

New Nearctic crane-flies (Tipulidae, Diptera)

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NEW NEARCTIC CRANE-FLIES (TIPULIDÆ, DIPTERA).*

BY CHARLES P. ALEXANDER, ITHACA, N. Y.

The following species of crane-flies were mostly obtained from the collections of the United States National Museum and the United States Biological Survey, through the kindness of Mr. Knab and Mr. McAtee. The various species will be figured in forthcoming revisional papers now in course of completion.

Family *Tipulidæ*.Subfamily *Limnobiinæ*.Tribe *Limnobiini*.Genus *Dicranomyia* Stephens.***Dicranomyia macateei*, sp. n.**

Female—Length 4.5-4.9 mm.; wing 5-5.5 mm.

Antennæ dark brown. Head dark brownish black, the frontal region more yellowish.

Frontal scutum light yellowish brown, scutellum dull light yellow. Mesonotal præscutum shiny light brown without distinct stripes. Pleura pale yellow, more suffused with brown on the dorsal sclerites. Sternum yellow. Halteres dark brown, a little brighter at the extreme base. Legs with the coxæ bright yellow; trochanters brownish yellow; femora and tibiæ yellowish brown, tarsi pale yellowish white, the terminal segment and the claws black. Wings with a dusky tinge, the stigma distinct, large, oval, brown; the base of the sector, the cord and the outer end of cell *1st M*₂ seamed with darker brown; no pubescence on the apical cells of the wings; veins dark brown. Venation with *Sc* long, extending over half the length of the sector; *Rs* long, over twice the length of the deflection of *R*₄₊₅; basal deflection of *Cu*₁ at or slightly beyond the fork of *M*; *Cu*₂ about equal to the basal deflection of *Cu*₁.

Abdomen brown, the ovipositor and the eighth segment largely yellow.

Holotype, ♀, Plummer's Island, Maryland; May 24, 1914 (McAtee).

*Contribution from the Entomological Laboratory of Cornell University.
February, 1916

Paratypes, ♀, Virginia, near Plummer's Island; July 14, 1915 (McAtee). 2 ♀'s, Great Falls, Virginia; Aug. 11, 1915, Oct. 3, 1915 (McAtee).

The type is in the collection of the Union States Biological Survey, the paratypes are in the National Museum and the collection of the author.

Tribe *Antochini*.

Genus *Teucholabis* Osten Sacken.

***Teucholabis lucida*, sp. n.**

Male—Length 3.5-4.1 mm.; wing 4.2-4.5 mm.

Rostrum and palpi black. Antennæ black. Head black with a thick light gray pubescence.

Pronotal scutum dark brownish black, the caudal margin paler, brown; scutellum pale yellowish white, interrupted medially above by a brownish depression. Mesonotal præscutum shiny black, pilose medially behind, the usual pale interspaces represented only by a small reddish brown area in front, just proximad of the pseudosutural foveæ, and a yellow median patch behind; scutum black shiny, with the median area in front pale yellow and with a short, pale pilosity; scutellum dull yellow, more grayish basally; postnotum black with a gray pile. Pleura light yellowish white with a broad black band extending from behind the pronotum beneath the wings to the base of the abdomen; a large rounded black spot on the sternum just before the middle coxæ and a smaller patch just behind these coxæ; mesosternum suffused with lemon-yellow. Halteres short, pale brown. Legs with the coxæ and trochanters pale testaceous; femora light yellow, the apex broadly blackened and slightly enlarged; tibiæ and tarsi dark brown, the former sometimes paler and narrowly tipped with blackish. Wings narrow, hyaline; stigmal spot brown, rounded, conspicuous.

Abdominal tergites black, the segments narrowly ringed with dull reddish yellow on the caudal margin; sternites blackish on the basal half, paler, yellowish, caudally.

Holotype, ♂, Dalecarlia Reservoir and outlet, District of Columbia; Aug 22, 1915 (McAtee).

Paratypes, 1 ♂; 1, sex uncertain, topotypic.

The type is in the collection of the United States Biological Survey, paratypes in the collection of the author.

Teucholabis carolinensis, sp. n.

