellow. Legs with coxae dark brown, heavily pruinose; trochanters obscure yellow, their apices narrowly ringed with black; femora, tibiae and basitarsi obscure brownish yellow, narrowly blackened at tips; remainder of tarsi black. Wings pale yellow, with a very heavy brown pattern, the total amount of dark being approximately equal to the ground; dark areas in part ocelliform, dark with paler centers, especially those at cord, outer end of cell *1st* M_2 and at wing-margin; dark areas distributed as follows: A series of five or six in cell *C*; major marks at arculus, origin of *Rs*, before outer end of *Rs*, tip of *Sc* and over the fork of R_{2+3+4}, over R_{1+2}, R_2 and over the supernumerary crossvein in cell R_3; major marginal areas at ends of all longitudinal veins excepting R_5 and M_1, from vein M_2 backward becoming progressively larger, the largest of all in the axillary field, including more than the proximal half of cell *2nd A*, extending into cell *1st A*; other areas along cord, outer end of cell *1st* M_2, fork of M_{1+2}, on distal third of vein *M* and along vein *1st A* at near mid-length; veins brownish yellow, darker in the patterned areas. Venation: Sc_1 ending about opposite the fork of R_{2+3+4}, Sc_2 at its tip; R_{2+3+4} relatively long, about one-third longer than *m-cu*; a supernumerary crossvein in cell R_3, in transverse alignment with vein R_2; cell *1st* M_2 moderately long, subequal to vein M_4 beyond it; cell M_1 about one-third longer than its petiole; *m-cu* just beyond the fork of *M*.

Abdominal tergites black, their discal portions slightly paler; genital shield dark castaneous; sternites brownish black, the cen-

tral portions of the intermediate segments broadly obscure yellow. Ovipositor with cerci compressed-flattened, relatively wide, the tips subacute.

Habitat. OREGON (COLUMBIA COUNTY).

Holotype, ♀, VERNONIA, April 1, 1938, on willow (K. Gray and J. Schuh); type in collection of Oregon State College.

I am pleased to name this species for Mr. R. L. Post, to whom I am indebted for numerous favors in the past. This is one of the most distinct species of the genus so far made known. It is readily distinguished from all other Nearctic species by the very heavy dark wing pattern that is in part ocelliform, with pale centers.

Cladura macnabi Alexander, new species

General coloration of thorax yellow, variegated with brown, including a single median praescutal stripe; dorsal mesopleura darkened; fusion-segment of antennae short, about equal in length to the two succeeding segments combined; halteres uniformly yellow; wings whitish subhyaline, vein *Cu* darker; vein R_2 very faintly indicated; cell *1st* M_2 large, about as long as vein M_3 beyond it; cell M_1 deep, about three times its petiole; male hypopygium with a single dististyle, this provided at apex with short blackened pegs; gonapophyses narrowed outwardly, produced into a very delicate, hyaline, spinous point.

Male. Length about 6 mm.; wing 6.8 mm.

Rostrum brown, palpi dark brown. Antennae with scape yellow; remainder of organ dark brown; fusion-segment cylindrical, about as long as the succeeding two segments combined and evidently formed of two such segments; succeeding segments oval to long-oval, with very long verticils. Head above clear gray, paling to brown on the genae and beneath; anterior vertex relatively broad, nearly four times the diameter of scape; eyes with course ommatidia.

Pronotum brown above, paler on sides, provided with a few long conspicuous setae. Mesonotal praescutum yellow, with a single dark brown stripe, this broad and conspicuous, not reaching the suture behind; scutum obscure yellow, each lobe with two brown areas, the more cephalic one larger; scutellum and mediotergite chiefly dark brown; pleurotergite and lateral portions of mediotergite obscure yellow. Pleura yellow, including the dorsopleural membrane; conspicuous brown spots on dorsal anepisternum and dorsal pteropleurite. Halteres relatively long, entirely pale yellow. Legs with the coxae and trochanters yellow; remainder of legs yellow, the tarsi infuscated. Wings whitish subhyaline, virtually unpatterned, variegated only by the more darkened cubital vein and faintly darkened adjoining portions of the membrane; no stigmal darkening; remaining veins chiefly pale,

those beyond cord a trifle darker. Venation: R_2 very faint, at near mid-length of upper branch of Rs, R_{2+3} thus slightly less than twice the arcuated R_{2+3+4}; Sc_2 near tip of Sc_1; cell *1st* M_2 large, about as long as vein M_3 beyond it; basal section of M_3 oblique, about twice m; cell M_1 deep, about three times its petiole; m-cu just beyond fork of M; vein *2nd A* short, ending before level of origin of Rs.

