

NEW NEARCTIC CRANE-FLIES (TIPULIDAE, DIPTERA): PART XXIX

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The preceding part under this general title was published in 1947 (Can. Ent., 79: 68-73). At this time I am describing a small series of Eriopterine crane-flies from California, taken chiefly by myself in 1946, with one further species secured by Mr. John L. Sperry. The types of the novelties are preserved in my collection of Tipulidae.

Erioptera (Psiloconopa) bisulca n. sp.

Thoracic dorsum pale brownish yellow, the pleura somewhat clearer yellow; antennae with scape and pedicel brownish black, the flagellum paler brown; wings pale grayish yellow; cell M_2 open by the atrophy of m ; vein 2nd A short and straight; male hypopygium having the outer dististyle with its outer two-thirds expanded into an elongate head; inner dististyle shorter, the apical third narrowed into a long recurved spine, the outer margin of the basal portion produced into a triangular point; gonapophyses profoundly bifid, heavily blackened, the two slender arms spinelike, the inner one with its inner margin provided with microscopic teeth.

Male. Length about 4.5-5 mm.; wing 5-5.8 mm.

Female. Length about 5-5.5 mm.; wing 5-5.5 mm.

Rostrum and palpi brownish black. Antennae with scape and pedicel brownish black, flagellar segments paler brown; verticils long and conspicuous. Head light gray.

Pronotum and mesonotum almost uniformly pale brownish yellow, not or scarcely patterned; pseudosutural foveae pale and inconspicuous, the tuberculate pits a trifle darker in color. Pleura and pleurotergite somewhat clearer yellow. Halteres yellow. Legs with the coxae and trochanters yellow; remainder of legs testaceous brown to pale brown, the outer tarsal segments darker. Wings pale grayish yellow, the prearcular and costal fields somewhat clearer yellow; veins pale brownish yellow, the macrotrichia darker. Venation: cell M_2 open by the atrophy of m ; $m-cu$ a short distance before the fork of M ; vein 2nd A straight, the Anal veins thus strongly divergent.

Abdomen reddish brown, the hypopygium somewhat darker, the styli blackened. Male hypopygium with the outer dististyle expanded at near one-third the length into a long narrow head, the outer surface with rows of abundant appressed spines. Inner dististyle shorter, the apical third narrowed into a long slender recurved spine, near its base with one or two setae; outer margin of the basal part produced into a conspicuous triangular point. Gonapophysis profoundly bifid, heavily blackened, the outer arm a longer and more slender spine, its outer surface, especially near the tip, microscopically spinulose or roughened; inner arm a stouter and slightly shorter curved spine, its inner margin with microscopic appressed teeth.

Habitat. California (Yosemite National Park).

Holotype. ♂, Bridalveil Creek, altitude 7075 feet, July 22, 1946 (C. P. Alexander). *Allotopotype.* ♀, pinned with type. *Paratopotypes.* ♂ ♀, July 22-24, 1946.

The most similar regional species is *Erioptera (Psiloconopa) recurva* Alexander, of the Cascade Mountains in Washington. The two flies are separated by conspicuous differences in the male hypogium, including both dististyles and the gonapophyses.

Erioptera (Gonomyodes) crickmeri n. sp.

General coloration of thorax almost uniformly dark gray; palpi and antennae uniformly black; wings with a very faint grayish tinge, the veins brown, darker than in *knowltonia*; *Rs* relatively short; cell 1st M_2 small, *m-cu* at near midlength; male hypopygium of the characteristic structure of the subgenus, differing from *knowltonia* in all details.

Male. Length about 3.5 mm.; wing 4.2 mm.

Rostrum dark gray; palpi black. Antennae black throughout, short; flagellar segments oval, the outer ones more elongate and slender; verticils relatively short. Head gray; anterior vertex broad.

