

*Descriptions of North American* DIPTEROUS IN-  
SECTS. *By* THOMAS SAY.

CULEX. *Linn. Meig.*

*C. musicus.* Tergum purplish, with lateral yellowish spots.

Inhab. Indiana.

*Head* dull honey-yellow: *vortex* blackish with yellowish hair: *proboscis* and *palpi* black: *thorax* black-purple, with yellowish hair or scales: *wings* dusky: *poisers* white, a little dusky at tip: *tergum* purple, or violaceous, with a band at base, and large lateral spot on each segment of yellowish hair or scales: *feet* black-violaceous: *thighs*, excepting at tip, and *coxæ* whitish, sericeous: *tarsi*, two terminal joints of the posterior pair white.

Length more than one-fifth of an inch.

CHIRONOMUS.

*C. tænio-notus.* Stethidium green, trilineate; a black line on the middle of the anterior line.

Inhab. Indiana.

*Body* bright pea-green: *head* yellowish, terminal joint of the antennæ blackish: *thorax* with three dilated, pale honey-yellow vittæ; a black line along the middle of the anterior one: *wings* white: *meta-thorax* pale honey-yellow, with a blackish spot in the middle, divided by a green line: *tergum* immacu-

late: *pectus* pale honey-yellow: *feet* pale greenish, anterior tibiæ and tarsal incisures dusky.

Length more than one-fifth of an inch. ♀

*C. devinctus*. Tergum black, incisures white; feet with black incisures.

Inhab. Indiana.

*Body* dusky: *stethidium* dusky livid: *thorax* trilineate with blackish: *scutel* dull honey-yellow: *halteres* and *wings* white: *tergum* brownish-black; incisures, particularly those near the base, white: *thighs* black, anterior pair pale at base; the others with a white annulus near the tip: *tibiæ* and *tarsi* white, with black incisures.

Length nearly one-fifth of an inch.

#### CERATOPOGON. Meig.

*C. scutellatus*. Black; *scutel* yellow; abdomen whitish.

Inhab. Indiana.

*Head* blackish: *mouth* yellow: *thorax* pale yellowish, with three black lines, which are widely dilated before, and confluent: *scutel* yellow: *wings* dusky: *poisers* white: *abdomen* whitish: *feet* whitish.

Length nearly one-twentieth of an inch.

Appeared in considerable numbers on the last of August, soon after sunrise.

#### LIMNOBIA. Meig.

*L. livida*. Tergum livid, with a yellowish margin.

Inhab. Mexico.

*Head* yellowish-brown, with a longitudinal fuscous line: *antennæ* fuscous, paler at base; joints rounded: *thorax* yellowish-brown, trilineate with blackish, exterior lines dilated, middle line capillary: *metathorax* with a grey reflection, yellow each side: *poisers* elongated, reaching the tip of the second abdominal segment, yellow, with a lateral dusky line: *wings* with a slight yellowish-brown tint, cross nervures margined with dusky: *tergum* livid, with a darker dorsal, and submarginal line, and yellowish margin: *pleura* bilineate with fuscous; superior line passing round the pectus before the anterior feet, and the inferior line behind them: *feet* yellowish, with an obsolete dusky band towards the tip of the thighs: *venter* livid, with a yellowish margin and obsolete middle line.

Length more than one-fourth of an inch.

The nervures are arranged nearly as in *L. lutea*, Meig.

#### TIPULA.

*T. annulicornis*. Pale; *antennæ* annulate with black.

Inhab. Indiana.

*Body* very pale honey-yellow: *antennæ* with a black annulus on each joint: *palpi* black at tip: *wings* immaculate: *tergum* with obsolete, dusky, slightly undulated bands.

Length under one-fourth of an inch.

## PLATYURA.

*P. subterminalis*. Yellowish; wings with a subterminal band.

Inhab. Indiana.

*Body* entirely pale honey-yellow: *antennæ*, excepting the two basal joints, fuscous: *ocelli* with a small black areola: *thorax* immaculate: *wings* with a slight yellowish tinge; a blackish, subterminal band, occupying on the costal margin all the space between the small cross nervure and the tip of the next long nervure, and extending to the thinner margin: *tergum* a little more dusky than the thorax: *tibiæ* and *tarsi* dusky.

Length three-twentieths of an inch.

Nervures as in *P. baumhaueri*, Meig. but the small cross nervure on the costal margin is perpendicular to the costal edge.

LEIA. *Meig.*

*L. bivittata*. Honey-yellow; trunk bilineate, and tergum with two series of black punctures.

Inhab. Indiana.

*Body* rather pale honey-yellow: *antennæ* black at tip: *stemmata* very distinct, in a curved line: *thorax* a little hairy, on each side a dilated black vitta: *wings* fasciate near the tip: *tergum* on each side with a series of oval black spots: *coxæ* white.

Length over three-twentieths of an inch.

Taken on the window in June.

MYCETOPHILA. *Meig.*

*M. discoida.* Thorax pale with a blackish disk; wings with a fuscous spot.

Inhab. Indiana.

*Head* blackish: *antennæ* whitish, at tip blackish: *thorax* pale honey-yellow; disk blackish owing to three vittæ of that colour being confluent into one: *wings* hyaline, with a fuscous spot on the connecting nervures: *tergum* blackish, somewhat sericeous: *poisera* whitish: *feet* whitish, with blackish tarsi: *abdomen* whitish at base.

