

## APPENDIX.

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### PART I.—NATURAL HISTORY.

#### § 1. ZOOLOGY, BY THOMAS SAY.

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#### A. CLASS POLYPI—ORDER VAGINATI.

##### CHONEMBLEMA.

##### *Generic Characters.*

POLYPIFER simple, lapideous, forming a somewhat irregular mass, and composed of parallel tubes. Each tube contains a series of inserted, infundibuliform diaphragms, constituting a continued siphuncle, which occasionally inosculates, through the parietes of the tube, with the siphuncles of the proximate tubes.

##### *Observations.*

By the general character of this interesting fossil, it might seem to be, in some degree at least, allied to the genus FAVOSITES of Lamarck, but it is widely distinguished by the extraordinary conformation of the interior of the numerous tubes of which it is composed. The diaphragms, unlike those of FAVOSITES, may be compared to a series of funnels inserted into each other and connected together by their siphuncular terminations, their superior peripheries being so expanded as to join the inner walls of the tube, thus interrupting the caliber of the latter into numerous.

cells. This arrangement of the interior of the tubes is not unlike, in principle, to that of some of the multilocular shells, such as *SPIRULA* for instance, but the diaphragms are less symmetrical and of a more acute concavity. The communication between the neighbouring tubes is another remarkable character of this fossil genus, which, however, it possesses in common with *FAVOSITES* and a few other genera, but these lateral openings are few in number, and do not seem to exhibit any regularity in their distribution. Linné would probably have placed this fossil in his genus *MILLEPORA*, but its proper situation in the modern system is probably next in order to *FAVOSITES*.

*Specific Character.*

*C. intricata.* Tubes cylindric, small, separated in the mass by nearly the distance of their diameters; siphuncle very obvious at the opening of the tubes on the surface, and placed on one side. Pl. 14, fig. 1, nat. size, *a.* magnified.

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## B. CLASS PISCES.

### PLATIROSTRA EDENTULA, *Lesueur.*

In addition to the detailed description by Mr. Lesueur, in the first volume of the Journal of the Academy of Natural Sciences of Philadelphia, the following characters may serve to complete the descriptive representation of this singular fish, as it appears in the living state.

*Colour* above livid-brown, immaculate on the body, but with small blackish spots placed in circles or ovals on the head as far back as the gill opening, on the upper part and sides of the rostrum, about the eyes and on the unwrinkled

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*Ampullaria depressa*



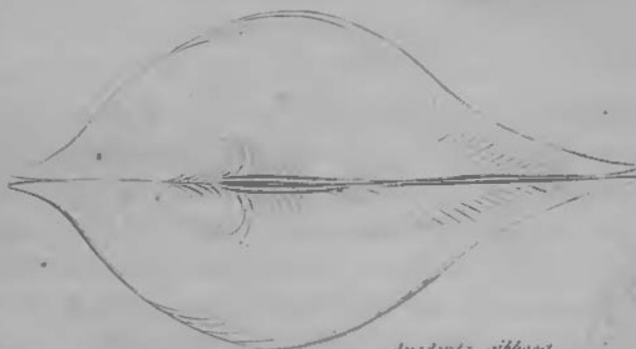
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*Chemnitzia intricata*

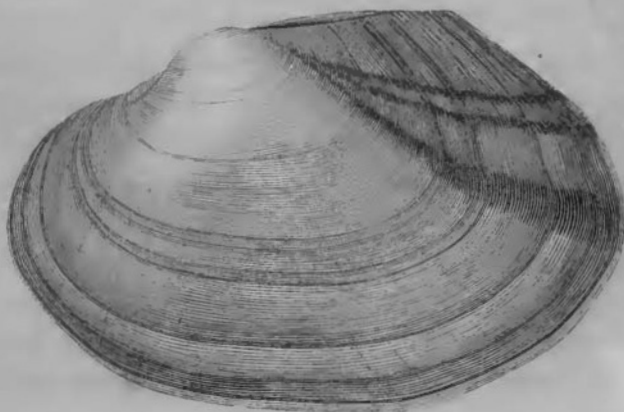


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*Anadonta gibbosa*

3





part of the gill cover; over the upper jaw and on the wrinkled part of the gill cover, with abbreviated lines of small blackish spots; *belly* white, with a few spots on the middle; *fins* dusky, pectorals and ventrals white before and behind; *gill covers* capacious, broadly united beneath, and each side tapering gradually to a somewhat obtuse point which nearly attains to the line of the anterior origin of the ventral fins; on the upper basal portion of the gill cover, and extending for a short distance along the side of the head, the surface is wrinkled to permit the great dilatation of the part; *mouth* entirely destitute of teeth, or of roughness to the touch; *tongue* with large dusky spots; *jaws* within margined with dusky; posterior bone of the gill opening covered with papillæ pointing backwards; a yellow oblong-oval cartilaginous bone on the tail beneath the termination of the caudal fin.

Total length four feet eight inches.

Rostrum, from the anterior canthus of the eye to the tip, fourteen and a half inches.

In the above description we have endeavoured to state such characters chiefly, as could not be drawn from the dried specimens, and that have therefore been hitherto wanting.

In the gills of this fish were several Lamprey Eels, (*Petromyzon*), of a small species. The Paddle-fish is frequently seen to leap out of the water in the manner of the Sturgeon. They grow to a somewhat larger size than the measure above recorded. The *Polyodon* of Lacepede we have not seen.

## C. CLASS MOLLUSCA.

The shells described in the following pages constitute but a small portion of the collection obtained during the expedition. Those collected on St. Peter's river were packed in a box, and intrusted to the men who returned in canoes to Fort St. Anthony; this box has not yet been received, and is supposed to be lost. On the subsequent part of the route I put all the univalves collected, in a canteen which I constantly carried, but which was finally lost at Mackinaw. Another parcel of shells sent from Chicago has not since been heard of. To this statement of our losses I may add a still more important one, consisting of a box which contained skins of quadrupeds, birds, reptiles, and fishes.



## HELIX.

1. *H. harpa*. Shell conic, reddish-brown; *whorls* four, convex, with numerous elevated, subequidistant, equal, lameliform, acute lines across, the interstitial spaces flat and wrinkled; *aperture* suborbicular, truncated by the penultimate whorl, and very little oblique; *labrum* simple; *umbilicus* small, nearly concealed by the base of the labrum.

Length rather more than one-tenth of an inch.

Inhabits the North-west Territory.

The elevated lines on this shell give it a very handsome appearance, and readily distinguish it from any of our native species that I have seen. The European analogue is the *aculeata* of Muller, but our shell is destitute of recurved points on the lameliform lines. Pl. 15, fig. 1.

*Immature Paper*

2. *H. porcina*. *Shell* depressed, yellowish-brown; *epidermis* rugose, with minute, very numerous bristles; *whorls* rather more than four, depressed above, beneath rounded, forming a very obtuse angle rather above the centre of the whorl; *umbilicus* open, rather small, profound; *labrum* simple.

Breadth rather more than three-tenths of an inch.

Inhabits North-west Territory. Pl. 15, fig. 2.

3. *H. fraterna*. *Shell* convex, brownish-horn colour, minutely hirsute; *whorls* five, rounded; *umbilicus* partially or entirely closed by the termination of the labrum; region of the umbilicus indented; *aperture* much contracted by the labrum; *labrum* reflected, white, unarmed; its outer edge not projecting beyond the curve of the whorl; its inferior angle extends to the centre of the base of the shell; *labium* with a strong, prominent, oblique, compressed, white tooth.

Breadth one-third of an inch.

Inhabits Pennsylvania.

I obtained a specimen of this shell several years ago, but supposing it to be an accidental variety of the *hirsuta*, I laid it aside without further notice. Since then, however, Messrs. Hyde and Mason have presented numerous specimens of the same species to the Academy, having found it rather common; I therefore no longer hesitate to consider it as a distinct species. It resembles *HELIX monodon* of Mr. Racket, (Trans. Linn. Soc. Lond. vol. 13, pl. 5,) in the conformation of the aperture, but that shell is represented as being largely umbilicated, and its labrum does not extend near to the centre of the base, as it does in our species. Pl. 15, fig. 3.

4. *H. diodonta*. *Shell* somewhat depressed; *spire* convex, very little elevated; *whorls* five, rounded, regularly

but not prominently wrinkled, and grooved transversely; *aperture* moderate; *labrum* reflected, with a slightly projecting dentiform callus near the base on the inner edge; *labium* with an oblique tooth on the middle; *umbilicus* rather large, profound, exhibiting all the volutions.

Breadth rather more than seven-tenths of an inch.

This shell inhabits the state of New York. It is closely allied to *H. profunda* nob. but may be distinguished by its smaller size and armed labium. Its aperture also is much less dilated than that of the *profunda*. Pl. 15, fig. 4.

*H. perspectiva* nob. is common in the North-west Territory, it varies in being smaller, and in the circumstance of the labrum embracing a somewhat smaller proportion of the penultimate volution.

*H. arborea* nob. common in this territory.

*H. chersina* nob. A variety of this species is not uncommon in the North-west Territory. It differs in the greater rotundity of the upper part of each whorl, and in the somewhat less rounded or more flattened figure of the labrum. It may, however, prove to be a distinct species, when many specimens of *chersina* can be had to compare with it.

*H. alternata* and *albolabris* nob. On our return homeward these two species were not found until we arrived in the secondary country towards the eastern extremity of Lake Superior.

*H. thyroidus* nob. Falls of Niagara.

*H. ligera* nob. North-west Territory.

#### VITRINA, *Draparn.*

*V. pellucida* of authors. This shell was first found near Coldwater Lake in latitude  $48\frac{1}{2}^{\circ}$  north, under stones, fallen

timber, &c. It afterwards frequently occurred in similar situations, until we approached Lake Superior, when it was no more seen. Like its congeners the inhabitant is much too large to retract within the shell, and a great portion of the body is therefore constantly exposed. No species of this genus has been hitherto found in this country; the discovery of this shell is therefore the more interesting. The specimens which we collected do not appear to differ in any respect from those of Europe.

### BULIMUS, *Brug.*

*B. lubricus* of authors. This species occurred under stones, &c. on the shores and islands of Lake Winnepeek and Lake of the Woods. It is altogether similar to the European specimens of this species, excepting that the labium is somewhat more transverse.

### PUPA.

*P. modesta.* *Shell* dextral, suboval, minutely wrinkled; *apex* obtuse; *whorls* six; *umbilicus* distinct; *aperture* obliquely subovate; *labium* with a prominent compressed semioval tooth equidistant from the extremities of the labrum, and a somewhat conic one rather below the middle of the columella; *labrum* not reflected, joining the preceding whorl at its upper extremity with a curve; bidentate, lower tooth placed opposite to that of the middle of the labium, the others smaller and placed a little above.

Length less than one-tenth of an inch.

Inhabits the North-west Territory. Pl. 15, fig. 5.

Var.  $\alpha$ . The smaller tooth of the labrum obsolete or wanting.

## SUCCINEA.

1. *S. avara*. *Shell* suboval, pale reddish-yellow, subdiaphanous, fragile, covered with an earthy crust; *whorls* three, minutely wrinkled; *body whorl* very large; *spire* small; *aperture* large, subovate, about two-thirds of the whole length of the shell.

Length three-twentieths of an inch.

Inhabits the North-west Territory.

This small species of *Succinea* occurs in humid places, very frequently under stones and near the water. The shell is always completely incrustated with a coating of earth. It may at once be distinguished from either the *ovalis* or *campestris* by its very small size. Pl. 15, fig. 6.

2. *S. obliqua*. *Shell* oblong-oval, nearly pellucid, pale amber-coloured; *whorls* three, very obliquely revolving, distinctly wrinkled; *spire* a little prominent; *aperture* suboval, somewhat oblique.

Length seven-tenths of an inch; length of the aperture less than half an inch.

Inhabits Pennsylvania.

Of this fine species, found in the vicinity of Philadelphia, many specimens were some time since presented to the Academy Nat. Sc. by Messrs. Hyde and Mason, and we obtained a specimen near the Falls of Niagara.

It may be at once distinguished from either the *ovalis* or *campestris* by the much greater obliquity of the revolutions of its whorls. It is very like the *HELIX putris* of Linn. but it is more than double the size of that species. It may, however, be a variety of that shell. Pl. 15, fig. 7.

## PLANORBIS.

1. *P. deflectus*. Shell dextral, depressed; *whorls* nearly five, minutely and regularly wrinkled across, wider than long, with a much depressed rotundity above, descending to an acute lateral edge below the middle; *spire* not impressed; *suture* indented, but not profoundly; *beneath* a little concave in the middle, exhibiting one-half of each volution to the apex; whorls flattened, slightly rounded; *aperture* declining very much, suboval, the superior portion of the labrum considerably surpassing the inferior portion and taking its origin a little above the carina; inferior portion of the labrum terminating on the middle of the inferior surface of the penultimate whorl.

Greatest breadth two-fifths of an inch.

This shell was presented to me by Dr. Bigsby, who collected many specimens in the waters of the North-west Territory.

It resembles the *exacuus* nob. but the aperture does not embrace so large a proportion of the preceding volution, and the volutions on the inferior portion of the shell are consequently more obvious, and the umbilicus is but slightly indented; the upper portion of the labrum does not extend so far beyond the lower portion, the aperture declines much more, and the carina is less acute. It has also an affinity for the *carinatus* of Europe, but in addition to other differences the aperture of that species declines but little, if at all, and the carina is an elevated revolving line. The aperture embraces the penultimate volution about as much as in the *rotundatus* of Europe, to which our shell is also allied, but differs in its declining aperture, and the less degree of rotundity of its whorls on their upper surface. Pl. 15, fig. 8.

2. *P. corpulentus*. *Shell* dextral; *whorls* more than three, rather rugged with coarse wrinkles, much higher than wide; superior surface much flattened, and edged by an abrupt acute line, which is distinct to the aperture; sides hardly rounded, and terminated below by another abrupt edge, which is not quite so definite and acute as the superior one; *spire* slightly concave; *umbilicus* exhibiting a portion of each of the rapidly retiring whorls to the apex; *aperture* longer than wide, the superior part extending higher than the preceding volution and the inferior portion declining much lower than the inferior line of the same volution.

Greatest breadth three-fourths of an inch.

Length of the aperture nearly half an inch.

Length of the penultimate whorl near the aperture rather more than three-tenths of an inch.

Inhabits Winnepeek river, Winnepeek lake, Lake of the Woods, and Rainy lake; common. Pl. 15, fig. 9.

Of this species I collected numerous specimens, but had the misfortune to lose them all, as well as a great number of interesting terrestrial and fluviatile shells, on our return to the settlements, and I am indebted to the liberality of Dr. Bigsby for the individual above described. It is closely allied to *trivolis*, nobis, but is much less rounded on the sides of the whorls, the carinæ are more prominent, the upper side is much more horizontally flattened, the labrum is less rounded, and the whole shell is larger and higher in proportion to its width, and the aperture extends both above and below the penultimate whorl.

*P. campanulatus*, nob. Falls of Niagara.

*P. trivolis*, nob. North-west Territory and Falls of Niagara.

*P. parvus*, nob. is common in the waters of the North-

west Territory, and may be found in plenty crawling upon the rocks near the shores. They vary in size from those found in the eastern states, being less than half as large.

*P. armigerus*, nob. St. Peter and Red rivers, common.

*P. bicarinatus*, nob. North-west Territory, rather common.

### LYMNEUS.

*L. megasomus*. Large, dilated suboval; *spire* short, rapidly diminishing, acute; *whorls* about five, rounded, obtusely wrinkled across; body-whorl large, the wrinkles very obvious; *suture* deeply impressed; *aperture* sub-ovate, much longer than the spire, within chesnut-brown; *columella* white.

Length more than one and six-tenths of an inch.

Length of the aperture more than one inch.

Greatest diameter one inch.

This remarkably large and fine species was found in Bois blanc Lake, North-west Territory, by Dr. Bigsby, to whom I am indebted for specimens. The colour is brownish, sometimes lineated across the body whorl with dull greenish and pale ochraceous; and the chesnut-brown colour of the interior of the shell, combined with its large dimensions, distinguish this species from all others yet discovered in this country. Pl. 15, fig. 10.

*L. emarginatus*, nob. from Lake Namakan, north of Lake Superior, collected by Dr. Bigsby.

*L. elongatus*, nob. Rainy Lake and Seine river, Dr. Bigsby.

*L. desidiosus*, nob. Falls of Niagara.

## PHYSA.

*P. heterostropha*, nob. North-west Territory.

## VALVATA.

*V. sincera*. *Shell* subglobose-conic; *whorls* nearly four, accurately rounded, finely and regularly wrinkled across; *aperture* not interrupted by the penultimate whorl nor appressed to it, but merely in contact with it, the labrum not diminished in thickness at the point of contact; *umbilicus* large, exhibiting the volutions.

Breadth less than one-fifth of an inch.

Inhabits North-west Territory.

For this species I am indebted to Dr. Bigsby. It is very similar to the *tricarinata*, nobis, but is destitute of carinated lines, and the umbilicus is rather larger; it differs from the *obtusa* of Europe, also, in the much greater magnitude of the umbilicus. Pl. 15, fig. 11.

## PALUDINA.

*P. limosa*, nob. North-west Territory.

## AMPULARIA.

*A. depressa*. *Shell* ventricose, subglobular, obsoletely banded with obscure green; *whorls* four, slightly wrinkled; body whorl more prominent above, somewhat flattened towards the suture, of a pale olivaceous colour, which is almost concealed by numerous, unequal, longitudinal and transverse greenish and brownish lines; *spire* very much depressed; *aperture* suboval, within somewhat glaucous,



*Lymnaea megalosoma*

11

*Talvula sincera*

8

*Planorbis deplanatus*

4



*Helix diastenta*

9



*Planorbis corpulentus*

6



*Succinea avana*

1



*Helix harpa*

5



*Pupa mactata*

2



*Helix perrina*

7



*Succinea obliqua*

3



*Helix fruticosa*



on the margin exhibiting the bands distinctly; *labrum* simple, as much rounded above as below; *umbilicus* small, nearly closed.

Greatest width one inch and nine-twentieths.

Total length one inch and a half.

Length of the aperture one and one-fifth of an inch nearly.

Inhabits East Florida.

During an excursion to East Florida, in company with Messrs. Maclure, Ord, and T. Peale, I obtained a single dead and imperfect specimen of this interesting shell. It occurred in a small creek, tributary to St. John's river, and on the plantation of Mr. Fatio. Captain Le Conte of the Topographical Engineers, has since presented me with a perfect specimen, with the information that he observed them in very great numbers on the shores of Lake George, a dilatation of St. John's river; that in some places the dead shells were piled up confusedly to a considerable height, and that the *NUMENIUS longirostra* feeds upon the living animal. The spire is still less elevated than that of the *globosa* of Swainson. Pl. 14, fig. 2.

## MELANIA.

*M. virginica*, nob. Falls of Niagara.

## ANODONTA.

*A. gibbosa*. *Shell* thin and very fragile; much inflated; anterior and posterior hinge-margins compressed, the former alated; surface pale-yellowish testaceous, finely radiate with green, and having somewhat regular concentric minute undulations; within somewhat iridescent.

Length about one and nine-tenths, breadth two and nine-tenths of an inch.

This shell exhibits a remarkable appearance, in the unusually great convexity of the disks and umbones. It is strikingly distinct, and was presented to me by Captain Le Conte of the Topographical Engineers, who informs me that it is an inhabitant of South Carolina. Pl. 14, fig. 3, 4.

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## D. CLASS VERMES.

### ORDER CRYPTOBRANCHIA.

#### HIRUDO.

1. *H. parasitica*. A yellow vitta before; quadrate marginal spots each side; beneath with about eleven longitudinal lines; ocular points two.

Descr. *Body* dilated when at rest, narrowed before; above varied with dull-yellowish and blackish-brown; a yellow vitta commences at the anterior extremity and is more or less elongated, in some specimens less than one-fourth the length of the body, and in others extending nearly or quite to the posterior disk; lateral margin with eighteen or twenty symmetrical equal and equidistant quadrate yellowish spots; posterior disk above radiate with yellowish; ocular points two, approximate, sometimes apparently confluent; beneath very flat, whitish, with about eleven longitudinal lines; lateral edges very acute.

Length in a state of repose two inches, greatest breadth seven-tenths of an inch.

This leech is frequent in the lakes of the north-western region, adhering to the sternum or inferior shell of Tor-

toises, (Emys,) particularly to that of *E. geographica* of Lesueur. Their young are often found with them, attached in considerable numbers to the abdomen. The superior surface of the body is subject to vary considerably in the arrangement of its colours. In one specimen the fuscous colour prevails and is interrupted only by dull-yellowish distant points, which, in their disposition exhibit an approach to the formation of three longitudinal irregular series; in another individual an arrangement into three series is still more obvious; the lateral quadrate spots, the yellowish vitta, at least on the anterior portion of the body, and the ventral lines, appear to be permanent characters. The form of this species is similar to that of the *H. swampina* of Bosc, but it cannot be the same from its number of eyes and the lineation of its inferior surface. The flat inferior surface and the acute lateral edges seem formed to exclude the air and assist the disks in their office of adhering to a foreign body.

2. *H. lateralis*. Dull livid with a rufous line each side; ocular points six.

Descr. This species is more elongated than the preceding, and far less depressed; the colour of the body is uniform dull livid, not at all paler beneath, but the rufous line each side extending the whole length of the body, is rather broad, and although dull, is yet very distinct; on the superior surface are a few very remote minute black points; the ocular points are placed in a regularly curved line.

Length when at rest two inches and three-fourths.

This species occurred in most of the small lakes on the height of land, between Rainy Lake and Lake Superior.

3. *H. marmorata*. Blackish varied with dirty whitish; ocular points six.

Descr. Body slightly broadest in the middle, from

whence it diminishes very slightly and gradually towards the extremities, near the anterior extremity it is more rapidly attenuated; colour black or fuscous with irregular whitish or light coloured spots; beneath pale, generally immaculate, but sometimes with confluent black spots; the ocular points are placed in a regularly curved line.

Length when at rest about two inches and a half.

This, and the preceding, are both large species, but the present is by far more abundant in the same situations, where they may be observed, many at a view, adhering to rocks, or swimming in their undulating manner.

4. *H. decora*. Body livid with a dorsal series of twenty-two small red dots, and a lateral series of the same number of black dots of a similar size; a transverse line of ocular points in close order before; on each side of which, and at a short distance from them and from each other, are two points of the same kind; beneath fulvous with a few black spots.

