

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

EDITED BY
JOHN L. LE CONTE, M.D.

WITH A MEMOIR OF THE AUTHOR, BY
GEORGE ORD.



IN TWO VOLUMES.

VOL. II.

^c
NEW YORK:

BAILLIÈRE BROTHERS, 440 BROADWAY.

LONDON:—H. BAILLIÈRE, 219 REGENT STREET.

PARIS:—J. B. BAILLIÈRE ET FILS, RUE HAUTEFEUILLE

MADRID:—C. BAILLY-BAILLIÈRE, CALLE DEL PRINCIPE.

1859.

behind and by a slender transverse line at the suture of the first segment, on which the lines do not extend: scutel with a longitudinal black line: metathorax, excepting at base, black: abdomen, petiole black, about one-third as long as the abdomen: tergum moderately arcuated; each segment having a black band: pleura black, about four yellow spots: posterior pair of feet with their coxæ at tip, maculated band, inferior edge and tip of the dilated thighs, tip and base of the tibiæ, black; the thighs are about the size of the abdomen, with six or eight large prominent black spines, the superior one divided into three or four.

Length less than one-fifth of an inch.

A very handsome species; I obtained it from the pupa of a *Thecla*.

2. *C. DEBILIS*.—Dull honey-yellow; anterior pair of feet whitish.

Inhabits Indiana.

Front yellowish towards the mouth; a black line from the antennæ to the vertex: antennæ dusky, paler beneath: thorax punctured, with three black vittæ; scutel with a black line: beneath the petiole are two whitish spines: petiole as long as the posterior coxæ, blackish, whitish at the tips: abdomen polished, the incisures blackish; thighs nearly equal to the abdomen; tibiæ whitish, blackish in the middle; tarsi white.

Length three-twentieths of an inch.

[272]

EURYTOMA Illig. Latr.

1. *E. ORBICULATA*.—Blackish; feet, excepting the middle of the thighs, yellowish.

Inhabits Indiana.

Body brassy-black, reticulate with punctures: antennæ, first joint honey-yellow: scutel obtusely rounded at tip: suture at its base not dilated: wings hyaline; nervures brown, branch of the radial nervure not longer than the part that extends beyond it on the edge: abdomen in profile almost orbicular, glabrous, polished; petiole punctured, longer than the posterior coxæ and trochanters: feet honey-yellow: thighs, excepting at their origin and extremity, black.

Length less than one-tenth of an inch.

The joint of the antennæ are unequally gibbous.

[Vol. I.]

2. *E. STUDIOSA*.—Black; terminal joint of the antennæ as long as the two preceding ones together.

Inhabits Indiana.

♂ Body reticulate with crowded punctures: antennæ moniliform, of eight joints, geniculate; second joint shortest; third joint hardly longer than the fourth, and gradually a little shorter to the penultimate; ultimate joint about as long as the two preceding ones together, conic-ovate, with a very slight appearance of being three-jointed: thorax, anterior segment in breadth at least equal to twice the length; suture at the scutel not dilated: scutel obtusely rounded behind: wings hyaline; nervure much arcuated from the edge, its confluence with the edge about as long as the branch, which is subclavate: abdomen polished, impunctured; above oval; laterally orbicular; peduncle shorter than the posterior coxæ and trochanters: knees and tips of the tibiæ honey-yellow: [273] tarsi, particularly the two posterior pairs, whitish.

Length less than one-tenth of an inch.

EULOPHUS Geoff. Latr.

1. *E. DICLADUS*.—Blackish metallic; tibiæ and tarsi white.

Inhabits Indiana.

Body brassy blackish, more or less tinged with cupreous, punctured: antennæ larger towards the tip; terminal joint larger than the preceding one, conic-compressed; two long, slender branches, originating near the base, and nearly as long as the antennæ; tergum tinged each side with green: feet blackish: tibiæ and tarsi white.

Length nearly one-twentieth of an inch.

The terminal joint of the antennæ in the female is considerably larger than the others.

2. *E. BASALIS*.—Greenish; feet, tip and base of the antennæ white.

Inhabits Indiana.

♂ Body granulated, brassy-green, with a slight violaceous reflection: antennæ yellow-white, third, fourth and fifth joints dusky: abdomen blackish-violaceous, basal disk whitish, and a small whitish spot at tip: feet white, including the anterior

coxæ: coxæ with a small, acute tubercle before: tarsi, terminal joint dusky.

Length about one-fifteenth of an inch.

I observed a number of the pupæ of this insect, congregated together on the under side of a leaf of the buttonwood (*Platanus occidentalis* L.) They were of a blackish color, and adhered to the leaf in a vertical [274] posture, by the extremity of the abdomen. Came out last June.

This is much like *E. damicornis* Kirby, which, however, has a shade in the middle of the wings; antennæ not shaded in the middle, and the posterior thighs of the female are dusky in the middle. I have five females, but not one male.

The last joint of the antennæ is evidently divided into three segments.

3. *E. HIRCINUS*.—Black, with sparse, long hairs; feet and base of the tergum yellowish.

Inhabits Indiana.

Body black: antennæ yellowish; terminal joints dusky: mouth yellowish: thorax, head and wings at base, with long sparse hairs: wing-scale honey-yellow: tergum on the basal disk yellowish: feet, including the coxæ, pale yellow: venter on the disk yellowish.

Length over one-twentieth of an inch.

Quite distinct from the preceding by the long hairs of the head and thorax.

PERILAMPUS Latr.

P. PLATIGASTER.—Blackish; face impunctured.

Inhabits Indiana.

Body brassy-blackish, punctured: head polished, impunctured before: occiput somewhat lineated transversely; before the eyes a little punctured: thorax with a glabrous, polished line each side: scutell short, obtuse, rounded, slightly emarginate at tip: wings hyaline; nervures brown; tergum quadrate, angulated each side, simply arcuated above, shining blackish: feet blackish, with a tinge of green: tarsi yellowish. [275]

Length about three-twentieths of an inch.

Differs from *P. hyalinus* nob. by color; and in that species the

[Vol. I.

face is very obviously punctured, the scutel is larger and more acutely emarginated, and the abdomen is elevated above, into an acute, transverse ridge.

TORYMUS Dalm. (MISOCAMPUS Klug.)

1. T. OCREATUS.—Green, tinged with blue; base of the antennæ, tibiæ and tarsi whitish.

Inhabits Indiana.

Body bright green, more or less tinged on the pleura, abdomen and thighs with blue or purplish; reticulately punctured: antennæ black; first joint before dull whitish: mandibles and palpi piceous: scutel, on the posterior half with very small punctures: wings hyaline; nervure brown: abdomen polished, impunctured: terminal joint ♀ brassy: oviduct as long as the body, fuscous: tibiæ and tarsi whitish.

Length one-tenth of an inch.

Resembles *bedeguaris* F., but is smaller, the abdomen and thighs differently colored, and the minute puncturation of the posterior half of the scutel strongly contrasts with the larger discoidal punctures of the basal half. It inhabits the receptacle of a *Liatris*.

The male has generally more of the purple tinge.

2. T. PAVIDUS.—Cupreous green; no large punctures; tibiæ and tarsi yellowish.

Inhabits Indiana.

Body coppery-greenish, with the appearance of minute granules or scales; antennæ black: hypostoma with the carinate line very distinct: mandibles piceous: wings hyaline; nervure pale brownish: abdomen bluish-green: [276] feet honey-yellow: thighs bluish-green; posterior pair of tarsi whitish.

Length ♂ nearly one-tenth of an inch.

The surface has no large and obvious punctures like those which distinguish the preceding.

SPARASION Latr.

S. FAMELICUS.—Slender; abdomen longitudinally lineated. Inhabits Indiana.

Body much elongated, very slender; with small punctures; 1835.]

black; antennæ, six basal joints dull yellowish, remaining joints close set: second and third joints equal: mandibles piceous: thorax with the anterior segment arcuated each side to the wings; two distant, dorsal, longitudinal impressed lines: wings hyaline; nervure not distant from the edge, branch, divaricating from the edge, not dilated at its tip: metathorax with longitudinal, elevated lines: abdomen elongated, with numerous, longitudinal, parallel, elevated lines, both on the tergum and venter: feet honey-yellow.