Length more than one-tenth of an inch.

Belongs to Meigen's first division of the genus.

*M. nubila.* Dusky; wings immaculate; feet whitish.

Inhab. Indiana.

*Body* dusky, brownish: *antennæ* first and second joints yellowish: *thorax* on the humerus dull honey-yellow: *scutel* dull yellowish: *wings* hyaline, immaculate: *poisera* whitish, capitulum dusky before the tip: *abdomen* slender, gradually enlarging to the tip: *tergum* with the tips of the segments pale; anal segment pale: *feet* whitish, dusky towards the tips; spines one-third the length of the first tarsal joint.

Length three-twentieths of an inch.

Belongs to Meigen's fifth division.

SCIARA. *Meig.*

*S. unicolor.* Velvet black; wings with a slight violaceous tinge.

Inhab. Mexico.

*Body* velvet black, with numerous short hairs: *thorax* with a minute humeral, obsolete piceous spot, and another at base of the wings: *scutel* with an obsolete piceous spot on each side: *wings* large, black, with a violaceous tinge; the apical furcate nervure, as well as all the other nervures, equally definite.

Length nearly three-tenths of an inch.

*S. exilis*. Halteres nearly half the length of the abdomen.

Inhab. Indiana.

*Body* dusky: *antennæ* as long as the body: *stethidium* yellowish-white: *thorax* blackish: *wings* dusky; apical forked nervure wide, the inferior portion hardly arquated: *halteres* subclavate, about half as long as the abdomen, a little dusky: *abdomen* a little hairy: *feet* pale.

Length ♂ one-thirtieth of an inch.

#### PENTHETRIA. *Meig.*

*P. heros*. Black; costal margin of the wings fuscous.

Inhab. Mexico.

*Body* entirely velvet black: *wings* dusky; costal margin fuscous; costal edge black; nervures of the disk pale.

Length ♀ two-fifths of an inch.

This I believe to be the largest species, yet discovered, of this small genus. The arrangement of

the nervures differ considerably from that of *P. holosericea*, Latr. as represented by Meigen. The male is much smaller and nearly corresponds in the arrangement of its nervures.

DILOPHUS. *Meig.*

*D. stygius*. Velvet black, immaculate.

Inhab. Mexico.

*Body* velvet black: *thorax* with a transverse series of approximate spines on the collar, interrupted in the middle, and a series of smaller ones before the middle of the thorax: *wings* blackish a little tinged with violaceous: *anterior tibiæ* with a series of acute spines on the anterior middle and tip.

Length one-fourth of an inch.

BERIS.

*B. fuscitarsis*. Nob. When describing this species I observed that "The scutel of my specimen is wanting, I cannot therefore ascertain its number of spines." I have since obtained individuals in Indiana and find that the scutel is altogether destitute of spines or radii. It differs in this respect from all the known species.

XYLOPHAGUS. *Meig.*

*X. fasciatus*. Wings dusky, fasciated; abdomen fasciated.

Inhab. Indiana.

*Body* dusky: *thorax* ——— posterior portion ho-

ney-yellow: *poisers* blackish at tip: *wings* dusky, a more distinct band on the middle and at tip: *feet* honey-yellow; hind *tibiæ* blackish: *tergum* yellow, basal half of the four basal segments black; remaining segments nearly all black.

Length over two-fifths of an inch.

By an accident the head and anterior part of the thorax of this fine specimen were destroyed, but the above description will sufficiently indicate the species. The wing nervures resemble those of the *maculatus*, Fabr.

#### THEREVA. Latr.

*T. albifrons*. Black. with gray hair: thorax with a blackish vitta.

Inhab. Indiana.

*Body* black, with numerous gray hairs: *front* silvery: *antennæ* —: *rostrum* dirty honey-yellow: *thorax* with a broad fuscous vitta: *wings* hyaline: *poisers* black at tip: *tergum* with the segments tipped with a more dense margin of gray hairs, wider and more obvious on the sides: *venter*, the two middle segments with a pale terminal margin: *feet* blackish; *tibiæ* dirty honey-yellow.

Length ♂ three-tenths of an inch.

Resembles *frontalis*, Nob. but is much smaller.

#### ANTHRAX.

*A. edititia*. Black with fulvous hair: wings fuscous at base.



Inhab.

*Body* black, covered with dense fulvous hair: *cheeks* naked: *proboscis* rather prominent, black: *antennæ*, two basal joints yellowish: *wings* hyaline, basal half fuscous, including all the costal cellule and the middle transverse nervures which are darker than the other part; two exterior transverse nervures margined with blackish: *halteres* reddish-brown, tip yellow: *tergum* each side and at tip yellowish: *venter*, except on the two or three basal segments, yellowish: *feet* fulvous; *tarsi* blackish.

Length over two-fifths of an inch.

Belongs to Wiedemann's fifth tribe.

*A. limatulus*. Wings fuscous at base and with three fuscous points.

Inhab. Indiana.

*Body* brownish-black: *occiput* plumbeous, near the neck black, with a black indented line passing up to the vertex: *wings* dusky, fuscous at base, chiefly on the costal portion of it, which extends attenuating beyond the middle; anastomosis, in the hyaline portion, margined with fuscous: *tergum* with four series of silvery points, or rather abbreviated transverse lines.

Length ♂ three-tenths of an inch.

♀ two-fifths of an inch.