This species is much smaller than either of the preceding and is comparatively rare. It occurred in Vermilion Lake.

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## E. CLASS INSECTA.

### ORDER COLEOPTERA.

#### CICINDELA, *Linn. Latr.*

1. *C. longilabris*. Blackish; elytra spotted and banded with white; labrum long.

Inhabits North-west Territory.

*Head* and *thorax* slightly tinged with greenish; *an-*

*tennæ*, basal joints, blue-black; *labrum* white, nearly as long as broad, obtusely longitudinally carinated, obscurely tridentate at tip, and a little dilated at the lateral base; *mandibles* white on the exterior edge near the base; *palpi* dark blue, or cupreous; *elytra* with rather large, dense punctures; a humeral spot, another before the middle on the margin, a reclivate nearly transverse band on the middle, and a spot at the posterior curve of the *elytra*, white; *venter* black, with a purplish reflection.

Length less than three-fifths of an inch.

Var.  $\alpha$ . The spots of the *elytra* obsolete.

This insect seems to approach nearest to *C. vulgaris*, nob. (Trans. Amer. Philos. Soc. vol. 1. new series,) but it is sufficiently distinct by the following characters. The *labrum* is twice as long, and the punctures of the *elytra* are more than double the size. The *venter* is sometimes dark green.

2. *C. terricola*. Black; a white line at the tip of the *elytra*.

Inhabits North-west Territory.

*Body* destitute of metallic lustre; *labrum* white; breadth more than twice the length; tip three-toothed, intermediate tooth conic acute, the lateral teeth angulated obtuse; *mandibles* white on the exterior base; *thorax* a little hairy; *elytra* with scattered very minute punctures, which are oblique, as if formed by a pointed instrument directed towards the anterior part of the insect, so that the surface before each puncture is a little elevated; a white line margins the extremity; *venter* blackish-testaceous; *tibia* dull testaceous.

Length rather more than two-fifths of an inch.

This species is closely allied to *C. pusilla*, nob. but the marking of the *elytra* differs, and the *thorax* is not so much

contracted at base and is more closely affixed to the abdomen.

### POECILUS, *Bonelli*.

*P. fraternus*. Dark green; elytra dark greenish-cupreous; palpi and feet piceous-black.

Inhabits North-west Territory.

*Antennæ* fuscous; three basal joints yellowish, and carinated, carina dusky; *thorax* slightly margined; dorsal impressed line extending entirely to the basal edge; lateral edge regularly arcuated; basal angles slightly more than right angles; *elytra* dark coppery, with a dark green exterior margin; *striæ* impunctured; interstitial spaces a little rounded; *beneath* piceous-black.

Length two-fifths of an inch.

Although the thorax of this insect is not broadly margined, yet the margin is much wider than that of the *chalcites*, Helwig, (in Melsh. Catal.) and it may be distinguished from the *lucublandus*, Knoch, (in the same work,) by the colour of the palpi, &c.

### DYTISCUS, *Linn. Latr.*

*D. fasciventris*. ♀ Dark olivaceous-brown; thorax and exterior elytral margin margined with yellow.

Inhabits Lake Superior.

*Head* darker than the elytra, greenish-back, with a rufous transverse frontal spot; *antennæ* rufous, joints dusky at their tips; *labrum* and *nasus* yellowish; *palpi* colour of the antennæ; *thorax* colour of the head, margined all round with yellowish; a longitudinal impressed line, and extremely minute scattered punctures; *scutel*

yellowish; *elytra* each with ten grooves extending nearly two-thirds the whole length from near the base; exterior margin yellowish, becoming obsolete at tip; an obsolete spot towards the extremity resembling the commencement of a branch from the colour of the margin; *feet* pale rufous; *postpectus* black, yellowish each side behind and at the anterior angles; *venter* black, with yellow bands, terminating each side in triangles of the same colour.

Length one and one-tenth of an inch.

This species is most closely allied to *D. marginalis* of Europe; the appearance of the superior surface of the body is altogether the same, even to the form and appearance of the frontal spot, nevertheless our insect is much smaller, and the arrangement of colours beneath, on the postpectus and venter, is altogether different.

### LACCOPHILUS, *Leach.*

*L. punctatus*. Dusky testaceous; very regularly and profoundly punctured.

Inhabits North-west Territory.

*Body* suboval, short, dull testaceous; *head* with two dilated slightly impressed spaces on the front; *clypeus* obtusely rounded at tip; punctures numerous, rather sparse on the vertex; *thorax* blackish on the anterior and posterior margins; punctures subequidistant; *elytra* darker than the head and thorax, very regularly and beautifully punctured; punctures rather larger than those of the thorax, subequidistant; *beneath*, excepting the feet, also punctured.

Length more than one-tenth of an inch.

This is a very pretty species, readily distinguished from others.

BUPRESTIS, *Linn. Latr.*

*B. maculativentris*. Violaceous with a cupreous reflection; anterior thoracic angles with a spot and a series on each side of the venter, yellow.

Inhabits North-west Territory.

*Head* confluent punctured; a yellow spot before the eye, almost confluent with another beneath the eye; *thorax* with a very distinct margining spot at the anterior angles; punctured, but with a glabrous dorsal line and one or two lateral glabrous spots; *elytra* violaceous, with cupreous reflections; base violaceous; punctured-striate; tip with a small tooth at the sutural angle, and about four very minute teeth; *beneath* cupreous, polished; *venter* with a series of three yellow quadrate spots on each side, and a larger oblique oval one on the anal segment approaching at the middle of the segment and extending by a branch for a short distance on the edge.

Length thirteen-twentieths of an inch.

This is a very pretty insect, readily distinguished by the subocular, thoracic, and ventral spots.

SCYDMÆNUS, *Latr.*

1. *S. clavipes*. Blackish; *elytra* bright rufous, blackish at tip; antennæ longer than the thorax.

Inhabits Pennsylvania.

*Body* hairy; *head* piceous; *antennæ* rather longer than the thorax, and with the *palpi*, dull rufous; *thorax* blackish with an impressed transverse line at base and the appearance of a longitudinal one before; hairs numerous; *elytra* smooth, polished, impunctured, and without striæ; bright rufous; hairs long; humeral angles longitudinally elevated;

a slight groove at the base of each elytrum, tip black; *feet* rufous; thighs clavate; *venter* dull rufous.

Length more than one-twentieth of an inch.

2. *S. brevicornis*. Blackish; elytra bright rufous, blackish at tip; antennæ shorter than the thorax.

Inhabits Pennsylvania.

*Body* hairy; *head* black; *antennæ* rather shorter than the thorax, hairy, dull rufous; *thorax* polished, black; *elytra* smooth, polished, impunctured, and without striæ, bright rufous; hairs long; humeral angles longitudinally elevated; a slight groove at the base of each elytrum, tip black; *feet* rufous; thighs clavate, dusky at tip.

Length rather more than one-twentieth of an inch.

Strongly resembles the preceding, but the antennæ are much shorter and more robust, the thorax is destitute of real or apparent impressed lines, and the clavæ of the thighs are more dilated.

### DORCATOMA, *Herbst*.

*D. oculata*. Rounded-oval, blackish-brown, a little hairy; antennæ yellowish-piceous.

Inhabits Pennsylvania.

*Head* very obscure piceous; a few short hairs; *antennæ* yellowish-piceous, first joint large, arcuated; second joint much smaller, rounded; third, fourth, fifth, still smaller and not very distinctly articulated; sixth transverse, very short; seventh much enlarged, on the inner side extending into a conic process, which is nearly as long as the preceding part of the antennæ, and when at rest is applied closely to the inner side of the eighth joint and extends quite to its tip; eighth joint elongate-obtriangular; ninth joint as long as the preceding joint, a little arcuated; *eyes* with an indented,

somewhat dilated line, extending from near the base of the antennæ to the middle; *thorax* punctured, with short hairs, and slightly tinged with piceous; anterior angles very much decurved and acute; posterior angles hardly acute; posterior margin lobed at the scutel; *scutel* small, rounded; *elytra* punctured and with short hair; exterior submargin with three impressed striæ; *beneath* punctured, hairy; *feet* dull piceous.

Length one-tenth of an inch.

The form of the penultimate joint of the antennæ differs considerably from that of the *dresdensis* in being much less dilated on the inner side, the seventh joint has the inner process more slender and the terminal joint is a little arcuated.

### NOSODENDRON, Latr.

*N. unicolor.* Black, immaculate, antennæ piceous, clavum yellowish.

Inhabits Missouri.

*Head* with dense, dilated, shallow punctures; *thorax* short, length less than half the breadth; punctures less dense than those of the head; posterior edge regularly arcuated; lateral edge hardly arcuated, nearly rectilinear; angles acute; *elytra* irregularly punctured; humerus a little elevated; humeral angles subacute; *beneath* and *feet* punctured; anterior tibia widely and deeply emarginated on the exterior edge near the tip and serrated; intermediate tibia with four or five serratures on the outer edge, and a prominent tooth near the tip; posterior teeth with about five small subspinous teeth, and a robust tooth near the tip.

Length one-fifth of an inch.

## ELMIS, Latr.

*E. crenatus*. Thorax with four elevated lines; each elytrum with two dull rufous spots.

Inhabits Pennsylvania.

*Parnus crenatus*? Knoch in Melsh. Catal.

*Body* blackish-brown; *front* with two dilated, cinereous, longitudinal lines; *antennæ* and *mandibles* rufous; *thorax* with four, obtuse, elevated, longitudinal lines; two intermediate ones nearly confluent at each end; lateral ones more distant, slightly interrupted behind the middle; *elytra* with striæ of dilated impressed punctures; an elevated line from the humerus terminates rather before the tip; another elevated line nearer the margin also originates at the humerus and becomes obsolete before the middle; a third elevated line originates at the middle of the base and also becomes obsolete before the middle of the elytrum; an oblong rufous spot on the humerus and another near the tip; *tarsi* dull rufous.

Length less than three-twentieths of an inch.

## PARNUS, Fabr.

(*Dryops*, Oliv. Latr.)

*P. fastigiatus*. Blackish-brown, with very short dense hair; elytra with striæ of rather large punctures.

Inhabits Pennsylvania.

*P. fastigiatus*. Knoch in Melsh. Catal.

*Antennæ* fuscous, terminal joints yellow; *palpi* dull yellow-testaceous; *thorax* highest rather behind the middle, and with an obsolete indentation each side behind; anterior angles prominent, acute; posterior angles obtuse; *scutel* quadrate, acute behind; *elytra* with short hairs over

the whole surface, and three series of fasciculated, more ferruginous hairs on the sutural half; on this half the punctures are larger and the striæ more deeply impressed than on the exterior half where the surface has a minutely granulated appearance; tip acute; *feet* blackish-piceous; tarsi piceous; anterior tibia with a line of dense yellowish hairs before.

Length one-fourth of an inch.

### HYDROPHILUS, *Fabr.*

1. *H. cinctus*. Black, surrounded with a yellowish margin.

Inhabits United States.

*H. cinctus*, Knock, in Melsh. Catal.

*Body* black, polished; with very numerous, minute, regular punctures; *head* with a large, triangular, yellowish spot before the eye; *palpi* yellowish; *antennæ* fuscous; *thorax* margined with yellowish; this colour is sometimes obsolete on the anterior margin, and generally obsolete on the posterior margin; *elytra* without any appearance of striæ; the exterior margin from the humerus to the suture, yellowish; *beneath* blackish-piceous; *tarsi* dull yellowish.

Length more than one-fifth of an inch.

We obtained specimens on Red river of Lake Winnepeg; it is also found in Pennsylvania.

2. *H. globosus*. Very convex, oval; *elytra* with striæ of punctures.

Inhabits United States.

*H. globosus*. Knoch. in Melsh. Catal.

*Body* very convex, black, immaculate, punctured; *head* with very regular minute punctures, and three or four somewhat larger ones before the eye; *palpi* yellowish;

*antennæ* yellowish, *clava* fuscous; *thorax* with minute punctures but slightly impressed; angles rounded; *scutel* with obsolete punctures; *elytra* with minute, numerous punctures, which are very slightly impressed, obsolete; with nine regular striæ of distinct larger punctures, and an irregular series on each alternate interstitial space; *beneath* piceous-black; *tarsi* colour of the palpi.

Length three-tenths of an inch.

This species is oval, not elongated, and is more convex than any other species of this country yet discovered.

3. *H. nebulosus*. Pale whitish-testaceous; a subsutural line on the elytra obsolete before the middle.

Inhabits United States.

*H. nebulosus*, Melsh. }  
*H. labiatus*, Knoch. } Melsh. Catal.

*Body* very finely but irregularly punctured; punctures sometimes obsolete; *head* black or varied with black; *thorax*, angles rounded; *elytra* with a subsutural impressed line which disappears before the middle, and is more deeply impressed behind; *beneath*, excepting the feet, blackish.

Length less than three-twentieths of an inch.

I obtained a specimen in the Lake of the Woods.

### APHODIUS, *Illig. Fabr.*

1. *A. hamatus*. Thorax impunctured on the disk; claw of the anterior tibia dilated, incurved.

Inhabits North-west Territory.

*Body* dark piceous; *clypeus* minutely punctured; margin reflected, particularly at tip; tip truncated, subemarginate; *thorax* punctured each side and at base; large, equalling at least two-thirds the length of the elytra; *ely-*

*tra* paler than the head and thorax; striate; striæ punctured; *feet* rufous; the claw at tip of the anterior tibia is dilated and curved inwards like a hook.

Length less than one-fourth of an inch.

An insect remarkable for its short robust stature and the proportional length of its thorax, as well as for the dilatation and crooked form of the appendages at the extremity of the tibia.

2. *A. clypeatus*. Black; elytra testaceous; clypeus, covered with small tubercles.

Inhabits North-west Territory.

*Head* black, convex, covered with very small obtuse tubercles; edge a little elevated, piceous; tip hardly truncated; *thorax* with irregular small obtuse rugæ; anterior angles rectangular; posterior edge regularly arcuated, not dilated in the middle; *elytra* rufo-testaceous, dusky at base; with deep, punctured striæ; interstitial lines convex; *thighs* dull-yellowish; posterior ones much dilated.

Length more than three-twentieths of an inch.

Readily distinguished by the rough appearance of the clypeus.

### TROX, Fabr.

*T. canaliculatus*. Thorax with an entire groove; clypeal edge not reflected; elytra with alternate series of large and small elevated bristly dots.

Inhabits North-west Territory.

*Body* blackish-brown; *head* with numerous irregular discoidal punctures; *clypeus* obtusely rounded at tip; the edge not reflected; surface flat, excepting two little elevated protuberances on the upper part of the front; *antennæ* yellow; *thorax* with a strongly impressed obvious de-

finite groove, the bounding lines of which are uninterrupted, and are equally elevated in every part; an obtuse slightly elevated line passes across the groove near its middle; between the elevated line of the groove and the lateral edge is a slightly elevated very obtuse space; basal edge sinuated, over the scutel obtusely rounded; basal angles extended a little backwards and rounded at tip; *elytra* with four elevated lines on which are oval fascicles of yellowish short bristles; interstitial spaces each with a series of small rounded points, also furnished with bristles.

Length seven-twentieths of an inch.

It is about equal in size to the *T. capillaris*, nobis, but is altogether destitute of the fine capillary lines which ornament the *elytra* of that insect.

### TENEBRIO, *Linn. Latr.*

*T. reticulatus*. Black; *elytra* rugose with impressed spots which have elevated centres.

Inhabits St. Peter's river.

*Body* deep black; *head* with numerous small and regular punctures, more dense before and on the labrum; *antennæ*, third joint but little longer than the fourth; *thorax* with numerous regular punctures; narrow, a little contracted before and very slightly contracted behind; lateral edge longitudinally a little arcuated, and vertically rounded, with a slightly impressed line bordered by a slightly elevated one, both so small as not to be visible to the eye; *elytra* irregularly reticulated with elevated lines; the intervening spaces with slightly elevated centres; *thighs* clavate; *anterior* and *intermediate tibiæ* a little curved; *tarsi* beneath, and inferior portion of the tip of the tibia with yellowish hair.

Length nearly seven-tenths of an inch.

This species is very distinct from any other that I have seen and very readily recognized.

### PHALERIA, Latr.

1. *P. testacea*. Pale testaceous, beneath black; thorax impunctured; elytra striate, and with a blackish spot on each near the tip.

Inhabits United States.

*Body* oblong-oval, polished; *head* hardly perceptibly punctured; a transverse indented line before the eyes; *antennæ* sensibly dilated towards the tip; joints from the sixth to the tenth inclusive, transverse, hemispheric-compressed, perfoliate; eleventh nearly globose; *thorax* transverse-quadrate, impunctured, rather wider behind; an impressed puncture each side on the basal margin, anterior angles rounded; *scutel* blackish; *elytra* striated, striæ slightly punctured, more deeply impressed behind, abbreviated at the humeral angle; a blackish-brown spot on each near the tip; *tergum* blackish; *beneath* black; *feet* pale testaceous; anterior tibia serrate with short spines, tip rather abruptly dilated, forming almost a lobe on the exterior side; intermediate and posterior pairs spinulose-serrated, gradually dilating towards the tip.

Length more than one-fourth of an inch.

This insect is not uncommon. It occurs in Pennsylvania, and under dead marine animals on the sea-beach, from New Jersey to Florida.

2. *P. picipes*. Black; antennæ, mouth and feet piceous.

Inhabits the southern states.

*Head* destitute of an impressed line before the eyes; *antennæ* and *thorax* formed as in the preceding species,

excepting that the anterior angles of the thorax are subacute; striæ of the elytra as in the preceding; *feet* as in the preceding, excepting that the anterior tibiæ are gradually very much dilated at tip, and not somewhat abruptly dilated near the tip, the line of the exterior edge is therefore nearly rectilinear.

Length from one-fifth to less than one-fourth of an inch.

Var.  $\alpha$ . thorax dull piceous.

Var.  $\beta$ . entirely piceous.

### EPITRAGUS, Latr.

*E. canaliculatus*. Thorax with two lines and lateral edge elevated.

Inhabits United States.

♂ *Body* blackish-brown, more or less bronzed, with very numerous short cinereous hairs; *thorax* broader behind, somewhat lobed at the scutel; angles produced, very acute; lateral edge rectilinear, elevated; anterior edge abruptly undulated; disk with two elevated lines which become obsolete behind and originate each in a flattened and porrect tubercle on the anterior edge; *elytra* with dilated, slightly impressed grooves.

Length nine-twentieths of an inch.

Var.  $\alpha$ . grooves of the elytra obsolete.

The female is very different in appearance from the male, by being entirely destitute of the elevated lines and edges of the thorax, and of the undulated form of the anterior edge of the thorax. The elevated lines and lateral edge give the thorax the appearance of having three dilated grooves. This insect is found in Pennsylvania, but is more frequent in the southern states; I also obtained specimens in Missouri.

EUSTROPHUS, *Latr.*

*E. bifasciatus*. Dark reddish-brown, sericeous; elytra black bifasciate with rufous.

Inhabits United States.

*Palpi* terminating with a large obconic joint, truncated; *thorax* sometimes blackish, nearly semicircular, somewhat truncated before; posterior angles rather less than a right angle; *scutel* transverse, very obtusely rounded behind; *elytra* with a rufous waved band near the base, extending to the base at the outer margin, and widely interrupted at the suture; another rufous band behind the middle, slightly undulated and hardly interrupted by the suture; sutural edge a little elevated behind; *venter* very distinctly sericeous with yellowish hair.

Length more than one-fifth of an inch.

I obtained a specimen many years ago near Philadelphia, and we lately captured another in the North-western Territory.

DIRCEA, *Fabr.*

*D. tibialis*. Black, with short hair; base of the antennæ and tibia yellowish.

Inhabits North-west Territory.

*Body* oval-orbicular, with very short hair, and irregularly and very minutely punctured; *antennæ*, three basal joints obscurely pale rufous; *clypeus* a little dilated before the antennæ and truncated; *palpi* dusky rufous; terminal joint rather abruptly conic-acute; *thorax* convex, short, wide; lateral edge arcuated; angles rounded; *scutel* rather large, triangular; *elytra* destitute of striæ; tip narrowed

and rounded; *tibia* pale rufous; posterior thighs much dilated, formed for leaping.

Length three-twentieths of an inch.

### SERROPALPUS, *Oliv.*

*S. 4-maculatus*. Blackish-brown, sericeous; elytra with two yellow spots.

Inhabits Arkansa and Missouri.

*Antennæ* and *labrum* dull testaceous; *thorax*, anterior margin obsoletely dull testaceous; *scutel* minute; *elytra* narrower behind; a large, very irregular yellow spot before the middle and another behind the middle of each; *pectus* and *postpectus* distinctly punctured; *anterior tarsi* dilated and covered beneath by very dense, short, yellow hair; remaining tarsi slender; *venter* dark red-brown, paler at tip.

Length nearly seven-twentieths of an inch.

This species appears to be of rare occurrence.

### HELOPS, *Fabr. Latr.*

1. *H. arctatus*. Dark brassy, irregularly punctured; elytra with dilated indentations.

Inhabits North-west Territory.

*Body* long, cylindrical, a little depressed; punctures dilated, rather large, profound, approximate, irregularly disposed; *antennæ* piceous, less than half the length of the body, terminal joint oblong-oval; *palpi* dark piceous, long; *labrum*, breadth equal to twice the length; a small impressed spot between the eyes; *thorax* depressed; widest hardly before the middle, from which part the edge is rectilinear to the posterior angles, and very nearly rectilinear to the

anterior angles, which are obtusely rounded; posterior angles a little angulated; *scutell* rounded behind, with short, cinereous, prostrate hairs; *elytra* not dilated behind; punctures larger than those of the thorax, often confluent; a slightly prominent line between the middle and suture, a depressed one between the middle and lateral margin; several slightly elevated lines near the tip; disk with two series of two or three much dilated alternate indented spaces; tip rounded; *beneath* blackish with small punctures; *feet* blackish-piceous.

Length half an inch.

This insect occurred on the shore of St. Peter's river, and on that of Red river of Lake Winnepeek. The large indentations of the *elytra* have a fortuitous appearance.

2. *H. venustus*. Dark brassy, punctured; posterior angles of the thorax slightly excurved; *elytra* iridescent.

Inhabits Pennsylvania.

*Body* densely punctured; *antennæ* and *palpi* blackish-piceous; *thorax*, posterior angles acute, the lateral edge near them being a little curved outwards; *elytra* with brilliant coppery and green vittæ changing place with the direction of light; *striæ* profound, and with the convex interstitial spaces impunctured; *beneath* cupreous, brilliant.