Length over three-twentieths of an inch.

CERAPHRON Jur. Latr.

1. *C. ARMATUS*.—Wings fuliginous in the middle; tergum striate at base.

Inhabits Indiana.

Body black, with rather distant punctures: thorax with three longitudinal lines before, approaching behind: wings fuliginous in the middle; nervure, carpal spot and branch robust, fuscous; the carpal spot or stigma rather [277] large and truncated: scutel with two small spines at tip: metathorax with a small spine or tubercle each side: tergum depressed, with numerous close set engraved lines extending to the middle of the length: feet piceous; thighs blackish.

Length more than one-tenth of an inch.

A very distinct species.

2. *C. STIGMATUS*.—Lateral margin of the tergum extending beyond the abdomen.

Inhabits Indiana.

Body black, minutely punctured: antennæ, first joint equal to the four following joints taken together: thorax, anterior segment with the three impressed lines distinct: wings hyaline; stigma large, semi-orbicular, brown; nervure of the incomplete radial cellule robust, brown, hardly longer than the stigma; tergum polished, slightly lineated at base; the segments extending each side beyond those of the venter: anterior and intermediate tibiæ and tarsi piceous.

Length over one-twentieth of an inch.

These two species belong to the second division of Jurine's *Ceraphron*.

PROCTOTRUPES Latr.

1. *P. OBSOLETUS*.—Black; feet and antennæ honey-yellow.

Inhabits Indiana.

Body polished, black: antennæ honey-yellow, simple, palpi white: thorax with a yellowish wing-scale: wings hyaline; nervure from the radial cellule continued to the middle of the wing; discoidal and anal nervures hardly distinct: feet honey-yellow: oviduct about as [378] long as the first joint of the posterior tarsi, gradually attenuating from the abdomen to the tip, and continuing the curve of the tergum downward.

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

2. *P. ABRUPTUS*.—Black; feet and first joints of the antennæ honey-yellow.

Inhabits Indiana.

Body polished, black: antennæ rather short, with close set, short, obvious hairs; two or three basal joints very obscurely honey-yellow or piceous; joints beyond the middle not twice the length of their breadth: mouth obscurely piceous: wings hyaline; nervure of the radial cellule not extended toward the middle of the wing; discoidal and anal nervures not obvious; wing-scale dull yellowish: feet honey-yellow: oviduct curved rapidly downward, almost deflected, not gradually attenuated, but somewhat cylindric at base, and hardly longer than the basal joint of the posterior tarsi.

Length one-tenth of an inch.

3. *P. PALLIDUS* nob. Contrib. Macl. Lyc. vol. i. p. 80.

This species is remarkable in having but a very short, bifid process extending from the tip of the abdomen. The sexes are not well understood. Jurine says that the antennæ have the same number of joints, and that the pointed valves which terminate the abdomen are nearly alike in both sexes. But the present insect leads me to suppose that the male has not been hitherto known. At the extremity of its abdomen are two very short, parallel filiform processes, which are probably characteristic of the male sex in this genus. It seems, therefore, possible that the *pallidus* may prove to be of the same species as [279] 1835.]

P. caudatus nob., notwithstanding their great apparent difference. But this cannot be determined without more specimens, and a better acquaintance with them both.

Since the above was written, I have obtained many specimens of this species, all corresponding in apparent sexual character, excepting that in some the second joint of the antennæ is so far immersed in the first, as to be hardly visible; still as it is not, in any, much exerted, this character is probably dependent on the greater or less degree of contraction in drying.

CINETUS Jur.

C. MELLIPES.—Black; feet honey-yellow.

Inhabits Indiana.

Body polished, black, hairy: antennæ fuscous; basal joint honey-yellow; vertex tinged with piceous: mouth obscure honey-yellow: thorax with two impressed lines: wings immaculate, ciliate; nervures of the radial cellule extended a little towards the base and centre of the wing; the two anal nervures very distinct; stigma not obvious: abdomen, peduncle with longitudinal, impressed lines; second segment very large, composing the chief part of the abdomen: feet honey-yellow.

Length one-tenth of an inch.

BETHYLUS Latr.

1. *B. CELLULARIS*.—Black; antennæ, tarsi and anterior tibiæ piceous.

Inhabits Indiana.

Body black: head with a raised line passing between the antennæ before: antennæ piceous: wings with a very [280] slight tinge of fuliginous; nervures yellowish; stigma double, fuscous; a small, additional, triangular cellule at the tip of the brachial cellules; abdomen polished: feet black; tarsi and anterior pair of tibiæ and tarsi piceous.

Length about one-tenth of an inch.

This species is remarkable by the supernumerary cellule.

2. *B. MUSCULUS*.—Black; antennæ and feet yellowish; abdomen depressed.

Inhabits Indiana.

Body somewhat polished, impunctured, black : antennæ dusky, honey-yellow towards the base : mandibles honey-yellow ; thorax with the anterior segment not much elongated ; dorsal impressed lines very obvious : wings hyaline ; radial nervure extended, equally distinctly near to the tip of the wing ; discoidal cellule none : metathorax minutely and densely punctured or granulated above, and minutely lineated each side : abdomen depressed, polished, piceous black, distinctly petiolated : feet honey-yellow : thighs a little dusky in the middle.

Length over one-twentieth of an inch.

This is the smallest species I have met with.

3. *B. PEDATUS*.—Black ; antennæ and feet honey-yellow.

Inhabits Indiana.

Body black, with scattered hairs : antennæ, particularly at base, obscurely honey-yellow ; first joint long : thorax minutely punctured : metathorax punctured and lineated : tergum polished : feet dull honey-yellow.

Length over one-tenth of an inch.

This species and the following are remarkable for the brevity of the inflected tip of the radial nervure, which is not at all arcuated, but points obliquely inward. [281]

4. *B. CENTRATUS*.—Black ; tarsi and tip of the tibiæ obscure piceous.

Inhabits Indiana.

Body black, polished, with scattered hairs : antennæ with an obsolete piceous tint, excepting the basal joint : metathorax with discoidal punctures and lineations : wings hyaline ; two brachial cellules ; a simple, short, oblique rectilinear inflection of the tip of the radial nervure pointing towards the centre of the wing : nervures pale : tergum polished : tibiæ and tarsi obscure piceous ; the latter blackish at tip.

Length less than three-twentieths of an inch.

This species is considerably larger than the preceding and differs in the color of the antennæ and of the feet.

COPTERA nob.

Artificial character.—Wings without nervures ; superior wings folded and with a fissure at tip ; abdomen of two segments.

1835.]

Natural character.—Body moderately slender: head longitudinally oblong, truncate or a little excavated before, over the insertion of the antennæ; eyes lateral, rounded, entire: stemmata three: antennæ submoniliform, gradually enlarging a little towards the tip; basal joint longest and dilated: wings without obvious nervures; superior wings large, folded longitudinally in two, and at the tip of the fold with a profound fissure; inferior wings rather slender: abdomen composed of but two segments, of which the basal one is somewhat petioliform: feet moderate. [282]

Observations.—This new genus differs from all others with which I am acquainted, that have nerveless wings, by having the superior wings doubled, by an equal fold, and at their tips a deep and obvious fissure. I have, as yet, seen only the male.

C. POLITA.—Black; feet honey-yellow.

Inhabits Indiana.

Body polished, black: head anteriorly rugose and biangulated: antennæ at base, excepting the first joint, piceous: thorax with two impressed lines: wings with short hairs and ciliate: abdomen oblong-oval, basal segment with elevated lines.

Length about one-twelfth of an inch.

Taken on the window, July 20.

PSILUS Jur.

1. *P. TERMINATUS.*—Black; feet and base of the antennæ honey-yellow.

Inhabits Indiana.

