

THE
COMPLETE WRITINGS
OF
THOMAS SAY
ON THE
Entomology of North America.

EDITED BY
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WITH A MEMOIR OF THE AUTHOR, BY
GEORGE ORD.

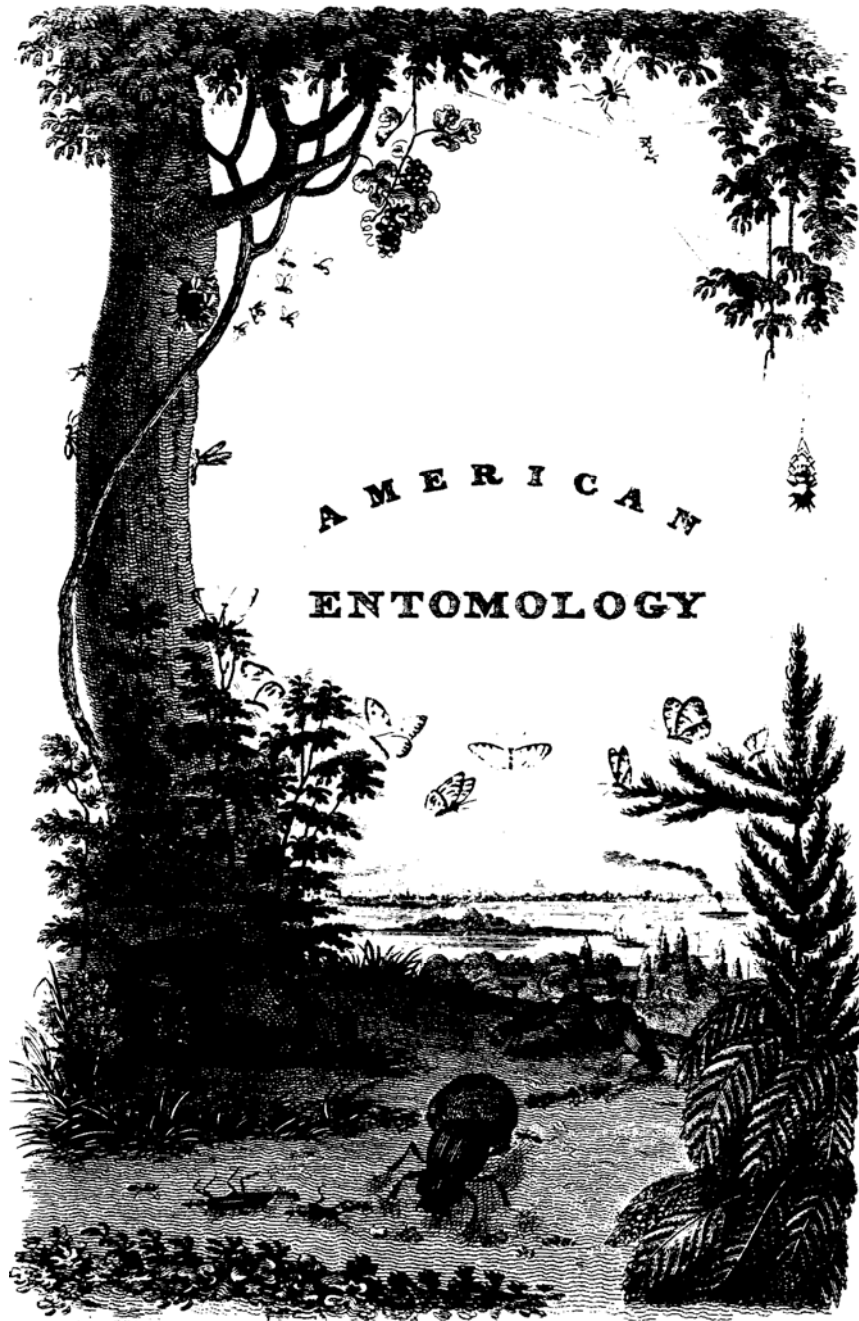


IN TWO VOLUMES.

VOL. I.

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a fuscous or blackish spot above, and a line on the lateral edge; the dorsal spots of the posterior segments are extended into bands: venter blackish on the terminal joints.

Obs. This species, as well as the *albicornis*, belongs to Meigen's first division of the genus, in which the palpi are elongate-conic, and incumbent on the proboscis. It resembles the *albicornis*, but the wings are immaculate, &c.

The lower left figure.

LEPTIS FASCIATA.—*Specific character.* Velvet-black; thorax with golden-yellow hair; tergum fasciate with white; wings hyaline with a large brown stigma.

Leptis fasciata nobis, Journ. Acad. Nat. Sci., vol. iii. p. 37.