Male—Length 4.2 mm.; wing 4 mm.

Rostrum and palpi black. Antennæ black. Head black with a slight grayish pubescence.

Mesonotal præscutum dark brownish black with a sparse grayish pile, the lateral margins of the segment broadly yellowish brown. Pleura dull brown with an indistinct dark brown stripe extending from the cervical sclerites caudad, becoming indistinct before the halteres; sternites brownish yellow without darker markings. Halteres short, pale, the knob brown. Legs with the coxae and trochanters dull yellowish; femora dull brownish yellow with the apex rather narrowly blackened; tibiæ yellowish brown, the tips of the hind legs scarcely darkened, the anterior pair narrowly blackened; tarsi black. Wings narrow, nearly hyaline, the stigma quite indistinct, the veins dark brown.

Abdomen brown, the sternites somewhat paler.

Holotype, ♂, South Island, Georgetown Co., S. Carolina; Aug. 19, 1915 (Alexander).

The type is in the collection of the author.

Tribe *Eriopterini*.

Genus *Trimicra* Osten Sacken.

? **Trimicra empedoides**, sp. n.

Male—Length 5.5-5.8 mm.; wing 7.7-8 mm.

Female—Length 5.7 mm.; wing 6 mm.

Rostrum dull yellow, the palpi brown. Antennæ having the first segment with a gray bloom, the second segment dull yellow, flagellar segments dark brown with the base more yellowish, this bicoloured appearance becoming obliterated on the terminal segments. Head pale yellow with a light gray bloom.

Thoracic dorsum light gray, without stripes, excepting a very indistinct and narrow median vitta on the extreme anterior portion of the præscutum; beneath the gray bloom are three stripes; the lateral margins of the præscutum pale, yellowish; tuberculate pits situated far back on the sclerite, about on a level with the pseudo-sutural foveæ; the interspaces between the usual thoracic stripes with sparse coarse hairs; scutellum pale flesh colour. Pleura gray and yellow, the dorso-pleural membranes more yellowish. Halteres

rather short, light yellow. Legs with the coxæ comparatively small, pale, sparsely gray pruinose; trochanters dull yellow; femora swollen, brownish yellow, very hairy; tibiae and the first segment of the tarsus dull brownish yellow, darkened at the apex, the terminal tarsal segments dark brown. Wings grayish subhyaline, the costal region yellowish brown, the veins *C*, *Sc* and *R* yellow, the remaining veins dark brown. Venation with *Sc*₂ placed very far back from the tip of *Sc*₁, but distad of the base of the sector; cells *R*₁ very broad and almost completely filled by the very large pubescent stigma; cross-vein *r* long, oblique, inserted at or slightly beyond the fork of the sector; *R*₂₊₃ long, about subequal to *R*₂ alone; basal deflection of *Cu*₁ at the fork of *M*; cell 1st *M*₂ closed.

Abdominal tergites brownish gray, broadly margined with yellow caudally; sternites similar, the pale margins less distinct; hypopygium pale.

The female is similar to the male, but smaller, the stigma very small, and in the allotypic specimen the cell 1st *M*₂ open by the atrophy of the medial cross-vein (this latter condition undoubtedly abnormal).

Holotype, ♂, Jemez Springs, New Mexico; altitude 6,400 feet; August 8, 1916 (John Woodgate).

Allotype, ♀, Ardmore, South Dakota; August 10, 1915 (E. G. Holt).

Paratype, ♂, with the allotype; August 5, 1915.

The type and the allotype are in the collection of the author, the paratype in the collection of the United States Biological Survey.

This insect is provisionally referred to *Trimicra*, but undoubtedly represents a new genus, which will be characterized in a later paper.

Subfamily *Tipulinae*.

Tribe *Tipulini*.

Genus *Tipula* Linnæus.

***Tipula* (*Cinctotipula*) *apache*, sp. n.**

Male—Length 12.3-13.1 mm.; wing 11.8-12.2 mm.

Female—Length about 18 mm.; wing 16 mm.

