

## NEW NEARCTIC CRANE-FLIES (TIPULIDÆ, DIPTERA). PART X.

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**Ormosia frisoni**, sp. n.

Closest to *O. meigenii* (O. S.); inner pleural appendage of the male hypopygium with a conspicuous lateral spine; all four gonapophyses of approximately equal size and shape.

*Male*.—Length 3–3.5 mm.; wing 4–4.5 mm.

*Female*.—Length 3.8–4 mm.; wing 4–4.8 mm.

Rostrum and palpi dark brown. Antennæ brownish black; flagellar segments oval, provided with a dense white pubescence and rather elongate verticils. Head yellowish grey.

Pronotum brown, the scutellum pale whitish yellow. Mesonotum uniformly brownish gray with a sparse yellowish bloom; pseudosutural foveæ conspicuously oval, black; tuberculate pits conspicuous, separated from one another by a distance a little greater than the diameter of one. Pleura light plumbeous. Halteres whitish. Legs with the coxæ plumbeous; trochanters light brown; femora brownish yellow, the tips broadly darkened; tibiæ and tarsi dark brown. Wings with a strong brownish gray tinge; stigma darker brown; conspicuous whitish areas before and beyond the stigma; basal cells largely whitish; veins dark brown. Venation: cell *1st M*<sub>2</sub> open by the atrophy of the outer deflection of *M*<sub>3</sub>; anal veins convergent.

Abdomen dark brown, including the hypopygium. Male hypopygium with the inner pleural appendage smaller than the outer, before the tip with an acute black spine set at a right angle to the appendage; outer appendage strongly curved, the tip acute. Gonapophyses four in number, black, of approximately equal size and shape, the inner pair a little more slender than the outer pair; outer apophyses with a tiny tooth at about two-thirds the length on the inner face; inner apophyses with the basal half flattened, the distal half strongly narrowed; penis-guard slender, pale in colour. Ninth sternite with a spatulate lobe as in the group.

*Habitat*.—Illinois.

*Holotype*.—♂, Muncie, May 15, 1920, (Alexander).

*Allotopotype*.—♀, (Frison).

*Paratopotypes*.—1 ♂, May 8, 1920, (Frison); 32 ♂ ♀'s, May 15, 1920, (Alexander & Frison).

Type in the collection of the Illinois State Natural History Survey.

*Ormosia frisoni* bears a considerable resemblance to *O. meigenii* (O. S.) but is readily told by the smaller size, differently coloured wings and, especially, by the structure of the male hypopygium. In *O. meigenii* the inner pleural appendage has the tip narrowed into a chitinized point that is in a straight line with the axis of the appendage; of the four gonapophyses, the inner pair are approximately one-half longer than the outer pair. This interesting new species is dedicated to the collector, my friend, Mr. Theodore H. Frison.

This species occurred near the margin of a prairie cat-tail swamp where it was associated with *Pseudolimnophila luteipennis* (O. S.) and *Tipula dejecta*

October, 1920

Walker. The flies were generally observed in small swarms among a dense growth of *Equisetum hiemale* that covered the embankment.

**Ormosia notmani**, sp. n.

General coloration dark brown, the praescutum without stripes; wings grayish subhyaline, the stigma slightly darker brown; cell *1st M*<sub>2</sub> open by the atrophy of the outer deflection of *M*<sub>3</sub>; basal deflection of *Cu*<sub>1</sub> very oblique in position, inserted beyond the fork of *M*; *2nd Anal* vein bent toward the *1st Anal* on its outer end only; male hypopygium complicated; outer pleural appendage a black, three-spined structure; inner pleural appendage slender, deeply bifid; gonapophyses slender, the distal end slightly widened, each apophysis with a long, powerful spine at the base.

*Male*.—Length about 3.8 mm.; 4.4 mm.

Rostrum and palpi dark brown. Antennæ slightly elongated, dark brown, the scapal segments a little paler; flagellar segments long-oval, provided with a dense, erect, white pubescence. Head brownish gray, provided with long, yellow bristles.

