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ART. XVII.—DESCRIPTIONS OF NEW SPECIES OF NORTH AMERICAN HYMENOPTERA, AND OBSERVATIONS ON SOME ALREADY DESCRIBED. By THOMAS SAY.
[Concluded from p. 305.]

MERIA, Jur.

M. costata, ♀ Black; tergum with yellow bands and two spots.

Inhab. 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 bi-lobed one each side behind, yellow; each side of the middle of the thorax are two abbreviated, somewhat oblique, impressed lines: *meta-thorax* 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*

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. α . 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 marginàta*, Nob., are exactly applicable to this species. It agrees precisely with Jurine's character of *PLESIA*, but differs from *MIZINE*, 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. marginàta*. (*PLESIA marginàta*, Nob., Western Quarterly Reporter).

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

Inhab. 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

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. ephippium*. Black; *tergum* bi-fasciate with fulvous.

Inhab. 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.

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

Inhab. 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 scutel, 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

SPHEX plùmipes, Drury. If this be correct, Drury has the priority, and the name and synonyms, will stand thus.

SCOLIA plùmipes, Drury.

“ *fossulàna*, Fabr. (female).

“ *radula*, Fabr. (male).

“ *confluenta*, Say. (female).

CEROPALES, Lat.

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

Inhab. 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 bi-fasciate 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 *fasciàta*, Nob. but the thorax is not distinctly punctured, the wings are dusky &c.

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

Inhab. 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.

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.

Inhab. 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 : *labrum* white, with a bi-lobate, black spot at base : *rostrum* honey-yellow, extending nearly to the origin of the posterior feet : *collar*, anterior and posterior margins white :

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 enclose 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.

Inhab. Indiana.

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.

Inhab. Indiana.

Body black, punctured : *head* before with a slight yellowish sericeous reflection ; *mandibles* piceous : *collar*

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, 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.

Inhab. 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 scutellum 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.,

which, however, has the second and third cellules each receiving a recurrent nervure, and the petiole is proportionally rather shorter.

2. *P. leucòpus*. Black; hypostoma silvery; tarsi white.

Inhab. 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.

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.

Inhab. 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

segments dark glaucous, without any bright silvery reflection : *posterior pair of tibiæ* at tip behind, with a ferruginous spot. ♂ More slender, wrinkles of the *meta-thorax* 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 pearly and somewhat iridescent.

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

Inhab. 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.

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* purple-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.

Inhab. 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 segments with a silvery reflection.

Length

Resembles *caliptera*, but may be distinguished by the greater width of the third cubital cellule; by the greater distance between the recurrent nervures at their entrance into the second cubital, and by the more wrinkled metathorax.

TRYPOXYLON, F. Latr.

1. *T. politus*. Black; very highly polished; without any silvery reflection; *thorax* and *scutel* with a slightly impressed, longitudinal line: *wings* black-purple, almost opaque: *abdomen* rather less slender at base than that of *T. figulus*, F. but the basal joint is rather abruptly slender on its basal half; this segment has an abbreviated, impressed, longitudinal line before its tip; second segment with a similar line before its middle: on the head and stethidium are very numerous, small punctures, but none on the abdomen: *posterior tarsi* white, first joint at base, and pulvilli blackish.

Inhab. Indiana.

Length nine tenths of an inch.

Judging by memory, as I have not his work here, this is probably the *albitarsa*, Beauvois, but although it agrees with the short description of Fabricius, yet I greatly doubt if it is the *albitarsa* of this author, who gives its native country as South America, on the authority of Mr. Smith and of the Museum of Mr. Lund, from whom and from Mr. Sebestedt he obtained an opportunity to describe a great number of Hymenoptera of that portion of our hemisphere; and but two species from North America. For these reasons I have been led to consider the *albitarsa*, F. as South American; and as Latreille says that every thirty degrees of latitude exhibits a total change

in the insect productions, I give a new name to this species.

2. *T. clavatus*. Abdomen at base slender and a little nodulous; wings at tip dusky.

Inhab. United States.

Body black; *head* and *stethidium* with silvery reflection: *wings* hyaline, terminal margin dusky: *abdomen* clavate; the first and second joints petioliform, a little nodulous at their tips: *posterior tarsi* white; the terminal joint and base of the first joint black; ♂ with a spine on the posterior trochanter.

Length about nine twentieths of an inch.

Var. α . Terminal joints of the tarsi blackish; a yellow band at base of the second segment of the tergum.

Judging from memory, as in the preceding instance, I suppose this to be the *fuscipennis*, Beauvois, but not that of Fabricius, for the reasons there adduced. I may also state that this species does not correspond with Fabricius' description in having "*alæ nigræ cyaneo parum nitidæ*," neither does it agree with "*Pedes nigri tarsi albis*" inasmuch as the posterior pair only are partially white.

3. *T. carinatus*. ♂ Black; *head* and *stethidium* with silvery reflection: a prominent, acute carina between the antennæ, divaricating above the antennæ into two carinæ: *antennæ* emarginate beneath towards the middle: *wings* hyaline; a slight tint of dusky at tip: *tergum* gradually attenuated to the base; three first incisures a little contracted: *feet*, anterior pair of knees, tibiæ and tarsi yellowish; intermediate knees and tarsi yellowish, the latter in the middle above dusky; posterior tarsi obscurely yellowish towards the tip.

Inhab. Indiana.

Length three tenths of an inch.

Remarkable by the carina of the head and the emarginate antennæ. It is much smaller than the *figulus*, F. and its abdomen is formed as in that species.

OXYBELUS, Latr.

1. *O. emarginatus*. ♂ Black; scutellar spine emarginate; tergum 4-spotted.

Inhab. Indiana.

Body black, with a slight silvery reflection, particularly on the anterior part of the head: *antennæ* dull yellowish at tip: *wing-scale* honey-yellow: *wings* hyaline: *scutel* with a dilated process widely emarginate at tip, and a lateral sublanceolate, decurved, acute, white one: *tergum*, first segment with a longitudinal, indented line and a transverse, abbreviated, white line at tip each side; second segment also with a similar line: *tarsi* pale honey-yellow: *anterior thighs* yellow at tip: *tibiæ* yellow; posterior pair black, yellow at base.

Length over three twentieths of an inch.

2. *O. 4-notatus*, Nob. Long's Expedition.

The male is almost destitute of spots on the second segment of the tergum, and all the tibiæ have a white line.

This species resembles the *O. trispinosus*, Fabr. but that insect may be distinguished by the dilated figure of the spot on the basal segment of the tergum and by the tibiæ, being entirely honey-yellow.

3. *O. latus*. Line on the collar, on the scutel and five lateral spots on the tergum yellow.

Inhab. Indiana.

♂ *Body* black, punctured: *head* with a slight silvery reflection: *antennæ* ferruginous: *mandibles* yellow, pice-

ous at tip : *collar* with a transverse, somewhat undulated yellow line, interrupted in the middle : *scutel* with a double, transverse, yellow spot : *metathorax* with the middle spine simple ; the lateral ones depressed, whitish, margined on the inner side with bright yellow : *tergum* with five yellow spots on each side : *knees*, *tarsi* and *tibiæ* yellow, the latter with a dilated black line on the inner side.

Length nearly one fifth of an inch.

Smaller than *mucronatus*, F., which is destitute of the scutellar line. It may be distinguished from the preceding species, by the yellow color on the collar and scutel.

CRABRO, Fabr.

C. confluentus. Black, with large confluent punctures ; tergum interruptedly fasciate.

Inhab. Indiana.

♀ *Body* black, densely and confluently punctured, particularly on the stethidium, where they are sometimes longitudinally confluent, so as to exhibit lines between them ; they are largest on the metathorax : hypostoma and *anterior orbits* behind the basal joint of the antennæ, silvery : *antennæ*, basal joint yellow ; second joint honey-yellow : *collar* yellow, slightly interrupted in the middle : *scutel* with a large, transverse, yellow spot ; a yellow transverse line behind it : *wings* slightly tinged with dusky : *abdomen* oval, rather abruptly narrowed at base : *tergum* with the incisures contracted, the segments being convex ; approximately punctured ; segments on their middles, each with an equal band which is interrupted for only a narrow space at the middle : *pleura* with a yellow spot at the humerus : *knees*, *tibiæ* and *tarsi* yellow : *venter* immaculate.