Palpi black. Frontal prolongation of the head short, brown, dusted with gray above and with a narrow, linear, median, yellow,

dorsal line; nasus very long, tipped with long golden hairs. Antennæ with the scapal segments very dark brown, the flagellum black. Front bright yellow; vertex yellow, this colour continuing as a point to the occiput; sides of the vertex and occiput dark brown.

Pronotum dark brown, the scutum with three pale yellow spots, of which one is median in position; scutellum with the lateral angles yellowish. Mesonotal præscutum dark brown with a very broad median light gray stripe, which is narrowly bisected anteriorly by a brown line, the lateral stripes very indistinct, brownish yellow; lateral margins of the præscutum pale brownish yellow; scutum with the median area shiny yellowish white, the lobes black dusted with gray and margined with black; scutellum black, the median third somewhat elevated, testaceous; postnotum dark brownish black, narrowly whitish medially in front. Pleura dark brown, dusted with gray. Halteres blackish, the base more yellowish, the apex of the knob gray. Legs with the coxæ brownish black; trochanters dark brown; femora and tibiæ dark brown narrowly blackened at the apex; tarsi dark brown. Wings infumed with dusky, a dark oval stigmal blotch; a vitreous band before the cord crossing the base of the elongate cell *1st M*₂ and extending into cell *M*₄; a vitreous spot beyond the stigma in cell *2nd R*₁; a number of short hairs in cell *R*₅ and the tip of *M*₁.

Abdominal tergites largely brownish yellow, the caudal margin and the lateral margin except at the base brownish black; ninth tergite dark brown. Sternites similar, the extreme caudal margins of the sclerites with a fringe of pale appressed hairs.

Holotype, ♂, Jemez Springs, New Mexico; altitude 6,400 feet; July 20, 1915 (Woodgate).

Allotype, ♀, South Fork of Eagle Creek, White Mts., New Mexico; altitude about 8,000 feet; August 13 (C. H. T. Townsend); at light.

Paratypes, 2 ♂'s, topotypic; July 12, 1915 (Woodgate).

The allotype is in the collection of the United States National Museum; the type and paratypes are in the collection of the author.

***Tipula caroliniana*, sp. n.**

Male—Length 18-19 mm.; wing 19-21 mm.

Palpi dark brown. Frontal prolongation of the head rather long, light brownish gray. Antennæ with the first segment brown,

the second segment and the apex of the first bright yellow; flagellar segments with the basal enlargement very prominent, blackened, the remainder of the segments dark brown, the apical segments more uniform; antennæ elongated for this group of species. Head brownish gray, clearer and brighter toward the occiput and around the eyes; the vertex with a low tubercle bearing an impressed median line; a circular to transverse impressed mark just behind the base of the antennæ meeting on the middle line before the tubercle.

Mesonotal præscutum light gray, the stripes darker gray to brown, narrowly margined with dark brown; the median stripe is bisected by a pale line, which is likewise margined with brown; scutum brown with two light gray spots on each lobe, the largest lying caudad and proximad; scutellum and postnotum light gray, with a narrow brown median line. Pleura with the dorso-pleural membrane dull yellow, the sclerites light gray with a rounded brown spot just beneath the anterior spiracle and a smaller one on the mesopleura. Halteres light yellow, the knob brown. Legs with the coxæ dusted with light gray; trochanters brownish yellow; femora brown, the apex darker; tibiæ brown, lightest at the base; tarsi brown. Wings with a light gray tinge, the costal cell more yellowish, stigma brown; a brownish blotch at the arculus and the origin of *Rs*; veins and the deflections of veins narrowly seamed with brown; hyaline spots before the cord, beyond the stigma in cell *2nd R*₁, base of *R*₂ and *R*₃; a rounded blotch in cell *M* at two-thirds the length of the cell; pale flecks in cell *1st.A*.

Abdominal tergites varying from almost clear yellow throughout to a brownish yellow, the caudal margin narrowly yellowish, the lateral margins narrowly grayish; the base of the tergites with a transverse rectangular coarsely punctured area on either side of segments 3 to 5, somewhat as in *T. discolor* Loew and similar species; second sternite brownish yellow with a large rounded black spot at the base; segments two to five with punctured areas on the sides of the sclerites, on segments two, four and five transverse, on segment three oblique; apical sclerites brown, broadly yellowish on the caudal margin. Ninth tergite yellowish, the caudal margin with a small, shallow, rounded or rectangular median notch, the lateral lobes broad, obliquely truncated; dorsal surface with a

small black chitinized point on either side of the middle line connected transversely.