Length more than three-tenths of an inch.

This species closely resembles the *micans*, *Fabr.* which has been described under different names by several authors; it has the same beautiful variable colour upon the *elytra*, which induced Olivier to call that insect *vittatus*, and Beauvois to give the name of *tæniatus*, but it is a small species, the lateral edge of the thorax is a little curved outwards near the posterior angles, whilst that of *micans* is rectilinear in the same part, and the interstitial

lines of the elytra are convex, whilst those of *micans* are nearly flat.

### CISTELA, Fabr. Latr.

1. *C. binotata*. Blackish, sericeous; elytra with a humeral rufous spot.

Inhabits North-west Territory.

*Body* black, polished; in a particular light sericeous both above and beneath with small hairs, which do not, however, at all conceal the punctures; *head* punctured; *palpi* and three basal joints of the *antennæ* rufous-yellow; *thorax* with equal large dense punctures; very slightly contracted behind, rounded before; posterior angles not prominent; an abbreviated longitudinal impressed line at base, on each side of which is an obsolete dilated impressed lunate space; *elytra* densely punctured, and with punctured striæ; humeral gibbosity rufous; *feet* dull rufous, sericeous.

Length nearly three-tenths of an inch.

2. *C. sericea*. Pale testaceous, sericeous; striæ of the elytra obsolete.

Inhabits United States.

*C. sericea*, Knoch in Melsh. Catal.

*Head* minutely punctured, transverse impressed line before the antennæ very obvious; *thorax* semioval, a little truncate before and not undulated behind; posterior angles rectangular; *elytra* hardly perceptible, darker towards the tip, rather lighter at base; striæ obsolete, excepting two next the suture which are distinct; *wings* a little dusky, particularly towards the tip; *feet* somewhat paler than the body.

Length one-fourth of an inch.

A very common species, particularly in July on the *Ceanothus Americanus* and other flowers.

MELANDRYA, *Fabr. Latr.*

1. *M. striata*. Black; thorax with three grooves; front with an impressed dot; elytra striate and punctured.

Inhabits the middle and northern states.

*Serropalpus canaliculatus*, Melsh. Catal.

*Head* with numerous minute punctures; a distinct rather longitudinally oval impressed spot between the superior part of the eyes; *palpi* at tip of the terminal joint, and one or two terminal joints of the *antennæ* dull rufous; *thorax* gradually dilating to the base, from the width of the head to that of the elytra; surface minutely punctured with small sparse hairs; three dilated longitudinal grooves, or undulations, obsolete before; lateral edge almost rectilinear to near the posterior angles, where it is a little incurved, it is vertically rounded before the middle, and acute behind the middle; posterior angles nearly right angled; *scutel* sub-orbicular, convex, punctured; *elytra*, striæ dilated, with numerous punctures, those of the base being more distinct as the striæ are not so profound in that part.

Length three-fifths of an inch.

A specimen of this interesting insect occurred in the North-west Territory. My friend, the Rev. John F. Mel-sheimer, with whom I corresponded on the subject of this species, agrees with me perfectly in the propriety of placing it in this genus, and in its being altogether different from the *S. canaliculatus*, Illig. *MELANDRYA canaliculatus*, Fabr. This conclusion indeed is irresistible, when we compare our insect with the description of that of Europe, and

with the figures given by Olivier, Panzer, Latreille, and others.

2. *M. labiata*. Black; labrum rufous; elytra destitute of striæ.

Inhabits Pennsylvania.

*Head* with minute punctures; no impressed frontal spot; *labrum* distinctly rufous; *antennæ*, terminal joint at tip, tip of the *palpi* and of the *tarsi*, rufous; *thorax* with the lateral edge regularly arcuated; a deep slightly arcuated groove on each side almost divided transversely into two impressed dots by an obtuse elevated line; a central nearly obsolete impressed line; *scutel* rounded, convex, punctured; *elytra* densely punctured; punctures small; striæ none; three or four obsolete raised lines.

Length rather more than two-fifths of an inch.

A smaller species than the preceding and more rare; it differs also in the colour of the labrum, the more rounded form of the thorax, and in the elytra being destitute of striæ. It may be sometimes found on plants in June.

### LAGRIA, *Fabr. Lam.*

*L. aenea*. Green; thorax oblong; elytra punctured; antennæ and palpi yellowish.

Inhabits United States.

*L. aenea*, Melsh. Catal.

*Body* green, sometimes tinged with brassy; *head* irregularly punctured; with a few scattered hairs, which are more numerous on the labrum; a transverse groove between the antennæ, formed by the incisure of the nasus; *antennæ* yellowish rufous, terminal joint longer than the three preceding ones together; *palpi* yellowish; *thorax* cylindrical, rather larger than broad, punctured, sometimes with transverse abbreviated wrinkles; posterior angles

slightly excurved; *elytra* nearly rectilinear, not dilated at the posterior curvature; punctures dense, profound, rather large; *beneath* blackish-green; *tarsi* dark testaceous.

Length from two-fifths to nine-twentieths of an inch.

This is not the *LAGRIA aenea*, Fabr. Ent. Syst. Suppl. as the late Mr. F. V. Melsheimer supposed it to be, for independently of the different specific characters in the description of that insect, it has since been referred by that author to the genus *DASYTES*, and must therefore be a Pentamerous insect. The circumstance of that species being removed from the genus *LAGRIA* enables me to retain the specific name given by Mr. Melsheimer. We obtained a specimen on Red river.

### LYTTA, Fabr.

*L. aenea*, nob. varies in being green, with black tarsi. The antennæ of this species resemble very much those of the genus *Mylabris*.

### COCCINELLA.

*C. labiculata*, nob. This species varies considerably in colour, but not, as I believe, in the number or arrangement of its spots.

Var.  $\alpha$ . Spots of the *elytra* ocellate, being surrounded by a yellowish areola.

Var.  $\beta$ . *Elytra* yellowish-white, with the black spots as in the species.

### RYNCHITES, Herbst. Latr.

*R. rubricollis*. Blued-black; thorax and feet rufous; *elytra* striate, hairy.

Inhabits United States.

*R. rubricollis*, Melsh. Catal.

*Body* slender; *head* hairy, black, with irregular punctures larger on the rostrum; *antennæ* and *labrum* dark piceous; *thorax* rufous, hairy, with dilated irregular punctures, and a longitudinal impressed dilated line, which neither reaches the anterior nor posterior margins; *scutel* black, rounded; *elytra* with regular striæ of punctures furnishing upright hairs; interstitial lines with each a series of upright hairs; *pectus* rufous; *postpectus* and *venter* blackish; *feet* rufous, pale.

Length more than three-twentieths of an inch.

This insect occurs occasionally in Pennsylvania; we also found a specimen on Red river of Lake Winnepeek.

### CERAMBYX.

*C. scutellatus*. Brassy-black, punctured; *scutel* pure white.

Inhabits North-west Territory.

*Body* brassy-black; punctures numerous, confluent, impressed, with minute hairs; *head* with a deeply impressed line between the antennæ, extending to the origin of the thorax; *front* with minute punctures; *labrum* piceous; *mandibles* dark piceous at base; *antennæ* longer than the body, dark reddish-piceous, paler at base; *thorax* with a very robust short spine on each side; posterior margin with an impressed transverse line; anterior margin with the punctures so transversely elongated and confluent as to appear wrinkled; *feet* blackish-piceous, paler at base; *scutel* covered with dense prostrate pure white hair; *elytra* with the impressed punctures larger at base, transversely confluent; humerus rather prominent, obtuse; on different parts of the *elytra* is dense, dirty brown, very

short, prostrate hair, tip unarmed; *beneath* blackish with a purplish or slight cupreous tinge; a little hairy, particularly on the postpectus.

Length nine-tenths of an inch.

### SAPERDA, *Fabr.*

*S. vestita*. Body entirely covered with a very short greenish-yellow hair; elytra with three small dots.

Inhabits near the southern extremity of Lake Michigan.

*Antennæ* about the length of the body; *eyes* dark chestnut; *thorax* with an obsolete dorsal line; *elytra* unarmed at tip; dots black, small, three on each elytrum, placed one before and near the middle, largest, one a little nearer the base and more distant from the suture than the other, and one behind the middle, distant from the preceding in a line with the anterior one.

Length three-fourths of an inch.

A very fine insect. It is also sometimes found in Pennsylvania.

### CLYTUS, *Fabr.*

1. *C. speciosus*. Black; thorax dilated; elytra about five-banded; feet yellow.

Inhabits near Prairie du Chien.

*Body* deep black; *head* with a band passing from the vertex round behind the eyes and meeting a band which is round the mouth above, yellow; a yellow band on the front immediately above the antennæ, terminating in the sinus of the eyes; *mandibles* yellow; *nasus* and *labrum* pale yellowish, glabrous; *antennæ* all black; *thorax* subglobular, depressed; an oblique spot each side

before, and another oblique longer spot or abbreviated line each side of the middle, yellow; an arcuated impressed line each side of the middle; *scutel* yellow; two small yellow spots before the scutel under the thorax; *elytra* with yellow bands; first band forming a regular arch of which the scutel represents the key stone; second band in the form of a W, each V receiving a termination of the first band; third band nearly transverse, placed upon the middle; fourth band arcuated each side from the suture obliquely backward, parallel and near to a large terminal spot or band, which on each elytrum is ovate with a central black spot; tip with a short obtuse tooth; *humerus* with three small spots; *postpectus* spotted with yellow; *thighs* with a brown line on the inner side; *venter* yellow.

Length less than one inch.

This very fine insect was caught on the banks of the Wisconsin river. It is certainly the finest of all our species of this genus, and seems to be allied to the *detritus*, but is sufficiently distinct.

2. *C. undulatus*. Brown; thorax subbifasciate; elytra with a spot and three bands, yellow.

Inhabits North-west Territory.

*Body* dark brown; *head* darker than the elytra; *antennæ* dark ferruginous; *front* below the antennæ bilineate with pale yellow; *thorax* darker than the elytra, rough with minute spines and hairs; anterior and inferior margins yellow, interrupted above; basal margin with a transverse yellow spot each side; *elytra* with a transverse spot on each near the base; an undulated narrow band across the middle, rising along the suture nearly to the scutel; an undulated transverse band behind the middle, and a terminal band; *postpectus*, incisures margined with yellow; *venter*, segments margined with yellow.

Length ♂ half an inch, ♀ three-fifths of an inch.

This appears to have some resemblance to the *mucronatus* of South America, but the elytra are not obviously mucronate, the markings also of the superior surface of the body materially differ.

### MOLORCHUS, Fabr.

*M. marginalis*. Yellowish; elytra dusky on the disk; antennæ shorter than the elytra.

Inhabits United States.

*Body* with numerous minute hairs; *head* yellow; *vertex*, *palpi*, blackish; *antennæ* short, hardly reaching the tip of the elytra, and excepting the three basal joints, blackish; *eyes* prominent, black-brown; *thorax* short, transversely oval, yellow with a dusky disk; *elytra* much abbreviated, rounded at tip, yellow; disk dusky, reaching to the base; the margin at tip is broad so as to resemble a yellow spot on each elytrum; edge, like that of the thorax, a little elevated, particularly at tip; *abdomen* long, yellow; segments more or less tinged with rufous at base; tail dusky or black; *feet* more or less dusky, with yellow incisures, sometimes nearly all yellow; *venter* somewhat sericeous.

Length three-tenths of an inch.

This species is not uncommon in Pennsylvania, and it is also an inhabitant of the North-west Territory.

### HISPA, Linn.

*H. vittata*, Fabr. This species varies much in colour, so much so indeed, that more than one species might be formed of it by a naturalist who relied implicitly on the

description which Fabricius gives of the insect. He describes the thorax to be "obscure aeneus, nitens lateribus rufescentibus," and the elytra "obscure aenea, nitidula: vitta lata, fusca." Now, I have a specimen, taken near Philadelphia, which agrees very well with these characters, although the thorax exhibits a tinge of rufous, and has the additional character of an obscure yellowish-brown exterior margin of the elytra, which might however, on a superficial examination, be very readily overlooked. But several specimens which we obtained in the North-west Territory, though evidently the *vittata*, differ so widely from the quoted description, that they would probably be considered as altogether new by an entomologist who had not a specimen which could serve as a link to the Fabrician specimen. These individuals all correspond perfectly in having a bright rufous thorax, dark steel-blue elytra with a narrow rufous fillet and lateral margin; the venter also is very dark steel-blue.

*H. marginata*. Fulvo-sanguineous; elytra with sanguineous lines; feet yellowish.

Inhabits United States.

*H. marginata*, Melsh. Catal.

*Head* with an acute impressed line; *antennæ* dark rufous, not surpassing the thorax; *thorax* with dilated irregular punctures; anterior and lateral edge dull sanguineous; *elytra* serrate on all the outer edge; sutural edge, external edge, and four lines elevated, and with abbreviated sanguineous lines; first line bifurcate at base; third line widely interrupted in the middle and confluent with the fourth line near the tip and on the humeral tubercle; fourth line serrated; humeral tubercle prominent; interstitial spaces with a double series of profound, dilated punctures, separated by elevated lines; tip of the elytra so

obtuse as to appear truncated ; *beneath* sanguineous ; *feet* pale yellowish.

Length more than one-fifth of an inch.

Var.  $\alpha$ . Disk of the pectus and postpectus, black.

This is our most common species, and we found a specimen in the North-west Territory.

### GALLERUCA, Geoff. Latr.

*G. decora*. Dusky ; elytra dull testaceous, sericeous with golden-brassy hair.

Inhabits North-west Territory.

*Body* dusky ; *head* with a transverse impressed line between the eyes and another descending between the antennæ ; *antennæ*, two basal incisures whitish ; *face* between the antennæ and a little above them pale yellowish ; *labrum* and *palpi* blackish ; *thorax* tinged with golden-brassy hair ; a longitudinal impressed line, and a lateral sublunate impressed space ; anterior margin, particularly on each side, dull whitish ; anterior angles with a slightly elevated tubercle surmounted by a single hair, and separated by an impressed line ; *elytra* dull testaceous, sericeous with brilliant, dense, prostrate, golden-brassy hair ; punctures rather large, profound, scattered irregularly ; *beneath* blackish, with very short prostrate hair ; punctures small ; *feet* whitish.

Length less than one-fifth of an inch.

### ALTICA, Geoff. Latr.

*A. tæniata*. Black ; antennæ, feet, and vitta on the elytra, white.

Inhabits North-west Territory.

*Body* deep black, polished; *head* with rather distant, profound punctures; region of the antennæ a little elevated and dull rufous; *antennæ* pale, dusky at base and tip; *thorax* punctured; punctures rather large and profound, but not very dense; no impressed line; posterior angles with a minute abrupt excurvature, acute; *elytra* punctured like the thorax, with a longitudinal white vitta on the middle of each, commencing at the middle of the base and extending rectilinearly, with a slight degree of attenuation near to the tip, and occupying about the sixth part of the surface; *feet* pale, posterior thighs dusky towards the tip.

Length three-twentieths of an inch.

This species resembles *A. striolata*, Schoenh. (which seems to be the *CRIOCERES vittata* and *GALLERUCA elongata* of Fabr., and Mr. J. F. Melsheimer quotes also as synonymous the *A. flexuosa*, Panzer,) but it is larger, of a more elongated form, and the vitta of the elytra is not flexuous as in that common and profusely named insect. I have not met with it in the Atlantic states.

### EUMOLPUS, *Kugell. Latr.*

1. *E. flavidus*. Pale yellowish; elytra striate with double series of punctures.

Inhabits United States.

*Body* densely punctured; punctures rather large and profound; *head* with two slightly elevated tubercles between the antennæ; *thorax* tinged with rufous; *elytra* with elevated lines, of which the inner one curves round at base and descends a short distance to unite with the sutural line; interstitial spaces, excepting the subsutural one and the two exterior ones, with double series of rather

large profound punctures; exterior edge blackish-brown; *venter* dusky.

Length nearly one-fifth of an inch.

Var. *a.* interstitial spaces of the elytra black; beneath, excepting the feet, black.

This insect is common in Pennsylvania; the variety was obtained on St. Peter's river, and might readily be mistaken for a distinct species.

2. *E. cochlearius*. Body black; base of the antennæ, tibia and elytra testaceous.

Inhabits North-west Territory.

*Body* short, robust; *head* punctured, hairy; an impressed line from the vertex bifurcates near the antennæ; *antennæ*, five basal joints testaceous, more slender than the remaining ones, and hardly equalling their collective length; *palpi* testaceous, terminal joint black; *thorax* with short, prostrate, cinereous hairs like those of the head; punctured, punctures rather large, giving origin to the hairs; transversely oval; sides without edges; *elytra* testaceous; punctures numerous, rather large, subequidistant, giving origin to prostrate hairs; *beneath* deeper black, with smaller punctures and shorter hairs; *feet* also with fine hairs, more numerous on the tibiæ which are testaceous.

Length ♂ more than three-twentieths, ♀ one-fifth of an inch.

### COCCINELLA, Linn.

*C. bitriangularis*. White; thorax with six, elytra each with nine, black spots.

Inhabits North-west Territory.

*Body* above white; *vertex* black, the colour extending downwards in a point near each eye; *thorax* with six large

black subquadrate spots, placed by threes in two triangles, one on each side of the middle, the two inner spots of each triangle sometimes confluent; *scutel* black; *elytra*, each with nine spots, placed as follows; one, large subquadrate; two small; one large oblong; two small; two, the exterior one elongated; one small, transverse; *beneath* black; *feet* yellowish-white.

Length more than one-tenth of an inch.

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## ORDER ORTHOPTERA.

### SPECTRUM, *Stoll. Lum.*

*S. femoratum*. Apterous; intermediate thighs dilated, angulated, and with the posterior thighs armed with a spine near the tip.

Inhabits United States.

*Body* greenish-brown, without any rudiments of hemelytra; *head* yellowish with three dilated fuscous vittæ; *antennæ* elongated, brown; *anterior thighs* unarmed, simple, bright green; *tibia* dull green, tip and *tarsus* testaceous; *intermediate thighs* dilated, angulated, pale ochreous, annulated with brown, the inferior angulated lines slightly serrated; a prominent, piceous, acute, robust spine beneath near the tip; *tibia* greenish, slightly serrated on the inner side; *tarsus* testaceous; *posterior thighs* brownish, ochreous, with a prominent, piceous, acute, robust spine near the tip, beneath.

Length about three inches.

A specimen occurred at the Falls of Niagara on a Hickory tree, (*Carya*), and I formerly obtained one near the Missouri river. They are both males.

## ORDER HEMIPTERA.

SCUTELLERA, *Lam.*

1. *S. binotata*. Head much arcuated, subtrilobate at tip; a large cinereous spot on the humeral region.

Inhabits North-west Territory.

*Body* oval, yellowish-gray, varied with dusky; punctured; punctures small, black; *head* longitudinally very much decurved, not forming a right line even on the vertex; fuscous, with three obsolete, dull fulvous vittæ; punctures dense, small, profound; two profound, very obvious, distinctly undulated impressed lines on the anterior two-thirds of the head, the included space a little elevated, and at tip forming a small lobe; lateral edge concavely arcuated, forming a rounded lobe at the lateral tip; *thorax*, punctures rather smaller than those of the head; anterior half, excepting the lateral margin, unequal, fuscous, with three obsolete dull fulvous lines; posterior half abruptly a little elevated; lateral edge black, concavely arcuated before and convexly so behind; posterior angles slightly emarginated; *scutel* entirely concealing the tergum and the hemelytra, excepting a very small portion of the latter at base; basal disk dusky; a glabrous line extending to the tip and margined with dusky; a large cinereous semiorbicular spot in which are abbreviated black lines, extending from the humeral angle to the lateral middle; *beneath* covered with black punctures; *feet* black; *knees* and spot near the tip fulvous; *tibia* fulvous with black lines; *tarsi* black.

Length more than one-fourth of an inch.

This species may be distinguished by the curvature of

the line of the head, and by the large spot on the humeral region.

2. *S. æneifrons*. Dull fulvous, varied with fuscous; head and two spots on the thorax brassy.

Inhabits North-west Territory.

*Body* oval, punctured; *head* densely punctured, convex, with two impressed nearly rectilinear lines from the tip abbreviated at the vertex; lateral edges convexly arcuated, tip rounded, the space included between the impressed lines very slightly projecting; *antennæ* fuscous, basal joint whitish; *thorax* dull fulvous, with obsolete longitudinal fuscous spaces, and a brassy triangular spot each side before; lateral edge nearly rectilinear to the posterior angles, which are rounded entire; *scutel* dull fulvous, varied with fuscous; *hemelytra* punctured, visible portion triangular; *beneath* pale, head brassy, a brassy spot on each side of the pectus; *thighs* with a few black points.

Length about three-tenths of an inch.

This species is subject to vary in being rather smaller, and in the fuscous variegations being hardly discernible, but the other characters remain unchanged.

### MEMBRACIS, *Fabr. Latr.*

1. *M. diceros*. Thorax 2-horned; varied with brown, pale before; wings and beneath blackish.

Inhabits United States.

*Body* above punctured, truncated and vertical before, surmounted by two horizontal subconic horns extending laterally; *clypeus*, vertical portion of the *thorax*, and triangular space included between the horns, whitish-green, varied with fuscous; horns fuscous behind and beneath; *back* acutely carinated, terminated in a very acute subulate de-

curved point nearly as long as the abdomen, but much shorter than the hemelytra; sides of the thorax posterior to the horns blackish-brown, with an arcuated spot or line behind the horns, and a band near the tip, whitish; *hemelytra* and *wings* blackish-brown; *beneath* blackish; *rostrum*, *knees*, *tibia*, and *tarsi*, whitish.

Length three-tenths of an inch.

This is an inhabitant of Pennsylvania, and also of the North-west Territory. It is closely allied to *CENTROTUS bubalus*, Fabr. and is infested by *LEPTUS hispidus*, nob.

2. *M. trilineata*. Brownish-rufous; thorax elevated on the middle, with three longitudinal, one oblique, and one transverse line, whitish.

Inhabits North-west Territory.