Pronotum gray, the scutellum and pretergites testaceous yellow. Mesothorax almost uniformly dark gray, the praescutal interspaces a trifle more darkened; dorsopleural region obscure yellow; tuberculate pits small, widely separated, lying far before the level of the pseudosutural foveae. Halteres yellow. Legs with the coxae testaceous yellow; trochanters clearer yellow; remainder of legs broken. Wings with a very faint grayish tinge, the prearcular and costal fields more whitened; stigmal region scarcely differentiated; veins pale brown, more whitened in the paler fields. Veins beyond cord with conspicuous macrotrichia, with a further series on the distal third of vein 2nd *A*. Venation: Sc_1 ending about opposite the fork of *Rs*, Sc_2 far from its tip, about opposite one-third the length of *Rs*; *Rs* long and nearly straight, about twice R_3 ; R_2 about two-thirds to three-fourths R_2+3+4 ; vein R_3 and R_4 diverging at an acute angle (about 30°); cell 1st M_2 very small, about one-half as long as vein M_1 ; *m-cu* at midlength of cell 1st M_2 .

Abdomen, including hypopygium, dark brown to brownish black. Male hypopygium in general structure much as in the subgenotype *knowltonia*, differing in the details, especially of the dististyles. Outer style stouter, including the head and neck portion. Intermediate style broader. Inner style more slender. Phallosomic cushion much the same in both species.

Habitat. California (San Bernardino County).

Holotype. ♂, East Barton Flats, San Bernardino Mts., altitude 6300 feet, at light, August 18, 1946 (J. L. Sperry).

I am very pleased to name this interesting crane-fly for Mr. Noël Crickner, of Borego, California, who has collaborated with the Sperrys in collecting numerous Tipulidae from California and elsewhere. The only species hitherto discovered is the subgenotype, *Erioptera (Gonomyodes) knowltonia* Alexander, of northern Utah, which differs conspicuously in the coloration, details of venation and structure of the male hypopygium. With this discovery of a second species, the subgeneric distinctions, particularly those shown in the male hypopygia, between *Gonomyodes* Alexander and *Gonempeda* Alexander become even more significant.

Cryptolabis (Cryptolabis) mixta n. sp.

Thorax dark brown, conspicuously patterned with yellowish white, the latter color including a broad dorsopleural line from the pronotum to the pleurotergite; scutellum yellow; a major yellow spot on the dorsal sternopleurite; male hypopygium with the dististyle relatively narrow, tapering gradually to the acute blackened tip, on outer margin at near two-thirds the length with a strong acute point; aedeagus relatively stout, straight, at apex abruptly narrowed and prolonged into a capillary tubule.

Male and Female. Length about 3.2-3.3 mm.; wing 3.8-4 mm.

Rostrum pale brown; palpi brownish black. Antennae dark brown; flagellar segments oval, the verticils exceeding the segments. Head with the front and orbits yellowish white, the center of vertex reddish brown.

Pronotum, pretergites and broad lateral mesonotal borders yellowish white, the color continued back over the wing root onto the dorsal postnotum; remainder of mesonotal praescutum and scutum dark brown; scutellum yellow; postnotum dark brown, variegated by yellowish white, as described. Pleura dark brown, with a major yellowish white area on the dorsal sternopleurite. Halteres pale. Legs with the fore coxae pale brownish testaceous; remaining coxae and all trochanters yellow; femora and tibiae obscure yellow, the tips narrowly darkened; tarsi brown. Wings subhyaline; veins brown. Numerous macrotrichia in cells beyond cord. Venation: R_s strongly sinuous, in alignment with the basal section of R_3 ; R_2+3+4 and R_2+3 subequal; $m-cu$ close to the fork of M_3+4 .

Abdomen dark brown. Male hypopygium with the distyle relatively narrow, tapering gradually to the blackened acute spinous tip; on outer margin at near two-thirds the length with a strong acute point; outer face of style as far distad as this spine with strong scattered setae. Aedeagus relatively stout, straight, at apex abruptly narrowed and prolonged into a capillary tubule.

Habitat. California (Mariposa County).