Length over three tenths of an inch.

♂ Spot of the scutel interrupted or wanting; antennæ beneath dull honey-yellow; the two posterior bands of the tergum generally confluent in their middles; abdomen longer and more slender than that of the female.

Length three tenths of an inch.

The sexes are more readily distinguished by the tip of their abdomen than by the antennæ. I have nine males and three females: two of the latter measure two fifths of an inch. The punctures of this species are larger and more dense than in our other species.

C. arcuatus. Metathorax with numerous parallel lines; tergum with yellow spots and bands.

Inhab. Indiana.

Body black, with minute, dense punctures: *front* with a wide glabrous interval between the silvery orbits: *antennæ*, basal joint yellow, with a black line near the inner base; sixth joint arcuated, a little prominent inwardly at tip: *hypostoma* yellowish-silvery: *thorax* with a slightly interrupted line on the collar of a bright yellow; a yellow transverse line beneath the scutel: *wings* a little tinged with dusky: *metathorax* with numerous, small, parallel lines, arcuated at base, and transversely rectilinear behind, extending upon the pleura beneath the wings: *pleura* with two small yellow spots before: *tergum* with an oblique somewhat arcuated, yellow spot each side of the first segment; an oblique elliptic one on the second segment each side; a reclivate, transverse, lateral yellow line on the third; remaining segments each with an entire, slightly undulated, slender greenish-yellow band: *anal processes* acute, very deeply and regularly ciliated: *feet* yellow: *coxae* and *trochanters* black: *thighs* at the base black; the black portion very small on the anterior

pair, but on the posterior pair extending on the inferior surface to the tip: *venter* immaculate.

Length two fifths of an inch.

STIGMUS, Jur. Latr.

1. *S. parallélus*. This species resembles the *fratérnus* Nob. but it may be distinguished by the following comparative characters. The posterior thighs and middle of the tibiæ are black. The stigma is a little smaller. The dividing nervure of the first and second cubital cellules is parallel to the posterior nervure of the second discoidal cellule; whereas in the *fratérnus*, the latter is more oblique.

The size is much the same.

Inhabits Mexico.

The *STIGMUS fratérnus*, is not uncommon in Indiana, and as in the present species, the hypostoma of the male is somewhat silvery.

2. *S. pusillus*. Petiole obsolete: second cubital cellule large.

Inhab. Indiana.

Body black, polished: *head* before and *mouth*, including the mandibles, whitish: *antennæ* honey-yellow; basal joint before, whitish: *wings* hyaline; nervures pale brownish; stigma fuscous; second cubital cellule large, somewhat longer than broad: *feet* honey-yellow; *posterior pair* blackish; *abdomen* with a very short petiole, almost sessile.

Length about one twelfth of an inch.

This is much the smallest species I have seen. The dividing nervure of the first and second cubital cellules is exactly opposite to the posterior nervure of the middle discoidal cellule. The hypostoma of the female is black.

PEMPHREDON, Latr.

1. *P. marginatus*. Black ; antennæ at base, mandibles and feet honey-yellow.

Inhab. Pennsylvania.

Body polished : *antennæ*, blackish ; first and second joints honey-yellow ; the former as long as the second and third together, which are nearly equal : *mandibles* honey-yellow, not very obviously denticulated at tip : *wings* tinted with fuliginous ; nervures brown ; stigma fuscous, not much dilated ; nervures of the second cubital cellule and second recurrent nervure margined with whitish, the latter abbreviated before the anal tip : *abdomen* subsessile ; with the exception of the first segment, piceous blackish : *feet* honey-yellow.

Length over three twentieths of an inch.

The second cubital cellule is somewhat larger than usual, and the nervures which form it, as well as the second recurrent nervure, are less distinct than usual.

2. *P. annulatus*. Black ; mandibles white ; feet yellowish.

Inhab. Indiana.

♀ *Body* black, polished, minutely punctured : *antennæ*, basal joint white ; second joint piceous : *nasus* prominent in the middle : *mandibles* and *palpi* white : *wing-scale* dull honey-yellow : *wings* hyaline ; nervures blackish, tinged with yellow at base ; first and second cubital cellules receiving their appropriate recurrent nervures : *meta-thorax* with larger punctures and lines : *abdomen* polished, impunctured, subsessile, the petiole being very short : *pleura* with a small whitish dot under the wing-scale : *feet* honey-yellow.

Length one fifth of an inch.

♂ *Hypostoma*, silvery : *nasus* rounded : *antennæ* annulate, one half of each joint being yellowish.

Length over three twentieths of an inch.

ALYSON, Jur.

1. *A. oppósitus*. Black ; feet honey-yellow ; tergum with two yellow spots.

Inhab. Indiana.

♀ *Body* black : *mouth*, *hypostoma* and *anterior orbits* yellow : *antennæ* at base beneath yellow : *thorax* with an obsolete yellow spot before the wings each side : *wings* very slightly tinted with dusky, more particularly in an obsolete band towards the tip : *nervures* fuscous : *stigma* brown : *recurrent nervures* entering the petiolated cellule exactly opposite to its bounding nervures : *spines* very short : *feet* honey-yellow : *tergum* polished ; first segment honey-yellow ; second segment with a large, lobately-rounded, bright yellow spot each side at base ; the base is also obsoletely honey-yellow.

♂ *Antennæ*, terminal joint as long as the first, arcuated : *wings* not distinctly tinted with dusky except in the radial cellule : *abdomen*, with the exception of the two yellow spots, black : *tarsi* paler than the tibiæ and thighs.

Var. *a.* Yellow spots of the tergum obsolete.

Length three tenths of an inch.

In form, size and color, very similar to *A. spinòsus*, (POMPILUS,) Panzer. But in that species the feet are blackish, &c.

2. *A. melleus*. ♀ Honey-yellow ; head, pectus, and tip of the abdomen black.

Inhab. Indiana.

Thorax honey-yellow : *head* black : *mouth*, *anterior*

orbits and *basal joint of the antennæ* excepting a line on the exterior side, whitish : *region of the scutel*, dusky : *wings* with a dusky band : *metathorax* honey-yellow with the elevated lines rather slender ; the lateral lines of the dorsal area arcuated : *tergum* with the first and second segments honey-yellow, the latter with a lateral whitish spot ; remaining segments blackish ; anal segment obscure piceous : *pectus* black : *feet*, excepting the base of the posterior coxæ, honey-yellow.

Length under one fourth of an inch.

The prevailing honey-yellowish color distinguishes this species ; and the metathoracic lineations are much finer than those of the preceding species. The lateral lines of the dorsal area of the metathorax in the *oppositus* are nearly rectilinear.

CERCERIS, Latr.

1. *C. fumipennis*. ♂ Black ; tergum with a broad band and very narrow ones ; wings blackish.

Inhab. Indiana.

Body black, densely punctured : *head* with a golden, sub-orbicular, orbital spot beneath the line of the antennæ, and dense golden ciliæ each side at the mouth : *antennæ* entirely black : *collar* with two yellow spots : behind the scutel a transverse, yellow line : *wing-scale* with a small yellow spot : *wings* blackish ; first recurrent nervure entering opposite to the dividing nervure of the first and second cubital cellules : *tergum*, incisures wide ; first segment rounded ; second with a broad, equable, terminal band ; remaining segments with each a terminal capillary band, more or less interrupted in the middle ; posterior band wider and somewhat irregular : *tibiæ* yellow pale,

on the inner side and tip of the exterior side black: *tarsi*, anterior pair dull yellowish; posterior pairs, except at base, blackish: *venter* immaculate.

Length over two fifths of an inch.

Resembles *C. desérta*, Nob. but aside from other differences it may be distinguished by that species having somewhat clearer wings and the inosculation of the first recurrent nervure being opposite to the middle of the second, or petiolated cubital cellule; the antennæ also in that species are yellowish before, towards the base; the scutel has two spots in addition to the yellow line behind it, and the bands of the tergum are always broader than in the present species. The *fallax*, Nob. differs in having the transverse yellow line *on* the scutel, in a direct line between the origin of the posterior wings; whereas in the present species it is behind the scutel.