Var. a. Posterior cross nervure of the central wing cellule not margined.

Belongs to Wiedemann's second tribe.

#### DASYPOGON. *Meig.*

*D. cepphicus.* Black, with short cinereous hair.  
Inhab. Mexico.

*Hypostoma, mystax,* and *genæ* silvery: *antennæ* black, first joint of the style longer than the second: *vertex* concave, but not very profound: *stemmata* on a common elevation: *thorax* with a slight appearance of lineations before: *poisers* yellow at tip: *nervures* black: *tergum* with the segments having short white hair each side: *metathorax* also somewhat silvery each side: *anterior coxæ* with a slender, arquated, transverse, black common line, and a longitudinal black line of separation: *anterior tibiæ* with silvery hair.

Length one-fourth of an inch.

The nervures of the wings are arranged more like those of an *Asilus* than of a *Dasypogon*, but the bi-articulate style proves the generic affinity.

#### LAPHRIA.

*L. saniosa.* Black; abdomen sanguineous.  
Inhab. Indiana.

*Body* blued-black: *head* black; *front* with a silvery reflection: *posterior* and *inferior orbits* reflect-

ing silvery : *wings* black violet : *abdomen* sanguineous, first segment of the *tergum* blackish.

Length nearly half an inch.

#### RAMPHOMYIA. Meig.

*R. rufirostra*. Black ; thorax lineate.

Inhab. Indiana.

*Body* hairy, black : *proboscis* honey-yellow, black at base : *thorax* blackish-cinereous, opaque, with three polished, black, equal lines obsolete behind, and two less obvious ones on each side, connected to the exterior of the dorsal ones in a humeral spot : *wings* with a yellowish tinge towards the base, and a large fuscous carpal spot ; middle cellule very short, but little longer than broad : *poisers* honey-yellow, with a fuscous capitulum : *tergum* polished : *feet* very hairy, polished ; *anterior tarsi*, first joint as long as the tibia and rather more dilated.

Length ♀ three-twentieths of an inch.

#### SARGUS.

*S. trivittatus*. Green ; thorax dull darker lines ; *tergum* fasciate.

Inhab. Indiana.

*Body* grass green, not metallic, nor brilliantly polished : *antennæ* terminal joint rounded, yellow ; seta black : *stemmata* equidistant, in a fuscous areola : *thorax* trilineate with dull reddish-brown : *poisers* blackish at tip : *tergum*, segments, excepting the

basal one, with a broad dusky band at their bases: *feet* dull yellowish, darker at their tips.

Length from two-fifths to half an inch.

A large species, destitute of the highly polished metallic colour so striking in many species. The thoracic lines are so dilated as to give the thorax the appearance of being entirely dull reddish-brown.

#### NEMOLETUS. *Meig.*

*N. polyposus.* Black; feet yellowish; thighs black at base.

Inhab. Mexico.

*Body* black, with a slight tinge of purplish, polished: *wings* white, costal and basal nervures yellowish: *poisers* white: *feet* honey-yellow; *thighs*, except at tip, black; *tarsi*, terminal joint black; *posterior tibiæ* black in the middle: *venter* immaculate.

Length more than three-twentieths of an inch.

This is closely allied to the species which I described under the name of *pallipes*.

#### STRATIOMYS.

*S. trivittata.* Greenish; thorax with three, tergum with one black vitta.

Inhab. Mexico.

*Head* yellowish-green; *front* and *vertex* brownish, each with a transverse, somewhat undulated line: *antennæ* reddish-brown, paler at base: *thorax* green, with three broad black vittæ: *scutel* greenish, two-

spined, immaculate : *poisers* pea-green : *tergum* yellowish-green, with a dilated, crenate vitta : *pectus* with a broad black vitta : *proboscis* and point each side on the hypostoma, black.

Length nearly seven-twentieths of an inch.

*S. goniphora*. Black ; thorax with minute golden hairs ; beneath greenish.

Inhab. Mexico.

*Head* yellowish-white, two undulated black frontal bands : *vertex* black, yellowish behind : *hypostoma* with a lateral black dot, sometimes obsolete : *proboscis* black : *antennæ* black : *occiput* black : *thorax* with numerous small golden hairs ; a yellowish line over the wings : *scutel* black, posterior margin and and spines yellow : *wings* hyaline ; costal nervures and cellule yellowish ; middle nervures blackish : *tergum* black, with lateral yellow triangles and tip ; beneath pale greenish : *pectus* on the disk black : *feet* yellowish, a line beneath the thighs black : *venter* on the posterior disk ferruginous.

Length more than three-tenths of an inch.

#### BACCHA.

*B. costata*. Body black ; tergum with white bands.

Inhab. Indiana.

*Head* silvery ; a shining black line from the vertex to the mouth, much constricted on the middle of

the front: *antennæ* obsoletely honey-yellow at base: *occiput* plumbeous with a silvery reflection: *thorax* black: *poisers* white: *wings* hyaline with a somewhat narrow costal margin, not reaching the tip: *scutel* margined with yellow: *tergum* black; first, second, and third segments with an oblique white spot on each side at base, and remaining segments tipped with white; *feet* black; anterior pairs, base of the *tibiæ* and tip of the thighs honey-yellow; posterior *tibiæ* honey-yellow at base.

Length half an inch.

#### XYLOTA. Meig.

X. *arquata*. Blackish; *tergum* fulvous with whitish arcs.

Inhab. Mexico.