*Body* with rather large dense punctures; *head* pale greenish-yellow, obsoletely irrorate with brown points; *thorax* before rounded, unarmed; a dilated pale greenish vitta from the head, is divided by the rounded elevation near the middle of the back, and passes down on each side in an oblique white line, which terminates at the inferior edge behind the middle; a narrow line on each side passes from the head and terminates at the emargination of the origin of the hemelytra; a white band near the tip margined with fuscous; dorsal foliaceous elevation taking its rise behind the line of the origin of the hemelytra, its edge very obtusely curved, and gradually disappearing behind at the white band, its sides in the middle are abruptly compressed; tip acute, not attenuated; *hemelytra* with a punctured scale at base, which is adjusted in the emargination of the thoracic edge; coriaceous exterior margin less than one-fourth the length of the hemelytra, and punctured; *beneath* yellowish-green.

Length three-tenths of an inch.

3. *M. concava*. Fuscous with elevated lines on the thorax, and an oblique white band behind.

Inhabits North-west Territory.

*Body* with dilated punctures; *head* inequal, varied with whitish and fuscous; tip a little more prominent in the middle; *thorax* unarmed, rounded before, with a carina originating at the head and continued to the tip; elevated lines like nervures, which are reticulate on the anterior part and near the back, but on the sides they are distinctly four or five in number; back over the origin of the wings a little concave; anterior or front of the thorax pale; carina on its concave portion white, and a white oblique band from behind the middle of the back to the exterior edge nearer the tip; tip obtuse, hardly surpassing the hemelytra; *hemelytra* dull amber, dusky at tip; nervures brown; a fuscous, coriaceous, punctured basal margin extending more than half the length of the wing; a fuscous, punctured scale adjusted in an emargination of the edge of the thorax; *beneath* piceous-black; *knees, tibia, and tarsi*, yellowish.

Length one-fifth of an inch.

Var. *α*. Thorax ferruginous or whitish, black or fuscous before and behind.

This species is also an inhabitant of Missouri and Arkansas.

4. *M. binotata*. Thorax with a compressed horn extending above the head, and two spots on the back.

Inhabits United States.

*Body* fuscous, punctured; *head* longer than broad, rounded at tip, minutely punctured; *thorax* with a projecting horn before, which rises high above the line of the back, compressed, carinated above, each side, and beneath, and incurved towards the tip; between the lateral and in-

ferior carinæ are three elevated lines converging towards the eye; superior carina of the horn continued upon the back to the tip; lateral carina of the horn continued upon the side to the middle of the thoracic edge; carina of the back slightly undulated, with two yellowish spots, of which one is on the middle and the other near the tip smaller and placed nearer to the anterior one than its own length; tip acute; *anterior* and *intermediate tibiæ* dilated, foliaceous; *posterior tibia* with two serrated lines behind; *hemelytra* opaque, much longer than the abdomen; *wings* hardly longer than the abdomen.

Length including the horn seven-twentieths; exclusive of the horn more than one-fifth of an inch.

The eyes are very nearly equidistant between the tip of the horn and of the hemelytra. It very closely resembles the *lanceolata*, Fabr. an inhabitant of South America, of which it may possibly prove to be a variety.

5. *M. latipes*. Thorax with a compressed, porrect horn; body fuscous, immaculate.

Inhabits United States.

*Body* fuscous, punctured; *hemelytra* paler; *thorax*, horn extended in a line with the back and slightly decurved at tip; but in other respects resembling that of the preceding species; back immaculate; posterior tip acute; *hemelytra* paler than the thorax; nervures fuscous.

Length equalling the preceding species.

This species very closely resembles the *binotata*, but the horn has a very different direction; the back is destitute of spots, and the hemelytra seem to be of a more membranaceous texture.

CERCOPIS, *Fabr. Germar.*

*C. parallella*. Hemelytra with two whitish bands, which are margined with dusky.

Inhabits North-west Territory.

Dusky yellowish-brown, punctured; *head* densely punctured; dusky in the middle and near the eyes; a glabrous somewhat elevated longitudinal line; length less than one-third of the breadth; *thorax* less densely punctured than the head; angulated at the middle of the anterior edge; a glabrous somewhat elevated line from the anterior central angle, continued on the scutel; *scutel* acute, punctured at base, glabrous at tip; *hemelytra* densely punctured; an oblique band from the tip of the scutel, attains the exterior edge near the middle, it is whitish, margined with dusky; another oblique band parallel with the preceding and of the same colours, is placed a short distance behind the middle; near the tip on the inner edge is a whitish spot; *pectus* and *feet* yellowish; *tarsi*, terminal joint dusky; *tergum* and *venter* dusky, margined with sanguineous.

Length two-fifths of an inch.

This species varies a little in the shade of its colouring, and when dark in colour, the bands are almost obsolete. This species also occurs in Missouri and Arkansa.

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## ORDER NEUROPTERA.

### BAETES, *Leach.*

1. *B. bilineata*. Large, pale ferruginous; inferior wings margined behind with dusky; tergum fuscous with a double series of whitish lines.

Inhabits St. Peter's river.

*Head* above somewhat fulvous; beneath and front yellow; *thorax*, first segment yellowish-brown, blackish each side and before; second segment pale brownish, a little tinged with rufous and with indistinct oblique whitish lines, proceeding from the longitudinal impressed line; two brown spots on the middle placed transversely; *wings* hyaline, whitish, with fuscous nervures; posterior margin of the inferiores fuscous; *tergum* fuscous, lateral margin whitish; posterior edges of the segments white above; a double series of whitish, oblique, dilated, abbreviated lines.

Length ♀ to tip of the wings one and three-tenths of an inch.

This is much the largest species of this country I have seen, it appeared in considerable numbers.

2. *B. alternata*. Wings whitish, nervures fuscous; *tergum* fuscous, segments whitish at their bases.

Inhabits North-west Territory.

*Body* fuscous; *head* on the anterior margin and *genæ* white; *thorax* pale brownish-livid, yellowish near the scutellum; *wings* hyaline, with a whitish reflexion, nervures not margined; *pleura* and *pectus* varied with yellowish; *feet* pale ochreous, a fuscous annulus near the tip of the thighs; *tergum* fuscous; segments whitish at base, one or two ultimate segments with two whitish longitudinal lines; venter whitish, each segment with two oblique lines and two intermediate points, black; *seta* whitish, with regular fuscous spots alternating.

Length of the body ♂ from two-fifths to half an inch.

Closely allied to the *femoratus*, nobis,\* but may be dis-

\* Western Quarterly Reporter, vol. 2. p. 162.

tinguished from that species at once, by the nervures of the wings being altogether destitute of coloured margins.

3. *B. alba*. White; vertex and anterior feet above dusky.

Inhabits Winnepeek river.

*Thorax* slightly tinged with pale yellowish-brown; *anterior feet* short, rather robust; *nervures* upon and near the costal margin dusky.

Length of the body ♀ about half an inch.

This insect appears in immense numbers. They rise upon the wing in the evening, and their short existence in the perfect state appears to be terminated before sunrise. For a more particular account of this species, see the Narrative.

### ASCALAPHUS, *Fabr.*

A. 4-*maculatus*. Wings with a white costal spot; antennæ as long as the body; tergum varied with black and testaceous; eyes with a suture.

Inhabits Pennsylvania.

*Head* and *stethidium* covered by long cinereous hair, the latter part blackish, varied with pale testaceous; *labrum* honey-yellow; *antennæ* as long as the body, dull yellowish-brown; incisures blackish, clavum oval, compressed, blackish with pale incisures; *eyes* large, prominent, in the middle divided by an impressed line; *wings* hyaline with a milk-white reflexion, an opaque snow-white spot near the tip of the costal margin, nervures black; *tergum* testaceous, segments with a dorsal line and oblong spot each side, black, terminal segments nearly all black; sides black, varied with testaceous.

Length to tip of wings one inch and a half.

Like the *cayennensis*, Fabr. this species has a white spot on each wing, but the clavum of the antennæ is not truncated. The eyes are each bisected by an impressed line in the middle, as in the *maculatus*, Oliv. and all others of this genus. This species was found by Mr. William W. Wood.

### HEMEROBIUS, Latr. Lam.

1. *H. irroratus*. Blackish; thorax with three lines and lateral margin yellowish; wings hyaline with black spots. Inhabits United States.

*Body* hairy; *antennæ* fuscous, less than half the length of the body, filiform; *orbits* above and before, and *hypostoma* glabrous, white, the latter with a broad, transverse, brownish line near the tip; *labrum* white, with two obsolete, dusky, longitudinal spots; *maxillary palpi* black; a large, transverse, quadrate, black, glabrous spot, surrounding the base of the antennæ; *thorax*, anterior segment five-lined, lines equal; *feet* whitish, hairy, four anterior thighs annulate with brown near the tip, their tibia at tip and annulus near the base, brown; *pleura*, incisures whitish; *wings* hyaline, with numerous irregular, unequal, black and white points and spots, which are larger on the inner and outer margin; nervures and margins alternately spotted with blackish and white; nervures of the disk with only a single line of connecting nervures which pass across the middle; margin with numerous nervures; *inferior wings* without spots, excepting on the margin.

Length to tip of the wings one inch and a quarter.

Rather rare in Pennsylvania. We obtained a specimen in the North-west Territory, and Mr. Isaiah Lukens informed me that they are extremely numerous near Lake Erie in June.

2. *H. vittatus*. Pale yellowish, with a black vitta on the pleura; abdomen fuscous; wings spotted with black.

Inhabits Pennsylvania and New Jersey.

*Head* with a transverse, quadrate, dusky spot between the eyes; *antennæ* somewhat longer than the head and thorax, yellowish-rufous, blackish at tip and base; *eyes* prominent, black; *thorax* greenish-white, dusky between the wings, first segment a little narrowed before; *wings* hyaline, with black spots; costal nervures articulate with black and white; a small white spot near the costal tip of each wing; inferior wings with fewer spots than the superior ones, but behind the costal middle is a large orbicular spot, and a smaller irregular one near the tip; *metathorax* blackish above; *pleura* with a broad blackish vitta, extending from near the head to the abdomen; *feet* blackish, thighs at base, an annulus near the tip of the posterior ones, and posterior tibia towards the tip, pale; *abdomen* blackish, with an obsolete, pale, small spot on some of the segments of the tergum.

Length to tip of the wings one and two-fifths of an inch.

This fine insect is in the collection of the Philadelphia Museum, and was found by Mr. Titian Peale.

### CHAULIODES, Latr.

*C. serricornis*. Brownish-black, wings spotted with white.

Inhabits United States.

*Head* somewhat wider than the thorax, dusky testaceous at base, diameters nearly equal; *antennæ* deeply serrated, black; *wings* blackish; *superior wings* with a white band across the middle not attaining the inner margin and widest on the costal margin, a white spot on the costal

margin near the tip, and numerous, small, white dots on the disk near the tip; *inferior wings* with a narrow band across the middle not attaining the inner margin and near the tip larger spots, white.

Length to tip of the wings from one inch and a quarter to one inch and a half.

A fine insect, which appears to inhabit almost every part of the United States, though I have not met with many specimens any where. Mr. Nuttall brought me an individual from Arkansa; Dr. Bigsby took a specimen as far north as the Lake of the Woods, and I have found one in Pennsylvania; another in Missouri, and a third on Red river of Lake Winnepeck.

### PHRYGANEÆ, Linn. Latr.

1. *P. subfasciata*. Pale yellowish-brown; wings covered with minute elevations, with two spots and posterior margin fuscous.

Inhabits North-west Territory.

*Antennæ* brown, first joint yellowish on the inner and inferior sides; *thorax* with two series of large granules furnishing hairs; *superior wings* covered with bullæ or minute raised points, and with short scattered hairs; inner margin of a somewhat darker colour; a band on the middle not reaching the costal margin; an irregular sublunate line, composed of confluent spots at the termination of the central elongated area, and posterior margin, fuscous; *inferior wings* fuscous on the posterior margin; setæ of the tibia and tarsi, black.

Length to tip of the wings seven-tenths of an inch.

2. *P. radiata*. Pale yellowish-brown; wings with a fuscous circle, from which proceed four radii.

Inhabits North-west Territory.

*Antennæ* fuscous; *vertex* and *neck* hairy; *thorax* on each side before the wings, and two dorsal series, hairy; *superior wings* nearly hyaline; beyond the middle a large fuscous circle from which a dilated line proceeds to the tip, another to the inferior angle, a third to the carpal spot, and a fourth towards the base, interrupted in its middle; dorsal margin, particularly towards the base, fuscous; surface with scattered hairs, those of the nervures more distinct and blackish; *tibia* and *tarsi* with black setæ.

Length to tip of wings seven-tenths of an inch.

3. *P. sericea*. Blackish, sericeous; wings varied with fuscous and sericeous.

Inhabits North-west Territory.

*Head* with a cinereous gloss, and a few long hairs; *antennæ* brown, incisures margined with yellowish; basal joint colour of the head; *thorax* with a cinereous gloss in a particular light; *superior wings* varied with pruinose and fuscous; a transverse, quadrate, blackish spot on the middle of the inner margin; hairs numerous, minute, those of the nervures larger and black; *inferior wings* immaculate; *posterior pairs of feet* pale ochreous, sericeous, with black setæ.

Length to tip of wings more than two-fifths of an inch.

### MANTISPA, Illig. Latr.

*M. brunnea*. Light brown; *antennæ* fuscous, light brown at the extremity; wings with a very broad, brown margin.

Inhabits United States.

♂ *Antennæ* short; posterior and inferior *orbits* yellow; *thorax*, first segment obtusely wrinkled, or undulated, anterior margin black, submargin yellow; base black, with a

yellow, transverse, angulated line; *scutel* yellow; *meta-thorax* yellow on the posterior edge; *pleura* bilineate with yellow; *wings* with a broad, light brown costal margin and tip; *feet*, intermediate and posterior pairs with yellow tibiae and tarsi, a rufous spot being near the knee; anterior thighs blackish on the inner side, with a yellow exterior inferior margin, and numerous spines on the inferior edge, of which one is very prominent; *tergum* at the base of the first and second segments black, the former margined with yellow; *venter* black at base, segments broadly margined with yellow.

♀ The yellow colour and marginings, excepting on the feet and first segment of the thorax, obsolete; the wings are darker than those of the male, and the hyaline portion of the wings is tintured with a shade of the general colour.

Length of the body ♂ half an inch, ♀ to tip of wings more than nine-tenths of an inch.

A specimen of the female of this curious insect was presented to me about a year ago by Mr. William Mason of this city; it was found near Philadelphia by Mr. Tyler. The male occurred on St. Peter's river.

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## ORDER HYMENOPTERA.

### XYELA, *Dalman*.

*X. ferruginea*. Ferruginous; thoracic spots and base of the abdomen blackish.

Inhabits Arkansa.

*Antennæ* fuscous, basal joint ferruginous; above the an-

tennæ and extending between the eyes is a transverse black spot; *thorax* each side above the base of the superior wings with a longitudinal blackish spot, connected behind with a transverse, almost indefinite one; *metathorax* blackish behind; *wings* hyaline, slightly tinged with yellowish, nervures brown; *tergum*, three basal segments black, remaining segments obsoletely blackish on their posterior margins; posterior pairs of tibiæ six-spined, one on the middle, one beyond the middle, and the other at tip.

Length to tip of oviduct seven-twentieths of an inch.

This interesting insect was presented to me by Mr. Thomas Nuttall, who obtained it during his expedition to Arkansas. The forms of some of the wing cellules differ a little from those of the type of this genus. The first radial cellule receives the first recurrent nervure and is nearly square, slightly oblong, and nearly two-thirds the size of the second cellule, which receives no recurrent nervure and is somewhat smaller than the third cellule. The latter receives two recurrent nervures. The cubital cellules are sub-equal, bounded beneath by an almost rectilinear line, the third nearly attains the tip of the wing, leaving the fourth cellule very small. The maxillary palpi also are much shorter than those of the Swedish species. This disposition of the nervures will authorize the formation of a distinct section in the genus.

### XIPHYDRIA, *Latr.*

1. *X. abdominalis*. Black; abdomen rufous.

Inhabits Pennsylvania.

*Head* confluentely punctured; *antennæ* short; *vertex* with two distant, longitudinal, yellow spots, and another

transverse one on each cheek above; *thorax* confluent punctured, margined, and with three longitudinal impressed lines distant before; *wings* fuliginous; *abdomen* bright rufous; first segment above blackish; *feet* piceous-black.

Length more than half an inch.

The abdominal colour of this species distinguishes it at once from any other. In *dromedarius* the middle segments of the tergum are rufous, but the terminal and three basal segments are black, and there is a series of whitish lateral spots.

2. *X. tibialis*. Black; four lateral spots of the abdomen, first tarsal joint and base of the tibia white.

Inhabits Pennsylvania.

*Stethidium* rough with confluent punctures, immaculate; *wings* hyaline, nervures dark fuscous; *feet* black; tibia white, fuscous at tip; tarsi, first joint white; *abdomen* black, three middle segments and penultimate segment, each with a white spot on each side.

Length more than two-fifths of an inch.

This species resembles the *camelus*, Fabr. and *UROCERUS annulatus*, Jur., but is less than half the size of either, and the former, according to authors, has ferruginous feet and a smooth thorax; the latter has a lateral white spot on each of the abdominal segments excepting the penultimate one.

### TARPA, Fabr. Le Peletier.

*T. scripta*. Black, with white lines and spots; abdomen rufous.

Inhabits North-west Territory and Arkansas.

*Hypostoma* on its anterior margin, *mandibles* and *palpi*, whitish; line upon the orbits extending from near the an-

tennæ to the occiput and together with an insulated spot each side on the vertex when viewed from behind presenting the form of the figure 3, white; a white slightly oblique spot above the base of each antenna; inferior orbits white; *thorax* with an abbreviated, transverse, angulated line before, slightly interrupted in the middle, a line before each wing and three small spots on the middle placed triangularly, white; *wings* hyaline, nervures fuscous; *feet* yellowish-white; *abdomen* rufous, first segment, and sometimes the tip, black.

Length from more than three-tenths to two-fifths of an inch.

### CEPHUS, *Latr.*

1. *C. trimaculatus*. Black; abdomen with a yellowish-white spot each side at the middle.

Inhabits Pennsylvania.

*Orbits* before, two longitudinal spots on the hypostoma, and base of the mandibles yellowish-white; *wings* brown-black; *metathorax* with a pale greenish, membranaceous, triangular spot behind; *abdomen* on the middle with a transverse oval pale yellowish spot each side.

Length ♂ nearly one-half, ♀ nearly three-fourths of an inch.

Var. *α*. head immaculate.

Var. *β*. a very small indistinct spot each side beyond the middle.

In the collection of Mr. William W. Wood, the great difference in point of size between the sexes of this insect, might readily lead to error with respect to their specific identity.

2. *C. abbreviatus*. Black; abdomen rufous at base.

Inhabits Pennsylvania.

♀ *Body* black, polished; *labrum* white, with a dilated, longitudinal, fuscous line; *thorax* with an oblique, white, abbreviated line at the base of the superior wings; *scutel* with a transverse white line; *metathorax* with a longitudinal white triangle; *wings* hyaline, nervures fuscous; the small nervure which divides the first marginal cellule from the first submarginal cellule is abbreviated and does not reach the margin; *feet* pale rufous, *tibiæ* with a white abbreviated line on the exterior side near the knees; posterior *tibiæ* and *tarsi* black; *abdomen* compressed, acutely edged above beyond the middle; first and second segments rufous.

Length seven-twentieths of an inch.

This may be readily distinguished from the preceding species as well by its inferior size and colour, as by the remarkable abbreviation of the dividing nervure of the first marginal and submarginal cellules.

### HYLOTOMA, Latr.

*H. dulciaria*. ♀ Pale rufous; head, wings, and feet violaceous-black.

Inhabits North-west Territory.

*Antennæ* black, with a slight violaceous tinge; *pectus* with a large, well defined black spot, tinged with violaceous; *feet* hardly tinged with violaceous; *abdomen* yellow; tail black.

Length to tip of the wings nine-twentieths of an inch.

This species was found by Dr. Bigsby, to whom I am indebted for the specimen. It seems to be allied to the *pectoralis*, Leach, of which, however, the wings are "luteo-hyalinæ."

LOPHYRUS, *Latr. Leach.*

*L. abdominalis*. ♀ Antennæ 18-jointed, pale yellowish; thorax with black spots.

Inhabits North-west Territory.

*Head* reddish-yellow; a large, transverse, black spot above the antennæ descending on each side between the antennæ and the eyes to the sides of the mouth, and ascending by two distant narrow lines over the vertex to the occiput; *mandibles* piceous at tip; *thorax* with large black spots, occupying the greater portion of the surface; *scutel* pale yellow; *wings* hyaline, nervures and stigmata fuscous; *thighs* dusky at base; *tergum* yellow, tinged with rufous, whitish on the lateral margin; segments piceous on their posterior edges.

Length of the body nearly three-tenths of an inch.

This species seems to be allied to *L. americanus*, Leach, but that insect is stated to have nineteen joints to the antennæ.

NEMATUS, *Jur.*

*N. ventralis*. Black; venter and feet pale.

Inhabits United States.

♂ *Hypostoma*, *palpi* and *mandibles* at base, whitish; *orbits* above and behind piceous; *thorax* dilated, triangular line before the wing, and wing scale, whitish; *wings* slightly dusky, nervures fuscous; feet honey-yellow, posterior tarsi black-brown; *tergum* black, segments each with a yellow band of which the four terminal ones are interrupted in the middle; *venter* pale honey-yellow.

Length one-fourth of an inch.

♀ *Orbits* all round whitish; white line or spot before

the wings with about three obsolete black spots before; *feet* white, thighs black in the middle, posterior tarsi blackish; *tergum* black, the bands obsolete; *venter* white, anal segment blackish.

Length three-tenths of an inch.

Belongs to *NEMATUS*, Leach, and to *NEMATUS* †††, Le Peletier.

### TENTHREDO, Latr.

1. *T. basilaris*. Black, hypostoma and basal joint of the antennæ yellow; *tergum* bifasciate.

Inhabits North-west Territory.

♀ *Body* polished; *hypostoma* emarginate in a curved line, and with the *labrum* and *mandibles* yellow, the latter piceous at tip; *gena* with a yellow line abbreviated above; *tongue* and *palpi* pale yellow; *thorax* with a yellow line before the wings; *scutel* yellow; *metathorax* with two small yellow spots; *wings* tinged with ferruginous; *pleura* with an oblique, dilated line above the intermediate feet, and a rhomboidal spot above the posterior feet, yellow; *anterior feet* greenish-white; *intermediate feet* pale yellowish, a black spot on the thighs near the tip behind; *posterior feet* pale yellowish, thighs and tibiae annulate with black at tip; *tergum*, first segment white on the posterior margin, fifth segment rufous, penultimate segment with a yellow subtriangular spot on each side, ultimate segment at base, and tail, pale yellow; *venter*, fifth segment rufous.