2. *C. sexta*. A broad band on each segment of the tergum; metathorax with a lateral spot.

Inhab. Missouri.

Body black; head before, base of the mandibles and basal joint of the antennæ beneath, yellow; third joint of the antennæ dull honey-yellow: *collar* with two large yellow spots: *wing-scale* and transverse line behind the scutel yellow; the triangular impunctured space behind the transverse line very obvious, with oblique lines and a longitudinal one in the middle: *wings* a little fuliginous particularly on the margin and tip; nervures brown; stigma yellow; recurrent nervure of the second cubital cellule entering at its middle: *metathorax* with a large, oval, longitudinal, yellow, lateral spot: *tergum* with a broad yellow band on each segment; that of the first or petiolar segment slightly interrupted in the middle; the two ultimate ones almost ferruginous: *feet* honey-yellow,

more or less varied with bright yellow : *venter* with interrupted bands.

Length over half an inch.

This was given to me by Nuttall. With the exception of *frontata* and *bidentata*, Nob. this is the largest North American species I have seen, and the much more dilated bands of the tergum are distinctive.

PHILANTHUS, Fabr. Latr.

P. solivagus. Black, with small punctures ; tergum fasciate on each segment.

Inhab. Indiana.

♂ *Body* black ; punctures numerous, small : *hypostoma*, *anterior orbits*, to the emargination, and large spot above the insertion of the antennæ yellow : *collar*, margin yellow, slightly interrupted in the middle : *stethidium* immaculate : *wing-scale* yellow : *wings* very slightly tinged with dusky ; nervures fuscous, towards the base and stigma honey-yellow : *tergum*, segments having each a greenish yellow band on the posterior submargin, that of the first segment largest, the others subequal ; sixth segment immaculate : *pleura*, *pectus* and *venter* immaculate : *knees*, *tibiæ* and *tarsi* yellow : posterior pair of *tibiæ* with a spot on the posterior tip and their *tarsi* above tinged with ferruginous.

Length two fifths of an inch.

RYGCHIUM, Spinola.

1. *R. balteatum*. ♀ Black, thorax and head varied with ferruginous ; tergum with a yellow band.

Inhab. Indiana.

Body black, punctured : *head* ferruginous ; region of the stemmata, black : *antennæ* black, first and second and half of the third joints ferruginous : *thorax* with a broad ferruginous margin, including the scutel, and with more or less of ferruginous in the middle ; anterior margin with a slender yellow line interrupting the ferruginous margin : *wings* black-violaceous : *feet* yellowish : *thighs* dusky at base : *tergum*, first segment impunctured, on the posterior margin a yellow band abruptly dilated each side ; second segment slightly punctured at base, posterior indented, with large punctures, and dull ferruginous ; remaining segments punctured.

Var. α . Behind the scutel a transverse, yellow, abbreviated line.

Var. β . Posterior margins of the terminal segments of the tergum, obsoletely ferruginous.

Var. γ . The ferruginous color predominates having but a small portion of black on the thorax ; the tergum is ferruginous with only a line of black on the first segment, and a triangle of black at base of the second segment ; but the yellow band on the first segment is still visible though less obvious.

Length over four fifths of an inch.

Not a common insect.

2. *R. 5-fasciatum*, Nob. (PTEROCHILUS, Appendix to Long's second Expedition). I am not sure of the generic place of my specimens as they have lost their trophi.

3. *R. crypticum*, Nob. (ODYNERUS, Western Quarterly Reporter).

4. *R. annulatum*, Nob. (ODYNERUS, Appendix to Long's second Expedition).

ODYNERUS, Latr.

1. *O. quadrisectus*. Black; trunk before and behind, tergum before and a band, white.

Inhab. United States.

Body black, punctured: *head* with a small spot above the interval of the antennæ, line on the basal joint of the antennæ, superior lateral margin of the clypeus and slight spot on base of the mandibles obscure white: *thorax*, a bi-lobed band on the anterior margin, spot beneath the wing, triangular spot each side on the scutel, transverse line behind the scutel, behind that again on each side is a very large triangular spot extending down almost to the origin of the abdomen, white; edge of the posterior declivity of the metathorax with a slight bifid, transverse, denticulated crest: *wings* dark violaceous: *tergum*, first segment white, with a dorsal, triangular, lobated black spot communicating with the black anterior declivity; second segment with an undulated, dull white band behind and an obsolete, very small spot of the same color each side before the middle: *feet* with short, whitish sericeous hair.

Length over seven tenths of an inch.

This is much like the *quadridens*, Linn. which is a true ODYNERUS, but it is destitute of the metathoracic spines of that species, and besides other differences it has a band on the second abdominal segment. This latter character not being very obvious may readily have been overlooked by Fabricius.

The male differs but little from the female; my specimens have two additional white spots on the anterior portion of the nasus.

2. *O. oculatus*. ♂ Black, tips of the abdominal segments and two points on the second segment, yellow.

Inhab. Ohio and Missouri.

Body black, with dense, rather large punctures: *clypeus* yellow, emarginate at tip: *mandibles* yellow, honey-yellow at tip: *antennæ*, basal joint yellow, with a black line above: *front* with a yellow line from the base of the antennæ, into the emargination of the eye, and a small spot above the interval of the antennæ, yellow; *thorax*, a bi-lobed spot on the anterior margin, wing-scale and small spot beneath it, and transverse spot behind the scutel, yellow: *wings* dusky: *tergum* not so grossly punctured as the thorax; first segment with a yellow posterior margin; second with a yellow small dot each side, and yellow posterior margin extending around the venter; remaining segments obsoletely margined at tip with yellowish: *feet* yellow; *thighs* black at base.

Length over three tenths of an inch.

Like the *acutus*, Latr. but may be distinguished by its more gross puncturing, as well as by the yellow dots on the tergum.

A variety from Missouri, has the feet all yellow.

3. *O. quádridentis*, Linn. (VESPA, Syst. Nat.—Amoen. Acad.) *cinerascens*, Fabr. The remark “size of *parietina*” may refer to the male.

4. *O. uncinata*, Fabr. (VESPA, Syst. Piez. p. 25). Fabricius mistook this species for the *quádridentis*, L., which is our largest and most common species, and sufficiently distinguished from the present, besides the denticulated metathorax, by many characters; and the following is a detailed description of it.

♀ Black; tergum with a yellow band.

Inhab. Indiana.

Body black, punctured: *head*, short line behind the eye, dot above the interval of the antennæ, one exterior

to the antennæ, one each side on the clypeus, and antennæ beneath, brighter towards the base, dull fulvous : *mandibles* on the exterior margin, honey-yellow ; *thorax*, bi-lobed spot on the anterior margin and transverse line behind the scutel, yellow : *wing-scale* piceous, black on the inner margin : *wings* blackish-violaceous : *tergum*, first segment on the posterior margin with a yellow band abruptly dilated each side ; second segment at tip with much larger and confluent punctures : *feet* orange : *thighs*, except at the knee, black.

Length three fifths of an inch.

Differs from any of the varieties of our *parietinus*, Linn., I have seen, though it is nearly allied to that species.

5. *O. anórmis*, S. (EUMENES) Long's second Expedition, probably belongs to this genus, but as the head of my specimen is destroyed, I cannot be certain whether it may not be a *PTEROCHEILUS*, Klug. It is like the *oculatus*, S.

LETHUS, F. Latr.

L. spinipes. Black ; clypeus broader than long ; first abdominal segment somewhat white at tip :

Inhab. Indiana.

Body black, punctured : *clypeus* much wider than long : *wings* dark violaceous : *tergum* slightly punctured ; peduncle rather slender, somewhat gibbous, with an indented spot above, near the tip, terminal margin with a piceous, dentate band ; second segment with a distinct neck at base ; posterior margin abruptly and smoothly impressed ; and with the remaining segments immaculate : *tibiae*, posterior pairs spinous behind.

Length seven tenths of an inch.

Differs from *L. cyanipennis*, F. which it seems to resemble most, in being smaller, more polished, having no testaceous at base of the petiole or on the sides of the metathorax ; the wings also are less opake.