Body black, polished, with a few, rather long, scattered hairs: antennæ thirteen-jointed, elongated, geniculate between the second and third joints, honey-yellow; first joint in a frontal groove; second joint elongated, subfusiform, third joint cyathiform; remaining joints moniliform, equal to the eleventh joint, which is abruptly dilated and with the twelfth equal, subquadrate, black; thirteenth joint subequal to the preceding, globose-ovate, black: wings with short ciliæ, and with short hairs; [283] nervures none; stigma triangular, black; abdomen dull honey-yellow at base; first segment half as long as the thorax: feet honey-yellow.

Length over one-twentieth of an inch.

[Vol. I.

Although the wings entitle this species to a place in Jurine's *Psilus*, yet the antennæ are entirely different from those of the type *P. elegans*, resembling considerably those of his *P. antennatus*.

2. *P. ABDOMINALIS*.—Antennæ clavate, as long as the body; black, abdomen whitish.

Inhabits Indiana.

Body black: antennæ broken at the second joint; first joint one-fourth the whole length, whitish: second joint obconic: terminal joint ovate-fusiform, longer than the three preceding joints together; wings very deeply ciliated: abdomen whitish, particularly at base: tarsi whitish.

Length about one-fourth of an inch.

3. *P. APICALIS*.—Antennæ at the tip of the head, which is a little prominent.

Inhabits Indiana.

Body black, polished; antennæ as long as the body, fuscous, with subquadrately moniliform joints; basal long joint honey-yellow; terminal joint not much longer than the preceding one; inserted at the tip of the head; beneath the antennæ is a rather broad prominence: costal nervure but little less than half the length of the wing, triangular and black at its tip; feet honey-yellow: petiole distinct.

Length one twenty-fifth of an inch.

It is probable that the present insect is related to the *P. cornutus* of Panzer, but I have not the means of comparing. [284]

4. *P. COLON*.—Wings with a dusky dot before the middle.

Inhabits Indiana.

Body black, polished; antennæ nearly as long as the body; terminal joint as long as the first and equal to the four preceding joints together: wings hyaline; an oval, dusky spot a little beyond the tip of the costal nervure and extending nearly across the wing: costal nervure with its terminal half more dilated than the basal portion and blackish; tarsi and anterior pair of tibiæ honey-yellow.

Length one twenty-fifth of an inch.

Readily distinguished by the dusky wing-spot.

1835.]

ANTEON Jur.

A. TIBIALIS.—Black; tibiæ and tarsi dull yellowish.

Inhabits Indiana.

Body polished, black; metathorax punctured and with longitudinal slightly elevated lines; tergum towards the tip with a few, rather long black hairs; tibiæ and tarsi dull yellowish-white.

Length about one-tenth of an inch.

HEDYCHRUM Latr.

1. H. OBSOLETUM.—♀ Thorax on the disk very slightly punctured; abdomen entire at tip.

Inhabits Indiana.

Body green, varied with purplish; thorax on the disk tinged with purple, and with sparse, slightly impressed punctures; wings fuliginous; metathorax and pleura with discoidal punctures, and a confluent blackish, double, indented [285] spot behind; tergum with a purple reflection, less obvious on the posterior segment; punctures slightly impressed, more obvious each side and on the terminal segment; terminal segment about equal to the preceding, perfectly entire at tip: venter bronze: tarsi brown.

Length less than one-fourth of an inch.

Differs from *ventrale* nob., which has the terminal segment slightly longer than the preceding one and very obtusely and slightly emarginate at tip, and the thoracic punctures are not sparse on the disk; the *sinuosum* nob. has a deep and acute emargination at tip of the terminal segment of the tergum.

2. H. SPECULUM.—♂ Green; tergum and disk of the thorax impunctured.

Inhabits Indiana.

Body green, varied with purplish: antennæ, excepting the first and second joints, blackish: head with discoidal punctures, vertex and posterior margin impunctured: thorax impunctured, polished, with an impressed, abbreviated line each side of the middle: metathorax with discoidal punctures: wings fuliginous: tergum impunctured, polished; terminal segment hardly half as

[Vol. I.]

long as the preceding one, obsolete punctured each side, at tip obtusely emarginate: tarsi pale honey-yellow: venter brassy.

Length less than three-twentieths of an inch.

The smallest species I have yet met with in this country.

PYRIA Lepel. & Serv.

P. TRIDENS L. & P.—Encyc. Meth. *Chrysis carinata* nob.
Contrib. Macl. Lyc. p. 82. [286]

FORMICA L.

A. First cubital cellule without recurrent nervure.

1. F. MELLEA.—Honey-yellow; scale truncate.

Inhabits Louisiana.

♂ Body entirely honey-yellow; eyes rather prominent, black, short oval: wings very slightly tinged with yellow; nervures yellow: scale robust, broad, truncate, and having a slight tubercle each side before, less than half the height of the abdomen, and not higher than the length of its base.

Length nine-twentieths of an inch.

Sent to me by Mr. Barabino. The small discoidal cellule, so distinct in the wing of *F. rufa* F., does not exist in this species.

2. F. LAUTA.—♀ Body piceous, more or less varied with black; the piceous color prevails chiefly on the stethidium and mouth: mandibles with larger and regular punctures; between the antennæ a slender, impressed line: thorax with generally a black line each side: scutell darker than the thorax: wings with yellowish nervures: no recurrent nervure: inferior nervure of the cubital cellule arising from the middle of the tip of the brachial cellule; the terminal line of this latter cellule is nearly rectilinear and transverse; anal nervure rectilinear at base, angularly undulated and slightly communicating with the tip of the axillary nervure: abdomen black; first segment often piceous: feet honey-yellow: tibiæ and tarsi darker.

Length over three-tenths of an inch.

♂ Entirely black, excepting the wings, which are like those of the female: the thorax has a distinct, longitudinal impressed line before, which sometimes exists in the female, but less distinct. [287]

1835.]

Length over one-fifth of an inch.

Inhabits Indiana. Common.

3. *F. IMPARIS*.—♀ Body light honey-yellow, impunctured: head small: eyes oval, black: mandibles, teeth black: wings very slightly tinged with fuliginous; no recurrent nervure; terminal line of the brachial cellule angulated, the anal half being oblique; anal nervure robust to its tip, arcuated from its origin, scarcely undulated, not communicating with the axillary nervure: scale emarginate at tip, often deeply and acutely: tergum, disks of the incisures a little deeper colored.

Length nearly three-tenths of an inch.

♂ Very small in comparison with the female; black; mouth piceous: feet dull honey-yellow; thighs, excepting the knees, black.

Length less than three-twentieths of an inch.

This species is common in Indiana. The great disparity in color and magnitude between the male and female, would deceive, as to their specific identity.

They appeared in great numbers on the 2d of April; the males swarmed around small bushes, alighting on the branches and leaves. The females were but few.

B. First cubital cellule with a recurrent nervure.

4. *F. SESSILIS*.—Peduncle concealed by the abdomen.

Inhabits Indiana

Body blackish: mouth dull honey-yellow: antennæ rather long: thorax with the three segments very distinctly marked: peduncle composed of a simple, oblong body; destitute of a scale, unless it be depressed and united to the surface of the peduncle, concealed by the first segment of the abdomen: abdomen projecting over the peduncle, and having a deep and well defined groove beneath the first segment for its reception: feet, excepting [288] at base, dull honey-yellow: wings with the discoidal cellule, small, quadrate; first cubital cellule not broader than the radial, and bounded by a right line; nervure of the second cubital cellule obsolete.

Length ♀ three-twentieths of an inch: nearer about one-tenth of an inch.

The projection of the superior part of the basal segment of

[Vol. I.

the neuter abdomen is more remarkable than that of the female. It probably belongs to the genus *Polyergus*.

A variety is much paler, even honey-yellow.

5. F. TRIANGULARIS.—Discoidal cellule subtriangular; blackish-piceous.

Inhabits Indiana.

Body blackish-piceous or obscure reddish-brown: hypostoma convex and somewhat carinate: mandibles piceous: wings whitish; nervures pale; discoidal cellule subtriangular, the superior angle being very obtuse; first and second cubital cellules not separated by a petiole; anal nervure abruptly angulated on the anal submargin: scale rather thin, elevated: tarsi honey-yellow.

♂ Body darker.

Length ♀ over one-tenth of an inch; ♂ about the same.