Abdominal tergites dark brown; basal sternites yellow, the outer segments slightly more infuscated, with paler caudal borders; eighth and ninth segments blackened to form a conspicuous subterminal ring. Male hypopygium with the basistyle relatively slender, at apex produced into a lobe that is about one-fifth as long as the dististyle. Dististyle single, long and gently curved to the blunt tip that is set with short blackened pegs. Gonapophyses appearing as flattened blades, narrowed apically, the tip narrowed into an unusually delicate hyaline spinous point.

Habitat. OREGON (YAMHILL COUNTY).

Holotype, ♂, MCMINNVILLE, October 3, 1936, shrub association (Macnab); Collector's No. 18; Alexander Collection, through Professor Macnab.

This distinct species is dedicated to the collector, Professor James A. Macnab, to whom I am much indebted for many interesting species and records of Tipulidae from Oregon. The fly is very different from the other regional members of the genus, especially in the venation and the structure of the male hypopygium. The wing venation is much as in *Pterochionea* Alexander but the fusion-segment of the antennae is short, as in *Cladura*. In the light of this new discovery, it seems possible that *Pterochionea* will best be placed as a subgenus of *Cladura* Osten Sacken.

Gonomyia (Idiocera) brookmani Alexander, new species

Belongs to the *blanda* group; allied to *californica*; rostrum darkened; antennae with scape blackened on lower face, yellow above; sublateral praecsutal stripes present; thoracic pleura conspicuously striped longitudinally with yellowish white on a brownish gray ground; wings patterned with brown, as in the group; R_{1+2} and R_3 very closely approximated to confluent at wing margin; abdomen brownish black, the segments conspicuously ringed caudally with pale yellow; male hypopygium with the outer lobe of basistyle pale throughout, terminating in an acute pale spine; outer and intermediate dististyles blackened, both obtuse at tips.

Male. Length about 5.2 mm.; wing 6 mm.

Female. Length about 5.5 mm.; wing 5.8-6 mm.

Rostrum blackish gray; palpi black. Antennae with scape blackened beneath, yellow above; pedicel and flagellum brownish black to black. Head above obscure yellow, with a restricted dark area on vertex.

Pronotum dark brown above, with an obscure yellow median spot behind, the lateral borders light yellow. Mesonotal praescutum clear gray, with elongate intermediate dark brown stripes, the sublateral pair narrow and poorly indicated; humeral and lateral portions of sclerite light yellow; pseudosutural fovea castaneous; posterior sclerites of notum gray, the scutal lobes with a darkened area on their mesal portion; posterior callosities of scutum yellow; postnotum gray, the dorsal portion of pleurotergite pale whitish yellow, crossing the suture onto the cephalolateral portion of the mediotergite. Pleura dark brown, pruinose, conspicuously patterned with yellowish white, including a conspicuous ventral stripe that expands behind onto the metapleura; dorsopleural area variegated with yellow. Halteres yellow, knobs blackened. Legs with the fore and middle coxae pale yellow, the posterior pair more darkened basally; trochanters obscure yellow; femora obscure yellow, with a nearly terminal dark brown ring; tibiae obscure yellow, the tips narrowly blackened; tarsi passing into black. Wings subhyaline, the prearcular and costal fields somewhat more whitened; a conspicuous brown pattern, arranged as in the group, including marks at *h*, arculus, origin of *Rs*, fork of *Sc*, stigma, cord, fork of M_{1+2} and in outer end of cell R_3; in more heavily patterned specimens, the margin of cell R_4 is darkened; veins brown, yellow in the brightened fields. Venation: *Sc* relatively long, Sc_1 ending about opposite mid-length of *Rs*, Sc_2 near its tip; R_{1+2} and R_3 very closely approximated to confluent at margin; *m-cu* from one to one and one-half times its length before fork of *M*.

Abdomen brownish black, sparsely pruinose, the segments conspicuously ringed caudally with pale yellow. Male hypopygium with the outer lobe of basistyle terminating in a short acute pale point, much shorter than in *californica*. Outer and intermediate dististyles both heavily blackened and blunt at their tips, the latter ones abruptly though slightly dilated at apex; inner style broadly flattened, its tip truncated. Aedeagus relatively narrow, entirely pale, the tip a short recurved point.

Habitat. WASHINGTON (YAKIMA COUNTY).

Holotype, ♂ NACHES, June 5, 1941 (Brookman). *Allotopotype*, ♀, pinned with type. *Paratopotypes*, 1 ♂, 3 ♀♀, with the types.

The species is named for Mr. B. Brookman, to whom I am indebted for many interesting Tipulidae from the Yakima Valley. The nearest relative of the fly is *Gonomyia* (*Idiocera*) *californica* Alexander, of California, which differs most evidently in the structure of the male hypopygium especially the long terminal spine of the outer lobe of the basistyle, and the acutely pointed intermediate dististyle.