POLISTES, Latr.

1. *P. métrica*. Ferruginous ; abdomen black ; wings dark violaceous.

Inhab. United States.

Body ferruginous : *antennæ*, fuscous ; first and second joints ferruginous beneath ; five or six last joints fulvous beneath : *hypostoma* with a few distant yellow, short hairs, not sericeous ; at the middle of the tip, a little prominent : *thorax*, with a black dorsal line abbreviated behind, each side of which is an obsolete line confluent behind, exterior to which at base is a black line attenuated before and abbreviated : *wings* dark violaceous : *feet* black ; *tibiæ* within, excepting the posterior pair ; *knees* and *tarsi* yellowish : *abdomen* black ; first segment obsoletely piceous each side and on the posterior edge ; second segment also with obscure ferruginous on each side, sometimes obsolete.

Length over four fifths of an inch.

Resembles the *annularis*, Fabr. but the ferruginous color is more prevalent ; the hypostoma is not sericeous, a little more prominent in the middle ; the basal abdominal segment is somewhat larger and destitute of the annulation. I have obtained it abundantly in Indiana and Mr. Barabino sent it to me from New Orleans.

2. *P. areata*. Thorax black bi-lineate and margined with yellow.

Inhab. Mexico.

Head yellow : *nasus* with black sutures and line before from the middle bifarius near the antennæ : *mandibles* piceous at tip : *antennæ* reddish-brown, darker above, and on the first joint yellow beneath : *vertex* black, of which two broad lines descend to the antennæ and one descends each side, for a short distance, posterior to the eyes ; a yellow oblique line from the summit to the tip of the eyes : *thorax* black, with two yellow vittæ : *collar*, with an abbreviated line before the wings, and a transverse anterior one, black : *wings* slightly ferruginous on the costal margin : *scutellum* and segment beneath it yellow, the former black in the middle : *metathorax* yellow, a black vitta, and lateral basal spot : *abdomen*, first segment petioliform, as long as the second : *tergum* black, segments on their lateral and terminal margins yellow, the latter undulated before ; second segment yellow also at base : *beneath* yellow, with black incisures : *feet* yellowish ; posterior pair darker behind : *venter* yellow, with two or three slender obsolete dusky bands.

Length less than half an inch.

3. *P. válida*. Yellow ; middle of the thorax and base of the segments of the tergum ferruginous.

Inhab. Mexico.

♀ *Body* dull yellow, with ferruginous sutures : *head* above, and *antennæ* at base, ferruginous : *thorax* on the disk ferruginous : *wings* yellowish ferruginous : *tergum* with the segments ferruginous at base : *venter* greenish-yellow, at base ferruginous : *feet* ferruginous ; coxæ and part of the thigh yellow.

Length over one inch.

A large and rather robust species. The male is more exclusively ferruginous with the posterior pairs of tarsi whitish ; the head in my specimen is destroyed.

4. *P. mellifica*. Wings yellowish ; abdomen fasciate. Inhab. Mexico.

Body blackish, sericeous, with a slight golden reflection : *clypeus* not acute, but almost rounded at tip : *mandibles* at tip piceous : *thorax* with a distinct, longitudinal, impressed line before, extending to the middle : *wings* yellowish ; dusky at tip : *scutel* truncate at tip, or rather very obtusely emarginate : *metathorax* almost vertical, with a distinct, prominent, robust angle each side : *abdomen*, first segment small and short ; second greatly the largest ; all margined behind with orange yellow : *venter* with all the margins yellow excepting the basal one.

♂ Basal joint of the antennæ beneath yellow : *nasus* very sericeous, having a whitish reflection : *coxae* and *trochanters* yellowish-white.

Length over three tenths of an inch.

Not being able to find my notes relative to this species, I can only state, that near Jalapa, my attention was attracted by a group of Indians, who were eating honey from a paper nest, which was then so far dissected in their repast, that I could not ascertain its proper form. The honey had a pleasant taste, and as far as I could gather from their gestures, the nest was obtained from a tree. Some of the specimens above described I found crawling feebly away, and others I extracted from the cells in a perfect state.

The trophi agree with those of the *P. nigripennis*, Oliv. excepting that the obliquely truncated portion of the mandibles is a little longer, and the terminal joint of the labial palpi is equal in length to the preceding joint.

I had made the above description and remarks before an opportunity offered to compare the individuals with Latreille's description of his *P. lecheguana*, (Ann. des

Sc. Nat. tom. 4, p. 335,) which I find it closely resembles, and to which I should refer it, but for the character attributed to that insect of having only the "bord postérieur des cinq premiers anneaux de l'abdomen jaune," whilst all the segments of the tergum of our species are margined with yellow, and the anal segment is also of that color, in all the specimens which I have seen; all the segments of the venter, moreover, are margined with the same color excepting the basal one. These differences induce me not to withhold this description, as we may reasonably infer that others exist, which can be detected only by comparison. Whether this species is the artificer of either of the nests figured by Hernandez and copied by Latreille in Humboldt's Zoölogy, I cannot positively determine, but it seems highly probable. The observation of Latreille relative to the insects that construct those nests, (or at least one of them, for they are very unlike each other) seems judicious, that "j'ai lieu de soupçonner que ces insectes sont identique ou peu différens," from his *P. lecheguana*.

COLLETES, Latr. Klug.

C. inæqualis. Labrum with four indentations near the base.

Inhab. Indiana.

♀ *Body* black with pale cinereous hair: *labrum* on the basal half, with four obvious indentations: *thorax* with the hair dusky on the disk: *wings* hyaline; nervures, fuscous: *tergum* with very short dusky hair; that of the anterior portion of the basal segment, and on each side of that segment longer and whitish or pale cinereous; posterior margins of the segments with white hair, beneath

which the surface is dull piceous at tip ; basal segment with a longitudinal impressed line at base : *venter*, segments on the posterior margins with dull whitish hair.

Length about half an inch.

♂ With more dense and obvious hair on the front.

Length less than half an inch.

In warm days of March and April, this species may be observed flying about near the surface of the earth.

SPHECODES, Latr.

S. confertus. Black, abdomen rufous, black at tip ; punctures dense.

Inhab. Indiana.

Body black, with close-set punctures : *head* rather small with whitish hairs : *mandibles* piceous black : *thorax*, middle thoracic longitudinal line very distinct, punctures equally close-set : *scutel* with the impressed line, continued from the thorax : *wings* hyaline : *abdomen* polished ; three basal joints rufous ; remainder black.

Length three tenths of an inch.

Resembles the *gibbus*, F. but is smaller ; with a proportionally smaller head and much more dense puncturing on the thorax and scutel.

HYLÆUS, Latr.

H. modestus. ♀ Black, opake : *abdomen* polished : *hypostoma* on each side with a triangular whitish spot : *collar* with an abbreviated, transverse, yellowish line each side : *pleura* with a yellowish spot under the humerus : *wings* hyaline, with blackish nervures : *feet* with whitish knees.

Length over one fifth of an inch.

♂ *Head* beneath the insertion of the antennæ, pale yellow : *antennæ* beneath dull ochreous ; basal joint beneath, pale yellow : *collar*, immaculate : *tibiæ* and *tarsi* pale yellowish, the former with a black spot near its tip.

Length about one fifth of an inch.

The spots on the head of the female, are like those of *H. variegatus*, F., but it is a very different species.

ANDRENA, Fabr. Klug.

A. válida. ♀ Entirely black, immaculate ; hair very short, dense, giving to the thorax and head a velvet-like appearance : *head* with the hair of the cheeks, tip of the *nasus* and outer inferior edge of the *mandibles* longer : *mandibles* with a rather strong tooth before the tip : *wing-scale* glabrous : *wings* purplish-fuliginous, the darkest portion at tip ; *stigma* honey-yellow : *metathorax*, surface not concealed by hairs, with separate punctures and except at base, canaliculate in the middle ; at base is a transverse space of much larger, confluent punctures, behind which space is a narrow glabrous space at the origin of the groove ; lateral margin hairy : *tergum* with very short hairs not concealing the surface ; first segment concave and deeply canaliculate on the anterior face ; segments with a transverse, impressed, submarginal, posterior line ; on the first and second are two : *venter*, segments with long, rather dense hairs.