Length of the body two-fifths of an inch.

♂ *Checks* entirely yellow; a yellow spot on the *pleura* above the anterior feet, connected with the thoracic line; *tergum* yellowish-rufous, dusky at tip and black at base; *venter* yellowish-white, dusky at tip.

This species resembles the *bifasciatus*, nob.,\* of which the only specimen I have seen is a female. On comparing the two species, it will be observed that the above described insect is larger, and of a somewhat more slender form; the surface of the head and thorax is much more smooth; the rufous band instead of being on the fourth segment, as in that species, is on the fifth, &c.

2. *T. verticalis*. ♀ Head pale yellow; vertex and antennæ black; tergum yellowish, spotted with black, tip black.

Inhabits North-west Territory.

*Mandibles* piceous at tip; *antennæ* rather long; *vertex* with a somewhat lobated, large black spot, extending by a process down between the antennæ, and connected with another large spot on the occiput; *neck*, a black line each side; *thorax* black, about four oblique, short lines in the centre, and dilated line before each wing, yellow; *wings* hyaline, stigmata and nervures fuscous, costal edge dull yellowish; *scutel* yellow; *metathorax* black, a triangle at base, two dots and behind, yellow; *pleura* black, a yellow spot near the anterior wings and another over the posterior feet; *feet* yellow, slightly varied with pale testaceous; posterior thighs black on the terminal half, their tibiæ black at tip; *tergum* yellow, with a testaceous tinge, second, third, and fourth segments two-spotted on each; those of the anterior one nearly confluent; fifth immaculate, terminal ones black; *venter* pale yellowish, black at tip.

Length of the body three-twentieths of an inch.

3. *T. rufipes*. ♀ Black; mouth yellow; feet rufous.

Inhabits North-west Territory.

*Antennæ* moderate; *hypostoma* emarginate with a re-

\* Western Quarterly Reporter, vol. 2. p. 72.

gularly curved line, pale yellow; *labrum* nearly orbicular, and with the *mandibles* pale yellow, the latter piceous at tip; *stethidium* and *abdomen* black, immaculate; *wings* with fuscous nervures, stigmata, and costal edge; *feet* pale rufous; posterior tarsi and their tibiæ at tip blackish.

Length of the body half an inch.

4. *T. terminalis*. Antennæ white at tip; abdomen testaceous.

Inhabits United States.

♀ *Body* black; *head* testaceous; *vertex* with a blackish longitudinal vitta; *antennæ* black, four last joints white; *stethidium* black; *thorax* with a piceous triangle before, and a large yellow spot behind; *thorax* with two small yellow spots; *wings* tinged with fuliginous; nervures fuscous; carpal spot whitish on the basal half; *pleura* with a large testaceous spot beneath the superior wings; *feet* testaceous, coxæ black, tip of the posterior coxæ white; *abdomen* entirely testaceous.

♂ Tip of the antennæ pale yellowish; superior orbits with a white sagittate spot; occiput each side with a white spot; instead of the piceous triangle of the thorax is a white V-like spot; *pleura* testaceous; *pectus* testaceous. disk and posterior coxæ at base black.

Length seven-twentieths of an inch.

The white terminal joints of the antennæ of this species are very distinct and striking.

5. *T. pygmæa*. Black; thorax rufous before; feet white.

Inhabits United States.

♂ ♀ *Body* polished; *hypostoma* obscure whitish; *thorax*, anterior segment rufous, collar dusky; *wings* dusky; *feet* white; thighs blackish in the middle behind; posterior tibiæ and tarsi black.

Length ♂ one fifth of an inch, ♀ rather more.

DOLERUS, *Jur.*

1. *D. inornatus*. Body black, polished; feet white, tarsi dusky\*.

Inhabits United States.

♀ *Labrum* and *palpi* whitish; *thorax* with a line before the wings and wing-scale, white; *scutel* with a small bullate white spot on each side; *wings* a little dusky; *nervures* blackish-fuscous; *pleura* with an abbreviated white line over the intermediate feet; *coxae* colour of the feet.

Length one-fourth of an inch.

This species belongs to DOLERUS †† of *Le Peletier*, EMPHYTUS, *Leach*.

2. *D. arvensis*. Blackish-violaceous; thorax rufous, a spot before and triangular spot behind, black.

Inhabits United States.

♀ *Antennæ* black; *palpi* and *mandibles* black; *head* black with a violaceous tinge; *thorax* with a longitudinal spot from the collar to the middle, a small spot over the wing, posterior margin connected with a spot, black; *metathorax* black; *wings* dusky; *pleura* and *pectus* black, tinged with violaceous, the former rufous at the humerus, this colour being connected with that of the thorax; *feet* black; *abdomen* dark-violaceous.

Length more than seven-twentieths of an inch.

Var. *a.* black spot above the wing enlarged and reaching the dorsal spot.

This species belongs to HYLOTOMA, *Fabr.* DOSYTHÆUS, *Leach*, and DOLERUS, ††† *Le Peletier*. It is found in the North-west Territory, Pennsylvania, and Arkansa. This species is closely allied to TENTHREDO *thoracina*, *Beauv.* but it does not fully agree with his figure, and his description is too unessential to be useful.

3. *D. sericeus*. Entirely black, immaculate.

Inhabits United States.

♂ ♀ *Body*, particularly the *venter* and *feet*, sericeous, with short hairs; *wings* dusky; *tergum* glabrous, polished.

Length seven-twentieths of an inch.

Belongs to the same division with the preceding species.

It is found as far south and west as Arkansa. It resembles *TENTHREDO unicolor*, Beauv. but is somewhat larger, the three last joints of the antennæ are differently formed, and the wings are dusky.

### EVANIA, Fabr.

*E. unicolor*. Entirely black, immaculate, slightly sericeous.

Inhabits United States.

*Antennæ* as long as the body; *palpi* piceous; *thorax* with very few, small punctures; *metathorax* densely punctured; *wings* hyaline, nervures fuscous; a distinct nervure passes from the dividing nervure of the cubital and discoidal cellules to the posterior margin of the wing; *abdomen* much compressed, impunctured, polished, oval, rather longer than the petiole; *posterior feet* elongated.

Length more than three-tenths of an inch.

The proportions of the petiole, abdomen, and posterior feet of this insect are nearly the same with those of *appendigaster*, Fabr. I obtained a specimen near the Rocky Mountains, and it is also found in Pennsylvania. The additional nervure is sometimes connected with the radial cellule by a faint, transverse nervure, so as to form a second cubital cellule.

FOENUS, *Fabr.*

*F. tarsatorius*. Black; feet pale rufous; posterior tibia blackish, at base white.

Inhabits Pennsylvania.

*Antennæ* black-testaceous beneath towards the tip; *mandibles* testaceous, at tip black; *hypostoma* each side silvery; *stethidium* immaculate, confluent punctured; *wings* hyaline, nervures fuscous; *anterior and intermediate feet* pale rufous, the tibiæ with a whitish line, the base of the tarsi white; *posterior feet* piceous, tibiæ blackish, clavate, a white band near the base, which is much dilated before; tarsi white at base, the first joint with a black origin; *abdomen* blackish, with about three dull testaceous spots on each side; *oviduct* pale testaceous; valves blackish, at tip whitish.

Length of the body eleven-twentieths of an inch.

SIGALPHUS, *Latr.*

1. *S. sericeus*. ♀ Black; tergum sericeous; tibia ochreous at base.

Inhabits North-west Territory.

*Head* with dilated, transversely confluent punctures; *nasus* minutely punctured; *thorax* with much dilated, irregularly confluent punctures; *scutel* polished, almost impunctured on the disk, lateral margin grooved; *wings* slightly fuliginous, nervures fuscous, those of the base very pale brownish; *metathorax* with very large, somewhat discoidal punctures; *tergum* without obvious incisures, black, covered with short, dense, cinereous, sericeous hair; obtuse at tip; *venter* excavated; *anterior pairs of feet* black, se-

riceous, with ochreous tibiæ and tips of the thighs; *posterior pair* black, sericeous, tibiæ ochreous at base.

Length one-fourth to nearly three-tenths of an inch.

Very like the *sulcatus*, Jurine, but is much larger; it differs from *ICHNEUMON oculator*, Fabr. by being immaculate, and from *CRYPTUS irrorator*, Fabr. by the oval form of its abdomen.

2. *S. basilaris*. Black; base of the antennæ and feet pale yellowish.

Inhabits Pennsylvania.

*Head* punctured; *antennæ*, first and second joints pale yellowish; *mandibles* yellowish; *palpi* white; *thorax* punctured; *scutel*, *metathorax*, and *tergum* at base longitudinally wrinkled; *wings* hyaline, pale yellowish at base; nervures fuscous; *feet* pale yellowish, tips of the tarsi dusky.

Length nearly one-fifth of an inch.

This species is in the collection of Mr. William W. Wood. It is much smaller than the preceding species and readily distinguished by the colour of the basal joints of the antennæ and of the feet.

## BRACON, *Jur.*

1. *B. tibiator*. Black; wings fuscous at tip.

Inhabits Pennsylvania.

♀ *Wings* hyaline, nervures robust, fuscous; tip including the extremity of the second submarginal cellule, fuscous; *feet*, anterior pair of tibiæ and tarsi yellowish-white; intermediate tarsi whitish; posterior pairs of tibiæ white at base.

Length of the body one-fifth of an inch.

2. *B. populator*. Black ; abdomen red ; wings dark fuliginous.

Inhabits United States.

♂ ♀ *Metathorax* rough, with confluent punctures ; *abdomen* entirely reddish-fulvous ; *oviduct* black, longer than the abdomen.

Length of the body two-fifths of an inch.

A very common insect in many parts of the United States. The head and stethidium are sometimes dark piceous with the anterior portion of the thorax black. It resembles *B. initiator*, Fabr.

3. *B. ligator*. Black, abdomen and feet rufous, antennæ with a white annulus.

Inhabits Pennsylvania.

♀ *Vertex* and *occiput* impunctured ; annulus of the *antennæ* placed beyond the middle ; *palpi* piceous ; *stethidium* with confluent punctures ; *thorax* with two dilated, abbreviated, longitudinal, dull rufous lines ; *scutel* with a dilated, longitudinal, dull rufous line ; *wings* hyaline, nervures fuscous ; *metathorax* dull rufous ; *feet* rufous, tarsi blackish at tip ; *posterior thighs* with a strong tooth beneath near the tip ; *posterior tibiæ* fuscous ; *posterior tarsi* whitish ; *tergum* punctured, glabrous at tip ; *oviduct* blackish.

Length seven-twentieths of an inch.

4. *B. stigmator*. Dark yellowish-rufous ; metathorax and first segment of the tergum black.

Inhabits North-west Territory.

*Antennæ* as long as the body, dusky towards the tip ; *vertex* between the stemmata black ; *occiput* all round the neck, blackish ; *metathorax* above and on the sides black ; *pleura* with a blackish, dilated, longitudinal line ; *pectus* with a blackish, dilated line before the anterior feet, reach-

ing near the head ; *wings* hyaline ; nervures fuscous ; *stigmata* rather large, triangular, fuscous, dull white at the anterior and posterior tips, and also on the costal edge ; *tergum* paler, disk of the first segment blackish.

Length less than one-fifth of an inch.

This insect is one of the many species that deposit their eggs in great numbers in the larva of Lepidopterous insects. In a dead and dried larva, which I found adhering to a tree, were the follicles of forty or fifty individuals of this species. It varies somewhat in the quantity of the black colouring with which it is marked. In some specimens this extends not only along the pectus, but is continued in a capillary line along the edge of the thorax, the metathorax also is entirely black, the tergum is blackish at tip and on the sides, the pectus has a black spot in the middle, and the hypostoma has a transverse, blackish spot.

### STEPHANUS, *Jur.*

*S. rufipes*. Black ; abdomen sessile ; thorax not remarkably attenuated before.

Inhabits Pennsylvania.

*Body* somewhat sericeous ; *palpi* pale yellowish ; *scutellum* with a groove on each side, rough ; *metathorax* rough, and with two slightly elevated, longitudinal, distant lines ; *wings* hyaline ; a large, triangular, fuscous, carpal spot ; *feet* rufous ; posterior pair of tarsi dusky ; *abdomen* a little rough at base ; *oviduct* as long as the abdomen.

Length one-fifth of an inch.

Although the arrangement of the wing nervures agrees precisely with *S. coronatus*, *Jur.*, yet the form of the body differs materially, the thorax not exhibiting the remark

able attenuation before, and the abdominal petiole is not visible.

### ACAENITUS, Latr.

(*Anomalon*, Jur.)

*A. stigmatæpterus*. ♀ Black; incisures of the feet white.

Inhabits North-west Territory.

*Thorax* densely punctured; two dilated grooves confluent behind; *scutæ* united to the thorax by a carinated line each side; *wings* tinged with fuliginous; nervures blackish; stigma terminated before by a small white spot; *metathorax* with large confluent punctures; terminated on each side behind by a short conic process; *pleura* and *pectus* polished; *tibiæ* at base, first joint of the tarsi at base, and near the tip of the tarsi, white.

Length more than one inch.

Well distinguished by the white points on the wings, and the white annulations of the feet. The head in my specimen is deficient.

### IBALIA, Latr.

*I. anceps*. Dull ferruginous; wings blackish; abdomen piceous.

Inhabits Arkansa and St. Peter's rivers.

*Head* with a black curved line at base of the antennæ; *collar* abruptly elevated at the anterior edge, and slightly emarginate in the middle; near the neck black; *thorax* transversely wrinkled, and with three longitudinal impressed distant lines, of which the intermediate one is black, and the lateral ones black on the exterior side; *scutæ* scabrous, abruptly elevated at tip, and emarginated;

*metathorax* scabrous, black on the disk; *wings* fuliginous-black; *pleura* and *pectus* blackish, the former with an obsolete, longitudinal line beneath the wings; *thighs* piceous in the middle; posterior pair black in the middle; *abdomen* compressed almost to flatness, piceous-black, margins of the segments paler; elongate-oval; rounded, but sharp-edged at tip; *tergum* and *venter* also with sharp edges.

Length nearly seven-tenths of an inch.

This species is not of very common occurrence. It is very closely allied to *BANCHUS cultellator*, Fabr.

### CHALCIS, Fabr. Latr.

1. *C. microgaster*. Slender, black; anterior pairs of feet and posterior tarsi, yellowish; peduncle as long as the abdomen.

Inhabits Pennsylvania.

*Stethidium* with dilated, dense punctures; *metathorax* with an angulated line above the insertion of the abdomen; *wings* hyaline, costal nervure fuscous; *posterior feet* black; tarsi yellowish; first joint of the coxæ with a small acute tooth above near the tip; thighs as large as the abdomen, with numerous, small, regular teeth on the posterior edge; *tibiæ*, terminal spine longer than the first joint of the tarsi; *abdomen* polished, a little compressed, triangular, the superior angle rounded.

Length less than one-fifth of an inch.

2. *C. ovata*. Robust, black; feet yellow, thighs black at base, head with a golden reflection.

Inhabits Ohio and Pennsylvania.

*Head* black, with golden sericeous hair, which is indistinct on the vertex; *antennæ* testaceous beneath towards the tip; *stethidium* with dilated, dense punctures, a little

sericeous with golden hair; scale covering the base of the wings yellow; *wings* hyaline; nervures fuscous, at base pale yellowish; *feet* bright yellow; basal half of the anterior pairs of thighs black; posterior thighs smaller than the abdomen, black, with a yellow spot on the tip above, dentated on the posterior edge; posterior tibia piceous on its basal incisure; terminal spine robust, shorter than the first tarsal joint; first joint of the posterior coxæ with a robust tooth above near the tip; *abdomen* subovate, polished; first segment nearly glabrous, second segment hairy on each side, remaining segments hairy near their tips.

Length one-fifth of an inch.

### LEUCOSPIS, *Fabr.*

*L. affinis.* Abdomen sessile; oviduct as long as the abdomen; black, varied with yellow; collar each side and behind margined with yellow, and with an abbreviated, transverse, yellow line on the anterior submargin.

Inhabits Pennsylvania.

♂ *Body* densely punctured; *antennæ*, basal joint yellow; *collar* margined each side and behind with yellow, the yellow abbreviated line on the anterior submargin is about half the width of the collar; *thorax*, incisure at the base of the wing dull yellow; *scutel* with a transverse yellow line; *wings* brownish; *pleura*, a yellow line over the insertion of the posterior feet; *feet* yellowish, thighs dusky or black at base; posterior thighs black, with a yellow spot at base and another at tip on the exterior side; posterior coxæ testaceous at tip; *tergum* with three nearly equal bands, and an oval, longitudinal spot near the tip, yellow; *venter* with a yellow spot each side, opposite to the termination of the third band of the tergum.

♀ Resembles the male, but the bands of the tergum are more dilated than those of the male, and the first is interrupted by the groove of the oviduct; the second band is reduced to a small lateral spot; the yellow spot at tip is divided by the groove of the oviduct; the venter is immaculate, and posterior thighs are piceous on the inner side.

Length rather more than three-tenths of an inch.

This species is very closely allied to the *dorsigera* and *gigas*, but more particularly to the former; it is much smaller than the *gigas*, and differs from both in many respects, and more obviously in the circumstance of the anterior margin of the collar being black, with an abbreviated yellow line on the submargin.

I observed this species running actively over the surface of a rafter in a barn, very busily feeling with its antennæ for a proper situation to deposit its eggs. Having found a suitable place, the insect, after some exertion, suddenly disengaged its oviduct from the groove and valves, and gradually thrust the instrument into the wood, nearly to the base; then having for a short time remained at rest, probably in order to protrude the egg, the oviduct was withdrawn, adjusted in its dorsal groove; and the insect proceeded again as before, in search of another spot suitable for its purpose. I could not ascertain the kind of larvæ, within the wood, that received these eggs.

### PSILUS, *Jur.*

*P. brevicornis*. Black, polished, immaculate; tibiæ and tarsi piceous.

Inhabits St. Peter's river.

*Antennæ* short, first joint much elongated, second joint longer than the remaining ones, which are subcylindric-

quadrate; *mandibles* pale testaceous; *thorax* convex, rounded, two faint impressed lines each side behind converging to the scutel, and on the posterior margin two indistinct dull whitish spots; *scutel* elevated, convex; *feet* dark piceous; thighs nearly black; *wings*, costal nervure indistinct; *abdomen* depressed fusiform, acute at tip.

Length more than one-twentieth of an inch.

### BETHYLUS, Latr.

*B. rufipes*. Black; antennæ and feet rufous.

Inhabits North-west Territory.

*Body* slender, polished, black; *mouth* rufous; *thorax* punctured; *wing joint* ochreous; *abdomen*, incisures and terminal segment obscurely piceous.

Length less than one-fifth of an inch.

This insect is also an inhabitant of Missouri.

### PROCTOTRUPES, Latr.

*P. caudatus*. Pale testaceous; oviduct as long as the abdomen.

Inhabits North-west Territory.

*Head* with a blackish, transverse line between the antennæ; *thorax* and *scutel* impunctured; *wings* hyaline, with a very slight ochreous tinge, stigmata very distinct, and with the costal nervures fuscous, the other nervures light brownish, the process of the radial nervure continued transversely to the middle of the disk of the wing, is not only extended from that point to the extremity of the wing, but also towards the base of the wing, terminating in this direction at the first transverse nervure.

Length of the body nearly two-fifths of an inch.

This species was also found in Missouri.

### HEDYCHRUM, Latr.

1. *H. ventrale*. Green polished; tergum tinged with blue; antennæ blackish at tip; venter bronze.

Inhabits Pennsylvania.

*Antennæ*, excepting the first joint, blackish-brown; *front* impressed; *stethidium* with dilated punctures; *thorax* in the middle between the wings, with a purplish shade; *wings* dusky, nervures fuscous; *tarsi*, excepting the basal joint, dark brownish; *tergum* passing to bluish-purple towards the tip; tip very obtusely rounded, terminal segment longer than the preceding one; *venter* entirely dull bronzed.

Length more than one-fourth of an inch.

2. *H. dimidiatum*. Green polished; posterior half of the venter bronze.

Inhabits Pennsylvania.

*Antennæ*, excepting the basal joint, and *palpi*, brownish-black; *front* somewhat impressed; *vertex* between the stemmata dark purplish; *stethidium* with dilated punctures; *thorax* longitudinally on the disk dark purplish; *wings* dusky, nervures fuscous; *tarsi* dark brownish; *tergum* longitudinally in the middle slightly tinged with bluish, ultimate segment less than half the length of the preceding one; *venter* green, posterior half coppery.

Length nearly three-tenths of an inch.

From the collection of Mr. William W. Wood.

MYRMOSA, *Latr.*

*M. unicolor.* Black; abdomen with cinereous hair; metathorax with an impressed line.

Inhabits North-west Territory.

*Head* with short cinereous hair, somewhat longer about the mouth; densely punctured; *thorax* and *scutel* densely punctured, and with scattered cinereous short hair; posterior segment of the former with two light parallel impressed lines; *wings* hyaline, nervures fuscous; *metathorax* with a longitudinal, impressed, very distinct line; and a transverse one at base; hair more obvious each side; punctures smaller than those of the thorax; *abdomen* more hairy than any other part of the body.

Length three-tenths of an inch.

This insect also occurred on the Missouri, at Engineer Cantonment, and in Pennsylvania.

TIPHIA, *Fabr.*

1. *T. inornata.* Black, immaculate; wings yellowish-fuliginous.

Inhabits Ohio and Pennsylvania.

*Head* punctured; *antennæ* piceous, paler towards the tip; *mandibles* piceous, blackish at tip; *thorax* punctured, wing-scale and posterior margin of the first segment impunctured, edge of the latter piceous; *metathorax* with three longitudinal, slightly elevated lines; posterior edge also slightly elevated into an acute line; *feet* hairy, tibiae and tarsi more or less piceous; *abdomen*, particularly behind, hairy.

Length three-fifths of an inch.

2. *T. interrupta*. Black, stethidium with yellow spots; tergum with yellow spots and bands.

Inhabits Pennsylvania.

*Antennæ* dull black-brown, first joint polished, piceous at tip; *mandibles* piceous, black at tip; *thorax* with a spot each side before, three in a line between the origin of the superior wings, yellow; *scutel* with a yellow, transverse line; *wings* hyaline, costal margin fuliginous; *metathorax* at the tip each side with a double, longitudinal, yellow spot; *pleura* with a vertical, yellow, oblong spot beneath the origin of the superior wing; *tarsi* pale piceous; *tibiæ*, anterior pair blackish-piceous, posterior pairs pale piceous; *thighs* black; *tergum* a little iridescent; first segment with a band abruptly and widely narrowed above; second segment with an oval spot each side; third segment, band gradually narrowed in the middle; fourth and fifth segments, bands slightly interrupted; *venter* immaculate.