Holotype. ♂, Bear Creek, Sierra National Forest, 10 miles west of Mariposa, July 25, 1946 (C. P. Alexander). *Paratopotypes.* 15 ♂ ♀.

The most similar described species is *Cryptolabis (Cryptolabis) sica* Alexander, of Arizona and southern Utah, which differs in the details of coloration and in the structure of the male hypopygium, including the broader dististyle and the differently formed aedeagus.

***Cryptolabis (Cryptolabis) bidenticulata* n. sp.**

General coloration of thorax dark brown, variegated with light yellow, especially conspicuous as a stripe from the pronotum backward across the wing-root to the postnotum, with an additional area on the pleura; scutellum dark; femora obscure brownish yellow, the tips broadly blackened; wings weakly dusky, very restrictedly patterned with darker; R_2+3+4 long, equal to $r-m$; $m-cu$ at midlength of M_3+4 ; male hypopygium with the dististyle conspicuously and evenly bidentate at apex; aedeagus relatively slender, the anterior end narrowed gradually into a long taillike extension.

Male. Length about 3.3 mm.; wing 4 mm.

Rostrum brown; palpi somewhat darker brown. Antennae brownish black throughout. Head dark brown, the front and orbits yellow.

Pronotum and pretergites light yellow, the color continued backward along the extreme dorsopleural region, around the wing root, onto the anterior postnotum, involving both the mediotergite and pleurotergites. Mesonotum uniformly dark brown excepting the very restricted obscure yellow humeral region of the praescutum, the more extensive outer posterior angles of the scutal lobes, and the postnotum, as described; scutellum dark. Pleura dark brown, patterned with light yellow, including the dorsal portion of the sternopleurite, the area continued cephalad onto the propleura which is almost uniformly pale. Halteres weakly infuscated. Legs with the coxae weakly darkened; trochanters obscure yellow; femora obscure brownish yellow, the tips broadly blackened; one detached leg, apparently a fore one, shows the femora almost entirely darkened; tibiae obscure brownish yellow, narrowly darkened at both base and apex; tarsi passing into black, the basitarsi chiefly pale. Wings with an exceedingly weak dusky tinge, the prearcular and costal fields somewhat more whitened; stigma, axilla and vague seams over the cord a trifle more darkened; veins dark brown, paler in the lighter portions. Macrotrichia of

wings cells relatively sparse, more or less restricted to the outer half or slightly more of the cells beyond cord, the bases of all these cells without trichia. Venation: R_s short and oblique, strongly sinuous; $R_2 + 3 + 4$ long, fully equal to $r-m$ and about four times $R_2 + 3$, the latter shorter than R_2 ; $m-cu$ at mid-length of $M_3 + 4$.

Abdomen dark brown, the hypopygium a trifle paler. Male hypopygium with the outer lobes large and conspicuous, with abundant long setae. Dististyle stout, conspicuously bidentate at apex, the two teeth subequal in size and shape. Aedeagus relatively slender, straight, the posterior end gradually narrowed into a long taillike extension.

Habitat. California (San Bernardino County).

Holotype. ♂, East Barton Flats, San Bernardino Mts., altitude 6300 feet, at light, July 20, 1946 (J. L. Sperry). *Paratopotypes.* ♂ ♀, July 14-16, 1946 (C. P. Alexander).

The most similar species include *Cryptolabis (Cryptolabis) sica* Alexander and *C. (C.) mixta* n. sp., both of which differ most evidently in the structure of the male hypopygium, particularly of the dististyle and aedeagus.

Ormosia (Ormosia) heptacantha n. sp.

General coloration of mesonotum reddish brown, the pleura and pleurotergite yellow; antennae (male) elongate, bead-like, the segments with exceedingly long outspreading verticils; wings pale brown, the stigma darker; cell M_2 open by the atrophy of basal section of M_3 ; Anal veins convergent; male hypopygium with the mesal face of basistyle with two strong blackened spines; phallosome with three further blackened spines, the lateral pair somewhat shorter.