*Body* blackish: *head* above with greenish hair, below the *antennæ* with whitish hair: *vertex* blackish; tubercle of the *antennæ* black: *antennæ* black-fuscous: *hypostoma* with a naked black vitta before, and another on each side, from the anterior canthus of the eye to the tip: *thorax* with short hair; with three slender lines on the disk: *scutel* yellowish at tip: *wings* hyaline: *tergum* fulvous; first segment black; remaining segments, excepting the terminal one, with a blackish middle and whitish transverse arquated line each side: *feet*, knees and posterior *tibiæ* honey-yellow: *venter* yellowish, more dusky at tip.

Length about seven-twentieths of an inch.

Var. a. Tergum black, with transverse arquated lines: posterior margins of the segments yellow.

MILESIA. *Fabr. Meig.*

*M. barda.* With yellow hair; tergum black, yellow at base.

Inhab. Indiana.

*Body* black: *hypostoma* with silvery hair and longitudinal, polished, naked line: *antennæ* piceous: *front* covered by yellow hair: *thorax* densely covered by yellow hair, black in the middle: *scutel* piceous, covered by yellow hair: *wings* with a large fuscous spot on the middle, obsolete in the male: *poisers* piceous: *tergum* black, covered by black hair; basal segment and second segment at base covered by yellow hair: *feet* hairy; *tarsi* piceous: *posterior thighs* of the male much thickened and with their *tibiæ* arquated.

Length three-fifths of an inch.

This I formerly considered as *ERISTALIS posticatus*, Fabr. but his attributed characters of "thorax immaculatus" and "femoribus posticis dentatis" seem to prove it distinct.

SYRPHUS. *Fabr. Meig.*

1. *S. stegnus.* Blackish-blue; tergum fasciate with glaucous.

Inhab. Mexico.

*Body* black-blue : *hypostoma* with dull cinereous irregular rugosities : *antennæ*, terminal joint beneath dull honey-yellow : *wings* hyaline, between the mediastinal and postcostal nervures yellowish : *poisers* yellow : *tergum* velvet black, opaque, with polished glaucous bands, the first one interrupted ; second and third occupying the basal half of the segments, the outer margin and the narrow tip, together with a longitudinal line ; terminal segment entirely glaucous : *tibiæ* honey-yellow : *venter* cupreous.

Length less than three-tenths of an inch.

2. *S. mutuus*. Tergum yellow, with blackish bands and spots.

Inhab. Mexico.

*Head* beneath and behind plumbeous : *posterior orbits* dull yellowish : *front* and *vertex* brassy black : *hypostoma* prominent, yellow : *antennæ*, beneath honey-yellow : *thorax* olivaceous, with a blue vitta, and yellow one over the wings : *scutel* dull yellowish, paler at tip : *tergum* with five broad blackish-purple bands, concealing the incisures, and on the middle of the third and fourth segments are two small blackish spots ; terminal band somewhat trilobate : *feet* yellow ; *posterior tarsi* blackish : *venter* yellow, tinged at tip with ferruginous.

Length one-fourth of an inch.

Closely allied to *S. marginatus*, Nob. but the abdomen is much more elongated.



3. *S. ectypus*. Segments of the tergum edged with yellow and with a lateral oblique line.

Inhab. Mexico.

*Head* yellow : *proboscis* black : *vertex* blackish : *occiput* black : *posterior* and *inferior* orbits gray : *mouth*, each side and beneath black : *thorax* green-gray, with an obsolete capillary line reflecting yellowish : *scutel* honey-yellow, darker on the middle base : *poisers* yellow : *tergum* black, edged all round with yellow ; second segment with two yellow dots ; third and fourth segments with their basal edges and dorsal line yellow, and on each side a wider line originating from the base, and curving a little towards the dorsal line, abbreviated, rounded at tip and tinged with rufous ; fifth segment rufous with three black spots : *pectus* blued-black : *feet* white ; *posterior tarsi* blackish.

Length less than one-fifth of an inch.

#### ERISTALIS. *Fabr. Meig.*

*E. trifasciatus*. Thorax grayish, trifasciate ; tergum with a band ; incisures yellow.

Inhab. Indiana.

*Head* white, on the vertex a little olivaceous ; behind dark olive, with white orbits : *antennæ* with the seta naked, and with a spot above on the front elevation of the hypostoma, and mouth each side honey-yellow : *thorax* gray-olive, with three equidistant blackish bands ; middle band as broad as the

other two together; posterior band terminal: *wings* tinged with yellowish, particularly in the middle: *scutel* pale honey-yellow: *tergum* black; second segment with a broad honey-yellow band, interrupted in the middle, and with the third and fourth segments bright-yellow on the posterior margin: *feet* rufous, tibiae paler at base; posterior thighs blackish at base.

Length over half an inch.

VOLUCELLA. *Geoff. Meig.*

1. *V. violacea*. Dark violaceous; hypostoma whitish.  
Inhab. Mexico.

*Body* blackish-violaceous: *hypostoma* dull honey-yellow, with small hairs reflecting whitish: *thorax*, each side, and *scutel* paler: *wings* blackish at base; this colour is confined to the basal cellules and the costal margin to the middle.

Length ♂ thirteen-twentieths of an inch.

The eyes of the specimen are in contact on the vertex.

2. *V. postica*. Obscure violaceous; hypostoma whitish with a lateral black line.

Inhab. Mexico.