Holotype, ♂, North Carolina. From the collection of C. V. Riley in the United States National Museum.

Paratypes, 3 ♂'s, topotypic.

The type and a paratype are in the collection of the United States National Museum, the remaining paratypes are in the collection of the author.

This species falls in the same group with *angustipennis* Loew, *balioptera* Loew, *centralis* Loew, *serta* Loew, *septentrionalis* Loew, etc., from all of which it is easily separated by the structure of the male genitalia.

Tipula texensis, sp. n.

Male—Length 11.3-12.5 mm.; wing 11.5-15 mm.

Female—Length 13.4-13.6 mm.; wing 12.5-14 mm.

Palpi dark brown. Frontal prolongation of the head dark brown, with a sparse light gray bloom. Antennæ with the first segment yellowish brown, with a sparse grayish bloom; second and third segments yellow or brownish yellow, the remaining flagellar segments yellow or dark brown basally, the terminal segments more uniformly dark brown. Head light gray, more yellowish on the occiput on either side of the median area; a delicate impressed, median, brown, dorsal line.

Mesonotal præscutum light gray with dark brown stripes, the middle stripe broadly bisected by a vitta of the ground colour, which in turn is split medially by a delicate brown line; lateral stripes almost confluent with the median stripe; scutum light gray, the lobes with an oblique brown mark; scutellum grayish testaceous, with a very delicate median brown line; postnotum light gray with or without a rather indistinct, impressed, median, brown line on the caudal fourth of the segment. Pleura light gray, indistinctly spotted with brown, the dorso-pleural membrane dull yellow. Halteres with the base bright yellow, darkening into brown on the knob. Legs yellow, with a grayish white bloom; trochanters yellow; femora dull yellow, the apex dark brown; tibiæ yellowish brown, only a little darkened at the apex; tarsi dark brown. Wings light gray, the stigma rectangular, brownish yellow; brownish blotches

at the origin of R_5 , at about mid-length of cell R and in the middle of cell R_2 ; hyaline blotches in cell R between the brown spots; a hyaline band before the cord; beyond the stigma in cell $2nd R_1$ and in the bases of cells R_2 , R_3 and R_5 ; tip of cell R_2 hyaline; cells M_1 and $1st M_2$ largely hyaline.

Abdominal tergites brownish yellow, with a very indistinct, interrupted, brownish, dorsal band becoming more distinct behind; a broad sublateral dark brown band on each side, lateral margins of the sclerites broadly, the caudal margins narrowly and indistinctly, whitish; sternites dull yellowish brown, darkest on the seventh and eighth segments; in some specimens indistinctly and interruptedly trivittate.

The female is similar, with the antennal flagellum almost uniformly dark brown; the median abdominal vitta distinct.

The maximum measurements given for the male sex are those of the holotype, a large and finely coloured specimen.

Holotype, ♂, Dallas, Texas; April 7, 1906 (F. C. Pratt).

Allotype, ♀, Kerryville, Texas; March 25, 1908 (F. C. Pratt).

Paratypes, ♂, with the allotype; April 11, 1907; ♀, San Augustine, Texas; March 22, 1908 (E. S. Tucker).

The type and the paratype female are in the collection of the United States National Museum; the allotype and the paratype male in the collection of the author.

***Tipula aspidoptera*, sp.ⁿ.**

Male—Length 13.5-14.3 mm.; wing 13.6-15 mm.

Female—Length 15 mm.; wing 4.9-5 mm.

Palpi brown. Frontal prolongation of the head brownish gray, nasus short, but prominent with a few scanty hairs at the tip. Antennæ with the three basal segments light brown, the remainder of the antennæ uniform dark brown. Head light gray with a very narrow, indistinct median brown line.