Desc. The fundamental color of the thorax is the same with that of the other parts of the body; hypostoma in a particular light cinereous; pleura and pectus dark lurid; poisers fuscous, scapus whitish; wing nervures brown, stigma rather large, brown and distinct; tergum on the posterior margin of each segment banded with yellowish; venter immaculate; feet whitish, thighs reddish-brown towards their bases, tarsi dusky at tip.

Obs. Inhabits Pennsylvania. The nervures of the wings are arranged as in Meigen's second division, and the insect has much the appearance in miniature of *L. thoracica* of Fabricius.

The lower right figure.

[Belongs to the genus *Chrysopila* Macq.—SACKEN.]

BERYTUS. PLATE XIV.

Generic character. Antennæ four-jointed, filiform, elongated, geniculated in the middle, inserted above a line drawn from the eyes to the base of the labrum; first joint very long, clavate at tip; second and third joints intimately connected so as to appear as one; last joint short and oval; body filiform; feet elongated, thighs clavate.

Obs. This is one of the many genera that have been very properly separated from the Linnæan *Cimex* by Fabricius under the name I have adopted, and under that of *Neides* by Latreille. It is very distinct in appearance from either of its neighboring genera, and is remarkable for its slender form of body and limbs.

BERYTUS SPINOSUS.—*Specific character.* Obscure reddish-brown; terminal joint of the antennæ fuscous; thorax punctured; a strong spine before the posterior feet.

Desc. Antennæ longer than the body, terminal joint fuscous, yellowish at base and tip: eyes black: stemmata sanguineous, distant, placed very far back, almost lateral: clypeus produced, conic; rostrum as long as thorax, inflected, and placed in a groove beneath: thorax gibbous behind, punctures large and crowded: scutellum with an elevated spine: elytra nervous, with a black costal spot near the tip: posterior feet longest; a spine each side as thick as the thighs, originating before the posterior coxæ, curving upward above the elytra, and abruptly attenuated near the tip: abdomen depressed, fusiform, margined; margin paler.

Obs. Of this genus Fabricius has described two species, of which the *tipularius* appears to be very like this insect—at least as far as I can judge from description, having no opportunity to consult a figure of either insect of the genus. One specimen in my cabinet has the antennæ rather shorter, and on the thorax are three lines a little elevated, one of which is dorsal and two marginal, with a two-lobed raised transverse spot before: this may be a sexual variety, or possibly a distinct species; but, for want of sufficient knowledge of them, I will not, at present, incur the responsibility of separating them.

The smaller figure in the plate denotes the natural size.

PELECINUS. PLATE XV.

Generic character. Antennæ with not more than fourteen joints; tongue trifid; neck not apparent; posterior tibiæ clavate; abdomen slender, elongated, filiform, inserted at the posterior and inferior extremity of the metathorax.

PELECINUS POLYCERATOR Drury.—*Specific character.* Black; antennæ with a white annulus; posterior tibia sericeous on the inside.

Ichneumon polyturator Drury, vol. ii. pl. 40, fig. 4.

Pelecinius polycerator Fabr., Latr.

Desc. Head with a compressed, elevated scale-like tooth at the inner base of each antenna: antennæ, tenth joint and half of the ninth joint white: wings, nervures and costal margin fuscous: feet, two anterior pairs blackish-piceous; posterior pair black, polished, the tibia much dilated at tip and much dilated on the inner side, the tarsi piceous.

Obs. A truly singular insect, not uncommon in various parts of the United States. Its flight is slow and awkward, and when taken it endeavors to force the point of the abdomen through the skin of the hand, but its strength not adequate to the task. The whole abdomen resembles a much elongated pedicle, from which the abdomen itself, or dilated portion, has been accidentally removed.

The plate exhibits two views of the insect, natural size, and a wing somewhat magnified, to show the arrangement of the nervures.

BLAPS. PLATE XVI.

Generic character. Mentum small, or moderately large, quadrate or orbicular; palpi terminated by a larger joint; terminal joint of the maxillary palpi securiform; mandibles naked to their base; clypeus terminated by a straight line; labrum transverse; antennæ moniliform at tip, third joint much larger than the fourth; back flat; thorax almost quadrate; elytra acute at tip.

[These species belong to the genus *Eleodes*.—LEO.]

BLAPS SUTURALIS.—*Specific character.* Blackish; elytra scabrous, grooved, reddish-brown, punctured; lateral thoracic margin reflected.

Blaps suturalis nobis, Journ. Acad. Nat. Sci., vol. iii. p. 257.