Pronotum brown, the scutellum obscure yellow. Mesonotum dark brown, sparsely dusted with a grayish yellow pollen; pseudosutural foveæ conspicuous, oval, black. Pleura brown, sparsely dusted with gray. Halteres light yellow. Legs with the coxæ and trochanters light yellow; femora light brown, brighter basally; remainder of the legs darker brown. Wings grayish subhyaline; stigma slightly darker, brown; wing-base a little brighter; veins dark brown. Venation: *r* less than its own length beyond the fork of *R*<sub>2+3</sub> on *R*<sub>2</sub>; cell *1st M*<sub>2</sub> open by the atrophy of the outer deflection of *M*<sub>3</sub>; basal deflection of *Cu*<sub>1</sub> a short distance beyond the fork of *M*, very oblique in position, the branches of *Cu* forming an angle of about 100°; *2nd Anal* vein with the extreme outer end bent toward the *1st Anal*.

Abdomen dark brown, the hypopygium a little brighter. Male hypopygium somewhat as in *O. bilineata* Dietz and *O. subcornuta* Alexander but very distinct in the details of structure. Outer pleural appendage a short, squat, chitinized structure that terminates in three acute blackened points, the two outer ones short and sub-equal, the inner spine much longer, acute; inner pleural appendage long and slender, almost straight, profoundly bifid, the two arms lying generally parallel, the one arm appearing as a long, blackened spine with the proximal face microscopically serrulate, the other, more dorsal, arm slightly paler, sparsely setigerous. Gonapophyses shaped as slender blades, the outer ends a little flattened and expanded, at the base of each with a powerful, semi-erect spine that is about one-third the length of the apophysis. Ninth sternite with a conspicuous fleshy spatulate lobe as in the *meigenii* group of species.

*Habitat*.—New York.

*Holotype*.—♂, Keene Valley, Essex Co., May 26, 1920, (Notman).

Type in the collection of the author.

This remarkably distinct species is dedicated to the collector, Mr. Howard Notman, whose conscientious and capable efforts have added numerous species, in many orders, to the list of New York insects.

***Limnophila (Eulimnophila) imbecilla illinoiensis*, subsp. n.**

*Male*.—Length 6 mm.; wing 6–6.5 mm.

Very similar to typical *imbecilla* Osten Sacken but very much smaller (in *imbecilla*, the wing of the male measures 8.2–8.5 mm.). Head yellowish with scarcely any gray pruinosity. Wings grayish yellow.

*Habitat*.—Illinois.

*Holotype*.—♂, Homer Park, June 13, 1920 (Frison).

*Paratopotypes*.—Two ♂'s.

Type in the collection of the Illinois State Natural History Survey.

Paratypes in the collection of Mr. Frison and the writer.

***Tipula tennesa*, sp. n.**

Allied to *T. ultima* Alexander; wings brownish yellow, the dusky spot at the end of the vein *2nd A* small; abdominal tergites with a narrow, dark brown median line; male hypopygium with the ninth tergite small, the caudal margin with a broad, U-shaped median notch, the lateral lobes obtusely rounded with the margins smooth, on the ventral face with a sharp chitinized spine.

*Male*.—Length about 16.5 mm.; wing 18.5 mm.

Generally similar to *Tipula ultima*, differing as follows:

Antennæ with the basal flagellar segments distinctly bicolorous, the basal enlargement of each segment dark brown, the remainder of each segment paler yellowish brown, the distal flagellar segments more uniformly brown.

Coloration of the thorax identical in the two species. Wings with a deep, brownish yellow suffusion, as in *ultima*, the dusky spot at the tip of vein *2nd A* very restricted but evident. Venation: cell *R*<sub>2</sub> more acutely pointed at base; cell *1st M*<sub>2</sub> long and narrow; petiole of cell *M*<sub>1</sub> shorter than *m*.

Abdominal tergites dull yellow with a distinct but narrow median vitta of dark brown; lateral margins of the tergites less distinctly darkened; sternites yellow. Male hypopygium with the sclerites fused into a continuous ring as in *ultima*. Ninth tergite small, the caudal margin with a broad, U-shaped median notch, the lateral lobes thus formed broadly and obtusely rounded, their margins unarmed; on the ventral face of each of these lobes a conspicuous, chitinized spine directed ventrad and slightly caudad and proximad; on the middle line beneath a narrow chitinized ridge that is slightly bifid at the cephalic end. Inner pleural appendage small, flattened, the distal end curved into a spoon-shaped structure. Ninth sternite profoundly notched, at the base of the incision with a flattened, recurved lobe that is sparsely provided with short hairs; on either side of this rectangular lobe, a somewhat similar lobe whose inner or proximal margin is provided with numerous, long, yellow bristles that become more elongated near the distal end; from the base of each of these subtending lobes, a flattened digitiform lobe extends dorsad; from the region of the pleurite a similar lobe is found, lying parallel to the last, the notch between them very narrow.