Var. α. Recurrent nervure none.

Var. β. Recurrent nervure obsolete or incomplete.

Resembles *sessilis* nob., but the scale is obvious; the discoidal cell is more triangular and the nervure of the second cubital is obvious.

6. F. DISLOCATA.—Yellowish; anal nervure almost dislocated at the anal emargination.

Inhabits Indiana.

Head black: hypostoma distinctly carinated: front [289] with an acute, longitudinal, elevated line over the insertion of each antennæ and a slightly impressed line in the middle: antennæ and mandibles piceous: thorax honey-yellow, dusky before: wings tinged with fuliginous; nervures dusky and very distinct; recurrent nervure forming a quadrate cellule less than half the size of the first cubital; anal nervure abruptly angulated near the anal emargination of the edge, and almost dislocated in that part, the terminal portion being arcuated at each extremity: scale thick, prominent, obtuse, entire: abdomen blackish, with prostrate hairs, and sparse elevated ones and regular cilix on the edges of the segments; first segment honey-yellowish at base, without any indentation opposite the scale: feet honey-yellow.

♂ Trunk and scale entirely pale honey-yellowish: scapus of 1835.]

the antennæ, hypostoma and mouth pale yellowish: abdomen somewhat piceous.

Length three-tenths, ♂ less than two-fifths of an inch.

Not uncommon in the forest, running rapidly upon the branches and leaves of bushes.

7. *F. SUBSERICEA*.—Black, minutely sericeous; abdomen impunctured.

Inhabits Indiana.

Body impunctured, black, very minutely sericeous: thorax with an impressed line before: wings dusky; discoidal cellule about half as large as the first cubital, a little narrower before: scale obtuse, or widely rounded at tip, somewhat truncate.

Length ♂ less than two-fifths, ♀ over two-fifths of an inch.

My specimen of the female has the legs entirely black: and of two males one has the legs honey-yellow, with the exception only of the base of the coxæ; and the other [290] also with honey-yellow legs has the coxæ, trochanters and even the base of the thighs black. It is one of the large species called "wood ants."

ATTA.

A. *FERVENS* Drury, vol. iii. p. 58, pl. 42, f. 3.—I obtained a female of this species in Mexico, and on comparison with an individual of the *cephalotes* sent me by Dr. Klug, I find it to be a closely allied species. The color of the wings and their neuration are the same; but the body is more hairy or downy, and its brown color is not so deep, (the color is much too black in my copy of Drury, agreeing better with the *cephalotes*, than with Drury's description.) The head is not so large, so deeply indented above, nor so acute at the posterior angles. The impressed, longitudinal line on the anterior part of the thorax, so distinct in *cephalotes* is not, or is scarcely visible in *fervens*. Judging from these two specimens, I am convinced that the *fervens* ought to be admitted into the modern books as a distinct species.

MYRMICA Latr. Klug.

1. *M. LINEOLATA*.—♀ Black, more or less varied with piceous: antennæ subclavate; at tip clothed with dense, short, whitish hairs: front with a longitudinal impressed line, termi-

[Vol. I.

nating before in a small triangular impression between the antennæ; the whole head, excepting the vertex, occiput and antennæ, striate with close-set very small lines, which are rather longer on the mandibles: wings hyaline; nervures yellowish-brown; small cubital cellule none: anterior segment of the petiole deeply striate [291] longitudinally each side, decidedly longer than the second which is submarginate above: abdomen oval, truncate, submarginate at base: pleura, striate like the head behind.

Length over three-tenths of an inch.

♂ Much more slender; transverse incisure between the wings more obvious; segments of the petiole not so deeply divided.

Length over three-twentieths of an inch.

Neuter. Piceous, varying to black; abdomen cordate, almost always black.

Length under three-twentieths of an inch.

This species is very common in various parts of the United States, even in houses, and may be observed, by every one, going in procession. The radial cellule is slender and elongated, the including nervures being nearly parallel; the inner nervures does not quite attain the edge. The first cubital cellule is hardly larger than the discoidal cellule, the recurrent nervure of which enters the first cubital at the middle. Second cubital extending to the tip of the wing.

2. *M. CORRUGATA*.—Honey-yellow; wings with three complete cubital cellules.

Inhabits Indiana.

♂ Body dark honey-yellow, almost piceous: antennæ whitish; first joint not longer than the second and third together; second joint rounded, thickest: metathorax with two obtuse tubercles instead of spines: wings hyaline; nervures and stigma pale yellowish; second cubital cellule complete, nearly as long as the first cubital and petiolated from the apical angle of the discoidal cellule, which is oblong-subquadrate; the descending nervure from the stigma enters the second cubital: abdomen, first [292] joint somewhat gibbous at tip; second segment rounded: feet whitish.

Length over three-twentieths of an inch.

♀ Somewhat darker than the male; metathoracic tubercles 1835.]

spiniform; first abdominal segment almost emarginate at the superior tip; second segment short and wide; first joint of the antennæ long; head anteriorly with numerous, approximate, impressed lines.

Length one-fifth of an inch.

Appeared on the wing, July 19th.

3. *M. OPPOSITA*.

♂ Body black, minutely and densely granulated: antennæ dusky; pale yellowish towards the tip; first joint slightly longer than the second and third together; second joint obtusely obconic: hypostoma convex: mandibles piceous: thorax with a glabrous line extending to the middle: wings dusky: second cubital cellule turbinate, petiolated from the angle of the discoidal cellule, its longitudinal nervures equally curved; nervure separating the second and third cellules in a direct line with the nervure from the stigma; discoidal cellule quadrate; metathorax, spines short, acute: abdomen polished, not obviously granulated; second node with an impressed line above, dividing the surface into three slight lobes: venter and feet tinged with piceous.

Length over three-twentieths of an inch.

Neuter. Dull honey-yellow: head minutely lineated: antennæ, first joint long: stethidium rather largely granulated; spines prominent, acute, reaching nearly to the tip of the first node: abdomen glabrous, polished; second node without impressed line.

Length less than one-fifth of an inch.

4. *M. INFLECTA*.—Black: wings dusky; discoidal cellule oblong. [293]

Inhabits Indiana.

♂ Body a little hairy, lineated with impressed lines, which are more distinct on the metathorax, black, slightly tinged with piceous: antennæ with a piceous tinge; first joint not longer than the three following ones together: wings dusky; discoidal nearly as long again as broad; second cubital sessile, the separating nervure from the first cubital rather abruptly inflected towards the base, and nearer the base almost obsolete, the other including nervure rectilinear; separating nervures between the first cubital

[Vol. I.

and radial, and the second and third cubitals, forming a broken or slightly dislocated line, the former almost entering the third cubital: metathorax without lineations on the posterior declivity, the spines distinct: abdomen polished, without lines; petiolar segments or nodes very distinct, subequal, the posterior one rather larger and spherical: feet more obviously tinged with piceous at base.

Length less than one-fifth of an inch.

The connexion between the radial and second cubital is very slightly petiolated, and the separating nervure between the first and second cubitals, is almost or quite angulated, and is less distinct towards its junction with the discoidal cellule.

5. *M. DIMIDIATA*.—Body pale yellowish: thorax somewhat tinged with piceous: wings with a very slight tinge of yellowish; discoidal cellule in length nearly twice its breadth; feet filiform; separating nervure between the first and second cubital cellules abruptly ending at the middle of the usual length, being entirely wanting on the basal half.

Length over one-fifth of an inch.

6. *M. MOLESTA*.—♀ Body pale honey-yellow, immaculate: antennæ with the two ultimate joints much larger [294] than the others; the terminal one as large again as the penultimate one: wings whitish; smaller cubital cellule none; discoidal cellule very small, less than half as large as the first cubital; first cubital receiving the recurrent nervure near its base; nervure of the radial cellule terminating abruptly before the tip: the two other apical nervures feebly traced towards the tip and not reaching the tip; metathorax unarmed.

Length less than three-twentieths of an inch.