*Body* blackish-violaceous: *head* whitish, tinged with obscure yellowish: *antennae* fuscous: *hypostoma* with a black line each side: *orbits* behind and above silvery: *thorax* each side and before the *scutel*, dull honey-yellow: *scutel* honey-yellow: *wings*

hyaline, transverse nervures of the middle margined with blackish: *tergum* yellowish-violaceous, darker on the tips of the segments; third and fourth segments with a small white spot on each side at their bases: *venter* with a yellow disk: *feet* blackish: *tibiae* dirty honey-yellow.

Length half an inch. ♂

Viewed from before, the posterior segments of the tergum have a hoary appearance, in consequence of having numerous short hairs of that colour. The eyes in the specimen are distant on the vertex.

3. *V. marginata*. Black, head white; tergum with black bands.

Inhab. Mexico.

*Head* white; *vertex* black; *face* with a black line extending to the tip of the hypostoma: *hypostoma* with a line each side, and all beneath black: *orbits* beneath white, behind glaucous: *antennæ* dark honey-yellow, seta very densely plumose, appearing like a solid mass, black: *thorax* with a vitta on each side over the wings, and two spots at base, yellowish-white: *wings* with the middle cross nervures margined with dusky: *tergum* pale yellow with a black dorsal vitta, and black posterior margins to the segments: *venter* whitish, at tip black: *feet* black; *tibiae* at base white; *tarsi* at base tinged with rufous.

Length seven-twentieths of an inch, the other sex half an inch.

If it be true that the male, in this genus, is distin-

guished invariably by the contact of the eyes on the vertex, then the male of the present species is nearly double the size of the female, and the former has the more densely plumose antennæ; in this case also the male of the *violacea*, has the loosely plumous antennæ, and the female of the *postica* has the loosely plumous antennæ.

PSILOPUS. *Meig.*

1. *P. femoratus*. *Dolichopus femoratus*, Nob. Jour. Acad. Nat. Sc. vol. iii. p. 86.

This brilliant species varies in the colour of its thighs, which in my description are stated to be green; a specimen taken in Indiana has whitish thighs.

2. *P. patibulatus*. Nob. *Dolichopus patibulatus*, Journ. Acad. Nat. Sc. vol. iii. p. 87.

This species also occurs in Mexico.

CHRYSOTUS. *Meig.*

1. *C. nubilus*. Blackish; feet dull honey-yellow. Inhab. Indiana.

*Body* blackish: *head* dull plumbeous: *thorax* cinereous, with three brown lines: *wings* immaculate: *poisers* white: *feet* dark honey-yellow: *thighs* black at base and above.

Length rather over one-tenth of an inch.

2. *C. concinnarius*. Green brassy: tergum blue towards the tip.

Inhab. Mexico.

*Head* violaceous, with a cinereous reflection: *palpi* with a cinereous reflection: *antennæ* black: *thorax* green with a gray olivaceous reflection: *wings* hyaline, obsoletely tinged with yellowish on the costal margin: *poisers* white: *tergum* with a gray reflection, brassy-green at base, and violaceous towards the tip: *thighs* green: *tibiæ* whitish.

Length one-fourth of an inch.

3. *C. abdominalis*. Green, polished; feet white.

Inhab. Indiana.

*Body* bright green, brilliant: *hypostoma* purple: *antennæ* yellow: *thorax* immaculate: *poisers* yellow: *tergum*, first segment at base with an obsolete yellowish line: *feet* white: *venter* white, at tip blackish-purple.

Length ♂ one-tenth of an inch.

#### MEDETERUS. *Fisch.*

1. *M. lateralis*. Tergum pale, with a lateral series of polished spots.

Inhab. Indiana.

*Head* silvery: *proboscis* and *antennæ* yellowish, seta of the latter with the first joint very short: *eyes* (when recent) green polished, with a cupreous reflection: *thorax* green, somewhat pruinose, with a dorsal rather compound vitta: *wings* hyaline: *poisers* whitish: *tergum* dull yellowish, with a series of

brassy spots on each side, posterior two largest: *feet* and *venter* whitish.

Length nearly three-twentieths of an inch.

The dorsal vitta is impressed behind.

2. *M. punctipennis*. Thorax variegated; wings with brown spots.

Inhab. Mexico.

*Thorax* olive-brown, trilineate; middle line slender, dull yellowish, obsoletely zigzag; outer lines cinereous with black points: *scutel* brown, cinereous in the middle: *wings* hyaline, with many irregular fuscous spots, hardly to be traced into four bands: *poisers* yellow: *tergum* cupreous, posterior margins of the segments blackish: *feet* white; *tarsi* blackish.

Length nearly one-fifth of an inch.

#### DOLICHOPUS. *F. Meig.*

*D. abdominalis*. Green; abdomen rufous.

Inhab. Indiana.

*Head* silvery: *antennæ*, first and second joints black, third —: *thorax* polished green: *wings* hyaline: *abdomen*, excepting the terminal joint, rufous: *halteres* white: *pleura* and *pectus* blackish, pruinose: *feet* white; *tarsi* dusky.

Length less than three-twentieths of an inch.

#### SCENOPINUS. *Latr. Fabr.*

*S. nubilipes*. Black; thorax submetallic; thighs black.

Inhab. Indiana.