Length seven tenths of an inch.

A large and fine species.

HALICTUS, Latr.

1. *H. nigricornis*, Fabr. (CENTRIS). This appears to me to be the male of *H. viridula*, Fabr. (MEGILLA), and the same as *H. nigricornis*, Coqueb. (ANDRENA) and *H. sericea*, Forster.

2. *H. radiatus*. ♀ Green; metathorax behind with a radiated disc.

Inhab. Indiana.

Body green, polished; hairs numerous, short, cinereous, not obscuring the general color: *antennæ* black, more or less tinged with piceous, particularly beneath: *nasus* before black, ciliate; *labrum* piceous: *mandibles* yellow towards the base, piceous at tip: *wings* tinged with fuliginous; nervures brownish, supplementary nervure at tip of the radial cellule very distinct: *metathorax* at base having numerous, elevated longitudinal or oblique lines; on the posterior declivity is a somewhat orbicular disk, distinguished from the general surface by an elevated line equally distinct all around; it is radiated with elevated lines: *tergum* sometimes tinged with blue or purplish; each segment with a slight inequality or impressed transverse line, near the middle: *feet* dark piceous; *tarsi* and *knees* somewhat paler.

Length over two fifths of an inch.

3. *H. labròsus*. ♀ Greenish; tergum purplish, segments margined with blackish.

Inhab. Mexico.

Body green, with a purple reflection: *antennæ* black: *nasus* at tip blackish: *labrum* black, much elevated at the middle of the tip; the elevation grooved before: *mandibles* black, tinged with piceous at tip: *wings* hyaline, slightly tinged with fuliginous; nervures fuscous: *meta-*

thorax with the including line of the posterior disk, prominent only towards the petiole : *tergum* darker purplish than the thorax ; the broad posterior margins of the segments, blackish : *feet*, purplish and blue : *tarsi* blackish-piceous.

Length about two fifths of an inch.

About the size of the preceding, from which it differs materially in color, and in the sculpture of the metathorax.

4. *H. purus*. Green ; first recurrent nervure confluent with the dividing nervure of the second and third cubital cellules.

Inhab. United States.

♀ *Body* green, polished, tinged with brassy or cupreous : *antennæ* black : *labrum* and *mandibles* piceous, the latter sometimes almost honey-yellow : *metathorax* at base lineated ; no distinct posterior disk, but the groove is well impressed, and there are often near the petiole, a few, obsolete, raised, converging lines : *wings* hyaline, very slightly dusky at tip ; nervures brown ; radial nervure fuscous ; stigma pale yellowish ; second recurrent nervure exactly uniting with the tip of the dividing nervure of the second and third cellules : *tergum* obviously varied with brassy ; posterior slender margins of the segments dark purplish or blackish, sometimes not obvious : *feet* dull piceous : *venter* dull piceous.

Length less than three tenths of an inch.

♂ *Head*, *thorax* and *metathorax*, greenish-blue : *mandibles* and *labrum*, dull honey-yellow : *thighs* obviously tinged with bluish-green : *venter* on the middle segments green.

Length less than one fourth of an inch.

A very common species. I have found their nests in

the soft, decomposing sap-wood of the Oak and Hickory, between the bark and the solid wood. Their cells are oval, horizontal, not symmetrically disposed, though many are parallel. These cells are composed of particles of the decayed wood, agglutinated together. Each cell contains an individual, subsisting on a yellow pollen, enclosed with it by the parent. In the same assemblage are the young of all ages to the perfect insect.

The male varies in having the tibiae and tarsi yellowish-white, with more or less of green on the middle of the posterior tibiae.

The preceding species, distinguished by their polished green color, are also remarkable by the very obtuse emargination of their eyes, or, in other words, the curvature of the inner side of the eye: they might very properly constitute a division of the genus.

5. *H. ligatus*. Black; tergum banded with whitish. Inhab. United States.

♀ *Body* black, with whitish cinereous hairs on the head and stethidium: *wing-scale* honey-yellow: *wings* hyaline, tinged with yellowish towards the base; post-costal nervure black; first recurrent nervure entering the second cubital cellule near, but not at the dividing nervure: *metathorax* at base having the depressed surface granulated or very minutely lineated; posterior face sub-orbicular, slightly concave: *tergum* having the posterior margins of the segments white with prostrate hair, beneath which the surface is piceous: *venter* a little hairy; posterior margins of the segments obscurely piceous: *feet* tinged with piceous, paler towards their tips; the posterior with pale ferruginous hair.

Length about three tenths of an inch.

♂ *Antennæ* beneath, ochreous, excepting the first and

second joints : *nasus*, *labrum* and *middle of the mandibles*, yellow : *wings* with the nervures darker : *tergum* not so very obviously banded : *feet* black ; *tibiæ* and *tarsi*, yellow ; the former having a black spot on the anterior middle of the posterior pairs.

Length three tenths of an inch.

A very abundant species. The male is a little longer than the female.

The scutelliform base of the metathorax is more or less sculptured with slightly elevated, longitudinal lines.

6. *H. parallélus*. Black ; *tergum* banded ; wings and feet ferruginous.

Inhab. Indiana.

♀ *Body* black, somewhat hairy ; hairs yellow-cinereous : *nasus* ciliate with ferruginous hairs which extend over the *labrum* : *antennæ* with the third joint but little longer than the fourth : *wings* pale ferruginous, dusky at tip ; second cubital cell quadrate, the basal and terminal nervures being quite parallel : *tergum*, each segment with a very obvious posterior margin of whitish-yellow hairs : *feet* ferruginous, the base of the thighs and *coxæ* more or less blackish.

Length less than half an inch.

CERATINA, Latr.

C. dupla. Blue ; much punctured.

Inhab. Indiana.

♀ *Body* deep blue, densely punctured, a little polished : *antennæ* black : *nasus* with a white spot, sometimes obsolete : *thorax* with an impressed line ; disk with few punctures and more polished : *wings* but slightly dusky ; nervures blackish : *wing-scale* dark piceous, impunctured :

tergum more densely punctured towards the tip ; basal segment on the anterior face impunctured, polished ; remaining segments with a distinct line on their anterior sub-margins, curving backward on each side ; between this line and the basal edge, particularly on the third and fourth segments, the surface is but little punctured and is polished, resembling a small segment : *feet* blackish, with piceous tarsi and whitish hair : *pleura* with a small yellow point under the wing-scale.

Length a little over three tenths of an inch.

♂ *Nasus* and quadrate spot on the labrum, white ; anterior tibiae whitish on their exterior edge.

Length one fourth of an inch.

The spots on the *nasus*, labrum and *pleura*, as well as the line on the tibiae in the male correspond with those of the male of *C. albilabris*, F. but the general color is altogether different. A variety ? is destitute of the spot on the labrum and has but a very small spot on the *nasus*.

The maxillary palpi sometimes appear to have six joints.

I am not sure that the male above described, is that of the present species.

STELIS, Panz.

S. obesa. Black, varied with yellow ; wings fuliginous.

Inhab. Indiana.

Body robust, convex, punctured, black : *nasus*, *mandibles* at base, *orbits* anteriorly and abbreviated line behind yellow : *thorax* with a yellow, arcuated line each side extending on the anterior margin : *scutel* somewhat in-

dented towards the tip, margined behind with yellow, which is slightly interrupted in the middle: *wings* fuliginous; *nervures* fuscous: *tergum*, six yellow bands, the anterior one widely interrupted, the others gradually less so to the penultimate one which is confluent; the ultimate one broadest, entire: *venter* yellowish at base: *feet* yellowish; *thighs* and posterior face of the *tibiæ* partly black.

Length over one fourth of an inch.

In the abdominal markings it resembles some species of *ANTHIDIUM*, but the maxillary palpi have two joints.

OSMIA, Panz. Latr.

1. *O. lignaria*. Dark bluish; thorax and base of the *tergum*, with cinereous hair.

Inhab. United States.