This is called the "little yellow ant," and is frequently found in houses in great numbers. They sometimes eat vegetable food, and some of my garden seeds have severely suffered from their attacks. They also devour grease, olive oil, &c. Their sting is like the puncture of a very fine needle. I placed a piece of meat on a window board frequented by these little depredators; it was soon absolutely covered by them, and thus enabled me to destroy thousands, every few hours that I returned to examine 1835.]

the bait, for several days, during which time their apparent numbers scarcely diminished.

7. *M. MINUTA*.—Pale yellowish; destitute of spines on the metathorax.

Inhabits Indiana.

Body whitish-yellow: head rather large: antennæ, terminal joint three times as large as the preceding one: eyes small, black, and placed low down: peduncle rather long: abdomen oval: very pale honey-yellow.

Length (neuter) less than three-fifths of an inch.

[Is it not the same as the *molesta*?—ED.]

This may possibly prove to be an *Atta*. I obtained only a single specimen, which was found entangled in the nails and tarsi of a specimen of *Gorytes phaleratus* nob., in my cabinet. It does not appear to have a spine on any part, but there are a few scattered hairs. [295]

MUTILLA Linn.

* *Eyes emarginate.*

1. *M. CONTRACTA*.—Black; above ferruginous; wings blackish.

Inhabits Arkansaw and Missouri.

Body entirely black beneath, inclusive of the feet: above ferruginous-yellowish: head black below the line of the eyes: metathorax, petiole, anterior and lateral declivities of the abdomen black. ♂ Anterior half of the first segment of the tergum black: wings blackish-fuliginous, somewhat paler in the middle; second cubital cellule wide beneath and contracted but not angulated at the radial cellule; third cubital cellule so much contracted at base that its extreme nervure is opposite to and joins the recurrent nervure.

Length about half an inch.

The neuration of the wings somewhat resembles that of the *maura* F. and is nearly the same as that of the *erythrina* Klug, of Mexico. I obtained several specimens from Missouri, and Mr. Nuttall gave me one from Arkansaw.

2. *M. HEXAGONA*.—♂ Black; abdomen honey-yellow.

Inhabits Indiana and Missouri.

Body black, much punctured, and with a slight reflection of silvery hairs, particularly on the head, on the anterior segment of the thorax and on the metathorax: thorax with four slight, impressed lines, and numerous confluent punctures: metathorax reticulate with punctures, and with a slight groove from the base nearly to the middle: wings dark purplish-fuliginous; radial cellule rounded at tip, not truncate; third cubital cellule [296] rounded hexangular, with abbreviated nervures from the two outer angles; a white line passes through the cubital cellules, and a white spot is in the outer discoidal cellule: abdomen rufous or bright honey-yellow; first or petiole segment black: feet silvery hairy.

Length from half an inch to nearly seven-tenths.

The neuration of the wings is much like that of the *M. italica* F., even to the white line and small spot; but the third cubital cellule is still more regularly hexagonal and the radial cellule is not truncate at tip like those of the *italica* and *melanura* Klug, and many other species.

3. *M. VIGILANS*.—♂ Black; large abdominal segment, excepting its anterior and posterior margins, rufous.

Inhabits Pennsylvania.

Body black; with large, dense punctures: thorax with three, somewhat elevated lines and a slight appearance of another each side: wing-scale convex, lineate on the margin; the outer and hinder margins lineated with minute, elevated, parallel lines: wings purplish-black; radial cellule truncate at tip; first cubital cellule bisected by a white line; second cubital gradually and regularly narrowed to the base, with an abbreviated white line at tip; third cubital hexagonal, not contracted, the two exterior angles with abbreviated nervures; exterior discoidal cellule with a white dot: metathorax discoidally punctured; dorsal groove extending beyond the middle; large basal segment of the abdomen with large remote punctures, smaller and closer on the sides, bright rufous, its basal and terminal margins black.

Length over three-fifths of an inch.

Resembles *M. italica* F., but differs in greater depth of color in the lineations of the wing-scale, greater length [297] of the 1835.]

metathoracic groove and the larger and distant puncturing of the larger segment of the tergum. It is also larger.

* * *Eyes entire or the emargination obsolete.*

EPHUTA.

4. M. ERYTHRINA Klug.—Scarlet-red, beneath black; wings blackish.

Inhabits Mexico.

Body with dense, bright scarlet-red hairs above; beneath black; antennæ and inferior part of the head black: wings black-violaceous; radial cellule truncate at tip; third cubital cellule pentagonal, contracted on the anal side, its apical nervures almost obsolete: metathorax black: abdomen, anterior declivity of the basal segment extending in an angle on the superior portion of the segment, black; petiole black; venter with a slight scarlet-red band rather behind the middle. ♀ with a black dot rather behind the middle of the tergum.

Length about nine-twentieths of an inch.

I obtained a female of this species in Mexico, and Dr. Klug has favored me with the sexes, differing in no respect from mine, except in being a little larger.

5. M. SCRUEA.—♂ Black; with dilated punctures; tergum with a whitish band.

Inhabits Indiana.

Body black, a little hairy, and having large punctures, which on the stethidium and head are confluent and discoidal: mandibles piccons before the tip; wing-scale also punctured: wings slightly dusky; nervures blackish: stigma not distinct, or none; second cubital cellule larger than the first; the third largest; separating nervure [298] of the second and third cellules rectilinear: metathorax reticulate with larger discoidal punctures and having at base an oblong triangle: tergum, first segment short, abruptly smaller than the second, petioliform, with discoidal punctures, hairy, abrupt before, and on the anterior inferior tip having an angle on each side; second segment with the punctures rather distant, profound, with a band of whitish hairs on the posterior margin: remaining segments with numerous whitish hairs, and a dorsal elevated line.

Length less than three-tenths of an inch.

Rather smaller than *nigrita* F., and may be distinguished by the more dilated punctures; the basal segment of the abdomen being suddenly smaller than the second, and shorter than in *nigrita*; by the abdominal band, and different configuration of the wing cellules. The emargination of the eyes is very small and acute.

6. *M. GIBBOSA*.—Black; petiole as long as the second abdominal segment; wings dusky at tip.

Inhabits Indiana.

♂ Body black; with numerous gray, but not concealing hairs: densely punctured; punctures large on the head and trunk: wings hyaline; at tip and including the radial cellule, fuliginous; stigma moderate; third cubital cellule incomplete; abdomen, first segment petioliform, as long as the second, and somewhat gibbous at tip, distinguished from the second by a deep stricture.

Length over three-tenths of an inch.

Resembles *scrupea* nob., but is larger, has a stigma and longer petiole. It is also like *nigrita* F., but is larger, with a much more obvious stigma: wings dusky at tip; the petiole more gibbous at tip, &c.

[299]

TENGYRA Latr. King.

T. STYGIA.—Black; mandibles piceous at tip.

Inhabits Indiana.

Body entirely black, immaculate, punctured; mandibles piceous at tip; near the tip one-toothed; wings hyaline; nervures black, separating nervure of the first and second cubital cellules wanting; stigma obvious, black: abdomen, segments contracted near the incisures: oviduct not extending beyond the terminal processes and concealed beneath them.

Length two-fifths of an inch.

Resembles *T. Sanvitali* Latr., but is larger, with a much larger stigma, and each abdominal segment is much more contracted before its posterior incisure.

METHOCA Latr.

M. BICOLOR.—♀ Rufous; head and part of the tergum black.

Inhabits Indiana.

Body pale yellowish-rufous, polished: head black: antennæ 1835.]

rufous, terminal joints piceous : mandibles and palpi rufous : thorax, segments subequal : anterior and posterior ones convex, subovate, intermediate one with two slightly elevated convexities : abdomen ovate-subfusiform : tergum with a transverse, triangular black spot at the tip of the second segment, another on the third, the remaining ones confluent.

Length one-fourth of an inch.

The abdomen does not contract abruptly to the petiole but subsides gradually. Van der Linden says that the species of this genus are the females of species of *Tengyra*. [Anh. des Sc. Nat. Jan. 1829, p. 48.] [300]

TIPHIA Fabr. Latr.