*Habitat*.—Tennessee.

*Holotype*.—♂, Knoxville, May 17, 1915, (G. M. Bentley).

Type in the collection of the Department of Entomology, University of Tennessee.

It will be seen from the above characterization that the hypopygium is very

distinct from that of *Tipula ultima*, where the ninth tergite is deeply notched, the lateral lobes very large, flattened, directed proximad and with the margins provided with numerous tiny chitinized denticles; all the other lobes and appendages of the hypopygium are much smaller and less complicated than in *T. ultima*. It should be noted that the present species is on the wing during May whereas *T. ultima* is a characteristic autumnal species.

### **Tipula lygropis, sp. n.**

Allied to *T. occidentalis* Doane; general coloration dark yellowish gray, the mesonotal præscutum with four brownish gray stripes; wings with a very strong brown suffusion, the oblitative streak unusually broad and conspicuous; abdomen obscure brown; male hypopygium with the ninth tergite with a deep, V-shaped notch; eighth sternite with two submedian pencils of long yellow hairs.

*Male*.—Length about 20 mm.; wing 21 mm.

Frontal prolongation of head dark brown, still darker laterally; no evident nasus, only a tuft of long hairs at this point; palpi brown, the basal two segments lighter in colour. Antennæ dark brown, the scapal segments slightly paler brown. Head brownish gray, the occiput darker; the vertex with indistinct lines that are concentric from the occiput.

Mesonotal præscutum yellowish gray with four brownish gray stripes, the intermediate pair narrowly separated for most of their length by a line of the ground colour, the ends contiguous; scutum light gray, the lobes largely dark gray; scutellum pale yellowish gray with a capillary brown median line, the lateral portions dark; postnotum yellowish gray, the posterior margins darker. Pleura dull gray, more yellowish gray before the base of the halteres. Halteres dark brown, the base of the stem brighter. Legs with the coxæ dull gray, the outer face sparsely yellow pollinose; femora and tibiæ reddish brown, narrowly tipped with dark brown; tarsi brown. Wings with a very strong brownish tinge; cells *C* and *Sc* more yellowish brown; cells *M* and *Cu* adjoining vein *Cu* more yellowish; a conspicuous brown spot at the end of *Sc* and another including the stigma; a paler brown seam at the origin of *Rs*, along the cord and at the tip of vein *Cu*<sub>2</sub>; a very conspicuous white oblitative streak extending from cell *C* across cells *1st R*<sub>1</sub>, the end of *R*, the basal two-fifths of cell *1st M*<sub>2</sub>, into the base of cell *M*<sub>3</sub>. Venation: *R*<sub>2+4</sub> shorter than the distal section of *R*<sub>2</sub>; petiole of cell *M*<sub>2</sub> a little more than one-half of *m*.

Abdomen obscure brownish, the tergites very indistinctly trivittate with still darker brown, the distal segments more uniformly darkened; sternites brownish gray. Male hypopygium moderately large. Ninth tergite with a very deep V-shaped median notch that extends almost back to the eighth segment; the lateral lobes have the ventral edge produced into a flattened, chitinized blade, the tips running out into small, chitinized points. Ninth pleurite rather conspicuous, conical, the apex obtusely rounded but flattened; outer pleural appendage conspicuous, rather stout, dark brown, clothed with long, dark hairs. Ninth sternite with a profound notch that is narrowly margined with pale, from its dorsal proximal angle hang two long, pendulous lobes. Eighth sternite with a broad, U-shaped notch, on either side of the median line of the base of the notch, a pencil of very long yellow bristles; lateral lobes produced

proximad into very broad-based triangular lobes that are directed proximad, the proximal margin sparsely provided with bristles, the tip narrowed.

*Habitat*.—California.

*Holotype*.—♂, Santa Cruz Island, May 16, 1919, (E. P. Van Duzee).

Type in the collection of the California Academy of Sciences

***Tipula pseudotruncorum*, sp. n.**

General coloration light gray; antennæ short, dark brown; head with a linear brown mark; mesonotal praescutum with five more or less distinct brown lines; a capillary brown median line extending from the suture to the base of the abdomen; wings pale brown, variegated with dark brown and subhyaline blotches; abdomen buffy brown, the tergum with three conspicuous dark brown longitudinal stripes.