*Body* black : *head* and *thorax* with numerous short hairs, giving it a granulated appearance, the latter with an obsolete rufous lateral tubercle near the humerus, disk slightly metallic : *wings* very slightly dusky : *poisers* blackish : *tergum* transversely grooved : *thighs* black ; *tibiæ* dull honey-yellow ; *tarsi*, particularly the posterior pair, whitish.

Length less than one-fifth of an inch.

Closely allied to *S. pallipes*, Nob. but may be distinguished by the colour of the feet.

#### CONOPS. *Fabr.*

*C. tibialis.* Black; two-thirds of the wing fuscous; *tibiæ* white at base.

Inhab. Indiana.

*Body* black, with short hairs : *head* yellow : *vertex* black : *front* with a longitudinal black line, bifarious at the base of the antennæ : *hypostoma* with an impressed saggitate spot : *antennæ* black, terminal joint beneath obscurely rufous : *proboscis* black : *mouth*, each side and beneath, black : *occiput* black, with a white reflection : *thorax* black ; *humeral tubercle* with a whitish reflection : *scutel* and *metathorax* black, the latter with a whitish reflection : *wings* two-thirds fuscous ; central cross nervure very distinct : *poisers* yellow, black at the base of the petiole : *tergum*, segments edged behind with whitish, or yellowish, on the basal suture the white band is com-

mon; near the tip with more or less of a whitish reflection: *feet* black; *tibiæ* white at base, anterior and intermediate pairs near the tip with a silvery reflection.

Length from one half to three-fifths of an inch.

Resembles *C. sagittaria*, Nob. but differs in several characters.

#### PHASIA. Latr.

1. *P. atripennis*. Black; abdomen and base of the thighs ferruginous.

Inhab. Indiana.

*Mouth* and *hypostoma* pale yellowish: *proboscis* black: *palpi* yellowish: *orbits* yellow, somewhat golden: *antennæ* black, third joint hardly longer than the second, subovate: *front* with a much dilated velvet-black vitta: *thorax* black, with a dilated golden vitta each side before: *wings* black, opaque, gradually paler on the thinner margin; apical cross nervure confluent with the externo-medial nervure before the tip; *poisers* and *scale* yellow: *feet* black; *thighs* at base, *coxæ* and *abdomen* ferruginous.

Length three-tenths of an inch.

The wing nervures are like those of *P. semicinerea*, Meig.

2. *P. jugatoria*. Black, abdomen ferruginous; thorax with golden lines before.

Inhab. Indiana.



*Front* golden, with a dilated fuscous vitta : *hypostoma* whitish, with two black lines each side descending from the antennæ : *antennæ* fuscous, first joint very short, third ovate, longer than the second : *proboscis* blackish : *palpi* yellow : *thorax* black, a transverse golden line before the middle, from which proceed five golden lines to the anterior margin, the lateral ones more dilated and anterior to the *wings* black, opaque ; posterior margin abruptly hyaline ; apical cross nervure rectilinear, confluent with the apex of the wing at the tip of the externo-medial nervure : *poisers* and *wing scale* pale ferruginous : *abdomen* pale ferruginous, black at tip : *feet* black ; *thighs* at base, and *coxæ* pale ferruginous ; *posterior tibiæ* deeply ciliated with dilated scale-like hairs.

Length three-tenths of an inch.

This cannot be the *THEREVA lanipes* of Fabr. of which the thoracic lines are said to be white, and the abdomen black, immaculate ; neither can it be the *THEREVA pilipes*, Fabr. which is said by Wiedemann to be a *PHANIA*, for the antennæ of our species have not the third joint "elongated and linear" as in that genus. It seems also allied to *DICTYA pennipes*, Fabr. which, however, has a large ferruginous spot on the wing.

#### OCYPTERA. *Fabr.*

*O. arcuata.* Wings blackish on the costal margin ; apical cross-nervure arcuated at its origin.

Inhab. Indiana.

*Body* blackish: *hypostoma* yellowish-white; *orbits*, excepting behind and on the vertex, honey-yellow with a gray reflection: *front* with a dilated blackish vitta: *antennæ* with the base of the third joint obsolete honey-yellow beneath: *thorax* with yellow hair before the wings: *wings* hyaline; costal margin blackish; terminal cross-nervure not angulated at its origin: *halteres* yellowish: *wing-scales* white: *feet* black; base of the thighs and coxæ yellowish: *tergum* pale yellowish; basal segment with the base and dorsal line black; second segment with a large black triangle; third segment with a gray reflection each side; remaining part black: *venter* pale yellowish, at tip black.

Length three-tenths of an inch.

This may readily be distinguished from other species, by the form of the apical cross-nervure.

#### MILTOGRAMMA. Meig.

*M. trifasciata*. Tergum black. fasciate with gray.

Inhab. Indiana.

*Hypostoma* and *posterior* and *inferior orbits* honey-yellow, with a silvery reflection: *antennæ* honey-yellow; *seta* with dense short hairs: *frontal vitta* of equal breadth: *thorax* gray, with many obsolete abbreviated blackish lines: *scutel* gray: *tergum* black; segments, except the basal, silver-gray

on the basal half: *venter* the same: *feet* black; *thighs* on the exterior side with a gray reflection: *wings* tinged with brownish.

Length less than half an inch.

GONIA. *Meig.*

*G. frontosa.* Front very prominent, abdominal segments whitish at base.

Inhab. Upper Missouri.