♀ *Body* very dark bluish: *head* with cinereous hair: *nasus* very profoundly emarginated: *antennæ* black: *thorax* with cinereous hair; wing-scale black-piceous: *wings* with a slight fuliginous tinge, particularly on the costal half of the radial cellule; *nervures* blackish: *tergum*, basal segment with cinereous hair; remaining segments with short blackish hair; anal segment blackish: *beneath* a little darker than above: *feet* and *ventral* hair blackish.

Length about nine twentieths of an inch.

♂ Hair of the head before dense, rather longer, and whitish; pectus, pleura and feet with cinereous hair; venter blackish; *nasus* very slightly and obtusely emarginate.

Length about seven twentieths of an inch.

A common species; nidificates in old wood. Forms a

dilated oval cocoon of a ferruginous color. It seems to approach *MEGILLA metallica*, Fabr. which however is said to be large, black-bronze, with white wings.

2. *O. buccònis*. Black; tergum with slender white bands.

Inhab. Indiana.

♀ *Body* black, with rather short gray hairs, and obvious, dense punctures: *head* rather large, long between the eyes and thorax: *nasus* entire: *mandibles* with a patch of dense prostrate hairs near the tip: *wings* hyaline: *nervures* fuscous; wing-scale piceous: *tergum* with short, blackish hairs; segments rather convex, narrow, white bands of prostrate short hairs, wider each side; towards the posterior extremity with numerous white, short hairs, obvious in profile; posterior tarsi with longer hairs, tinted with ferruginous: *venter* with fulvous hairs.

Length over three tenths of an inch.

♂ Resembles the female, but is smaller, and the tail has four distant denticulations.

Length one fourth of an inch.

CÆLIOXYS, Latr.

1. *C. 8-dentata*, Nob. (Appendix to Long's Expedition, p. 353).

♀ *Body* rather more slender than that of the male; the abdomen conic and polished; head before, a little pruinose, with short hairs; thoracic lines white and less obvious than in the male; feet black; tibiæ and tarsi more or less piceous; tergum, with the bands white and all of them single, those of the male are tinged with yellow.

The *ANTHOPHORA bidentata*, F., which is said to be

a *CÆLIOXYS*, is described as having the abdomen brown and with only two spines.

The armature of the tail of the *8-dentata*, resembles that of *C. cónica*, L. but the middle spines are much more robust and obtuse; the bands are more distinct and the abdomen opake in the male.

2. *C. alternata*. Bands of the tergum alternately interrupted; ♂ tail 10-spined.

Inhab. Indiana.

♂ *Body* black, punctured; the punctures not much crowded: *head* with short, white hair, almost naked on the vertex: *front* with long, white, dense hair: *antennæ*, tip of the basal joint obscurely piceous: *thorax* an interrupted, arcuated, white line before, curving over the wings; a line before the scutel, and another at its tip, white: *wing-scale* dull honey-yellow: *wings* yellow fuliginous, more dusky at tip: *tergum* polished, punctures more sparse than on the thorax; segments, particularly the basal ones, white on their posterior margins; and each segment excepting the ultimate and basal ones, with a white interrupted band before the middle; tail concave above, with about ten spines: *feet* black, more or less piceous: *venter* banded with white.

Length over two fifths of an inch.

♀ Hair on the front, short; wings destitute of the yellow fuliginous color, excepting on the stigma.

Length over half an inch.

NOMADA, Scop. Latr.

1. *N. vincta*. Tergum, with yellow bands which are obsoletely margined with ferruginous.

Inhabits Indiana.

Body black : *head* beneath the antennæ, ferruginous : *orbits* yellow : *antennæ* ferruginous, dusky about the middle ; terminal joint paler : *collar* yellow : *thorax* each side over the wings, with a dull ferruginous margin ; before the wings a yellow spot : *wing-scale* honey-yellow : *wings* slightly dusky, particularly the terminal margin : *nervures* honey-yellow : *scutel* sub-bi-lobate, yellow, line on the middle posterior margin ferruginous : *metathorax* near the scutel with a transverse line and an irregular, longitudinal, quadrate spot each side behind, yellow : *tergum* with a yellow band, gradually contracted towards the middle, and obsoletely margined with ferruginous, before the middle of each segment ; anterior band a little undulated or denticulated : *pectus* with a triangular, yellowish spot over the fore-feet : *coxæ* black, with a yellow spot : *thighs* ferruginous, blackish behind : *tibiæ* and *tarsi* ferruginous and yellow : *venter* with two yellowish bands ; towards the tip, honey-yellow.

Length ♀ nine twentieths of an inch.

♂ Ferruginous ; orbits and head before, yellow ; antennæ blackish towards the tip ; first joint yellow beneath ; collar, line over the wings, two obsolete ones in the middle, wing-scale excepting a dot in the middle, yellow ; scutel undivided, yellow ; metathorax in greater part, yellow ; abdomen yellow, posterior margins of the segments black, sub-margins ferruginous. Rather more slender than the female.

2. *N. bisignata*, Nob. (Appendix to Long's Second Expedition). The male has the head black, with the *nasus* and mouth yellow ; antennæ beneath, rufous ; the thorax has hardly any appearance of ferruginous ; but the scutel in some specimens is of that color ; the thighs, par-

ticularly the posterior pair have more black than those of the female.

Var. Abdomen rufous, immaculate.

EPEOLUS, Latr.

E. fumipennis. Black ; thorax bi-lineate, ferruginous all around.

Inhab. Mexico.

Body densely punctured, black : *head* carinate between the antennæ : *antennæ* honey-yellow at base, beneath : *labrum* with an obsolete, minute, ferruginous dot each side : *mandibles* honey-yellow at base : *thorax* with two slender whitish abbreviated lines and whitish lateral edge : *collar* with a ferruginous disk, contracted in the middle ; a ferruginous dot before the wings : *wing-scale* and *scutel* ferruginous : *wings* fuliginous : *tergum*, first and second segments with a yellow band, the first broader and widely interrupted ; remaining segments with a whitish band, the last segment with the addition of an obscure rufous terminal margin : *tibiæ* and *tarsi* honey-yellow.

Length three tenths of an inch.

The *lunatus*, Nob. also has a bi-lineated thorax, but it is a larger species, has a whitish spot around the base of the antennæ ; lunated spot at base each side of the tergum, &c. Smaller than *mercatus*, F. and *scutellâris*, Nob.

MACROCERA, Latr.

1. *M. obliqua*. ♂ Thorax with yellowish hair ; tergum fasciate, second segment with an oblique band.

Inhab. Indiana.

Body black : *head* and *stethidium* with long, dull yel-

lowish hair : *hypostoma* and *labrum* yellow : *antennæ*, excepting the basal joint, beneath piceous : *mandibles* yellow at base, with a piceous spot, honey-yellow in the middle and blackish at tip : *wings* slightly fuliginous ; nervures dusky : *tergum*, first segment at base, with hair as on the thorax ; second segment with a broad basal margin of whitish prostrate hair, and a narrow oblique one on the middle ; third and fourth segments with oblique bands of the same color on their middles ; fifth with the band obvious and a little oblique, intermixed with longer hairs.

Length nearly three fifths of an inch.

I have numerous specimens, all of which are males. The hair of the head and thorax is slightly tinted with ferruginous.

2. *M. binotata*. Black ; wings blackish.

Inhab. Indiana.

♀ *Body* black : *head* and *thorax*, particularly the latter, with short hair, that of the occiput and behind the scutellum a little longer : *labrum* with prostrate hair : *wings* blackish violaceous : *tergum* on some parts, with a slight purplish reflection ; fourth segment with a transverse-quadrangle, white spot of prostrate hair on each side, upon its posterior margin : *posterior tibiæ* and *tarsi*, with the long hairs whitish.

Length about nine twentieths of an inch.

♂ A little smaller than the female ; *nasus* and *labrum* pale yellow ; *antennæ* beneath, dirty yellowish ; wings not so dark as in the female ; *tergum* immaculate.

Although it has some points of specific similarity with the preceding, yet it differs so widely from it in other respects, that with much hesitation, I have concluded to give it a distinct place.

3. *M. pruinosa*. Tergum with much dilated white bands; double on the second segment; hair on the thorax yellowish.

Inhab. United States.