*Male*.—Length 15 mm.; wing 16 mm.

*Female*.—Length 20 mm.; wing 17.5 mm.

Frontal prolongation of the head long and slender, light gray; palpi dark brown. Antennæ short, the first segment elongate, dusted with gray; second scapal segment brownish; flagellum black, the segments short with the basal swelling indistinct. Head light gray with a conspicuous elongate brown mark.

Mesonotal praescutum light gray, conspicuously marked with dark brown; median stripe light gray, split by a capillary brown line, the lateral margins of the stripe more broadly dark brown; all three of these lines are confluent before the suture; lateral praescutal stripes dark, the area between them and the median stripe infuscated; scutum light gray with two isolated grayish brown marks on each lobe; remainder of the mesonotum light gray, a capillary brown line extending from the suture to the base of the abdomen. Pleura light gray. Halteres brownish yellow, the knobs dark brown. Legs with the coxæ light gray; trochanters grayish brown; femora black, more reddish basally; remainder of the legs black. Wings brown; stigma dark brown; a small, dark brown spot at the origin of *Rs*; membrane conspicuously variegated with subhyaline areas, the more conspicuous situated before and beyond the stigma, immediately before the origin of *Rs*; a conspicuous white blotch at the base of cell *M* and another at about two-thirds the length of the cell; indistinct whitish areas in cells *Cu* and *1st A*. Venation: *Rs* long; cell *1st M*<sub>2</sub> long and narrow; petiole of cell *M*<sub>1</sub> shorter than *m*.

Abdomen with the first tergite light gray; remaining tergites buffy brown, with three broad dark brown stripes that are narrowly interrupted at the base and apex of each segment; lateral margins of the tergites broadly light gray; sternites dusted with gray. Male hypopygium rather large. Ninth tergite with a broad, U-shaped notch, the lateral lobes indistinct, obtusely rounded; deep median incision that extends back to beyond mid-length of the tergite, the margins being practically contiguous. Ninth pleurite complete; outer pleural appendage tumid, gradually narrowed to the apex. Ninth sternite with a deep V-shaped notch, the lateral angles produced proximad into fleshy lobes that are contiguous on the median line, at the tip with conspicuous long yellow hairs that largely fill the notch of the sternite. Eighth sternite with the lateral angles produced into slight tumid lobes, each tipped with a pencil of long, reddish bristles, decussate across the median line.

The allotype female is much paler throughout but presumably belongs to this species; the markings on the body as well as the wings are very pale but indicated.

*Habitat*.—Northwestern United States.

*Holotype*.—♂, Longmire Springs, Mt. Rainier, Washington, altitude 2,500 feet, July 18, 1919, (Dr. C. L. Fox.).

*Allotype*.—♀, Paradise Valley, Mt. Rainier, altitude 6,000–8,000 feet, August 5, 1919, (Dr. C. L. Fox.).

*Paratypes*.—Two ♂'s, Moscow, Idaho.

Type in the collection of the California Academy of Sciences.

*Tipula pseudotruncorum* bears a resemblance to the European *T. truncorum* Meigen, and was distributed under this name by Prof. Doane. What is apparently this same species has been recorded by Snodgrass (Trans. Am. Ent. Soc., Vol. 30, pp. 211, 212; 1904) as *T. truncorum*. A comparison with authentic specimens of *truncorum* received from my friend, Herr M. P. Riedel, shows that the two species are abundantly distinct.

#### NOTES ON THE COLEOPTERA WITH DESCRIPTIONS OF NEW SPECIES.

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***Cicindela spreta* Lec.** Several years ago I prepared a note on the capture of this form in Maine, but after some correspondence with the late Mr. Edward D. Harris it was laid aside. Further interesting facts regarding this much misunderstood insect were noted in his letters which should correct the impression given by several authors that it is closely related to *purpurea* Oliv. His father, T. W. Harris, some time prior to 1848, sent Dr. LeConte a specimen taken at Eastport, Maine, and which, according to Mr. Harris, is the unique type now in the LeConte collection at Cambridge, Mass., and bears his father's label.