Male. Length about 5 mm.; wing 5.5 mm.; antenna about 3.5 mm.

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

Rostrum brown; palpi black. Antennae (male) elongate; scape and pedicel brown, flagellum black; flagellar segments elongate, flask-shaped, the long apical necks subglabrous, the swollen bases with exceedingly long outspreading white verticils. Head light gray; anterior vertex relatively narrow.

Pronotum and pretergites yellow. Mesonotum pale reddish brown, the humeral region of praescutum yellow, the cephalic portion a trifle darker. Pleura and pleurotergite pale yellow. Halteres yellow. Legs with the coxae and trochanters yellow; remainder of legs broken. Wings broad, pale brown, the stigmal region darker; veins pale brown; macrotrichia still paler. Venation: Cell M_2 open by the atrophy of basal section of M_3 ; $m-cu$ close to fork of M ; Anal veins convergent, the distal half of 2nd A sinuous.

Abdomen, including hypopygium, dark brown. Male hypopygium with the tergal lobe broad, its caudal margin with a broad V-shaped notch, at the base with pale membrane; lateral lobes at apex and on outer margin with strong fimbriations. Basistyle on mesal face with two strong blackened spines, the outer one larger. Outer dististyle scoop-shaped, darkened, the tip truncate; outer surface with microscopic appressed spinulae. Inner dististyle narrowed at apex into a dark colored cylindrical lobe. Phallosome comprised of three blackened spines that are more or less fused basally, the lateral spines or apophyses slightly shorter than the median one.

Habitat. California (Humboldt County).

Holotype. ♂, Prairie Creek Camp, in Coastal Redwood forest, July 31,

1946 (C. P. Alexander). *Allotopotype*. ♀, pinned with type.

In the nature and arrangement of the spines on the mesal face of the basistyle, the hypopygium of the present fly is most like that of *Ormosia* (*Ormosia*) *pleuracantha* Alexander, of Oregon and northern California. In some details of the hypopygium a similarity likewise is shown to *O.* (*O.*) *furibunda* Alexander, of Oregon, but the relationship is not particularly close.

***Ormosia* (*Ormosia*) *tricornis* n. sp.**

General coloration of thoracic notum dark brown; wings with a weak brown tinge, the stigma darker; male hypopygium with the tergite produced into a narrow spatula; outer dististyle complex, the outer lobe heavily blackened, produced into three strong spines; inner arm forking into two very long slender rods; inner dististyle a long narrow blade, before apex on outer margin with an erect black spine.

Male. Length about 3.8 mm.; wings 4.5 mm.

Rostrum and palpi black. Antennae black, of medium length, broken at midlength; basal flagellar segments subcylindrical, with one unusually long verticil on each segment, these unilaterally arranged, fully three times the segments. Head dark gray.

Pronotum dark brown; anterior pretergites light yellow. Mesonotum chiefly dark brown; lateral praescutal borders broadly more reddish brown; pleurotergite somewhat paler. Pleura testaceous brown. Halteres pale, especially the base of stem. Legs with the coxae brownish yellow; trochanters yellow; remainder of legs broken. Wings with a weak brownish tinge, the stigma darker; veins pale brown. Venation: Sc_1 ending nearly opposite R_2 , Sc_2 opposite one-third the length of R_3 ; R_2 oblique, about twice as long as $R_2 + 1$; cell M_2 open by the atrophy of basal section of M_3 ; $m-cu$ close to the fork of M ; Anal veins generally divergent, vein *2nd A* weakly sinuous on distal third.