Desc. Body black-brown, punctured: antennæ, third joint longer than the fourth and fifth conjointly; fourth, fifth, sixth and seventh equal obconico-cylindric; eighth obconic-orbicular, shorter than the preceding; remaining joints nearly equal to the eighth, globose; the terminal one somewhat conic-compressed: labrum prominent, emarginate, and with very short yellow hairs at tip: thorax transverse-quadrate; edge deeply concave before; lateral margin dilated, reflected; lateral edge regularly arquated, slightly excurved at base; posterior edge slightly flexuose, nearly rectilinear; angles acute, anterior ones with a small excurved point; punctures of the disk acute, distant; two obsolete indented spots behind the middle: scutel impunctured, distinct, acute: elytra with seven grooves, the four sutural ones each with a single series of elevated points, remaining grooves with numerous points; a series of points on each of the interstitial lines; lateral edge reflected, slightly elevated, acute; a sutural, common, reddish-brown margin: epipleura scabrous and punctured, with four

or five obsolete impressed striæ: feet scabrous, anterior thighs slightly dilated beneath before the tip into an obtuse angle.

Length one inch nearly.

Obs. During the progress of Major Long's expedition up the Missouri, that enterprising and excellent officer entrusted me with the direction of a small party of thirteen persons, destined to explore the country on the south side of that extended river. After encountering many obstacles and privations which it is unnecessary to enumerate, the party arrived at the village of the Konza Indians, hungry, fatigued, and out of health. Commiserating our situation, these sons of nature, although suffering under the injustice of white people, received us with their characteristic hospitality, and ameliorated our condition by the luxuries of repletion and repose. Whilst sitting in the large earth-covered dwelling of the principal chief, in presence of several hundred of his people, assembled to view the arms, equipments, and appearance of the party, I enjoyed the additional gratification to see an individual of this fine species of *Blaps* running towards us from the feet of the crowd. The act of empaling this unlucky fugitive at once conferred upon me the respectful and mystic title of "medicine man," from the superstitious faith of that simple people.

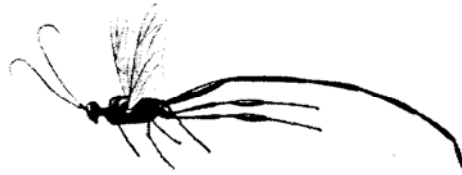
On the subsequent journey towards the Rocky Mountains, several specimens occurred, together with other insects of the same classical division, till then unknown.

The upper right figure.

BLAPS ACUTA.—*Specific character.* Blackish; elytra scabrous, grooved; dilated sutural margin reddish-brown; exterior edge acute; thoracic margin not reflected.

Blaps acuta nobis, Journ. Acad. Nat. Sci. vol. iii. p. 258.

Desc. Body blackish, punctured: head with larger punctures than those of the thorax: antennæ as in the preceding species: labrum prominent, emarginate, with short yellow hairs at tip: thorax subquadrate: anterior edge concave; punctures minute, separate; lateral margin not reflected; lateral edge regularly arcuated, a little excurved at base; posterior edge nearly rectilinear: scutellum impunctured: elytra grooved: the four sutural grooves with a single series of elevated points; interstitial lines with about one series of distant punctures; sutural margin



Peleciurus polycarator.

(From Narrative of an Expedition to the source of St. Peter's river, &c., under the command of Stephen H. Long, Major U. S. T. E., Vol. 2; Philadelphia, 1824, pp. 268—378.)

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; antennæ, [269] 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. *a.* 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.

[Allied to the European *C. sylvatica*; and subsequently described by Kirby as *C. albilabris* (Fauna Bor. Am. 12: I have a green variety from Newfoundland.—LEC.]

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 [270] 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* Hellwig, (in Melsh. Catal.) and it may be distinguished from the *lucublandus* Knoch, (in the same work,) by the color of the palpi, &c.

[I consider this as a variety of *P. lucublandus*.—LEC.]

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 color of the antennæ; thorax color of the head, margined all around with yellowish; a longitudinal impressed line, and extremely minute scattered punctures; scutel [271] 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 tip above, dentated on the posterior edge; posterior tibiæ 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; scutellum 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. [328]

♀ 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; [329] 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 scutellum 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. [330]

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

This species was also found in Missouri.

ADYCHIRUM 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 Wood.

MYRMOSA Latr.

[331]

M. UNICOLOR.—Black; abdomen with cinereous hair; meta-thorax with an impressed line.

Inhabits North-west Territory.

Head with short cinereous hair, somewhat longer about the mouth; densely punctured; thorax and scutellum 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, tibiæ and tarsi more or less piceous; abdomen, particularly behind hairy.

Length three-fifths of an inch.

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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; scutellum 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

[From Contributions of the Maclurian Lyceum to the Arts and Sciences, vol. I. Philadelphia.]