Length nine-twentieths of an inch.

In the collection of Mr. William W. Wood.

This species would seem to be allied to the *serena*, judging by the description that Fabricius gives of that insect, particularly as he describes the costal margin of the wings to be fuscous. That insect, however, is stated to be only a little smaller than the *namea* of the same author, a size which at once puts that species out of the question.

### POMPILUS, *Fab. Latr.*

1. *P. faseipennis*. Black; wings hyaline, with a fuscous band near the tip; abdomen rufous at base.

Inhabits United States.

♀ *Hypostoma*, and inferior portion of the *front*, with

numerous silvery hairs; *wings* with fuscous nervures; a fuscous band including nearly all the radial cellule, and not reaching the posterior angle; tip slightly margined with fuscous; posterior thighs and tibiæ at base rufous; *abdomen* sessile, first and second segments rufous.

Length about three-tenths of an inch.

2. *P. marginatus*. Black; wings dusky, with a broad, darker posterior margin; abdomen sessile, first and second segments rufous.

Inhabits North-west Territory and Missouri.

♀ The terminal dark margin of the wings is so broad as to reach almost to the terminal cubical cellule, and passes round on the costal margin to the origin of the radial cellule; on the inferior wings is also a broad, terminal, darker margin.

Length two-fifths of an inch.

Very similar to the preceding, but manifestly distinct by the above characters.

### CEROPALES, Latr.

1. *C. fasciata*. Black; thorax and tergum spotted and banded with pale yellowish; feet ochreous, tarsi pale yellow.

Inhabits United States.

*Front*, *labrum*, and *orbits* yellow, the latter interrupted above; *thorax* punctured; anterior margin, a spot each side near the head, a longitudinal, abbreviated, central line, yellow; *scutel* with a spot on the disk, and another transverse one beneath its tip, yellow; *wings* immaculate, nervures blackish; *pectus* with a yellowish spot over the intermediate and another over the posterior feet; *coxæ*, first joint with a dilated yellow line; *posterior feet* elongated; *ter-*

*gum* polished; first segment with a rather large, yellow spot on each side, angulated before; second, third, fourth, and fifth, with each a yellow band, slightly interrupted in the middle, and at its termination on each side dilated into a spot; sixth segment dull ochreous; tail piceous.

Length nearly two-fifths of an inch.

This insect has considerable resemblance to the *macularia*, Fabr. but the longitudinal thoracic line, scutellar spot, the form and number of the bands of the tergum, &c. sufficiently distinguish it. It is more especially found in Missouri.

2. *C. ferruginea*. Ferruginous; wings violet; pleura and metathorax black.

Inhabits United States.

♂ *Antennæ* beyond the third joint, gradually shaded into fuscous; *mandibles*, the two teeth black; *thorax*, middle segment with a black anterior margin; posterior segment, and *scutel*, black on each side; *wings* decidedly violaceous; *posterior coxæ* at base black; *tergum*, first segment at base and tip, and second segment at tip, black.

Length less than three-fifths of an inch.

3. *C. bipunctata*. Black; wings dark violaceous; posterior thighs bright rufous in the middle; a small yellow dot each side at the tip of the metathorax.

Inhabits United States.

♂ *Hypostoma*, *labrum*, *anterior orbits*, and line on the basal joint of the *antennæ* before, yellow; *mandibles* piceous; *palpi* pale; *collar* yellow on the posterior margin, and with the *thorax* and *scutel* with somewhat distant punctures; *wings* violaceous; *posterior thighs*, excepting at base and tip, bright rufous.

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

♀ *Hypostoma* and *labrum* black, the *anterior orbits*

only yellow; *collar* destitute of the yellow margin behind. Smaller than the female.

This species may readily be distinguished by the two small, bright, yellow dots at tip each side of the metathorax, and the bright colour of the posterior thighs. It varies considerably in size.

### BEMBEX, *Fabr. Panz.*

*B. monodonta.* Black; tergum with dilated, greenish-yellow bands.

Inhabits Pennsylvania.

*Front* and *vertex* with cinereous hair; *labrum* with a greenish, oblong, margined spot each side, near the base; *thorax* hardly hairy; anterior edge, terminating in a spot on the pleura; an oblique, abbreviated line above the origin of the wings, terminating in a comma-formed spot behind, greenish-yellow; *metathorax*, a transverse, rectilinear line at base, and an arcuated one at base, slightly interrupted in the middle, greenish-yellow; *thighs*, at tip, *tibiæ* and base of the *tarsi*, pale yellowish; tips of the latter dusky; a dilated black line near the tip of the anterior *tibiæ*; *wings* hyaline; *tergum* with six yellow and green bands, which occupy more than two-thirds of the surface; first band bilobate before, yellow, with a broad green posterior margin; remaining bands somewhat dentated before; the second and third bands yellow, with a green central dash; fourth and fifth bands yellow, their anterior margins green; terminal band entirely yellow; *venter* entirely black; a single elevation on the second segment.

Length ♂ half an inch.

In the collection of Mr. William W. Wood.

## MONEDULA, Latr.

1. *M. 4-fasciata*. Black, obscurely iridescent; tergum with four bands, interrupted and narrowed in the middle.

Inhabits Pennsylvania.

*Antennæ* with the basal joint beneath yellow; *orbits* anteriorly, *hypostoma* and *labrum*, yellow; the latter margined each side with piceous, and the hypostoma has a more or less dilated black spot above; *mandibles* blackish-piceous; *thorax* with a capillary line before; *wings* hyaline, slightly fuliginous, nervures fuscous; *metathorax* at tip each side compressed and yellow; *pleura* with a whitish spot over the anterior feet, and from one to three yellowish approximate spots above the middle; *feet* pale yellowish; thighs black on the basal two-thirds, those of the anterior feet black only on the exterior side; *tergum* with four yellow bands, dilated on the sides, and gradually narrowing to the middle of the back, where they are slightly interrupted, the terminal one widely interrupted; two terminal segments with large punctures each side and at base; *venter* with three small yellow spots each side near the middle; ♂ with an obsolete spot each side on the two segments beyond the bands, and the anus is three-spined, of which the lateral ones are curved, and ♀ with an obsolete, yellowish line before the wings on each side.

Length ♂ three-fifths, ♀ nearly seven-tenths of an inch.

This species is in the collection of Mr. William W. Wood. The hypostoma of the male specimen is occupied by the black basal spot, excepting on its anterior margin. The bands of the abdomen in this species are not at all dentated.

2. *M. ventralis*. Black, obscurely iridescent; tergum

with about five yellow bands, interrupted, but not narrowed in the middle.

Inhabits Pennsylvania.

♂ *Orbits* anteriorly obsoletely tinged with dull yellowish; *antennæ*, first joint beneath yellow; *hypostoma*, *labrum*, and *mandibles* black; *pulpi* whitish; *thorax* punctured; a line on the anterior edge, with a spot at tip on the pleura, and a small, longitudinal, oval spot each side above the inferior wings, yellow; *scutel* with a transverse yellow line; *metathorax* at tip each side compressed and yellow; *wings* hyaline, very slightly tinged with fuliginous; *nervures* fuscous; *feet* yellowish; *thighs* black from the base to near the knee, first pair on the anterior side only the basal half black; *tergum* with about five or six yellow bands, which are rather wider on the back and interrupted by a very narrow space; excepting the first band which is slightly undulated, slightly narrowed on the back, and interrupted by a wider space; the ultimate bands narrowed each side and interrupted near a spot on the lateral margin; terminal segment with large, dense punctures, as numerous on the disk as upon the sides; anus three-spined, of which the lateral ones are curved; *venter* each side with a triangular spot at the tip of each of the dorsal bands excepting the first.

Length nearly half an inch.

I have not seen the female, the male is in the collection of Mr. William W. Wood.

### ASTATA, *Latr.*

*A. unicolor*. Deep black, immaculate; wings dusky at tip.

Inhabits North-west Territory and Missouri.

♀ *Head* with rather long, silvery hair; *thorax* and *scutel* with remote punctures, the former with a very slight appearance of longitudinal lines before, the latter with a longitudinal, impressed line at tip; *metathorax* with dense, dilated punctures; *wings* hyaline, with a broad, dusky tip, nervures black; *tarsi* piceous; *abdomen* polished, immaculate.

Length less than half an inch.

### OXYBELUS, Latr.

O. 4-*notatus*. Black; tergum with a slight, whitish, abbreviated line on each side of the first and second segments.

Inhabits Pennsylvania.

*Antennæ* towards the tip beneath, *stethidium*, immaculate; *wings* hyaline, nervures brown; *metathorax* and *scutel* each with three raised lines, two superior spines of the former whitish at tip, decurved; inferior spine larger, black; *tarsi* testaceous at tip; *anterior tibiæ* testaceous on the inner side; *tergum* polished; lateral abbreviated line of the first segment much more distinct than that of the second.

Length nearly one-fourth of an inch.

### GORYTES, Latr.

G. *bipunctatus*. Black, collar and scutel with a white line; tergum with two white spots.

Inhabits Pennsylvania.

*Hypostoma* silvery white; basal joint of the *antennæ* before, exterior base of the *mandibles* and *palpi*, white; line of the *collar* capillary, of the *scutel* broader, abbrevi-

ated; *wings* hyaline, nervures fuscous; *pleura* with a small dot before the wing; *feet* black; *tibiæ* sericeous, white on the exterior base; *tarsi* white; *tergum*, second segment at tip each side with a small white spot.

Length three-tenths of an inch.

This species corresponds in its generic characters precisely with *ARPACTUS*, Jurine, and of course possesses those oblique parallel lines of the metathorax which Jurine mentions as distinguishing this genus.

### PEMPHREDON, *Latr. Fabr.*

1. *P. concolor*. Black, minutely punctured; metathorax with dilated punctures; abdomen glabrous.

Inhabits North-west Territory.

*Head* with minute pubescence, more distinct on the front; *mandibles* obtusely bifid at tip, immediately above which are two obtuse teeth; punctures minute, sparse on the vertex; *thorax* with a slightly impressed, longitudinal line, from which proceed numerous, minute wrinkles, curving outwards and backwards; punctures larger than those of the head; *wings* slightly fuliginous, nervures blackish; *metathorax* with dilated punctures, or slightly impressed cavities; *feet* somewhat sericeous; *abdomen* polished, impunctured; petiole moderate.

Length of the body nearly seven-twentieths of an inch.

This is allied to *P. unicolor*, Fabr.

2. *P. inornatus*. Black, immaculate, punctured; abdomen impunctured, polished; petiole nearly one-third the length of the abdomen.

Inhabits Pennsylvania.

*Wings* hyaline, very slightly tinged with dusky, the

first submarginal cellule receives the two recurrent nervures; nervures dark fuscous; stigma rather large.

Length less than three-tenths of an inch.

### STIGMUS, *Jur. Latr.*

*S. fraternus*. Black, antennæ and feet yellowish.

Inhabits Pennsylvania.

*Body* deep black, polished, not obviously punctured; *mandibles* and *palpi* whitish; *wings* hyaline, nervures pale brown, stigma piceous-black, whitish at base; origin of the wings yellowish; *pleura* with a white spot rather before the origin of the wings; *feet* immaculate; *venter* whitish at tip.

Length rather more than three-twentieths of an inch.

This species is in the collection of Mr. William W. Wood. It is closely allied to the *ater* of authors, the petiole of the abdomen, however, is proportionably longer.

### CRABRO, *Fabr. Latr.*

1. *C. tibialis*. Black, polished; thoracic line, scutel, knees, and tibiæ, yellow; abdomen with piceous incisures.

Inhabits Pennsylvania.

♀ *Head* with a slightly impressed frontal line, extending to the stemmata; *antennæ*, basal joint yellow; *hypostoma* silvery, brilliant; *thorax* with a transverse, yellow line on the collar, not extending to the postpectus; *scutel* yellow; *wings* hyaline; nervures fuscous, those of the disk pale at base; *metathorax* slightly carinated each side with a longitudinal, impressed line, which is a little dilated beyond the middle, and a slight transverse line on the mid-

dle ; *pleura* immaculate ; *tarsi* slightly tinged with testaceous ; *posterior* pair entirely black ; *abdomen* rather long, blackish-piceous ; incisures edged behind with pale-piceous, the second segment above margined behind with pale-piceous.

Length three-tenths of an inch.

A small species in the collection of Mr. William W. Wood.

2. *C. scutellatus*. Black, polished ; thoracic line, scutel, knees, and tibiæ, yellow ; abdomen totally black.

Inhabits Pennsylvania.

Length ♀ one-fifth of an inch.

This species closely resembles the preceding, but is smaller ; the abdomen proportionally shorter, and entirely black ; the yellow line of the collar extends to a yellow spot at the commencement of the *pleura* ; the transverse line of the metathorax is much more profoundly indented, and a transverse punctured line is far more obvious than in the preceding ; the intermediate and posterior tibiæ have a black spot near the tip.

3. *C. 6-maculatus*. Black ; tergum with three yellow spots on each side.

Inhabits Pennsylvania.

♀ *Antennæ*, basal joint yellow ; *mandibles* at base yellow ; *hypostoma* silvery, brilliant ; *thorax* with a yellow band on the collar, interrupted in the middle ; two parallel, abbreviated, transverse, equal, yellow lines behind ; *wings* dusky ; *pleura* with two, equal, rounded, yellow spots, one of which is beneath the superior wing and the other before it ; *thighs* black, knees yellowish ; *tibiæ* yellow with a black or piceous spot on the inner side ; *tarsi* tinged with rufous ; *tergum* on the second, fourth and fifth segments with a transversely oval spot.

Length three-tenths of an inch.

4. *C. trifusciatus*. Black; scutel, two spots on the collar, base of the antennæ and lateral spots of the tergum, yellow.

Inhabits North-west Territory.

*Body* with numerous, short hairs; *hypostoma* silvery; first joint of the *antennæ* and middle of the mandibles, yellow; *thorax* punctured; *collar* with two yellow spots; *scutel* yellow; *metathorax* with dilated, confluent punctures, and an impressed longitudinal line; *wings* fuliginous, nervures brown; *pectus* with a yellow spot before the wings; *feet* yellow, thighs, and a line on the inner side of the tibiæ, black; *tarsi* dusky at tip; *tergum* polished, impunctured; a yellow band on the middle of the second segment interrupted above; a short yellow line each side of the third segment; a yellow band on the fourth segment, slightly interrupted above; a yellow band on the fifth segment, not interrupted but only slightly emarginate above; *venter* immaculate.

Length two-fifths of an inch nearly.

### PHILANTHUS, *Fabr. Latr.*

1. *P. punctatus*. Black; head and thorax with yellow spots; tergum with large punctures and four yellow bands.

Inhabits Pennsylvania.

♂ *Eyes* very slightly emarginate; a longitudinal line each side of the hypostoma, a triangular spot on the middle of the anterior margin, another on the front, a small rounded spot on the basal joint of the antennæ before, a small dot each side on the vertex, and another behind each eye, yellowish-rufous; *thorax* uneven, with large profound punctures; a line on the collar, another on the scutel, be-

fore which is a smaller one, and wing-scale, yellow; *wings* fuliginous; *pleura* with a double yellow spot beneath the anterior wing; *feet* honey-yellow, thighs black at base, tibiae bright yellow before; *tergum* rough with large profound punctures; first segment rounded, immaculate; second with a broad, yellow, slightly arcuated line, touching the anterior edge and curving towards the posterior angles; third, fourth, and fifth segments, each with a narrow, dull yellow band on the posterior margin; venter immaculate.

Length less than two-fifths of an inch.

2. *P. politus*. Black, polished; *tergum*, first segment with two whitish spots, the other segments with a spot each side, connected by a whitish band.

Inhabits Pennsylvania.

*Hypostoma*, *mandibles* at base, and anterior *orbits* as high as the emargination, whitish; *antennæ* beneath beyond the third joint, rufous-brown, a whitish spot on the basal joint; *thorax* with small, irregular punctures; *collar* with two transverse spots; *wing-scale*, and transverse line on the *scutel*, whitish; *wings* a little dusky towards the tip; *pleura*, a double whitish spot beneath the superior wings; *thighs* black; *knees* and *tibiae* excepting a black line on the inner side, whitish; *tarsi* dusky; *tergum* polished, first segment with a transverse ovate spot each side; remaining segments each with a transverse quadrate spot each side, touching the posterior margin and connected along this margin by a band, which is transversely thicker in the middle.

Length more than seven-twentieths of an inch.

### CERCERIS, Latr.

*C. deserta*. Black; *hypostoma*, *feet*, and bands of the *tergum*, yellow.

Inhabits North-west Territory, Missouri, and Pennsylvania.

♂ *Hypostoma* entirely yellow; *antennæ* yellow before, dark brown behind; *collar* with two transverse yellow spots; *scutel* with a transverse line, yellow; *wings* hyaline, brownish on the costal margin near the tip; *feet* yellow; anterior thighs black on the posterior middle, intermediate thighs on the posterior base and posterior thighs at tip, black; *tergum*, first joint rounded with a spot each side; second and third segments with each a band on the posterior margins slightly and widely emarginate before, remaining segments with each a narrower band on their posterior margins, yellow; *venter*, three or four first segments with each a lateral, triangular, yellow spot.

Length more than two-fifths of an inch.

Var. *α*. metathorax with a yellow, oblique line each side behind; first joint of the tergum immaculate.

Var. *β*. metathorax and first joint of the tergum immaculate; bands of the tergum excepting the first, very narrow, linear; ventral spots obsolete; feet with a larger proportion of the black colour.

Var. *γ*. a small yellow spot each side before the tip of the scutellar line.

### EUMENES, Latr.

1. *E. fraterna*. Black; hypostoma, anterior thoracic margin, scutellar line, posterior submargins of the segments of the tergum, and two spots on the second segment, yellow.

Inhabits United States.

*Body* polished, punctured; *hypostoma* emarginate, and with a line between the antennæ, pale yellow; *antennæ*,

basal joint with a whitish line before; *thorax* with the anterior margin somewhat contracted in the middle, yellow; *scutel* yellow; *wings* fuliginous; *thighs* black, yellowish at the knee joint; *tibiæ* whitish, a black line near the tip; *tarsi* pale yellowish, dusky towards the tip; *tergum*, first segment with a subbidentate yellow band on the posterior margin; second segment with a yellow band on the posterior submargin somewhat sinuated before, and an oval, oblique yellow spot on the middle of each side; third and fourth segments with each an abbreviated, whitish, submarginal line behind; *venter* with a spot at tip of the first segment, and a submarginal band on the second behind.

Length from nine-twentieths to more than three-fifths of an inch.

Var.  $\alpha$ . Spot on the second segment of the *tergum* elliptical.

Var.  $\beta$ . A pale yellowish spot on each side of the *scutel*, and nearly in a line with it.

This species is very closely allied to the *coarctata*, Fabr. of Europe, but the whole of the hypostoma is yellow, the line between the antennæ being only a process from it; there is no yellow point beneath the wings; none on the first segment of the *tergum*; and the bands on the third and fourth segments are always much abbreviated, never extending to the sides or upon the venter.

Like the *coarctata* this species constructs for each of its eggs a hollow globe of earth, with a short ascending neck, the rim of which is sometimes widely outspread horizontally; it is often built around a twig of a bush for support, as represented by Degeer, (*Hist. abrégée des insectes*, vol. 2, pl. 16, fig. e.) sometimes the nest occurs simply attached to the superior page of a leaf. The egg deposited in this globe in June, is inclosed with a sufficient supply of food,

consisting of the larvæ of some of the nocturnal Lepidoptera. Early in July or towards the middle of that month, the perfect insect makes its way through the side of its dwelling. The form of the first segment of the abdomen of our species, is similar to that of Schaeffer's representation of his *VESPA nona*, (Icon. vol. 1, pl. 53, fig. 10,) which is proportionally much smaller than in Degeer's figure of the *coarctata*. This species is found as well in Pennsylvania, as in the North-west Territory and Missouri.

2. *E. verticalis*. Black; hypostoma above, anterior thoracic margin, scutellar line, posterior submargins of the abdominal segments, and spot each side on the first and second segments, yellow; metathorax with a vertical spot each side at tip.

Inhabits Pennsylvania.

This species differs from the preceding in the following characters; anterior portion of the hypostoma with a deeply trilobated black spot; superior wing-scale rufous; a small yellowish spot beneath the superior wing and a yellowish line over the insertion of the inferior wing; a vertical, oblong, yellow spot each side near the inferior tip of the metathorax; a small spot each side on the first segment of the tergum, and the yellow margin is reflected backwards on the lateral edge for a short distance; the spot of the second segment is elongated, and the bands of the third and fourth segments pass round the venter. Size about equal to the preceding, and seems to be allied to the *pomiformis*, Fabr.

3. *E. anormis*, Black; first abdominal segment very short and dilated.

Inhabits St. Peter's river and Arkansa.

♂ *Antennæ* with the scapus yellow before; *hypostoma* attenuated, truncate at tip, with large, longitudinal punctures, and at base a transverse, yellow, arcuated line; a

small spot on the front, another in each emargination of the eyes, and a transverse one behind the eyes on each side, yellow; *thorax* densely punctured, a yellow spot on each side of the collar; wing-scale yellow, with a pale-brown spot; *wings* fuliginous; *scutel* with a transverse, yellow line; *metathorax*, on each lateral margin with an oblique, yellow line; *pleura*, a yellow spot under the superior wing; *feet* yellow; thighs except at the knees, and spot on the anterior tibiæ, black; *tergum*, segments yellow on their posterior margins, first and second segments with each a yellow, lateral spot, the former segment short, dilated, not pedunculiform; *venter* immaculate.

Length more than seven-twentieths of an inch.

Excepting in the character drawn from the first segment of the abdomen, this insect has a general similarity to the preceding species, and the form of the anterior portion of the hypostoma and the trophi, prove that this species is properly placed in this genus.

### PTEROCHILUS, *Klug.*

*P. 5-fasciatus*. Segments of the tergum yellow on their posterior margins; first and second segments with a lateral, ferruginous spot on each.

Inhabits North-west Territory and Missouri.