Abdomen dark brown, the hypopygium a trifle brighter. Male hypopygium with the appendage of the ninth tergite a triangular spatula, the base very narrow, thence expanded, the apex truncated with a median notch, the whole distal half with microscopic fimbriations to form a heart-shaped cushion; basal half with about a score of coarse setae. Outer dististyle complex, consisting of a compact blackened outer structure that terminates in three powerful spines; from the base of this mass arises a further strong arm that almost immediately forks into two long slender rods, each of which narrows at apex into a blackened spine, the two directed toward one another, forceps-like. Inner dististyle subapical in origin, appearing as a long narrow blade, some distance before apex on outer margin with an erect black spine. Each gonapophysis appearing as a slender blackened spine, with a smaller blackened spike at base. Aedeagus small and simple, straight, the apex obtuse, the total length subequal to the longest spine of the apophysis.

Habitat. California (Humboldt County).

Holotype. ♂, Prairie Creek Camp, in Coastal Redwood forest, July 31, 1946 (C. P. Alexander).

The peculiar male hypopygium, especially the inner dististyle and gonapophyses, is much as in *Ormosia* (*Ormosia*) *unicornis* Alexander, of Oregon (Cascade Mountain foothills) but the structure of the outer dististyle is entirely different.

***Ormosia (Ormosia) legata* n. sp.**

Allied to *cornuta*; size relatively large (wing, male, 5.5 mm.) general coloration light brownish gray; flagellar segments of male antennae long-cylindrical, with long outspreading verticils; wings with a brownish tinge; cell M_2 open by atrophy of basal section of M_3 ; Anal veins convergent; male hypopygium with the outer dististyle a compact blackened mass that bears four spinous points; two sets of apophyses, the outer pair appearing as twisted yellow blades that gradually narrow into a slender spine; inner apophysis smaller, blackened, terminating abruptly in a strong straight spine.

Male. Length about 4.6 mm.; wing 5.5 mm.

Female. Length about 5.8-6 mm.; wing 6.2-6.5 mm.

Rostum and palpi dark brown. Antennae brown, the basal segments somewhat paler; antennae of male broken near base, the proximal flagellar segments long-cylindrical, indicating a relatively long organ; flagellar segments with very long and conspicuous white verticils. Head gray.

Thoracic dorsum light brownish gray, the pronotal scutellum and pretergites yellow; praescutum with a delicate brown median vitta that is slightly expanded in front; posterior sclerites of notum light brown, the scutellum testaceous; vestiture of notum yellow, long and conspicuous. Pleura and pleurotergite infuscated. Halteres yellow. Legs with coxae and trochanters yellow; remainder of legs brown, the color produced in part by dark vestiture. Wings with a brownish tinge, the stigma darker brown; vague more whitish areas in the vicinity of cord; veins brown. Venation: R_1 long, straight; $R_2 + 3 + 4$ from one-fourth to one-half longer than the basal section of R_5 ; $R_2 + 3$ and R_2 subequal; cell M_2 open by the atrophy of basal section of M_3 ; *m-cu* at or close to the fork of M ; Anal veins convergent, 2nd A sinuous on its outer half.

Abdomen dark brown; genital segment of female more testaceous yellow. Male hypopygium with the tergal lobes produced into long yellow fimbriations. Outer dististyle a compact blackened structure that terminates in spinous points, there being a more flattened scabrous outer projection and two acute slender spines on the inner apical portion; besides these, at base of inner face, with a further strong curved spine. Inner dististyle pale, dilated on more than the basal half, the apex suddenly narrowed. Two sets of apophyses, the outer pair appearing as long yellow blades that are twisted or bent at near midlength, the outer portion gradually narrowed into a long slender apical spine; inner apophysis smaller, blackened, terminating in a strong straight spine. Aedeagus small and simple.

Habitat. California (Kings Canyon National Park).

Holotype. ♂, near the General Grant Tree; swept from dense thickets of *Azalea occidentalis* along a small clear stream, July 19, 1946 (C. P. Alexander).
Allotopotype. ♀ *Paratopotypes.* ♀ ♀.

Ormosia (Ormosia) legata is readily distinguished from *O. (O.) cornuta* (Doane), *O. (O.) subcornuta* Alexander, and other allied species by the very distinct male hypopygium, particularly the outer dististyle and the gonapophyses.