Note on Capt. Le Conte's paper on "New Coleopterous Insects of North America," published in the first volume of the Annals of the Lyceum of Natural History of New York.

Read April 23, 1827.

Colaspis infuscata Le C. is the *C. quadrinotata*.—See Journal of the Acad. Nat. Sc. P. vol. iii. p. 444.

Anthicus murinipennis Le C. is the *A. bicolor*.—See American Entomology, vol. i. pl. x. It is very closely allied to *Notoxus serricornis* of Panzer, No. 31. [39]

Molorchus affinis Le C. is the *M. bimaculatus*.—See Journal Acad. Nat. Sc. P. vol. iii. p. 428.

Chrysomela scalaris Le C. may possibly prove to be the *C. decipiens* of Weber, p. 52, notwithstanding Weber's description of the suture, which he says is "*brunneus*;" a specimen in my collection has a tinge of that color, and another has a slight appearance of the lateral thoracic indentations, which Weber attributes to his species. At any rate, I referred the species to that description until another insect could be found better adapted to it.

There can be no doubt respecting priority in relation to the above names.

[From Contributions of the Maclurian Lyceum to the Arts and Sciences.
Vol. I., Philadelphia, pp. 67—83.]

A Description of some new species of Hymenoptera of the United States.

Read March 3, 1828.

AULACUS Jurine.

A. FASCIATUS.—Wings violaceous with hyaline band.

Inhabits Ohio.

Body black; thorax confluent punctured in transverse grooves; wings violaceous with a hyaline band on the middle, hardly reaching the anal margin; abdomen much compressed; oviducts longer than the abdomen, much incurved at tip.

Length half an inch.

[68]

ICHNEUMON Linn. Fabr.

I. I. PARATA.—Antennæ black with a whitish annulation; tergum yellow, with five or six blackish bands.

Inhabits Indiana.

Head yellow; disk of the vertex and the occiput black; antennæ black; basal and second joint beneath and 15, 16, 17, 18, 19 and 20 joints pale yellowish: thorax black; band on the collar, line on each side extending to the wings, and interrupted before, and a small quadrate spot on the disk, yellow; scutel and a small spot behind it, yellow: metathorax, posterior disk, yellow; wings somewhat dusky with fuscous nervures; stigmata pale brownish; central cellule pentangular and transverse, not at all oblique, the superior side very short; tergum, basal segment with the basal incisure, and spot on the disk near the tip, black; remaining segments with a blackish band at their bases more or less emarginated in their middles; beneath yellow; pectus and postpectus with the transverse incisure, black; posterior feet, coxæ above, excepting at tip, thighs, excepting at base, tibiæ at tip and first and second joints of tarsi, black; venter with paler and less perfect bands than those of the tergum.

Var. *a*. Intermediate thighs black on their middle above.

Length two-fifths of an inch.

2. I. CONCINNUS.—Antennæ black with white annulations; tergum white with six or seven black bands.

Inhabits Indiana.

Head white; a broad black vittæ extending from the black occiput, two black abbreviated lines beneath the antennæ, each terminating near an indented point; mandibles brown at tip, a black line from their base to tip; antennæ black; 9 to the 17 joints inclusive, [69] white; collar yellow, anterior portion black; thorax with a narrow line before the wings widely interrupted before; a double much abbreviated white line in the middle; scutel and small transverse line behind it, white; metathorax with two longitudinal lines, on each side of which is a spine, and a lateral white line interrupted above; tergum yellow; terminal half of the first segment, and basal two-thirds of each of the others, black; pectus black; feet honey yellow; coxæ white; posterior feet, coxæ with a wide much indented black band; thighs blackish at base; venter somewhat dusky; central cellule of the wings as in the preceding.

♀ A single line beneath the antennæ and an irregular line above the mouth, black; double white line on the thorax widely separated; an abbreviated, oblique white line from the edge of the scutel towards the superior wings; tergum with the black band of the first segment not terminal; feet honey yellow; coxæ, excepting the posterior pair, white; tip of the tarsi black; oviduct blackish piceous, less than half the length of the abdomen.

Length over two-fifths of an inch.

Second joint of the maxillary palpi dilate, as in *Peltastes* Illig.

3. I. OTIOSUS.—Antennæ black with a white annulation; tergum with a white band on the base of segment.

Inhabits Indiana.

Body black with a white orbital line, broader before and obsolete above; antennæ 9 to the 14 joints inclusive, white; thorax with a line before the wings, interrupted before, and two abbreviated lines on the disk slightly diverging anteriorly, white; scutel and transverse spot behind it, white; central cellule of the wings [70] as in the preceding, but the superior side is somewhat shorter; tergum, first segment with a triangular band at tip; pleura with a white, longitudinal, abbreviated line beneath the

wings and one or two spots behind; beneath with a white spot before the anterior and intermediate coxæ; tibiæ white lines on their exterior sides; posterior tarsi, first and second joints with a white line above.