T. TARDA.—Body polished, black, punctured : mandibles piceous in the middle : metathorax with three longitudinal lines, and the minute lines on the margin of the posterior declivity very regular and obvious : wings tinged with honey-yellow : nervures brown ; stigma black : incisure of the first abdominal segment not very much contracted : second segment at its basal margin with the minute longitudinal lines very regular and distinct : palpi dull piceous.

Inhabits Indiana.

Length about three-tenths of an inch.

The smallest species I have seen, and may be distinguished from its American congeners by its size. The male has the metathoracic lineations more distinct. It is smaller than the *femorata* of Europe.

MYZINE Latr. Klug.

1. *M. HAMATUS*.—Black ; thorax spotted and abdominal segments margined with yellow : the latter not abruptly emarginate each side.

Inhabits Indiana.

♂ Body black, polished, with small punctures : nasus, labrum, tip of the basal joint of the antennæ, two spots between the antennæ and base of the mandibles yellow : collar on the anterior margins interrupted in the middle and on the posterior margin, yellow : thorax with a spot in the middle emarginate before, yellow : metathorax, a transverse yellow spot near the scutellum and an

[Vol. I.]

obscure yellow, longitudinal spot each side at tip: tergum with a perlaceous iridescence: on each segment a slender yellow [301] band on the posterior submargin, a little undulated obtusely on its anterior edge, not abruptly emarginated on each side; on the anterior submargin of the segments an impressed transverse line: pleura, a small yellow spot beneath each wing; wings hyaline, a slightly dusky margin at tip: feet, coxæ with a yellow spot: tarsi, excepting their tips: thighs at tip or a line above, and anterior pairs of tibiæ yellow: venter five spotted each side.

Length from three-fifths to seven-tenths of an inch.

This is so much like *M. subulata* nob., that it is not without much hesitation that I give it as distinct. It is, however, much larger and more robust, and the form of the bands of the tergum is different; those of the *subulata* being abruptly notched each side of the middle as in the *valvulus* Fabr., whereas in the bands of the present species, instead of the abrupt notch, is an obtuse and dilated undulation of the edge.

A variety occurs in Missouri, of which the wings are yellowish, and the second recurrent nervure is confluent with the dividing nervure of the second and third cubital cellule.

2. *M. SUBULATUS* nob. *Sapyga*, Western Quarterly Reporter.—A variety inhabits Mexico in which the abdominal bands are less abruptly emarginate each side.

SAPYGA Latr.

S. CENTRATA.—Black, with yellow spots; abdomen 5-banded. Inhabits United States.

Body black: head ———: thorax with a transverse spot each side before, two on the middle, one beneath the superior wing, and two large ones behind, yellow: [302] wing hyaline; nervures fuscous: stigma brown: radial cellule fuliginous: tergum, each segment, excepting the first, with a yellow, dilated band on its middle and more or less interrupted: venter with a transverse spot each side on the third, fourth and fifth segments: feet yellow: thighs, except at the tip, black: tarsi honey-yellow.

Length about three-tenths of an inch.

Var.? α . Spots ferruginous.

Length nearly two-fifths of an inch.

1835.]

I have hardly a doubt that the individual here given as a variety is a distinct species; but as my specimens are much mutilated, I am unwilling to venture to separate them.

POMPILUS Fabr. Latr.

1. *P. CALIPTERUS*.—Wings bifasciate; antennæ and feet honey-yellow.

Inhabits Indiana.

Body black, polished, slightly pruinose: antennæ honey-yellow, a little dusky towards the tip: nasus, at tip, mandibles and palpi honey-yellow: wings hyaline, with a blackish band on the middle and a much broader one crossing the second and third cubital cellules; the latter hardly reaches the anal margin; basal series of transverse nervures dislocated at the externo-medial nervure: feet honey-yellow; tarsi with the ultimate joint blackish; intermediate and posterior pairs of feet more or less varied with blackish.

Length three-tenths of an inch.

A very pretty species, of which I have as yet obtained but two specimens. It is probably allied to the *bifasciatus* Fabr.

2. *P. ARCHITECTUS*.—Dark purple; wings hyaline. [303]
Inhabits Ohio.

♀ Body dark bluish-purple, somewhat hairy: head black in front, with short, dense, yellowish-cinereous hair: mandibles at tip piceous: wing-scale dark piceous: wings hyaline, nervures blackish: second and third cubital cellules not unusually contracted at the radial cellule, but almost equal in that part, feet black: tergum, anal segment polished.

Length about three-tenths of an inch.

This insect forms neat mud nests under prostrate logs and stones. They consist of short cylinders, agglutinated together alternately, and each composed of little pellets of mud, compressed, or rather appressed to each other. When these are adjusted to their places on the edge of the cylinder, each has a fusiform shape and the slender end of one laps over that of another, and the convex part of the pellet of the succeeding layer is placed against this duplicature so as to restore the equality of the edge. This arrangement gives the surface an alternate appearance.

[Vol. I.

The basal series of transverse nervures is very slightly dislocated.

3. *P. BIGUTTATUS* Fabr.—The individual described by Fabricius appears to be a female. Coquebert gives its length at nine-twentieths of an inch, but it sometimes exceeds half an inch in length. The male is over three-tenths of an inch in length; it is destitute of the anterior white striga of the thorax, and the tip of the tergum has a white reflection; the posterior half of the metathorax also has a white reflection. The basal series of transverse nervures is not dislocated, in this species.

4. *P. LEPIDUS*.—Black; abdomen and wings purplish. [304]
Inhabits Mexico.

♂ Body black, slightly sericeous: wings dark purplish; second and third cubital cellules a little narrowed at the radial cellule, particularly the latter, which is less than two-thirds the length of the second cellule, in that part; basal series of transverse nervures not dislocated; metathorax with a very slight reflection of purplish, and without any impressed line; the posterior edge obviously reflected; tergum with a distinct purplish reflection; beneath black; in a favorable light a very slight purplish reflection may be perceived on the thighs.

Length two-fifths of an inch.

5. *P. 5-NOTATUS*.—Tergum on the second segment with two white spots; third segment with a white interrupted band.

Inhabits Indiana.

♀ Body black; head with a slight white reflection before; and a very slender white line on the posterior orbit; wings on the apical margin black; basal series of transverse nervures not dislocated; tergum with a white dot each side before the middle, on the second segment: third segment with a white, interrupted band at base, on the fourth segment at base is an obsolete, whitish spot each side, sometimes wanting; anal segment with a white spot at base.

Length two-fifths of an inch.

Resembles *biguttatus* Fabr., but is distinguished by the two or four more white spots on the tergum, as well as by the white spot on the anal segment.

1835.]

7. *P. MELLIPES*.—Black ; feet yellowish rufous.

Inhabits Indiana.

♀ Body black, somewhat sericeous with silvery hairs ; antennæ, joints long, distinct ; mandibles piceous at tip : [305] palpi whitish : wings hyaline ; third cubital cellule very little contracted before, larger than the second ; first recurrent nervure entering the second cellule at the middle ; basal series of transverse nervures dislocated ; feet bright honey-yellow, the coxæ only black.

Length over two-fifths of an inch.

8. *P. (MISCUS) CORNICUS* [CONICUS].—Black ; wings a little dusky ; basal line of transverse nervures widely dislocated by the externo-medial nervure.

Inhabits Indiana.

♀ Body black, immaculate ; wings dusky ; nervures blackish ; second cubital cellule somewhat conic, the anterior basal nervure entering the radial cellule in a much arcuated direction, so as not to form an angle with it ; third cubital cellule not much contracted anteriorly ; basal series of transverse nervures widely dislocated, that portion which is between the externo-medial and anal nervures is equal to the length of the dislocation ; abdomen polished ; mandibles at tip piceous.

Length less than one-fifth of an inch.

♂ Wings less obscure ; anterior tibiæ and tarsi obsoletely dull yellowish.

Length one-fourth of an inch.

9. *P. (MISCUS) PETIOLATUS*.—Tergum fulvous near the base ; third cubital cellule petiolated.

Inhabits Indiana.

♀ Body black, a little sericeous : wings blackish ; third cubital cellule decidedly petiolated : tergum with the terminal half of the first segment, and the greater portion of the second segment yellowish-fulvous.