Pronotal scutum light gray, the scutellum largely yellow. Mesonotal præscutum light gray, the median brown stripe very broad, a little narrowed behind, the lateral stripes rather indistinct; scutum, scutellum and postnotum light gray. Pleura with the dorso-pleural membrane yellow, the pleura clear blue-gray. Halteres long, slender, brown. Legs with the coxæ clear blue-gray; trochanters gray; femora brownish yellow, only a little darkened

at the tip; tibiae yellowish brown, a little darker at the tip; tarsi dark brown. Wings pale brownish gray, the stigma brown, the costal cell brownish yellow; wings streaked with hyaline, this colour including the basal cells and cell R_5 except the tip; cell $1stA$ hyaline, except the broad apex.

Abdomen brownish gray, clearer gray laterally, the caudal margin narrowly brownish yellow; ninth tergite broadly tipped with bright yellowish; sternites grayish brown.

The female is similar to the male, but the antennae are shorter, the wings reduced, extending about to the end of the third abdominal segment; valves of the ovipositor rather short, the tergal valves only a little longer than the sternal pair.

Holotype, ♂, Bred from larvæ taken at Alvarado, Texas (Hill); issued March 5, 1881.

Allotype, ♀, topotypic.

Paratypes, ♂, ♀'s, topotypic; ♂, Dallas, Texas; April 16, 1906 (W. D. Hunter).

The type, allotype and paratypes are in the collection of the United States National Museum, additional paratypes in the collection of the author.

This interesting species of the *tricolor* group was bred from larvæ received in Washington, February 26, 1881, by Mr. Pergande from Mr. Jesse M. Hill, Alvarado, Texas. The specimens were given the lot-number 846 and the first fly issued March 5, 1881, the last on March 22, 1881 a total of some 13 males and 11 females, most of which are still in existence. This insect was determined as *T. eluta* Loew with a question by Coquillett, which, however, has a long-winged female and the antennae bicolorous. In its unicolorous antennae it likewise differs from *Tipula subeluta* Johnson, which has bicolored flagellar segments, as clearly stated in the original characterization of the species, although Dr. Dietz's key is misleading in this regard.

***Tipula comanche*, sp. n.**

Male—Length 11.2 mm.; wing 12.4 mm.

Female—Length 10.9 mm.; wing 11 mm.

Palpi brown. Frontal prolongation of the head rather long, light gray, the nasus very short. Antennae with the first segment

rather long, brownish gray, the second segment yellowish brown, the flagellum elongated, the segments dark brownish black throughout, slightly incised beneath. Head light gray with a narrow, median, brown vitta.

Mesonotal præscutum light gray with three brown stripes, of which the lateral pair are shortened; scutum with the lobes light gray, indistinctly brown in the centre; scutellum and postnotum light gray, the latter more whitish. Pleura with the dorso-pleural membrane yellowish, the sclerites clear blue-gray. Halteres elongate, light brown, the knobs darker. Legs with the coxae pale, with a sparse whitish or gray bloom; trochanters brownish yellow; femora brown, darkened on the apical half; tibiæ and tarsi brown. Wings with a very pale picture, much paler than the similar *eluta* Loew and *aspidoptera* n., and in some respects suggesting *sayi* Alexander; the costal cell is yellowish; stigma rounded, yellowish brown; the membrane of the wing grayish hyaline, darkest on the apex and in the caudal cells; cell R_5 almost hyaline like the basal cells.

Abdomen brownish gray, the lateral margins of the segments broadly dull yellow, the caudal margins narrowly ringed with the same colour; hypopygium yellowish.

Holotype, ♂, Paris, Texas; April 13, 1904 (A. A. Girault).

Allotype, ♀, topotypic.

The type is in the collection of the United States National Museum, the allotype in the collection of the author.

***Tipula guasa*, sp. n.**

Male—Length 8.5-10.3 mm.; wing 8.5-10.9 mm.

Female—Length 11.2 mm.; wing 9 mm.

Palpi brown, the third segment pale at the base. Frontal prolongation of the head rather short, nasus not very prominent; the prolongation yellow, more brownish beneath, with a subimpressed brown lateral line and a sparse gray bloom on the dorsal surface. Antennæ with the first segment brown, the second segment paler, the apices of the scapal segments pale; flagellum short, dark brownish black, the segments short, broad basally, narrowed toward their tips, the segments not incised. Head dark brown, paler adjoining the eyes, a little grayish on the middle line

of the occiput; in some specimens the head is gray, with only the centre of the vertex dark brown.