Length more than half an inch.

Second joint of the maxillary palpi dilated as in *Peltastes* Illig.

4. I. VINCTUS.—Black: abdomen rufous.

Inhabits Indiana.

Body black; head above the antennæ and occiput, black; orbital line interrupted behind, and all beneath the antennæ except the incisure, white; antennæ, basal joints beneath, white; collar with a white line; thorax with a short line above the anterior wing and another below it, from the anterior extremity of these lines, a white line proceeds, and is interrupted before; two impressed dorsal lines obsolete behind; scutellum and obsolete point behind it, white; wings, central cellule pentangular, transverse; metathorax with somewhat elevated rugæ, enclosing a pentangular space, from the angles of which abbreviated lines diverge, the two posterior of which terminate at the short tubercles; feet, anterior and intermediate pairs, pale whitish yellow, the coxæ white with a black spot behind, the thighs with a black line and tibiæ of the anterior pair also with a black line; posterior pair black, second, third and fourth joints of the tarsi, white; abdomen bright rufous, immaculate.

Length ♂ half an inch.

[71]

5. I. INQUISITOR.—Black; feet honey-yellow; posterior tibia white, binnulate with black.

Inhabits Indiana.

Body black; palpi whitish; thorax with a white spot on the anterior base of the superior wings; wings, central cellule quadrangular, longitudinal, narrowed a little at the tip; feet honey-yellow: posterior tibia white, a black annulus near the base and another somewhat larger at tip; joints of the posterior tarsi whitish, blackish at their tip: oviducts nearly as long as the abdomen.

Length one-fourth of an inch.

Preys upon the larva (of a *Bruchus*?) that feeds on the seeds of the *Clematis*.

6. I. PTERELAS.—Black; feet honey-yellow: oviducts elongated.

Inhabits Indiana.

Body black; immaculate; antennæ picceous beneath; palpi whitish: wings, central cellule subquadrangular, almost triangular, rather longitudinal; posterior tibiæ and tarsi dusky; oviducts nearly as long as the body, aculeus picceous.

Length three-fifths of an inch.

Belongs to the genus *Pimpla* Fab.

7. I. HILARIS.—Yellowish; head black, beneath the antennæ yellowish.

Inhabits Indiana.

Body yellowish, approaching honey-yellow; head above the antennæ and occiput black; beneath the antennæ and mouth yellow, a transverse black line above the mouth; antennæ dusky, yellowish beneath, and still darker above, shorter than the body; thorax with an obsolete, double, pale yellowish line; wings hyaline; central [72] cellule small, quadrangular, longitudinal, somewhat oblique, not distinctly narrowed at either end; posterior tarsi at their tip dusky: abdomen depressed: venter with a dusky spot near the tip.

Length ♂ nearly three-tenths of an inch.

8. I. MALACUS.—Body black; antennæ annulate with white, beginning at the tenth joint and terminating at the eighteenth; joints very distinct; wings blackish; small cellule with one bulla, large anal cellule with three bulla and two short processes; metathorax with elevated lines: abdomen with an impressed line each side.

Length more than half an inch.

9. I. PECTORALIS.—Black: abdomen rufous; antennæ blackish, whitish near the middle.

Inhabits Indiana.

Body black; orbits and all beneath the antennæ, yellow; antennæ blackish, 13, 14, 15, 16, joints white: thorax with scutel and a white line before the wings, interrupted before; transverse line beneath it, yellow; wings hyaline, central cellule pentangular, transverse; pleura black: pectus black, with a large yellow spot between the intermediate and posterior

feet: feet yellow; posterior thighs tinged with rufous; posterior tibiæ rufous at tip; abdomen rufous, with black incisures.

Length over one-fifth of an inch.

10. I. BIFASCIATUS.—Ferruginous wings dusky, bifasciate.

Inhabits Indiana.

Body ferruginous; antennæ somewhat tinged with whitish beyond the middle and fuscous at tip; thorax circumscribing incisure black; wings dusky with a hyaline [73] band hardly beyond the middle and an abbreviated one nearer the tip; stigma pale ferruginous; inferior wings dusky, with a semifasciate on the middle with hyaline: oviducts black; pectus incisures black; posterior tibiæ blackish at tip.

Length two-fifths of an inch.

11. I. MORULUS.—Black; antennæ with a whitish annulation.

Inhabits Indiana.