Length over two-fifths of an inch.

The petiolated character of the third cubital cellule resembles that of *P. niger* Fabr. The basal series of transverse nervures is distinctly dislocated.

[306]

[Vol. I.]

[Continuation from Boston Journal of Natural History, vol. 1, May, 1837,
No. 4, pp. 361—416.]

MERIA Jur.

M. COSTATA.—♀ Black; tergum with yellow bands and two spots.

Inhabits Indiana.

Body black: head above the antennæ with a transverse line, slightly interrupted in the middle, an orbital line, and short line behind the eyes, yellow: mandibles piceous: thorax with two transverse spots before, a small, triangular one above the wing-scale, a transverse one behind the scutel, and a bilobed one each side behind, yellow; each side of the middle of the thorax are two abbreviated, somewhat oblique, impressed lines: metathorax with a double yellow longitudinal side and obvious transverse rugæ: pleuræ with a triangular spot under the superior wings, a small oblique line over the intermediate feet, yellow: wings with a brown costal margin: tergum [362] with a yellow band on the middle or before it, of each segment, excepting the last; the second band interrupted into two transverse, oval spots: venter with a longitudinal, lateral spot on the second segment and a transverse lateral one on the third, yellow; tarsi and intermediate and posterior pairs of tibiæ piceous; a yellow spot on the posterior coxæ.

Length half an inch.

Var *a*. Middle of the thorax with a small double yellow spot.

The observations which I had occasion to make relative to the generic affinities of *Plesia marginata* nob., are exactly applicable to this species. It agrees precisely with Jurine's character of *Plesia*, but differs from *Mixine* Latr. by having the mandibles entirely destitute of teeth, a character which it has in common with *Meria* Ill., but the form of its wing-scale, will not admit of its being referred to the latter genus; I have, however, in this instance, been guided by the characters laid down by Latreille in the *Règne Animale* (first Edition).

2. M. MARGINATA.—*Plesia marginata* nob., Western Quarterly Reporter.
1837.]

3. *M. COLLARIS*.—Collar with an interrupted band and two spots yellow.

Inhabits Indiana.

Body black: head with two spots above the antennæ, frontal orbits, and dilated line behind the eyes, yellow: mandibles dark piceous, black at tip: collar with an interrupted band on the posterior margin and two spots before yellow: thorax with a small yellow spot above the wings: wing-scale dull honey-yellow with a yellow spot: wings yellowish, fuliginous, dusky on the costal margin towards the tip; behind the scutel is a transverse [363] yellow line: metathorax somewhat sericeous, without any appearance of rugæ, and with two yellow longitudinal spots: tergum with a somewhat varied reflection; first and second segments with a lateral yellow spot, (those of the former probably, in some specimens, obsoletely connected); third and fourth segments with a lateral basal yellow spot, connected by a slender line; fifth segment with an obsolete yellow lateral spot: pleura with a yellow spot under the anterior wings: feet, anterior knees and tibial dilated line yellow; intermediate and posterior tibiæ and all the tarsi ferruginous: anal segment above minutely lineated, and at tip, dull ferruginous.

Length over three-fifths of an inch.

This species is larger than *costata* nob., which it much resembles, but may be distinguished by the sericeous appearance of the metathorax and the absolute destitution of rugæ on that part; in the *costata* also, the lateral spots of the metathorax are double.

SCOLIA Fabr.

1. *S. EPHIPPIMUM*.—Black; tergum bifasciate with fulvous.

Inhabits Mexico.

Body black: wings dark violaceous; cubital cellules two, the second receiving two recurrent nervures, and with an abbreviated nervure proceeding from its base towards the tip of the wing: tergum violaceous-black; second and third segments fulvous, with a narrow basal and terminal black margin; beneath black: venter slightly tinged with violaceous: thighs not remarkably robust.

Length ♂ over one inch and one tenth.

A large and fine species.

[364]

[Vol. I.]

2. *S. DUBIA*.—Black; abdomen ferruginous behind with two yellow spots on the third segment.

Inhabits United States.

Body black: head and thorax immaculate: wings dark violet blue: cubital cellules two, with no appearance of more than one recurrent nervure: abdomen, first and second segments black; remaining segments ferruginous; more hairy, somewhat, than the others; the third segment, however, more or less tinged with blackish and with two transversely oval, a little oblique, bright yellow spots.

Length four-fifths of an inch.

A very fine, though rather common species, in various parts of the Union.

3. *S. CONFLUENTA* nob. Western Quarterly Reporter.—I think it highly probable that Drury's fig. 5, pl. 44, vol. i, is intended for this insect. I was deterred from quoting this figure in consequence of its yellow head and four-banded tergum; but the head is truly, on its front and base, covered with yellowish cinereous hair, as well as the anterior part of the collar; this may agree with Drury's observation that the "head is of a pale yellow, in front" and "the neck is hairy and of a lemon color." The species also probably varies in having four yellow bands. Drury's figure is that of a female, and my specimen agrees with it in having an immaculate thorax and scutellum, as in the *fossulana* Fabr., which I believe to be in reality the female of this same species, and of course the same as that of Drury; whereas he quotes Drury's figure as that of *radula* F. which appears to be the male, if I may judge by the "thorace maculato" and other corresponding characters. I have no index to the first volume of Drury, but Fabricius quotes the figure as [365] *Sphex plumipes* Drury. If this be correct, Drury has the priority, and the name and synonyms, will stand thus:

Scolia plumipes Drury.

" *fossulana* Fabr. (female).

" *radula* Fabr. (male).

" *confluenta* Say, (female).

CEROPALES Lat.

1. *C. INTERRUPTA*.—Black, spotted and banded with yellow; wings dusky; antennæ and feet honey-yellow; tarsi yellow.

Inhabits Indiana.

Antennæ honey-yellow; first joint, bright-yellow: labrum yellow, black at base: hypostoma yellow, with a quadrate spot and incisures black: orbits dilated, yellow, interrupted above: thorax impunctured; margin of the anterior segment all around, longitudinal spot each side of the scutel and transverse spot behind the scutel, yellow: metathorax at tip bifasciate with yellow, posterior band clavate each side on the pleura: wings fuliginous, particularly on the cubital cellules and tip: abdomen ferruginous, varied with obsolete yellow and black bands; and with two yellowish spots on the first segment: pleura with a spot behind the wings and a larger one over the intermediate feet, yellow: coxæ varied with yellow: thighs honey-yellow, black at base: tibiæ honey-yellow, yellow at base: tarsi yellow.

Length two-fifths of an inch.

Closely allied to *fasciata* nob. but the thorax is not distinctly punctured, the wings are dusky, &c. [366]

2. *C. APICALIS*.—Black; wings black at tip; abdomen with a rufous band; tip white.

Inhabits Indiana.

Body black: hypostoma hoary: collar on the posterior margin white: wings hyaline with a fuliginous tip, in which is an obsolete hyaline spot or band: metathorax dull silvery; abdomen rather slender towards the base; second segment, excepting on its posterior margin, fulvous; anal segment white: posterior tibiæ with a white line on the posterior side: intermediate and posterior tarsi with the second, third and fourth joints white, with black tips.

Length over two-fifths of an inch.

CHLORION Latr.

C. CANALICULATUM nob. (*Ampulex*) Western Quarterly Reporter, vol. ii. p. 76.

The name *Chlorion* has priority over that of *Ampulex* given by Jurine.

[Vol. I.]

BEMBEX Fabr. Latr.

1. *B. LONGIROSTRA*.—Rostrum extending beyond the insertion of the intermediate feet; superior wings with the marginal and last submarginal cells divided by a very distinct space.

Inhabits Mexico.

Body black, with short, dense, white hair: antennæ tinged with piceous; first joint white beneath: anterior orbits dull white: nasus whitish, with two black spots: tergum white, with a bilobate, black spot at base: rostrum honey-yellow; extending nearly to the origin of the posterior feet: collar, anterior and posterior margins white: [367] thorax with a very small fulvous, abbreviated line each side of the middle, and a small, double, fulvous spot behind the middle: scutel with a white lateral spot: metathorax with a white line at base and an oblique one each side towards the tip: tergum varied with yellow and black or green and black; the posterior margins of the segments dull rufous; about four distinct black spots: feet honey-yellow: thighs black beneath: tarsi paler: venter honey-yellow, with a black spot before the anterior spine.