Pronotal scutum grayish brown; scutellum clear light yellow. Mesonotal præscutum grayish brown, the area before the pseudo-sutural foveæ paler, yellowish; the usual lateral stripes are indistinct, but margined narrowly with dark brown; of the middle stripe only a single narrow dark brown line persists; the thoracic stripes in some specimens are quite obliterated; extreme lateral margin of the sclerite grayish; pseudosutural foveæ very large, black; scutum grayish brown, the median area more yellowish, the lobes marked with brown; scutellum testaceous, more yellowish on the sides; postnotum lead-coloured, with a distinct median yellow vitta. Pleura yellow, with blue-gray blotches. Halteres rather short, yellowish brown, the knobs dark brown. Legs having the coxæ yellowish with a gray bloom; trochanters and femora dull yellow, the latter passing into brown on the terminal half; tibiæ dull yellowish brown, darker apically; tarsi dark brown. Wings grayish subhyaline, the costal region a little more yellowish, stigma pale brown.

Abdominal tergites dark yellow, with a very broad median brown band, the caudal margin narrowly ringed with brown; ninth tergite dark brown with the caudal half yellowish; sternites yellow, indistinctly and broadly suffused with brown.

The female has the tergal valves elongate, subacute, dark brown, the sternal valves shorter, more yellowish, acute.

The paratype males from Calvert are much larger (the largest measurements given above) but in all other respects are indistinguishable from the small specimens taken at the type-locality.

Holotype, ♂, Liberty, Texas; March 18, 1908 (E. S. Tucker).

Allotype, ♀, topotypic.

Paratypes, 4 ♂'s, topotypic; 3 ♂'s, Calvert, Texas; April 19, (W. W. Yothers).

The type, allotype and paratypes are in the collection of the United States National Museum, additional paratypes in the collection of the author.

The specific name is that of a native Indian tribe.

Tipula arizonica, sp. n.

Male—Length 9.8-10 mm.; wing 11.3 mm.

Female—Length 14.5 mm.; wing 14 mm.

Palpi pale yellow with black hairs, the third segment with a sparse pale gray bloom, the terminal segment dark brown. Frontal prolongation of the head elongate, shiny yellowish, the extreme base light gray; nasus prominent. Antennæ indistinctly bicolorous, the basal segments light yellow; the third segment yellow, passing into brown on the apical half; remainder of the flagellum dark brown, the basal enlargement a little more intense, the segments slightly incised. Head light gray with a subimpressed, very indistinct median brown line; a row of large hairs following the inner margin of the eye.

Thoracic dorsum opaque light yellow, without distinct stripes, although they may be faintly indicated beneath the bloom. Pleura yellow, with a sparse whitish bloom. Halteres rather short, but slender, brown, the knob a little darkened. Legs with the coxæ yellow, very sparsely white pollinose; trochanters yellow; femora light yellow, soon passing into brown; tibiæ brownish yellow; tarsi brown. Wings hyaline or nearly so, the costal cells yellowish, the stigma a little brownish, veins brown.

Abdominal tergites yellow, the segments three to six more brownish, the segments broadly ringed with silvery; a rounded brown spot on the sides of segment two beyond mid-length of the sclerite; rounded brown spots on the sides of segments three to five at the base; hypopygium brownish; sternites yellow, the sclerites somewhat indistinctly ringed with silvery. Ninth tergite large, the lateral angles produced slightly and bent strongly ventrad; eighth sternite very large, prominent, the apex with a dense brush of yellow hairs.

The female is like the male, but the antennæ are shorter and more distinctly bicolorous; the spots on the sides of the abdomen rather distinct; tergal valves of the ovipositor very long, the tip rounded, the sternal valves very short, the apex abruptly truncated.

Holotype, ♂, Williams, Arizona; May 30 (H. S. Barber).

Allotype, ♀, topotypic; May 29.

The type is in the collection of the United States National Museum, the allotype in the collection of the author.