Body black: antennæ with a white annulation beginning at the tenth or eleventh joint and ending at the sixteenth or seventeenth; wings violet black; recurrent nervures of the small cellule, with each a salient angle; on the anterior one a whitish dot and on the posterior two white dots: a dot also on the posterior nervure of the small cellule; metathorax with elevated lines and each side behind an acute angle; abdomen with a short petiole, which is lineated: second segment opaque with confluent punctures, larger towards the base; color blue-black; oviduct hardly obvious.

Length three-fifths of an inch.

Second joint of maxillary palpi dilated as in *Peltastes* Illig.

12. I. RESIDUUS.—Yellowish; antennæ white in the middle and black at tip.

Inhabits Indiana.

Body yellowish, tinged with rufous: antennæ not longer than the thorax, the ten basal joints color of the body, 11, to 16 whitish, the remaining joints black; wings hyaline; central cellule pentangular; posterior tibiæ at tip, and posterior tarsi, dusky.

Length more than one-fourth of an inch.

[74]

ANOMALON Jurine.

1. *A. SEXLINEATA*.—Black; feet rufous; metathorax with six raised lines.

Inhabits Indiana.

Body black; antennæ piceous beneath, rather shorter than the body; palpi yellowish; thorax subtrilobate, the impressed lines being deep and wide; wings a little dusky, a small whitish spot on the beginning of the carp: central cellule none; metathorax densely punctured, with six longitudinal, slightly elevated lines, two of which are on the side; feet rufous; posterior tibiæ and their tarsi dusky; tergum, first segment densely and finely punctured; oviduct hardly as long as the abdomen.

Length three-twentieths of an inch.

2. *A. HUMERALE*.—Black; antennæ with a white cinctus.

Inhabits Indiana.

Body black, punctured; antennæ, 12, 13, 14 and 15th joints white; thorax with an acute tubercle on the humerus; somewhat elongated before the wings; metathorax with two acute tubercles each side at tip; tergum, second segment with an impressed oblique line each side at the basal angle; oviduct longer than the abdomen; knees white.

Length ♀ more than half an inch.

3. *A. MELLIPES*.—Black: feet honey-yellow.

Inhabits Indiana.

Body black, polished; palpi whitish; wings hyaline, with a slight fuliginous tinge; larger middle cellule with three white bullæ; oviduct as long as the body; feet honey-yellow.

Length more than two-fifths of an inch.

[75]

OPHION Fabr.

1. *O. BILINEATUS*.—Honey-yellow; head yellow; thorax with two dark lines.

Inhabits Indiana.

Head yellow; antennæ honey-yellow; mandibles blackish at tip; thorax with two somewhat reddish brown lines almost obsolete; wings with fuscous nervures; costal nervure and carpal spot honey-yellow; the latter dilated, conspicuous; large central cellule acutely angulated at tip; central cellule angulated

at tip; small central cellule angulated at the superior basal angle and with a very slight process, its terminal nervure almost obliterated on the outer half, its outer nervure almost obliterated in the middle and white in that part: the two terminal connecting nervures forming an acute angle; pleura paler than the thorax; abdomen, second segment hardly as long as the first and longer than the third.

Length seven-twentieths of an inch.

2. *O. ANALIS*.—Reddish-brown: head above black, beneath the antennæ yellow; abdomen black at tip.

Inhabits Indiana.

Head above the antennæ black: beneath the antennæ yellow: occiput black, reddish-brown each side: antennæ dark reddish-brown, almost black, at base black: beneath somewhat paler, darker towards the base, radical joint yellow at base; thorax reddish brown, with large blackish disk, divided into three wide lines by two impressed lines; sutures of the scutel and metathorax black; wings the larger central cellule obtuse at tip; smaller central cellule with a small angle at tip, where it is widest, very obtusely rounded at the superior basal angle; do not meet and form an angle, carpal spot slender; pectus black; posterior thighs blackish at base, their coxæ with [76] a black spot, their tibiæ dusky at tip and their tarsi yellow; abdomen black at tip and on the superior edge of the second segment, which is at least as long as the first segment.

Length ♀ nearly three-fifths of an inch.

3. *O. GEMINATUS*.—Yellowish; vertex with a black spot; large central cellule of the wings obtuse at tip.

Inhabits Indiana.

Body dull yellowish; head yellow; vertex black: antennæ somewhat shorter than the body, tinged with brown, the first joint yellow; wings hyaline, with fuscous nervures and honey-yellow somewhat dilated carpal spot: large central cellule obtuse at tip, the nervure of the tip double; smaller central cellule very obtusely rounded at the superior basal angle; pleura and pectus pale yellowish; abdomen, second segment obviously shorter than the first, and not longer than the third.

Length about two-fifths of an inch.