♀ *Head* black; dilated posterior orbits, and anterior orbits to the emargination of the eyes, ferruginous; *hypostoma*, *scapus* of the antennæ and *mandibles*, ferruginous; tip of the former acutely emarginate in the middle; *flagellum* black-brown; *labial palpi* testaceous, very long, ciliate with long hairs, three-jointed; terminal joint much compressed, flat, obtuse at tip; *stethidium* black; *collar* and *wing-scale* ferruginous; *scutel* with two, large, yellow

spots; *metathorax* with a transverse, yellow line, and at the base each side a large ferruginous spot; *wings* a little fuliginous; *pleura* with a yellow spot beneath the superior wings; *feet* ferruginous; *tergum* black, with five, broad, bright yellow, somewhat dentated bands, the posterior one abbreviated; first and second segments with each a large ferruginous spot on each side; *venter* black, ferruginous at base.

Length more than seven-tenths of an inch.

### ODYNERUS, Latr.

*O. annulatus*. Segments of the *tergum* yellow on their posterior margins; first and second segments with a lateral, ferruginous spot on each.

Inhabits North-west Territory and Missouri.

♂ *Head* black; *hypostoma* yellowish, truncate at tip, and with a small denticle each side; a large triangular spot on the *front*, front of the *scapus* of the antennæ, *mandibles*, and *anterior orbits* to the bottom of the emargination of the eye, yellowish; *posterior orbit* above with a ferruginous spot; *antennæ*, terminal joint very much compressed, ferruginous, and reflected outward and backward on the two preceding joints; *stethidium* black; *collar* and *wing-scale* ferruginous; *scutel* with two yellow spots; *metathorax* with a transverse, yellow line, and at the base each side a large ferruginous spot; *wings* a little fuliginous; *pleura* with a yellow or ferruginous spot beneath the superior wings; *feet* ferruginous; *tergum* black, with six, broad, bright yellow bands; first segment ferruginous excepting the posterior margin, with a black spot in the middle; second segment with a large ferruginous spot each side, in which is a smaller yellow spot; *venter* black, fer-

ruginous at base ; posterior segments with yellow posterior margins.

Length more than half an inch.

♀ First and second joints of the antennæ ferruginous ; *tergum* with five yellow bands ; first and second segments ferruginous with yellow posterior margins, the latter segment with a large yellow spot each side, and more or less of black in the middle.

Size very little larger than the male.

The very striking similarity in markings between this species and the *PTEROCHILUS 5-fasciatus*, led me at first to consider it the male of that species, but having several specimens, on submitting them to a more accurate inspection, I discovered that one of the number is a female nearly corresponding in size with the others, and agreeing with them in the form of the termination of the hypostoma and in the ventral bands, which specifically distinguish this species from that just mentioned.

### NOMIA, Latr.

N. ? *heteropoda*. Hairy, blackish-fuscous ; wings blackish at tip ; posterior tibia much dilated, triangular ; terminal joint of the antennæ compressed, dilated.

Inhabits North-west Territory, Arkansa, and Maryland.

♂ *Body* blackish-fuscous, with cinereous hair ; *antennæ* hardly as long as the thorax, terminal joint compressed and dilated on the inner side, subsecuriform ; *mandibles* unarmed ; *wings* slightly tinged with dirty yellowish, with a broad, blackish, terminal border, nervures reddish-brown ; *intermediate feet* with the thighs very much dilated, compressed, triangular, first joint of the tarsus dilated and compressed before ; *posterior feet* with the thighs dilated,

particularly towards the tip; tibia remarkably dilated, forming a rectangular triangle, much compressed, excepting at the inner tip, and undulated on the inner side, first joint of the tarsus elongated, much longer than the tibia, not dilated, densely ciliated on the inner side with equal, fulvous hair; *venter* sparsely hairy; fourth segment divided by a longitudinal suture in the middle, at the posterior angles prominent, acute; fifth segment short, longitudinally carinated in the middle, and with a prominent tubercle each side behind; sixth segment longitudinally divided in the middle by a suture.

Length seven-tenths of an inch.

This singular insect does not perfectly correspond in character with the genus under which I have placed it, and it disagrees still more with the neighbouring genera as defined in the books.

### PANURGUS, *Panz.*

*P. 8-maculatus*. Black; tergum with four, transverse, yellow spots on each side.

Inhabits United States.

♂ *Hypostoma*, *labrum*, *mandibles* at base, inferior part of the anterior orbits, yellow; *antennæ* brown, yellowish beneath and bright yellow on the anterior side of the basal joint; *thorax* slightly tinged with brassy, a small yellow point each side on the collar; *pleura* with a yellow spot before the wings; *wings* slightly dusky, pale at base, nervures fuscous; *feet* yellow, middle of the thighs and posterior middle of the tibiæ blackish; posterior feet blackish-brown, knees and base of the thighs yellow; *tergum* dark-brown, four first segments each with a transverse, yellow spot.

Length more than one-fifth of an inch.

♀ *Hypostoma* with three, longitudinal, yellow spots, of which the intermediate one is longest; *orbits* on the anterior inferior portion with a triangular yellow spot; *antennæ*, basal joint entirely black; spots of the *tergum* less elongated than those of the male, and the feet have more of the black colour.

Length rather over one-fourth of an inch.

### MEGACHILE, Latr.

1. *M. interrupta*. Thorax surrounded by ferruginous; tergum five-banded.

Inhabits Missouri.

♂ *Body* punctured, above glabrous; *head* black; *antennæ*, first joint at base and third and fourth joints dull rufous; *hypostoma*, broad frontal *orbits*, and *mandibles* at base, yellow; *vertex* with a ferruginous band, interrupted in the middle and extending down the cheeks; *labrum* rufous, a small black spot at base; *thorax* black, surrounded by a ferruginous margin, which is interrupted before, and passes upon the posterior margin of the scutel; *wings* fuliginous; *pleura* with cinereous hair beneath the wings; *feet* rufous, tarsi with yellow hair; *tergum* convex, black, with dilated, obscure, rufous, scarcely definite bands, five in number, on each of which, excepting the basal one, is another yellow band emarginate each side behind, and the three posterior ones are interrupted in the middle; *anus* trilobated; lobes yellow, intermediate one small; *posterior coxæ* each with a robust yellow spine; *venter* with transverse bands of long, dense, yellow hair.

Length nearly two-fifths of an inch.

♀ The black colour of the front extends down upon the

middle of the hypostoma nearly to its tip; the rufous colour on the basal joints of the antennæ is obsolete; *labrum* black on the disk; *mandibles* black, excepting a small, rufous spot at base; the three last bands of the tergum are destitute of any rufous colour about them; *venter* densely covered with hair; *mandibles*, as in the male, three-toothed; posterior coxæ unarmed.

Length about the same as the male, but more robust.

2. *M. emarginata*. Black; a band on each abdominal segment, slightly interrupted in the middle, and emarginated each side before.

Inhabits Missouri.

♀ *Body* punctured, above glabrous; *head* with a small yellow dot each side of the vertex; *mandibles* five-toothed; *thorax* with a small, whitish spot before the wings; wing-scale whitish, with a brown spot; a whitish spot on the posterior angles, forming a curve with two whitish spots on the scutel; *wings* hyaline, nervures fuscous; *feet* black, a dilated whitish line on the exterior side of the tibia, tarsi with dull yellowish hair; *tergum* convex, a whitish band on each segment, very slightly interrupted in the middle, and, excepting the first one, deeply emarginated each side before, the terminal segment with two rounded spots instead of a band.

Length less than seven-twentieths of an inch.

3. *M. jugatoria*. Black; a band on each abdominal segment, interrupted in the middle and entire each side.

Inhabits Missouri.

♀ *Body* punctured, above nearly glabrous; *head* with a yellow line on the superior part of the cheeks; *hypostoma* with a dilated, yellow line, which extends upon the anterior orbits nearly to their summit; *thorax* with a widely interrupted line before, extending round above the wings,

and two oblique lines upon the scutel, yellow; *wings* fuliginous; *feet* blackish, with dull rufous joints, and tarsal hair; anterior feet before dull rufous; *tergum*, bands yellow, not at all emarginated each side, the basal band widely interrupted, second band less widely interrupted, the penultimate one hardly interrupted, and the ultimate one entire.

Length about seven-twentieths of an inch.

That these three species are congeneric is evident, but they do not correspond in all respects with the genus *MEGACHILE* as defined by entomologists. The trophi agree very well, and the form of the nails of the feet in the two sexes are also similar, but the tergum is convex, as in *OSMIA*, and the abdomen curves very much downwards towards the tip, as in *STELIS*, from which latter genus they differ by having a hairy venter.

### CAELIOXYS, Latr.

*C. 8-dentata*. Black; abdomen with five white bands, tip eight-toothed.

Inhabits United States.

♂ *Front* and *hypostoma* with dense, long, dull yellowish hair; *thorax* with a dentated band before, interrupted in the middle, a spot at the base of the wings and a transverse line at base of the scutel, white; *wings* a little dusky on the apical margin; *feet* rufous; *tergum* with five white bands, of which the two or three terminal ones are double; segments each with a transverse indented line; tip with eight teeth, of which two are on each side, and four at the extremity placed two above and two beneath; *venter* with a white line on the posterior margin of each segment, the basal and terminal ones obsolete.

Length two-fifths of an inch.

Var. *α*. Spots and lines of the thorax obsolete ; feet, excepting the tarsi, black.

This is an inhabitant of various parts of the United States, from the North-west Territory to Arkansa, and is common in Pennsylvania.

### NOMADA, *Fabr.*

*N. bisignata*. Terminal half of the wings with a dusky margin ; abdomen rufous, with a bright yellow spot each side of the middle.

Inhabits United States.

♀ *Head* ferruginous, front with a large, black spot, confluent with another transverse one on the vertex ; occiput and throat black ; *antennæ* blackish, beneath rufous ; *stethidium* black, varied with ferruginous, and like the head rough with dense punctures ; *thorax* ferruginous, with a longitudinal, black line ; *scutel* ferruginous ; *feet* rufous ; thighs black at base ; *wings* dusky, particularly on the margin of the terminal half ; *tergum* rufous, the segments on their posterior margins, and the basal segment at base also black ; second segment with a large, lateral, yellow spot, and a slight appearance of another on each side of the third segment.

Length rather more than three-tenths of an inch.

This species varies in having the thorax black, with four ferruginous lines.

### EPEOLUS, *Latr.*

1. *E. lunatus*. Tergum with two opposite lunules on the first segment, and three bands on the other segments.

Inhabits Missouri and Prairie du Chien.

♀ *Body* black; *front* with a whitish spot surrounding the base of each antennæ; *antennæ* black-brown, three basal joints and *labrum* ferruginous; *thorax* with two abbreviated, whitish, longitudinal lines before the middle, a pale yellowish line on the collar, another over the wings, passing round behind above the scutel, a double line beneath the scutel, and an oblique sagittate spot each side on the metathorax, also pale yellowish; *wings* a little fuliginous; *feet* rufous; thighs blackish in the middle; *tergum* velvet-black; first segment with an angulated lunule on each side, and a subterminal band on each of the three following segments, of which the first is very slightly interrupted; terminal segment with a slight, oblique, cinereous spot each side.

♂ Anterior half of the thorax with much of the pale yellowish colour; bands of the tergum larger than those of the female and one more in number, feet nearly all blackish.

Length half an inch.

Smaller than *E. 4-fasciatus*, nobis, but much larger than *E. mercatus*, Fabr.

2. *E. scutellaris*. Thorax surrounded by ferruginous; posterior spines dilated.

Inhabits Middle States.

♀ *Body* deep black, densely punctured; *front* with a white spot surrounding the base of each antennæ; *antennæ* black-brown, three basal joints and *mandibles* rufous; *thorax* with the collar, obsolete line over the wings, dilated posterior teeth and *scutel*, ferruginous; *wings* dusky on the terminal margin; *feet* rufous; *tergum* black-brown; two distant bands on the first segment, of which the first is obsolete, and the other is interrupted in the middle, se-

cond and third segments each with a band on their posterior margins, pale yellow; remaining bands indistinct.

Length from three-tenths to nearly seven-twentieths of an inch.

Much smaller than the preceding, and about equal in size to *E. mercatus*, Fabr. from which it differs by various characters, and particularly by the much more dilated form of the posterior thoracic teeth. During rainy or windy weather, this insect secures itself to the edge of a leaf or to the small branch of a bush, by its mandibles, retracts the feet to the body, and projects the antennæ forwards.

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## ORDER DIPTERA.

### ANOPHELES, Meig. Wied.

*A. 4-maculatus*. Pale brownish; wings with four fuscous spots.

Inhabits North-west Territory.

*Thorax* dull cinereous; two oblique, brown lines confluent behind and reaching the posterior edge; a broad, lateral, brown line also extending the whole length of the thorax; *wings* hyaline, the nervures hairy, forming two blackish spots near the middle, placed longitudinally; and two others nearer the tip on the bifurcations of the nervures, placed transversely; *scutel* dull ochreous, dusky in the middle; *feet* black-brown, incisures at tip of the thighs and of the tibiæ, yellowish; *tergum* whitish, a little varied with dusky.

Length ♀ to the tip of the wings more than three-tenths of an inch.

Closely allied to the *maculipennis*, Hgg. I have not seen the male. Wiedemann informs me that my *CULEX punctipennis* is a true *ANOPHELES*, an observation which I have found to be correct. I described that insect in the year 1819, before any account of that new genus had reached this country, otherwise I certainly should have adopted it.

### LASIOPTERA, Meigen.

*L. ventralis*. *Body* blackish-brown; *antennæ* 18-jointed, hairy, joints subglobular, rather transverse, and placed close to each other, basal joint whitish; *thorax* and *tergum* immaculate; *feet* whitish, exterior side of the tibiæ blackish; *tarsi* blackish, first joint very short; *venter* whitish in the middle; *wings* with a narrow, blackish, costal margin, which is gradually narrowed to the tip.

♀ Length rather more than one-twentieth of an inch.

I caught this species in the garden of the University of Pennsylvania, early in August.

### CECIDOMYIA, Latr.

*C. ornata*. Carneous; wings spotted.

Inhabits Pennsylvania.

*Body* varies in colour from a very pale flesh colour to a deep red; *antennæ* and *feet* whitish; *wings* with five or six dusky spots occasioned by the greater density of the hair of the surface in those parts.

Length to the tip of the wings nearly one-tenth of an inch.

This is most probably the prettiest species of the genus;

it occurred on a window in Philadelphia on the 13th of September.

### PSYCHODA, Latr.

*P. alternata*. Wings acute at tip, with a small black spot at the tips of the nervures.

Inhabits Pennsylvania.

*Body* pale yellowish-white; *abdomen* dusky; *wings* ovate-lanceolate, acute at tip, cinereous with an obsolete pale band on the middle and base; the alternate nervures of the posterior margin at their tips and the tips of the nervures of the anterior margin, with a black spot; spots of the posterior margin more distinct.

Length to the tip of the wings more than one-tenth of an inch.

A very common little insect, even in Philadelphia. It may be readily distinguished from other species by its more acute wings, as well as by the arrangement of the spots and bands, however obsolete, which exist on these organs.

### LIMNOBIA, Meig.

*L. argus*. Yellowish-white; head black; wings ocellate and marbled with blackish.

Inhabits North-west Territory.

*Antennæ* moniliform; *thorax* pale yellow-piceous, whitish near the neck; *wings* hyaline, with a double series of large, pupilate ocellæ, those near the tip confused; ultimate nervure furcate; *poisers* fuscous, at tip white; *coxæ* whitish; *thighs* annulate with black near the tip.

Length ♂ ♀ more than three-tenths of an inch.

To this species the name of *ocellata* would perhaps be more appropriate than it is to the Linnæan species of that name, inasmuch as in the latter the ocellæ are epupilate. It is a very pretty insect, and exhibits much singularity in the arrangement of the nervures of its wings, the penultimate and ultimate nervures being connected by a transverse nervure which arises from the tip of the latter. In other respects the distribution of the nervures are similar to that of the *bifasciata*, Fabr. Wied.

### TIPULA, Linn. Meig.

*T. maculatipennis*. Cinereous; thighs black at tip; wings dusky with white spots.

Inhabits North-west Territory.

*Antennæ* yellowish, incisures of the joints dusky; *palpi* blackish; *thorax* with two, brown, dorsal lines, which are confluent on the anterior margin, attenuated behind, and abbreviated behind the middle; a lateral line slightly interrupted in its middle, and hardly reaching the anterior or posterior margins; *scutellum* dull honey-yellow, with a black line; *wings* dusky, with a black carpal spot margined with white, three or four white spots along the central nervure, and about as many near the termination of the ultimate nervure; *poisers* white, dusky at tip; *abdomen* blackish; incisures edged with whitish; *thighs* with a very obvious blackish tip.

Length to tip of the wings ? seven-tenths of an inch.

### PTYCHOPTERA, Meig.

*P. 4-fasciata*. Wings hyaline, with four brown bands. Inhabits Pennsylvania.

*Head* and *thorax* blackish-brown; *antennæ*, *palpi*, *mouth*, and *hypostoma*, except near the base of the *antennæ*, whitish; *wings* with four, brown, subequidistant bands, of which the third reaches the inner margin and the others are abbreviated; *pleura*, *pectus*, and *feet*, yellowish white; the incisures of the latter dusky.

Length to the tip of the wings nearly half an inch.

This species is infested by a parasite of the genus *Ocrpete*. It occurred in June.

### TRICHOCERA, Meig.

*T. scutellata*. Dark fuscous; scutel whitish.

Inhabits North-west Territory.

*Palpi*, blackish; *thorax* slightly tinged with livid; anterior angles and neck segments dull yellowish-piceous; *scutel* dull whitish; *wings* immaculate, whitish at base; *poisers* white, with a fuscous capitulum; *coxæ*, and *thighs* at base, dull yellowish.

♂ ♀ Length of the body three-twentieths of an inch.

Taken in September at the Falls of Kakabikka, beyond Lake Superior. The posterior margin only of the scutel is dull yellowish-white in the male. This species seems to be closely allied to *T. parva*, Meig.

### PLATYURA, Meig.

(*Ceroplatus*, Bosc. Fabr.)

*P. fascipennis*. Thorax yellowish; wings with a blackish subterminal band.

Inhabits North-west Territory.

*Head* yellowish; disk of the *vertex* black; *thorax* immaculate; *wings* hyaline, with a blackish band near the

tip, hardly reaching the inner edge, and margined with an obsoletely whiter colour than the other parts of the wing; *poisers*, colour of the thorax; *coxæ* and *thighs* whitish; *tergum* blackish-testaceous; *venter* blackish, segments dull yellowish on their posterior and lateral margins; *abdomen* slender at base, gradually dilating behind.

♀ Length rather more than one-fifth of an inch.

The wing nervures are arranged as in *P. baumhaueri*, Meig. It is probably closely allied to the *carbonaria* of Bosc, which, however, is described to be altogether of the same form as the *tipuloides*, Bosc, to have a black thorax and obscure feet; whereas ours is a much more slender insect than the *tipuloides* as represented by Coquebert.

### SCIOPHILA, Hgg.

1. *S. pallipes*. Brownish-black, with gray short hairs; antennæ and feet whitish.

Inhabits North-west Territory.

*Antennæ*, (at least the two basal joints,) yellowish-white; *thorax* with numerous, scattered, short, gray hairs, which are fewer in number and more prominent behind; *wings* dusky; *poisers* elongated, yellow-white, at base dusky; *feet* yellow-white; *abdomen* with numerous, prostrate, short, gray hairs.

♂ Length to tip of the wings nearly one-fifth of an inch.

The nervures of the wings correspond with those of *S. hirta*, Hgg.

2. *S. littoralis*. Pale yellowish; thorax trilineate; abdomen fasciate with fuscous; feet dusky at tip.

Inhabits North-west Territory.

*Vertex* and a line extending down between the antennæ upon the hypostoma, blackish; *antennæ* dusky, two basal

joints yellowish; *thorax* with a double, brown, middle line, attenuated and abbreviated behind, and a brown approximate line on each side abbreviated before; a small fascicle of hairs beneath each wing, and a dusky spot over the insertion of each foot; *wings* immaculate; *poisers* yellowish-white; *abdomen* slender at base, gradually dilating towards the tip, dull-yellowish, hairy; incisures and tip dusky; *feet* dull-yellowish, towards their tips dusky.

Length of the body three twentieths of an inch.

I obtained this species on the rocky coast of Lake Superior, in a thicket of small bushes. The nervures of the wings correspond with those of *ASINDULUM punctatum*, Latr., excepting that the second nervure is not at all connected with the first nervure, but curves downward at tip and enters the intermediate cellule before the middle, and the ultimate and penultimate abbreviated nervures are distinct; it is a much smaller species than the *fasciata*, nob. the nervures of which agree better with the preceding species, but its connecting nervure from the second nervure enters the intermediate cellule at the middle.

3. *S. hirticollis*. Yellowish-white; thorax hairy; tergum black, with pale yellowish bands.

Inhabits North-west Territory.

*Head* black; *hypostoma*, *mouth* and *trophi* whitish; *antennæ* black-brown, the four basal joints yellow, with a dark brown spot above on the third and fourth; *thorax* with rather numerous, somewhat long, black hairs; three dilated, brownish-livid lines, the intermediate one abbreviated and attenuated behind, and the lateral ones attenuated before; *wings* a little dusky, the intermediate cellule appearing to the eye like a small, black spot; *poisers* whitish; *pleura* with a brownish-livid spot over the intermediate and posterior feet; *feet* dusky towards the tip, the *coxæ*

with strong, black hairs on the exterior side and tip; *tergum* black, with black, rather long hairs; segments with broad, yellowish hind margins; tip black.

Length of the body three-twentieths of an inch.

The wing nervures resemble those of *S. littoralis*, nob., but the abbreviated nervures are very strongly marked; the second nervure is connected with the first, and by a transverse nervure with the intermediate cellule opposite to the middle; the cellule is also connected with the central, furcate nervure, by a nervure as perfectly transverse as that of *S. vitripennis*, Meig.

4. *S. bifasciata*. Dark yellowish; wings bifasciate.

Inhabits North-west Territory.

*Head* black; *antennæ* fuscous; *hypostoma* yellow, near the *antennæ* blackish; *palpi* whitish at base, dusky towards the tip; *thorax* honey-yellow; two oblique, black lines confluent behind, and not reaching the posterior margin; a black line above each wing, joining on the posterior margin and meeting the oblique lines at the anterior angles; *wings* hyaline, with two blackish bands more obvious at the costal margin, one of which is near the middle widely interrupted on the disk, and the other near the tip; *metathorax* black; *feet* white-yellow at base, dusky towards the tip.