♂ *Body* black: *stethidium* clothed with yellow-ferruginous hair: *head*, hair on the superior part like that of the thorax: *nasus* with a large, yellow, transverse spot before: *labrum* with prostrate whitish hairs, and generally an obscure yellowish, longitudinal line: *antennæ*, rather short, beneath excepting the basal joints, dull piceous: *wings* hyaline: *tergum*, first segment, except at its tip, hairy like the thorax; second segment with a white band at base and another on the posterior sub-margin, united at the sides; posterior margin and transverse middle black; third and fourth segments white with black posterior margins; remainder white; tarsi ferruginous.

Length two fifths of an inch.

♀ *Antennæ*, color as in male: *nasus* immaculate: *posterior feet* with long ferruginous hair.

Length nearly half an inch.

A common species; at first sight somewhat like *obliqua*, Nob. which however is much larger, the bands of the tergum much narrower and more oblique than in the present species. In magnitude this species does not seem to differ widely from that which Drury names *annularis*, ii, *pl.* 37, *f.* 7. That figure is, however, a very uncertain one, even as respects its genus, and in my copy of the work, does not at all agree with the description which accompanies it.

The bands of the tergum have a pruinose appearance in consequence of the shortness of the hair of which they are composed. The *antennæ* of the male do not reach the posterior extremity of the thorax.

4. *M. rustica*. Tergum with white bands, double on the second segment ; hair of the thorax whitish.

Inhab. Indiana.

♂ *Body* black, with whitish hair: *antennæ* longer than the stethidium ; beneath, excepting the three basal joints, dull piceous: *nasus* white: *thorax* with whitish hair: *wing-scale* black: *wings* hyaline ; nervures fuscous: *tergum*, first segment, excepting at its tip, hairy like the thorax ; bands white, not much dilated ; second segment with one at base and another behind the middle, confluent each side ; remaining segments with a band on the middle of each: *tarsi* towards their tips ferruginous.

Length under seven twentieths of an inch.

♀ *Body* much more robust ; less hairy ; but the bands of the tergum are rather wider, sometimes almost interrupted in the middle ; hair of the posterior feet yellowish ; *antennæ* rather short ; *nasus* black.

Length nearly two fifths of an inch.

A smaller species than *pruinosa* and much like it ; but it may be distinguished by the much longer *antennæ* of the male, by the *nasus* being all white, and by the whitish or almost uncolored hair of the head and thorax.

When recent, the color of the eyes is light blue, with three or four transverse, movable series of longitudinal dark spots.

MEGATCHILE, Latr.

M. pollicaris. ♂ Anterior tarsi dilated, deeply ciliated, appendage rather long ; spines of the anterior coxæ yellow.

Inhab. Louisiana.

Body not very hairy, black: *wings* with a slight fuli-

ginous tint, particularly at tip: *tergum* oblong sub-quadrate: *anal* segment with a sinus in the tip, each side of which are small inequalities of the edge: *anterior feet*, *coxæ* with prominent yellow spines, rufous on the exterior tip; thighs yellow, black at tip and base; *tibiæ* black, yellow within and at tip, on the posterior tip a very short, acute spine; *tarsi* much dilated and deeply ciliated behind, yellow-white, covered in their greatest part by a yellow broad scale, which is honey-yellow at tip; nails honey-yellow: *intermediate tarsi* cordate, the lobes of one side more prominent.

Length eleven twentieths of an inch.

Mr. Barabino sent me this species. It differs in many respects from the *M. latimànus*, Nob. (Western Quarterly Reporter) which has in that species the anterior *coxæ* black; the appendage of the anterior *tarsi* shorter, &c. but it is perfectly congeneric with it, as well as with *ANTHOPHORA lagópoda*, Fabr., if I may judge by the similarity of the anterior feet, though it certainly approaches *STELES* in the paucity of ventral hair. The maxillary palpi of *latimànus*, have the second joint rather longer than the first.

M. brevis. Black; not remarkably hairy; anterior *tarsi* simple; abdomen short.

Inhab. Indiana.

♂ *Body* black, somewhat polished: *head* densely covered with long, yellowish hairs in front: *thorax* with whitish hair, sometimes tinged with yellowish, and not concealing the surface: *wings* a little fuliginous, tinged with violaceous: *venter* not, or hardly longer than broad: *tergum* with small, dense punctures, and a narrow, white band on each segment; *anal* segment transversely concave, at its tip emarginate, in the middle and on each side,

the edge has several small denticulations : *anterior tarsi* simple : *tarsi* piceous at their tips.

Length less than two fifths of an inch.

♀ A little larger than the male ; with very little hair on the front ; abdomen short conic-oval ; venter hairy.

Length two fifths of an inch.

The male of this species closely resembles that of *pugnatus*, so much so, that it might readily be considered as the same ; but the anterior tarsi are not dilated, and the abdomen, although similarly terminated, is remarkably shorter.

M. pugnatus. Black ; anterior tarsi dilated in the male, with the first joint prolonged at its anterior angle beyond the tip of the second joint.

Inhab. Indiana.

♂ *Body* black, not densely hairy : *head* densely covered with long whitish hairs in front : *thorax* with whitish hair, not concealing the surface : *wings* fuliginous, tinged with violaceous ; venter longer than broad : *tergum* with small, dense punctures ; and a narrow white band on each segment ; anal segment transversely concave, at its tip emarginate in the middle, and on each side the edge has several small denticulations : *anterior tarsi* whitish, dilated, and ciliated ; anterior tip of the basal joint prolonged a little beyond the tip of the second joint, and its whole length excavated before ; anterior tip of the second joint also prolonged almost to the tip of the third joint ; fourth joint not dilated : *anterior tibiæ* with dilated crowded punctures : *anterior coxæ*, each with a prominent, black spine : *intermediate* and *posterior tarsi* piceous at tip.

Length over two fifths to nearly half an inch.

♀ Frontal hair shorter and less conspicuous ; anterior feet simple ; venter with dense yellow hair.

Length over half an inch.

It is smaller, much more slender and much less hairy than either *latimanus*, or *pollicaris*, Nob. and has a somewhat different habit.

ANTHOPHORA, Latr.

1. *A. abrupta*. ♂ Black; thorax with cinereous hair; nasus and labrum whitish.

Inhab. Indiana.

Body robust: *antennæ* on the anterior side of the basal joint, whitish: *nasus*, and each side of it to the eye yellowish, a little tinged with fulvous in the middle: *labrum* pale yellowish, hairy: *mandibles* having a whitish spot near their outer base: *thorax*, *pleura* and *pectus*, clothed with whitish cinereous hair: *wings* hyaline; nervures fuscous; stigma not at all dilated: *pleura* with an oblique line of black hairs passing downward and backward from the posterior wings: *tergum* with much shorter and less dense hair than that of the thorax, and black; that of the basal segment a little longer, and near the metathorax partaking of the color of the hair of that part: *feet* black; the longer hairs of the anterior pair are whitish.

Length over half an inch.

It is less robust than *A. pilipes*, F. and is equally well clothed with hair on the anterior part of the body, but the transition of color between the hair of the thorax and that of the tergum is much more abrupt. It has much the appearance of a small humble-bee and also resembles *ANDRENA thoracica*, F.

2. *A. frontata*. Thorax with yellowish hair; hypostoma and basal joint of the *antennæ* beneath, and spot at base and near the tip of the *mandibles*, yellow.

Inhab. Louisiana.

♂ *Body* black: *hypostoma* yellow and with yellow hair: *antennæ* with the inferior longitudinal half of the basal joint yellow, and with dense yellow hair: *nasus* yellow, with yellow hair: *labrum* black, covered by the hair of the *nasus*: *mandibles* with a yellow oval spot at base and a slender obsolete one near the tip: *maxillæ* with an obsolete yellowish spot before the palpi: *palpi* with a few rigid hairs; terminal joint one third the length of the preceding joint: *tongue* ferruginous: *vertex* in the middle, having a few yellow hairs: *thorax* with dense, long, yellow hair: *wing-scale* blackish: *wings* with a slight dusky tint; nervures black, exterior recurrent nervure entering the outer cubital cellule directly opposite to the outer nervure of the cellule: *tergum* hairy; hairs black, rather long; a few yellow hairs towards the middle of the first segment: *anterior feet* with yellow hair on the posterior edge: *hind feet*, hairs not much elongated.