Length from seven-tenths to four-fifths of an inch.

With the short maxillary palpi and the one-toothed mandible of *Bembex*, this insect has the radial and last cubital cellules as widely separated at their tips as in *Monedula*. The proboscis is not folded, but extended horizontally beneath the body. These characters may justify the formation of a distinct genus, or at least of a division, under the name of *Steniolia*.

2. *B. FASCIATA* Fabr.—A male in my cabinet has six bands upon the tergum and two spots on the ultimate segment: the first band is double the width of that of the female, and is interrupted by a very small space only; second band not interrupted, but its two lunules are so continued as to inclose two black spots; third band with the lunules not or hardly interrupted; fourth and fifth bands interrupted; sixth band entire, undulated: spots on the ultimate segment, orbicular; the female has but five bands.

GORYTES Latr.

G. PHALERATUS.—Black, sericeous, varied with yellow; wings dusky.

Inhabits Indiana.

[368]

Body blackish, impunctured: head golden sericeous: antennæ, basal joint yellowish: nasus and mouth, excepting the tip of the mandibles, pale yellow: thorax, posterior margin of the collar, abbreviated line over the wings, and wing-scale, yellow: scutel yellow: wings dusky, purplish-fuliginous, tinged with yellowish towards the base; stigma small; second cubital cellule obviously hexagonal: metathorax with two large, oblong-oval, yellow spots; triangle at base destitute of small lines and with but a single impressed line: tergum, basal segment yellow; posterior narrow margin, and lobed spot on the disk communicating with the base, black: second segment yellow on the posterior margin, the yellow rather dull and a little undulated on its inner edge: third and fourth segments with obsolete yellowish posterior margins: pleura somewhat silvery sericeous, with three almost confluent yellow spots in a line with the collar: feet pale, honey-yellow; thighs and coxæ, with more or less of black above.

Length about half an inch.

This is a large species. The character which Jurine mentions as common to all the species, of having behind the scutel a triangular space, in which parallel lines are sculptured, is so modified in this species as to present the triangle with only a simple longitudinal impressed line.

NYSSON Latr.

N. AURINOTUS.—Black; metathorax two-spined; tergum with three lateral spots.

Inhabits Indiana.

Body black, punctured: head before with a slight yellowish sericeous reflection; mandibles piceous; collar [369] with an obscure golden margin, terminating in a spot: metathorax with a golden spine each side, in a golden spot: wings dusky: tergum on the posterior edges reflecting whitish; at base of the first segment, obscure golden sericeous; posterior margins of the first,

[Vol. I.

second and third segments, each with a yellow band widely interrupted in the middle, the anterior one largest: feet honey-yellow: thighs black at base.

Length three-tenths of an inch.

Readily distinguishable from *N. 5-spinosus* nob. Resembles *N. interruptus* F. but the areolæ of the metathoracic spines are not gilded in that species.

PSEN Latr.

1. *P. MELLIPES*.—♀ Black, with a silvery reflection; antennæ at base, tibiæ and tarsi piceous.

Inhabits Indiana.

Body black: head beneath the antennæ yellowish-silvery: occiput with a silvery reflection: antennæ to the seventh joint honey-yellow: mandible piceous: thorax with longitudinally confluent punctures, a slender transverse line before, four or six obsolete spots near the scutel and two large obvious ones near the insertion of the petiole of the abdomen: wings hyaline; nervures black stigma brown; second cubital cellule receiving both recurrent nervures: abdomen immaculate, with a few hairs towards the tip; petiole as long as the posterior tarsi or rather longer, arcuated, piceous: tibiæ and tarsi piceous or honey-yellow; anterior pair with dense, short, golden hair.

Length nearly eleven-twentieths of an inch.

Very similar in form and color to *P. atratum* Fabr., [370] which, however, has the second and third cellules each receiving a recurrent nervure, and the petiole is proportionally rather shorter.

2. *P. LEUCOPUS*.—Black; hypostoma silvery: tarsi white.

Inhabits Indiana.

♀ Body black, with a slight silvery reflection: antennæ immaculate: hypostoma entirely silvery: thorax with minute, longitudinal lines on the disk: wings hyaline: nervures blackish; second cubital cellule receiving the two recurrent nervures: tergum impunctured, polished; petiole slightly arcuated, rather shorter than the posterior tarsus: tarsi white, dusky towards the tip.

1837.]

Length over three-tenths of an inch.

♂ Lines of the thorax only visible at base and tip.

Length over one-fifth of an inch.

LYROPS Illig.

† Stemmata, one.

1. *L. ARGENTATA* Beauv.—Black; tergum, segments margined with dark glaucous; metathorax with a few wrinkles on the posterior lateral margin.

Inhabits the United States.

♀ Body black: collar having a gradually elevated angle on the middle: wings slightly dusky; a darker band at tip; by an obliquely transmitted light, opalescent, varying to purplish, and at tip, in the darker portion, tinged with green; recurrent nervures entering the second cubital cellule very near to each other, but little more than their own width apart: metathorax, posterior lateral edge wrinkled transversely: tergum, posterior margins of the [371] segments dark glaucous, without any bright silvery reflection: posterior pair of tibiae at tip behind, with a ferruginous spot. ♂ More slender, wrinkles of the metathorax less obvious, and the recurrent nervures at their entrance into the second cubital cellule not quite so close together.

Length ♀ nearly half an inch.

The color of the wings, by a particular, obliquely transmitted light, is very beautifully perlaceous and somewhat iridescent.

2. *L. PEPTICA*.—Black; tergum fasciate with glaucous, reflecting silvery.

Inhabits Indiana.

♀ Body black; reflecting silvery, particularly on the head and feet: palpi piceous-yellowish: collar silvery on the posterior margin; thorax and scutel having their sutures reflecting silvery: wings hyaline; nervures honey-yellow; recurrent nervures moderately near each other at their junction with the second cubital cellule: tergum, segments excepting the ultimate one, on their posterior margins glaucous reflecting silvery: anal segment with a bright golden reflection: feet black, reflecting silvery; last tarsal joint rufous.

Length over half an inch.

♂ Head and base of the mandibles with a golden reflection : anal segment reflecting silvery.

Length under half an inch.

The black tibiæ and tarsi will at once distinguish this species from *aurulenta* F., than which it is also smaller.

3. *L. AURULENTA* F. (*Larra*) Syst. Piez. p. 220. [372]

LYRODA.

† † Stemmata, three.

4. *L. TRILOBA*.—Deep black, immaculate : head anterior to the antennæ with a slight silvery reflection : mandibles dull rufous towards the base ; collar somewhat trilobate, or having above an obvious angle in the middle and a more obtuse one on each side ; thorax having a distinct, impressed, longitudinal line before ; wings purplish fuliginous, almost opaque ; recurrent nervures rather distant at their junction with the second cubital cellule ; tergum in a particular light, more obviously sericeous on the posterior margins of the segments.

Length over half an inch.

This has very much the appearance of *Larra æthiops* nob., but is much larger. In that species also the collar is emarginate in the middle, the wings are but very slightly tinted, and the recurrent nervures approximate at their junction with the second cubital cellule ; it has but one ocellus, and the mandibles are not obviously armed with a tooth on the inner edge.

5. *L. SUBITA*.—Black ; tergum, segments margined with a whitish reflection ; metathorax wrinkled above.

Inhabits Indiana.

♀ Body black : head before with a somewhat silvery reflection : collar with an abruptly elevated angle in the middle ; wings at tip dusky ; recurrent nervures entering the second cubital cellule, at a distance from each other ; third cubital cellule but little narrowed : metathorax with small, transverse wrinkles on the disk as well as on the sides : tergum, posterior margins of the segment with a silvery reflection.

Length

[373]

Resembles *caliptera*, but may be distinguished by the greater width of the third cubital cellule ; by the greater distance between the wings. [1837.]