This species closely resembles *O. bilineatus* nob., but is much smaller, and the arrangement of the wing-nervures proves it to be a different species.

4. *O. EMARGINALUS* [EMARGINATUS].—Black; antennæ fuscous; feet honey-yellow.

Inhabits Indiana.

Body black, sericeous with short hair; head convex beneath the antennæ, at the base of which the head is much more prominent than immediately above the antennæ where the head is indented; antennæ short, above dark fuscous, beneath paler, first joint rather longer; palpi white; thorax immaculate; metathorax with four longitudinal slightly raised lines; wings hyaline with fuscous nervures and carpal spot; larger central cellule obtuse or [77] rather truncated at tip, and emarginated by the curvature of the radial cellule; smaller cellule with a small angle at tip, where it is widest, and gradually tapering to its opposite extremity without any curvature; feet honey-yellow, short, anterior coxæ with a whitish reflection; abdomen short, almost sensible, not compressed.

ALYSIA Latr.

1. *A. RIDIBUNDA*.—Rufous; head, wings and tip of the tergum, black.

Inhabits Indiana.

Body yellowish-rufous; head black, a rufous spot each side of the mouth; antennæ longer than the body; wings blackish; central cellule large, longitudinal, acute before, nervure connecting with the carpal spot placed obviously behind the middle of the cellule; feet black; tibiæ and tarsi more or less tinged with dull rufous; tergum depressed, near the tip a large black spot.

Length ♂ nearly one-fifth of an inch.

2. *A. PALLIPES*.—Black; feet, abdomen at base, and antennæ at base, white.

Inhabits Indiana.

Body black, polished; antennæ fuscous, first and second joints whitish; mandibles piceous; wings hyaline, central cellule in length equal to double its greatest width; feet white; abdomen white at base.

Length one-twentieth of an inch.

BRACON Jur. Fabr. Latr.

1. *B. EXHALANS*.—Black; abdomen sanguineous.

Inhabits Indiana.

Head black; palpi whitish; antennæ shorter than the [78] body; thorax black; wings blackish, second cubital cellule longitudinal, quadrangular, acute at base, nervure connecting with the carpal spot placed obviously before the middle of the cellule; feet blackish; abdomen sanguineous; oviduct shorter than the body, blackish; metathorax simple pale reddish.

Length more than three-twentieths of an inch.

2. *B. HONESTOR*.—Yellowish-rufous; wings blackish, with a whitish band and tip.

Inhabits Indiana.

Body rufous, slightly tinged with yellow; antennæ rather longer than the body; thorax somewhat bilobate, the posterior segment being canaliculate; wings dusky, with black nervures and rather large carpal spot; a narrow, transverse, whitish band beyond the middle, and whitish tip; posterior tibiæ dusky, whitish at base and at the terminal incisures; abdomen clavate, almost pedunculated; oviduct longer than the abdomen.

Length one-fifth of an inch.

Second cubital cellule elongated.

3. *B. TRUNCATOR*.—Pale honey-yellow; vertex with a black spot.

Inhabits Indiana.

Body pale honey-yellow, polished, impunctured; antennæ fuscous, honey-yellow at base; stemmata in a black spot; palpi whitish towards the tip; metathorax slightly punctured: abdomen much compressed, truncate.

Length nearly one one-fourth of an inch.

PERILAMPUS Latr.

1. *P. TRIANGULARIS*.—Green and blue; tarsi yellow; wings dusky at tip. [79]

Inhabits Indiana.

Body polished; head green with a violaceous reflection, each side before vertically striate; occiput transversely and longitudi-

nally striated, violaceous, the collar punctured, green; scutel much elongated, entire; wings dusky on the apical half; abdomen very short, wide, triangular, very convex above and beneath; anterior half violaceous, posterior half, green with a violaceous reflection; tarsi yellow.

Length one-fifth of an inch.

2. *P. HYALINUS*.—Green; wings hyaline.

Inhabits Pennsylvania.

Body green punctured; scutel much elongated, slightly emarginated; wings hyaline, immaculate; abdomen very short, wide, triangular, very convex above and beneath, violaceous; tarsi yellowish; anterior tibiæ honey-yellow.

Length less than one-fifth of an inch.

Differs from the preceding in being destitute of the dusky wing tips and in having punctures instead of striæ.

SPALANGIUS Latr.

S. POLITUS.—Bluish-green; tergum with a cupreous band at base.

Inhabits Virginia.

Body bluish-green, varied with violaceous, densely punctured; front grooved to receive the basal joint of the antennæ; flagellum fuscous; wings hyaline, slightly dusky; scutel somewhat prominent; abdomen a little depressed; first segment brilliant cupreous; incisures glabrous; terminal segment longer than the others together, forming at tip a narrowed, carinated black [80] process for the reception of the tip of the oviduct beneath; feet dull honey-yellow.