Length to tip of the wings nearly two-fifths of an inch.

A large and handsome species. The wing nervures agree with those of *ASINDULUM punctatum*, Latr. excepting that the second nervure is continued a short distance beyond its transverse nervure, which latter enters the intermediate cellule at the basal angle.

5. *S. obliqua*. Pale yellowish; thorax four-lined; *tergum* fasciate with black.

Inhabits North-west Territory.

*Head* black; *hypostoma* and base of the antennæ yellow; *thorax* with two oblique, fuscous lines confluent at the middle of the base; and a dilated fuscous line each side much abbreviated before and hardly reaching the basal edge; *wings* slightly tinged with dusky, immaculate; *poisers* white; *feet* white, dusky towards the tip; *tergum*, segments with blackish posterior margins; last segments entirely blackish; anal segment yellow.

Length ♂ nearly one-fifth of an inch.

The wing nervures are arranged altogether like those of *ASINDULUM punctatum*, Latr. Closely allied to *S. fasciata*, nobis, but may be distinguished by the narrow, oblique lines of the thoracic disk.

### LEIA, Meig.

*L. ventralis*. Deep black, polished; wings fasciate near the tip; feet yellowish.

Inhabits North-west Territory.

*Head* a little hairy; *palpi* and three basal joints of the antennæ, yellowish; remaining joints of the latter fuscous; *thorax* with sparse hairs; a whitish humeral spot; *wings* hyaline, with a dusky band near the tip, which does not reach the thinner margin, and a dusky tinge or line between the ultimate and penultimate nervures; *poisers* with a fuscous capitulum and yellowish stipes; *feet* yellowish-white; *tarsi* dusky; *tergum* hairy; *venter* pale yellowish.

♂ Length of the body nearly three-twentieths of an inch, to tip of the wings more than one-fifth of an inch.

This species is closely allied to the *bimaculata*, Meig. with which it also corresponds in the position of the stemmata and the arrangement of the wing nervures, even to the dislocation of the superior branch of the inferior furcate nervure.

## MYCETOPHILA, Meig.

1. *M. sericea*. Head and thorax sericeous; the latter dusky, margined with yellowish.

Inhabits North-west Territory.

*Head* blackish, with a yellowish, sericeous gloss; *antennæ* fuscous, two basal joints and *palpi* yellowish; *thorax* sericeous, blackish on the disk, dull yellowish each side and on the anterior edge; *wings* immaculate, nervures fuscous; *poisers* and *feet* yellowish-white; *tarsi* and *spines* fuscous, the latter half the length of the first tarsal joint; *coxæ* yellowish-white, with a few short, black, rigid hairs on the exterior sides and tip, particularly the anterior pair; *abdomen* compressed, dusky above; sides dull yellowish on the tips of the segments.

♂ ♀ Length to tip of the abdomen one-fifth of an inch.

The wing nervures are arranged as in *M. fasciata*, Meig. excepting that there are three abbreviated nervures, as in *M. lateralis* of the same author.

2. *M. maculipennis*. Yellowish; thorax trilineate; wings three-spotted.

Inhabits North-west Territory.

*Body* pale yellowish; *vertex* dusky; *thorax* with a double fuscous line attenuated and abbreviated behind, but near, the middle; and a larger line on each side abbreviated before, confluent behind, extending upon the scutel; a spot of the same colour above the insertion of the wings; *pleura* with about two dusky spots, one over the insertion of each of the posterior feet; *wings* with three blackish spots on the costal margin, of which one is on the middle; the second much beyond the middle, obsoletely extended into an undulated band; the third is near the tip; *feet*

dusky at tip and on the posterior thighs near the knees, *tergum* with blackish bands.

Length of the body nearly one-fifth of an inch.

A very pretty species; the wing nervures are like those of *M. fasciata*, Meig. The antennæ in my specimen are deficient. Found on the coast of Lake Superior in a thick growth of bushes.

### SCIARA, Meig.

(*Molobrus*, Latr.)

1. *S. atrata*. Entirely deep black, polished, immaculate; wings dusky, iridescent; nervures dark fuscous; poisers black; thorax in a particular light somewhat pruinose; abdomen opaque, with short black hairs; spines of the tibia rather longer than the transverse diameter of the tibia.

Inhabits North-west Territory.

♂ Length to tip of wings less than one-fifth of an inch.

The nervures of the wings agree with those of *S. thomæ*, Fabr. This seems to be very closely allied to *S. nigra*, Wied. an inhabitant of South Carolina, but the thorax in a particular light exhibits a grayish reflection, a character which Wiedemann attributes to the antennæ only in his species. The antennæ are deficient in my specimen.

2. *S. polita*. Deep black, polished; poisers whitish; feet yellowish at base.

Inhabits North-west Territory.

*Body* with numerous short hairs, which are slightly sericeous; eyes without interval above the antennæ; wings dusky, pale yellowish at base; poisers whitish; feet dusky towards the tip; coxæ and thighs yellowish-white.

♀ Length of the body less than three-twentieths of an inch.

The abdomen and thorax are both highly polished.

3. *S. fraterna*. Deep black, polished; abdomen black-brown, opaque; base of the poisers, and feet pale yellowish.

Inhabits North-west Territory.

*Antennæ* dark fuscous, with dense grayish hair; *eyes* in contact above the antennæ; *thorax* polished; *wings* dusky, pale yellowish at base; *poisers* with a yellowish scapus and fuscous capitulum; *feet* dusky towards the tip; *abdomen* fuscous, opaque.

♀ Length of the body one-tenth of an inch, ♂ smaller.

4. *S. exigua*. Black; thorax piceous at the anterior angles; poisers whitish at base; feet whitish, dusky at tip.

Inhabits North-west Territory.

*Antennæ* fuscous, with dark gray hairs; *wings* a little dusky; nervures fuscous; *poisers* elongated, whitish, capitulum fuscous; *abdomen* fuscous, opaque.

♂ Length of the body one-twentieth of an inch.

♀ A little larger, with the base of the feet and of the poisers of a darker shade than those of the male.

## SCATOPSE.

*S. atrata*. Deep velvet black; tarsi pale; tip of the antennæ abruptly compressed.

Inhabits Pennsylvania.

*Body* hardly polished and nearly opaque, immaculate; *poisers* colour of the body; *wings* hyaline; *marginal nervures* but little more than half the length of the wing, fuscous; furcate nervure attaining the tip; below the furcate nervure are two parallel nervures which do not reach the margin; beneath the latter is the ordinary undulated nervure.

I obtained several specimens which were crawling on the glass of a window, in September, in Philadelphia. The

nervures of the wings differ somewhat from those of the *S. notata*, Linn. Meig.; the marginal nervures do not approach so near the tip of the wing, and instead of a single nervure between the forked nervure and the undulated nervure, as in the *notata*, this species has two.

### BIBIO, *Latr. Meig.*

*B. thoracica*. Black; thighs rufous.

Inhabits East Florida.

*Body* black, somewhat polished; *thorax* bright yellowish-rufous, with a small black spot on each side of the scutellum; *collar*, *scutellum*, and *metathorax* black; spines of the anterior tibiae piceous, the exterior one much larger; *wings* fuscous; the fourth marginal nervure abbreviated, and not attaining to the inner margin.

Length ♀ two-fifths of an inch.

This is a very large and fine species. On the thorax is sometimes an obsolete brown line.

### BERIS, *Latr.*

*B. viridis*. Bright green; tergum black-brown; venter pale; feet yellowish.

Inhabits Pennsylvania.

*Head* brassy-green, polished; *antennæ* obscure, yellowish, brownish at tip; *proboscis* and *palpi* whitish; *stethidium* green, polished; *scutellum* with four yellowish spines; *wings* hyaline; *stigmata* large, fuscous; *nervures* fuscous, those of the costal margin anterior to the *stigmata* whitish; central areola destitute of an abbreviated nervure, two nervures passing off from the tip, and a third from very near its base; *poisers* white; *feet* pale yellowish, *tarsi* dusky at

tip, posterior tibiæ fuscous at tip; *tergum* black-brown, incisures and lateral edge yellowish; *venter* pale yellowish, dusky at base.

Length to the tip of the wings one-fourth of an inch.

This species seems to be allied to the *tibialis* of Europe, but the posterior tibia are not very obviously clavated, the central cellule of the wings is destitute of the small abbreviated nervure, and the inferior of the three nervures which radiate from this cellule issues out very nearly from its base, and not from the inferior middle as in that species.

### ODONTOMYIA, Meig. Latr.

*O. vertebrata*. Black; abdomen white, with dorsal black spots.

Inhabits North-west Territory.

*Mouth* deep black, pale within; *hypostoma* with an elevated testaceous knob; *antennæ* deep black, terminal joint beneath dusky testaceous; *thorax* blackish, with hardly perceptible hairs; *scutel* dull testaceous, black at base; tip a little hairy; spines horizontal, white; *wings* white; *poisers* white, with a whitish-glaucous capitulum; *feet* yellowish-white; *abdomen* subquadrate, much depressed, white; *tergum* with a series of large black spots almost connected together.

Length ♂ rather more than three-tenths of an inch.

### COENOMYIA, Latr. Meig.

*C. pallida*. Wings and abdomen yellowish-testaceous; thorax ferruginous.

Inhabits near St. Peter's river.

*Head* yellowish-testaceous; *orbits* beneath and behind dark cinereous; *vertex* with an elevated, obtuse, dusky line between the stemmata; *thorax* ferruginous; anterior angles a little prominent, rounded and concave behind with an elevated line reaching to the origin of the wings; *scutel* colour of the thorax; *wings* pale yellowish-brown, with margined nervures; *poisers* whitish; *feet* somewhat paler than the thorax; *tergum* polished; posterior segments somewhat sericeous; second, third, and fourth segments with three abbreviated series of punctures near their bases.

♀ Length four-fifths of an inch.

Of this interesting insect I obtained three specimens, which were females.

### THEREVA, Latr.

*T. frontalis*. Black; thorax with two yellow vittæ; tergum annulate with yellow.

Inhabits North-west Territory.

*Head* beneath with white hair; *antennæ*, *proboscis*, and *palpi* black; *front* and *vertex* dusky yellowish, with a large, deep black, glabrous, polished, transverse, undulated spot; *thorax* black with two yellow lines, or yellow with three black lines; *wings* hyaline, tinged with dull yellowish; nervures fuscous, slightly margined, and with a carpal spot; *scutel* yellowish, with a dusky basal spot; *tergum* glabrous, polished, the posterior margins of the segments bright yellow, wider upon the sides; *pleura* and *pectus* glaucous, the latter hairy; *poisers* whitish, with a blackish capitulum; *feet* black; *tibia* excepting at tip dull testaceous; *venter* cinereous, changeable, second and third segments with yellowish posterior margins.

Length more than half an inch.

ANTHRAX, *Latr.*

1. *A. alcyon*. Wings brown, a hyaline spot near the middle, another at tip in which are two curved brown lines.

Inhabits North-west Territory.

*Body* black, with pale fulvous hair; *head* yellowish-white, hairs above the antennæ black; tip of the hypostoma prominent, and with black rigid hairs; *antennæ* black, basal joint yellowish with black hairs; *vertex* black; *occiput* with a very profoundly impressed line above; *scutellum* piceous; *wings* dusky, pale brown on the disk, an obsolete, small, subhyaline spot between the middle and the base; a large, subtriangular, hyaline spot near the middle, a small portion of which is cut off by a nervure; tip with a large, subquadrate-oval, hyaline spot, the two arcuated nervures that pass across this spot are margined with blackish; central cellule widely bilobated at tip, lobes equally approaching the inner margin, a nervure passes from between the lobes to the edge of the wing, an abbreviated nervure passes from the lobe nearest the base, half way to the inner margin, and another nervure connects this lobe with the third nervure so as to form an additional cellule; *feet* yellowish; *tarsi* black; *venter* pale, two last segments black on the disk; *tergum* with blackish hair on the incisures.

Length nearly eleven-twentieths of an inch.

This species seems to approach nearest to Wiedemann's fifth tribe, though the additional cellule will justify its being placed apart; we observed it frequently on St. Peter's river and on Red river.

2. *A. tegminipennis*. Black with pale fulvous hair; wings brownish-black, immaculate.

Inhabits North-west Territory.

*Head* yellowish-white below the antennæ; *hypostoma* prominent, with a few rigid black hairs at tip; *antennæ* black, basal joint whitish, with black hair; *front* dull fulvous; *vertex* black; *wings* entirely brownish-black, without spot; *feet* pale rufous; *tarsi* black; *tergum* with black hairs at the incisures, which on the side alternate with the fulvous ones, but more distinctly so near the tip.

Length from nine-twentieths to half an inch.

This species belongs to Wiedemann's fifth tribe.

3. *A. fulvianus*. Black, covered equally with pale yellowish hair; wings hyaline, with a narrow, brown, costal margin.

Inhabits North-west Territory.

*Head* with dull yellowish, short hairs, intermixed with black ones on the front and hypostoma; *thorax* densely hairy; *wings* hyaline, interval between the two nervures of the costal margin, and base to the first transverse nervure, light brown; *feet* black, sericeous, with yellowish-fulvous hair, intermixed with black hairs; *tergum* covered with dense hair, without any intermixture of black hairs, and without any fasciated appearance; *venter* each side behind with hairs of a brighter fulvous tint than the others.

Length more than nine-twentieths of an inch.

Allied to *A. hottentota*, Fabr.

Belongs to the fifth tribe in Wiedemann's arrangement. It is common on St. Peter's river, at Pembina, &c. It is closely allied to *alternata*, nob. in the characters of the wing, but there is no sign of fascia on the tergum, nor of alternating black fascicles of hair on the sides. The colour of the hair on the last segments of the venter is sometimes ferruginous, but it is always of a deeper tint than that of

other parts of the body. It seems to vary in size, I have a specimen less than one-fourth smaller.

4. *A. fascipennis*. Black, slightly hairy; wings varied with blackish and hyaline.

Inhabits Red river of Winnepeek.

*Body* deep black, hairs sparse, very short, ferruginous; *head* with black short hairs above, and between, the antennæ; sides of the mouth whitish; hypostoma with dull, yellowish-ferruginous hairs; posterior orbits with silvery hair; *thorax* with long hairs before the wings; *scutel* margined with piceous; *wings* with a wide, blackish-brown costal margin from which proceed two oblique bands; the basal one is dilated and attains the thinner margin, on which it extends from the middle of the basal curve of the wing to the extremity of the first and second nervures; the second band is irregularly arcuated and is abbreviated near the thinner margin where it terminates in the form of a hook; on the costal margin near the tip is an oblique spot connected with the costal coloured margin; *poisers* fuscous; *capitulum* white at tip; *tergum* with the second and third segments obsoletely piceous each side; *venter* whitish at base; *feet* dusky; *tibia* pale.

Length one-fourth of an inch.

This species coincides with the third tribe in Wiedemann's arrangement of this genus. It is small, and the wings are prettily variegated. The specimen I obtained is remarkably destitute of hair.

5. *A. costata*. Black; wings hyaline, with a black costal margin, and small anastomosis in the middle.

Inhabits North-west Territory.

*Body* deep black, with very short, sparse, sericeous hairs; *thorax* with the lateral hairs longer and pale yellowish-rufous; *wings* hyaline, with a blackish costal margin bound-

ed by the fourth nervure as far as the middle, where it is abruptly contracted so as to be included by the first apical nervure for a short distance, when it is gradually contracted so as to be included by the two costal nervures; anastomosis near the centre of the wing, blackish; *feet* black; *poisers* fuscous, capitulum whitish.

Length more than three-tenths of an inch.

The disposition of the wing nervures of this species corresponds with that of the fifth tribe in Wiedemann's arrangement.

## LAPHRIA.

1. *L. posticata*. Black; thorax and before the tip of the tergum covered with yellow hair.

Inhabits North-west Territory.

*Antennæ*, hair of the *vertex* and of each side of the antennæ, black; long hair beneath the antennæ yellowish; hair of the *cheeks* long, white; *thorax* covered with yellow hair, immaculate; *pleura* and *pectus* black, the latter with long whitish hair between the feet; *poisers* yellowish-white; *wings* dusky; *tergum* blued-black, polished, with black hairs each side; two last segments and posterior margin of the preceding segment covered with yellow hair; *venter* polished, immaculate.

Length three-fifths of an inch.

2. *L. flavicollis*. Black; wings dusky; hair of the head and thorax yellow.

Inhabits North-west Territory.

*Head* with long yellow hairs, and a few black ones over the mouth; *proboscis*, *antennæ*, and *palpi* black, the latter with black hairs; *thorax* thickly clothed with yellow hair, immaculate; *wings* dusky; *nervures* fuscous; *poisers*

dark reddish-brown; *feet* with black hair; a few pale hairs on the basal half of the thighs, and many about the origin of the feet; *tergum* black, with a slight shade of blue, polished, and with black hairs.

Length more than half an inch.

This species resembles the *thoracica*, Fabr., but may be distinguished by the colour of the hair of the head, it is also a smaller insect, with a more slender form.

### ASILUS.

*A. abdominalis*. Black; hypostoma silvery; tergum fulvous in the middle.

Inhabits North-west Territory.

*Head* rather small; *antennæ* elongated, second joint very small; *hypostoma* bright silvery; *mystax* sparse, rigid, black; *thorax* with minute black hairs, and a few longer ones on the margin; *wings* broad, black; *tergum*, segments, excepting the basal one and two terminal ones, reddish fulvous.

Length more than three-fifths of an inch.

The styles of the *antennæ* being lost in the specimen, I am not certain that this species is correctly arranged when placed in this genus. It will not agree with *DIOCTRIA*, as the *antennæ* are perfectly sessile, nor with *DASYPOGON*, as the basal joint of the *antennæ* is nearly four times the length of the second joint. The rectilinear posterior *tibiæ* will not authorize its reference to *LAPHRIA*. The appearance of the pectus and the adaptation of the feet are precisely as in *ASILUS*. In the arrangement of the wing nervures it agrees with Wiedemann's first tribe.

## HEMERODROMIA, Hgg.

*H. superstitiosa*. Whitish; thorax with a broad, blackish-brown vitta; tergum with a broad black vitta, which is crenate on its edges.

Inhabits North-west Territory.

*Antennæ*, *proboscis*, and *front* white; *occiput* and *inferior part of the head* blackish-brown, in some parts slightly sericeous; *eyes* chesnut-brown; *thorax* with a broad vitta, which is paler in the middle and occupies the greater portion of its surface; *wings* hyaline; *poisers* white; *scutel* dusky, with a paler margin; *tergum*, the broad vitta is very deeply crenated on its edges, and is often separated into a series of large spots by the incisures; *beneath* white.

Length nearly three-twentieths of an inch.

This species is very closely allied to the *H. oratoria*, Fall. The disposition of the nervures is the same with those of that species, but the *oratoria* is said to have only a line on the thorax in place of a vitta, to have the abdomen all dark brown, and the tip of the posterior tibia brown.

## SARGUS, Latr. Meig.

1. *S. decorus*. Front blue; thorax green; tergum greenish golden; feet pale yellow.

Inhabits Pennsylvania and East Florida.

*Hypostoma* and *vertex* blackish; *proboscis* yellow; *antennæ* dusky yellowish, third joint darker; *frontal tubercles* with a white reflexion; *wing* dusky, stigma distinct; *poisers* pale yellow; *pleura* blackish-piceous; *feet* yellow; posterior tarsi dusky; *abdomen* slender, widest at tip, gra-

dually attenuated to the base, and with pale yellowish-brown hair.

Length about three-tenths of an inch.

This species is very closely allied to the *S. auratus*, Meig. Fabr. but it is smaller and the feet are dissimilar; it may, however, prove to be a variety of that species.

2. *S. dorsalis* Black, eyes brassy, with a green line; feet white, tibiæ and tarsi above blackish.

Inhabits Kentucky.

*Stemmata* approximate on the vertex; *eyes* brown, when recent brassy-green tinged with red or purplish, a broad, green, longitudinal line across the middle; *antennæ* whitish at base; *feet* white; *tarsi* black at the tip; *anterior* and *posterior tibiæ* black above; *wings* dusky, *nervures* deep brown, *carpus* distinctly marked by an oblong, opaque, brown spot; *abdomen* oval, middle of the two or three basal segments of the tergum and venter whitish.

Length of ♀ one-fifth of an inch, ♂ rather less.

The male is very similar to the female, but is a little smaller. This species is allied to the genus *Varro*, *Latr.* by the nervures of the wings, the nervure between the three which radiate from the central joint being altogether wanting, but the second joint of the antennæ resembles that of a *Sargus*, the third joint is deficient in my specimens. In general form it resembles *S. politus*, Linn.

### PARAGUS, *Latr.*

*P. 4-fasciatus*. Black; tergum with four yellow bands; costal margin of the wings fuscous.

Inhabits North-west Territory.

*Head* pale yellowish; *hypostoma* slightly impressed with a black line, and another dilated black line descends

from the black vertex and includes the superior portion of the tubercle of the antennæ; *mouth* each side black; *antennæ* blackish-piceous, basal joint and seta paler; second joint decidedly longer than the first; *eyes* with two yellow bands of which the anterior one is irregular; *occiput* black, with a cinereous orbital line; *thorax* with four yellow spots on the anterior margin; an obsolete, yellowish, curved line above the wings terminating anteriorly in a transverse, whitish spot on each side of the centre; an angulated yellow line behind; *pleuræ* with two yellow spots placed vertically; *scutel* edged with yellow; *wings* hyaline; a fuscous, costal margin, ferruginous at base and gradually dilated towards the tip; *poisers* white; *feet* white; anterior pair with the anterior half of the thighs and tibiæ and all their tarsi black; intermediate pair with the tip of the thighs, of the tibiæ, and all the tarsi pale rufous; posterior pair hairy beneath, with a tooth near the tip and posterior half black; tarsi and tip of the tibiæ pale rufous, the latter arcuated; *tergum* with a band near the base, somewhat narrowest in its middle; another narrower one on the middle and two near the tip a little broader in their middles, yellow; *venter* with about three distant, narrow, yellow bands, of which the middle one is sometimes fulvous.

Length less than three-fifths of an inch.

This insect does not altogether agree with the characters of the genus in which I have placed it, inasmuch as the hind thighs are toothed, the hind tibiæ arcuated, and the terminal joint of the antennæ is oval and not elongated. It disagrees with *MILESIA* in the elongated first and second joints of the antennæ, and with *PIPIZA* in the length of the palpi, and but for the character of the antennæ, I should certainly refer it to the genus *MILESIA*.