The original description in the "Catalogue of the Geodephagous Coleoptera" (Ann. Lyc. Nat. Hist., 1848, p. 177) begins, "*Obscure nigro-aenea subviridescens*,—" and was probably made from the specimen in the LeConte collection, as it is a green insect of about the shade of those green forms of *purpurea* which sometimes pass for *spreti*, but having the complete *limbalis* markings. The figured *spreti* on the coloured plate XIII of the above work is a black insect, and it is referred to in the LeConte Revision of the *Cicindelae* of 1856 (Trans. Am. Phil. Soc. XI., p. 37) under *limbalis* (as a variety of *splendida*) as, "*Nigra. C. spreti* Lec. Ann. Lyc., 4, 177; tab. 13, fig. 7", and in a few lines below, "Eastport, Maine, Dr. Harris." In the Harris collection, Boston Museum of Natural History, is one specimen bearing an "Eastport, Me.," label and the manuscript number 1502, which is referred to in the Harris manuscript catalogue as, "*Cicindela Raiana* H. ms. *spreti* Lec. Ann. Lyc. N.Y. IV. 177. Eastport, Me., Dr. J. Ray, 1836." This is the specimen referred to by Mr. E. D. Harris in a letter to me as the "companion specimen" to the one in the LeConte collection. I examined this (Harris collection) specimen, which still bears the

old Harris label, and found it much darker than the type at Cambridge. It is an almost black insect with the faintest traces of green. It is marked like the type, and is almost exactly as the figure on Plate XIII of the work of 1848. Does it not seem probable that Dr. LeConte made the description from his green specimen, and in some way the figure was made from the black specimen of the Harris collection? This supposition will at least account for the dual colour rôle of *spretæ*.

In correspondence with Dr. LeConte, T. W. Harris expressed the opinion that *spretæ* was much nearer *limbalis* Klug. than *purpurea*, and that Dr. LeConte was in accord with him is shown by the Revision of 1856.

In 1900, Mr. E. D. Harris took a large series (about 100 specimens) of *limbalis* at Mt. Desert, Me., and, discovering several dark green ones among them, took one to Cambridge and placed it beside the type, and then to the Harris collection where he made a comparison with the "companion specimen." His conclusion was, "It is, to all intents, exactly the same thing. It is *limbalis*."

On June 24, 1909, I took a specimen of *spretæ* at Monmouth, Me., in a sparsely wooded pasture on the west shore of Lake Cobbosseecontee. It has been placed beside the type and found to be the same in every respect. Another specimen from Wales, Me., June 15, 1909, is very much like Mt. Desert *limbalis*, with reddish-cupreous shading and silky lustre. A specimen from Monmouth, June 25, 1905, is nearly intermediate between the other two, being a more clear green at the base of elytra and becoming gradually cupreous towards the apex, but without definite silky lustre.

From the above we have sufficient proof that *spretæ* Lec., a rather dark green insect (of about the shade of the green forms of *purpurea*) with *limbalis* markings, (humeral, post-humeral and ante-apical dots, sinuate median fasciæ, and apical lunules) is but a colour variation of *limbalis* Klug. as represented by the Mt. Desert specimens. Therefore, Dr. Walther Horn is in error in the Genera Insectorum in placing "*spretæ* Lec., 1848" as a "senile form" and *spretæ* Lec., 1856, as a "black form" of *purpurea* Oliv.

***Cicindela hentzi* Dej., var. *niveihamata*, n. var.** This interesting variation was taken at the Middlesex Fells Reservation in a road near the shore of Spot Pond in the town of Stoneham, Mass., July 26, 1903. It was found somewhat remote from the usual haunts of the species, although they frequently scatter from the ledges to the neighboring roads. The markings of this unique are formed by the extension of the apical lunules along the margin, including the ante-apical marginal spots, to and joining with the obliquely transverse median fasciæ; the result is a broad marginal band with sinuate inner edge terminating in a hook at the middle of each elytron. The median ante-apical dot has almost vanished and the humeral lunule is represented by a small humeral dot and a very faint sub-humeral one. The markings resemble those of the posterior half of the elytra of *C. schauippi* with the transverse fasciæ more oblique. In order to stimulate ambition and anticipation among those collectors who delight in aberrant forms this handsome little insect is duly christened as above.

***Pterostichus coruscus* Lec.** This species, which has hitherto been taken rarely along a railroad embankment through a swamp, was found in large numbers (over 100) under stones, logs and in debris along the shores of