Length ♀ seven-twentieths of an inch.

I found this species on the sea beach of Senipuxent Island.

CODRUS Jur.

C. PALLIDUS.—Pale honey-yellow.

Inhabits Indiana.

Body pale honey-yellow; antennæ, excepting the basal joint, fuscous; stethidium, incisures black; wings hyaline: stigma distinct, pale brown.

Length nearly three-tenths of an inch.

SERLION Latr.

S. *TERMINALIS*.—Antennæ, terminal joint white; wings unifasciate.

Inhabits Indiana.

Body somewhat piccous; head yellowish; antennæ broken, blackish; first joint nearly as long as the others together; terminal joint dilated, compressed, subtriangular, white; wings with a broad dusky band; intermediate tarsi white except at tip.

Length more than one-twentieth of an inch.

PSILUS Jur.

1. P. *CILIATUS*.—Black; feet whitish; hairs of the wings elongated.

Inhabits Indiana.

Body black, polished; antennæ with an oblong oval acute club, at base honey-yellow; petiole of the abdomen and feet honey-yellow; wings deeply ciliated, the hairs longer than the transverse diameter of the wings.

Length less than one-twentieth of an inch.

2. P. *OBTUSUS*.—Black; feet whitish, thighs black in the middle.

Inhabits Indiana.

Body black, polished; antennæ fuscous; anterior wings white and very obtuse, finely ciliated; ciliæ very short; feet whitish; thighs black, white at base and tip; coxæ black.

Length nearly one-twentieth of an inch.

PLATYGASTER Latr.

3. P. *PALLIPES*.—Body black; antennæ fuscous, moniliform: basal joint honey-yellow; wings hyaline; abdomen polished, much depressed; widest near the tip and obtuse, gradually and rectilinearly a little narrowed to the base: feet whitish-yellow.

Length one-thirtieth of an inch.

BETHYLUS Latr.

B. *ARMIFERUS*.—Black; tergum with elongated white hairs. Inhabits Indiana.

Body entirely black, immaculate, with short hairs; head

covered with discoidal punctures; tergum polished, with a few elongated, rigid, white hairs, as long as two of the segments taken together.

Length seven-twentieths of an inch. [81]

DRYINUS Latr.

D. BIFASCIATUS.—Yellowish; wings bifasciate.

Inhabits Indiana.

Body honey-yellow, varied with blackish; anterior thighs dilated; wings with two fuscous bands, the apical one broader.

Length rather more than one-fifth of an inch. [82]

CHRYSIS Linn. Latr.

1. *C. PACIFICA*.—Green; anal segment mutic; tarsi fuscous.

Inhabits Indiana.

Body green with a slight bluish tinge, with short hairs; antennæ, five or six terminal joints fuscous; wings hyaline, a little brownish on the costal margin beyond the stigma; tergum more particularly tinged with bluish; anal segment rounded, subtruncate, unarmed; tarsi fuscous.

Length three-tenths of an inch.

2. *C. CARINATA*.—Bluish; abdomen subtridentate.

Inhabits Indiana.

Body greenish blue varied with purplish; front, from the antennæ to the middle, with numerous whitish hairs; antennæ fuscous, green at base; metathorax, lateral tubercles acute; middle termination subacute; tergum, anal segment carinate, the carina extending beyond the edge into an acute tooth; lateral angles acute; tarsi fuscous.

Length three-tenths of an inch.

HEDYCRIMUM Latr.

H. SINUOSUM.—Reddish-coppery; wings fuliginous at tip.

Inhabits Indiana.

Body reddish-coppery, polished, punctured; front concave, greenish; antennæ fuscous, green at base; metathorax acute at posterior angles; wings beyond the middle fuliginous; tergum blue-purple; terminal segment hardly as long as the penultimate, with a sinus at tip; beneath green; tarsi fuscous.

Length about one-fifth of inch.

TIPHIA Fabr. Latr.

T. TRANSVERSA.—Blue-black, somewhat hairy.

Inhabits Indiana.

Body black, with a slight bluish or purplish reflection; with numerous whitish hairs; immaculate, punctured; antennæ black, opaque; mandibles piceous at tip; palpi fuscous; wings a little dusky, hyaline; nervures black; apical lines of the second cubital cellule transverse, rectilinear; metathorax each side striated, above with three slightly elevated longitudinal lines and a posterior transverse one; abdomen, first segment narrower than the second, somewhat gibbous above and flat beneath, the incisure indented; remaining segment more hairy, ciliated; tibiæ and tarsi with silver hairs.

Length nearly half an inch.