Length half an inch.

Sent to me by Mr. Barabino. Differs from the *abrupta*, Nob. in being less robust, the hair of the thorax being pale yellow, and the mandibles having a white spot near their tips.

3. *A. taurea*. Thorax pale, with a dusky central spot, from which proceed two lines to the anterior angles.

Inhab. Indiana.

Body black with whitish cinereous hair: *head*, hair on the vertex dusky: *thorax* with whitish hair; a large, obvious, central, dusky spot, with a line curving from it to each anterior angle of the thorax: *scutel*, hair dusky: *metathorax* and *first segment of the tergum*, with cinereous hair; remaining segments of the tergum with the hair very short and black, excepting on the posterior margins which are pure white; ♀ ultimate segment with

a glabrous, subcarinate, triangular, oblong space above : wings hyaline ; nervures fuscous ; stigma not suddenly dilated ; terminal third of the radial cellule slightly separated from the edge of the wing ; terminal nervure of the third cubital cellule inserted at the middle of the nervure of the radial cellule.

Length ♂ about two fifths ; ♀ half of an inch.

The thoracic spot will readily distinguish this species. The manners and habits of the species may be likened to those of the *A. parietina*, Latr. It digs a cylindrical hole in compact clay or adhesive earth on the side of a bank, or in earth retained amongst the roots of an overturned tree. The hole is two or three inches in depth. The sides and bottom are of a dark brown color, quite smooth and somewhat polished, containing a quantity of white pollen, considerably larger than the artificer itself. The entrance consists of a cylinder extending downwards from the mouth of the hole, more than an inch in length, and consisting of small pellets of earth compacted together, very rough on the exterior and smooth within. A species of *ODYNERUS* was numerous in the same locality in which I observed the above, and sometimes entered the holes ; but the exterior cylinder does not agree with that which is attributed to *O. murària*, Latr. which Kirby and Spence inform us is composed of "little masses so attached to each other, as to leave numerous vacuities between them, which give it the appearance of filagree-work." Many of the tubes of the *táurea*, have a fissure above, throughout the whole length ; resembling in this respect the shell *SILIQUARIA*. It does not agree with Fabricius' description of *MELECTA remigàta*.

XYLOCOPA, Latr.

X. *Carolina*, Fabr. This species was referred by Fabricius to the genus CENTRIS, and is even now generally considered as belonging to that genus. But doubting the accuracy of that arrangement, I found on examination, that the labial palpi are rectilinear, the terminal joints being in a right line with the others, and the maxillary palpi are six jointed. The mandibles have only one large tooth, which is on the inner side. The circumstance of Fabricius referring to Drury's *fig. 1, pl. 43, of vol. i*, for *BOMBUS virginicus*, Linn. leads me to suppose that he had this species also in view in that description. But as that description in the *Syst. Piez. p. 346*, agrees very well with one of our largest and finest species of BOMBUS, rather than introduce a new name, I would transfer the quotation of Drury's figure to the description of X. *Carolina*, (CENTRIS), F. I add the following description of it, which I formerly drew out, with the name of *válida*, under the belief that the *Carolina*, is really a CENTRIS, and therefore altogether different.

Blackish ; a prominent, compressed, obtuse tubercle between the antennæ ; thorax hairy.

Inhab. United States.

♀ *Body* black, tinged with purplish : *head* with close set, discoidal punctures ; an obvious, compressed tubercle between the antennæ, rounded at its tip : *labrum* conic : *thorax* tinged with greenish ; with pale yellow hair, except on the middle : *wings* fuliginous, sub-opake at tip : *tergum* tinted with very obscure green ; basal joint covered with pale yellow hairs : *pleura* beneath the wing, with yellow hairs.

Length about four fifths of an inch.

♂ *Nasus* white. The tubercle of the head is very distinct.

Common in the Union. The males may be distinguished by their larger and more approximate eyes and white *nasus*. It varies in having the hair of the thorax and of the first abdominal segment, almost ferruginous.

2. *X. lateralis*. Violaceous; abdomen with a posterior lateral cinereous spot.

Inhab. Mexico.

♂ *Body* blackish-violaceous: *head* black: *nasus* and *labrum* white: *antennæ* with an anterior white line on the radical joint: *genæ* with a few gray hairs: *wings*, first recurrent nervure entering the third cellule within the distance of its own breadth from the nervure of intersection of the third cellule: *abdomen*, each side near the tip with a cinereous spot of hair, extending upwards on each side of the venter, but becoming obsolete towards the base.

Length over seven tenths of an inch.

BOMBUS, Latr.

1. *B. sonorus*. Yellow; head, thoracic band and abdomen behind black.

Inhab. Mexico.

Body yellow: *head* black: *thorax* with a broad black band in the middle: *wings* violaceous-black: *tergum* with the first, second and third segments yellow, the others black: *beneath* black.

Length ♀ four fifths of an inch.

Resembles the *fervidus*, Fabr. so closely that it may readily be mistaken for it, but that species has only two segments of the *tergum* clothed with yellow hair; that of

the second one, however, is so much elongated as to conceal a considerable portion of the next segment. The color is a much deeper yellow than that of *férvida*.

2. *B. ephippiatus*. Black; pleura and base of the tergum yellowish.

Inhab. Mexico.

Body black: *pleura* pale yellow; *wings* dusky, tinged with violaceous: *tergum* pale yellow towards the base; this color is gradually narrowed behind and terminates on the third segment, forming somewhat of a semi-oval, with its base to the thorax and confluent with the color of the pleura.

Length less than half an inch.

3. *B. ternarius*. Yellowish; thorax fasciate; tergum fulvous in the middle.

Inhab. Indiana.

Head black: *thorax* with dull yellowish hair, and a blackish band on the middle: *wings* with a slight yellowish tinge; nervures fuscous: *tergum* fulvous on the second and third segments; first and fourth segments yellowish; remaining segments black.

Length ♂ nearly three fifths of an inch.

TRIGONA, Jurine, Latr.

1. *T. bilineata*. ○ Blackish; antennæ, beneath, labrum and two lines on the nasus pale.

Inhab. Mexico.

Body piceous black; flagellum of the antennæ beneath, obsolete narrow anterior orbits, two rather broad lines on the hypostoma, labrum and mandibles somewhat pale: *wings* hyaline, slightly tinged with fuliginous towards the base; cubital cellules obsoletely divided into three by two

hardly perceptible nervures ; ultimate cellules hardly attaining to the tip of the wing ; the second receiving the recurrent nervure : *feet* not different in color from the body ; posterior tibiæ with the ciliæ of the edge sparse.

Length less than one fourth of an inch.

It is somewhat smaller, and less robust than the *ruficrus*, Latr. of which the posterior tibiæ are densely ciliated. I am indebted to Dr. Klug for a specimen of the *ruficrus* ; and it is very different from the *amalthæa* and *spinipes*, Fabr. My specimens are workers, and I did not find the nest or ascertain the kind and importance of the honey they make. The generic name is almost too much like TRIGONIA of Conchology, but as the pronunciation differs it can remain.

2. *T. ligata*. ○ Blackish ; abdominal segments margined with ochreous.

Inhab. Mexico.

Body brownish-black, hairy : *antennæ* beneath, particularly the basal joint, anterior half of the anterior orbits, line distinguishing two lobes of the hypostoma and mouth, dull yellowish : *wings* slightly tinged with fuliginous, particularly towards the base ; nervures of the cubital cellules like those of the *bilineata*, Nob. but the first one is much more distinct : *tergum* shortly hairy ; posterior margins of the segments ochreous : *feet* dull honey-yellow ; tip of the posterior tibiæ and base of the first tarsal joint black.

Length about two fifths of an inch.

Of this I obtained but a single specimen, which is a worker. It is widely different from the preceding species, particularly in being hairy, and is much larger and of a somewhat different habit. I have carefully compared it with Latreille's descriptions and figures of MELIPONA



Say, Thomas. 1837. "Descriptions of new species of North American Hymenoptera and observations on some already described." *Boston journal of natural history* 1, 361–416.

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