*Body* black, with rigid hairs: *head* pale yellowish-white, sericeous: *front* very prominent, gibbous: *eyes* placed very far back, oblong-oval, chestnut-brown: *stemmata* black: *antennæ* blackish-cinereous; *seta* reclivate, robust, terminal joint longest: *proboscis* black: *palpi* pale: *thorax* immaculate: *scutel* pale brownish: *wings* dusky; *nervures* blackish-brown; *costal margin*, towards the base brownish: *feet* black: *tergum* each side near the base with a large, obsolete, reddish-brown spot; segments whitish at base.

Length nine-twentieths of an inch.

Occurred rather common at Engineer cantonment on the Missouri, late in March, on a wounded tree from which much sap had exuded.

MESEMBRINA. *Meig.*

*M. pallida.* Honey-yellowish; wing *nervures* margined.

Inhab. Indiana.

*Body* dull honey-yellowish: *head* pale yellow: *front* with a reddish-brown vitta: *antennæ* very short, hardly half as long as the hypostoma, terminal joint oval: *nervures* margined with brownish: *pectus*, *pleura* and *feet* paler.

Length two-fifths of an inch.

#### CORDYLURA. Fall.

*C. qualis*. Dark cinereous, hairy; thorax trilineate; head with a cinereous reflection.

Inhab. Indiana.

*Body* blackish-cinereous: *head* hemispheric, dark plumbeous, with a silvery reflection: *eyes* approximate above: *antennæ* blackish, rounded at tip; bristle short, two-jointed, thickened at base: *palpi* hairy, black, dilated at tip: *proboscis* rather long, slender, black: *thorax* obscurely trilineate with black, and with two less distinct oblique lines each side: *wings* slightly dusky: *tergum* very hairy, black, when viewed from behind with a gray reflection, except on the dorsal line and sutures: *feet* hairy, black.

Length ♂ one-fifth of an inch.

#### DENIA. Meig.

1. *D. vertebrata*. Abdomen conic, pale yellowish, with a dorsal black line and tip.

Inhab. Indiana.

*Orbits*, except behind, silvery: *front* fuscous.

*hypostoma* pale livid, with a dark lateral line bounding the orbits: *antennæ* yellowish, darker at base; *seta* blackish: *thorax* blackish: *tergum* yellowish-white with a black line, which is somewhat dilated at the tip of each segment; tip of each segment and tail black: *feet* black; *coxæ* piceous.

Length half an inch.

Nervures of the wings arranged like those of *D. rustica*, Fabr.

2. *D. analis*. Abdomen yellow, blackish at tip.

Inhab. Indiana.

*Head* silvery; *front* tinged with dull yellowish: *antennæ* yellowish, tip of the third joint black: *palpi* yellow: *proboscis* black, yellow at tip: *thorax* black, with a somewhat golden reflection; a dull yellow line each side, passing over the origin of the wings: *wings* hyaline, a little dusky, yellowish at base: *scutel* yellow: *pectus* black, with a whitish band before: *feet* yellowish; *tarsi* black: *abdomen* pale yellow, tip fuscous.

Length seven-twentieths of an inch.

The proboscis and palpi are much elongated.

#### SAPROMYZA. Fall.

1. *S. connexa*. Pale honey-yellow; head whitish.

Inhab. Indiana.

*Head* whitish: *antennæ* pale honey-yellow, terminal joint rounded: *eyes* greenish, somewhat gild-

ed : *thorax* and *scutel* honey-yellow : *wings* with a slight yellowish tinge : *tergum* paler than the thorax : *feet* white.

Length three-twentieths of an inch.

Closely resembles *S. flava*, Linn. of Europe, but is much larger. The *S. flava* is also an inhabitant of this country.

2. *S. bipunctata*. Yellowish; wing with spots and costal margin fuscous.

Inhab. Mexico.

*Body* pale honey-yellow : *scutel* with two black points on the posterior edge : *wings* hyaline ; costal margin beyond the postcostal nervure, and extending in breadth a little over the subcostal nervure, fuscous; near its tip it extends into the wing so as to form a spot on the externo-medial nervure, this nervure and the interno-medial nervure have each a spot at tip : the two cross-nervures margined : *tergum* more dusky at tip, with an obsolete blackish dorsal line, and posterior margins of the segments.

Length one-fifth of an inch.

*Descriptions of North American* DIPTEROUS IN-  
SECTS. *By* THOMAS SAY.

[Continued from page 178.]

ORTALIS. *Fall.*

1. *O. marginata*. Nervures margined with fuscous.

Inhab. Indiana.

*Body* dull honey-yellow: *front* somewhat fulvous: *hypostoma* with a black line under each antenna: *thorax* yellowish-gray, with two dorsal black lines, exterior to which are three abbreviated lines: *scutellum* immaculate: *wings* with the nervures margined with fuscous; *costal margin* fuscous, with a whitish spot near the base, extending into a band, another hyaline spot before the tip: *pleura* honey-yellow: *feet* pale: *tergum* black; first and second segments chiefly honey-yellow; remaining segments gray at base.

Length three-tenths of an inch.

Closely allied to the genus PLATYSOMA, and is a fine species.

2. *O. ligata*. Wings quadrifasciate with fuscous.

Inhab. Mexico.

*Body* blackish: *head* ferruginous, tinged with glaucous behind and on the vertex: *thorax* blackish-plumbeous: *wings* white, subopaque, with four fus-

cous bands; the first a little oblique, across the neck of the wing; second from the tips of the mediastinal and postcostal nervures, and proceeding a little obliquely, so as to be bounded posteriorly by the middle cross nervure; third, perpendicular to the costal margin, and covering the posterior cross nervure; fourth, terminal, slightly connected on the costal edge with the third: *poisers* white: *tergum* coppery-black: *feet* black; *knees* and *tarsi* ferruginous.

Length three-twentieths of an inch.

3. *O. trifasciata*. Wings hyaline, trifasciate with fuscous.

Inhab. United States.

*Head* blackish-rufous: *thorax* brassy, polished: *scutel* rather darker than the thorax: *wings* with a brown fascia rather before the middle, hardly to be traced to the thinner margin, and not passing over the middle cross nervure; another band passing over the other cross nervure, and nearly parallel to the first; tip brown, as broad as the other bands, and connected to the second band by the costal margin: *feet* honey-yellow; *thighs* dusky at base: *abdomen* greenish, towards the tip tinged with cupreous.

Length one-fifth of an inch.

4. *O. vau*. Blackish; wings with about three bands and tip fuscous.



Inhab. Ohio.

*Body* dark cinereous, with numerous fuscous points and spots: *antennæ*, terminal joint piceous: superior orbits and band above the *antennæ* piceous: *vertex* and *front* blackish: *poisers* whitish: *wings* hyaline, near the base a fuscous band much paler in the middle; another somewhat dislocated band passes over the two cross nervures, the inferior or dislocated portion points to a costal spot beyond the middle, and if continued to it would form the letter V, this band is also much paler in the middle; tip fuscous.

Length more than one-fifth of an inch.

The circumstance of the wing bands being paler in the middle, gives the costal margin the appearance of having four equal, equi-distant spots.

The inferior dislocated portion of the second band, is sometimes so extended as almost to join the third costal spot.

When recent, the eyes are sanguineous, with a longitudinal, pale, narrow line.

It occurred in plenty early in August.

#### TRYPETA. *Meig.*

1. *T. electa.* Thorax lineate with bright yellow; wings fasciated.

Inhab. Indiana.

*Head* pale yellowish: *thorax* honey-yellow; a line before the wings bright yellow, another over the

wings confluent behind with the bright yellow scutel, and another on the middle abbreviated before: *wings* hyaline; a brown V on the middle, the posterior limb extending along the costal margin, to the tip or a little below; a brown point on the costal margin within the V; near the base a brown band parallel to the basal limb of the V: *poisers* pale yellow: *abdomen* pale yellow, *ultimate* segment with a black dot each side: *pleura* with a yellow line each side.

Length three-tenths of an inch.

2. *T. obliqua*. Yellowish; wings with oblique bands; tergum with two series of black dots.

Inhab. Indiana.

*Body* pale brownish-yellow: *wings* with a definite yellowish costal margin, and three very oblique bands proceeding from the costal margin; basal band terminating on the thin margin midway between the anal and axillary nervures; middle band terminating at the tip of the anal nervure; outer band terminating at tip of the interno-medial nervure; costal margin ending a little beyond the externo-medial nervure; the bands are edged exteriorly with a black line, which is dilated into a spot at tip: *thorax* with two black dots behind: *scutel* yellow, pale: *tergum* with a series of black dots each side.

Length one-tenth of an inch.

The wing bands are parallel and equi-distant, the intervals are as broad as the bands.

3. *T. caliptera*. Wings black, with hyaline points, apical edge white.

Inhab. Indiana.

*Body* dull brownish, or dirty honey-yellow: *hypostoma* with two deep black dots: *wings* rounded, black, with very numerous, sub-equal, hyaline points, those of the thinner margin rather larger; apical margin white: *poisers* yellow at tip: *tarsi* paler than the leg.

Length more than one-fifth of an inch.

#### CHLOROPS. *Meig.*

*C. proximus*. Yellow; thorax trilineate with black.

Inhab. Indiana.

*Body* yellow: *antennæ* black: *vertex* with a black triangle, elongated before almost to the base of the *antennæ*: *occiput* with a large black spot, like a dilated continuation of the triangle of the vertex: *thorax* with three black vittæ: *scutel* immaculate: *wings* hyaline: beneath the scutel a large black spot: *tergum* dull yellowish; segments dusky at tips; second segment with a black spot each side at base: *venter* tinged with green: *feet* tinged with honey-yellow.

Length less than three-twentieths of an inch.

Closely allied to *C. lineatus* of Europe, but differs in the colour of the tergum.

EPHYDRA. *Meig.*

*E. hians.* Cinereous; front dark bluish.

Inhab. Mexico.

*Body* dark cinereous: *front* and *vertex* dark bluish: *antennæ* black-brown; second joint as long as the third; seta thick at base, slender at tip: *hypostoma* hairy: *thorax* with a slight green reflection: *scutel* also with a slight green reflection: *tergum* the same.

Length nearly one-fifth of an inch.

LONCHŒA. *Fall.*

*L. polita.* Black; tarsi white.

Inhab. Indiana.

*Body* shining black, with a very slight tint of blue hardly perceptible: *antennæ* as long as the hypostoma; terminal joint more than three times as long as the two others together, at its base under the seta obscure honey-yellow: *hypostoma* with a slight gray reflection: *wings* hyaline; *nervures* pale brownish: *tarsi* yellowish-white, last joint dusky.

Length more than three-twentieths of an inch.