

*Descriptions of new species of Coleopterous Insects inhabiting the United States.* By THOMAS SAY.  
Read January 18, 1825.

DYTISCUS, Linn. Latr.

1. *D. liberus*. Thorax obscure rufous; elytra brownish, glabrous, with three obsolete series of punctures.

*Body* impunctured, glabrous, oval: *head* very obscure rufous; *antennæ* and *palpi* pale: *thorax* obscure rufous, somewhat piceous, varied with dusky: *scutel* piceous: *elytra* dull testaceous, but having a fuscous appearance in consequence of very numerous, minute, blackish, confluent points; a narrow dull testaceous exterior margin, in which the blackish points are less numerous; three series of distant obsolete punctures: *beneath* piceous: *venter* varied with dull testaceous, and with about four spots of the same colour on each lateral margin.

Length less than  $\frac{1}{2}$  an inch.

I have never found this insect in Pennsylvania. I purchased several specimens, with a collection of insects, several years ago in New York, of which state it is therefore probably a native. The elytra of the female are not sulcated, but are precisely similar to those of the male.

I have recently received specimens from Dr. Harris of Massachusetts, who obtained them in that state.

CYPHON, *Fabr. Dej.*

1. *C. discoidus*. Testaceous; elytra with a common black disk.

Inhabits Arkansa.

*Body* oval, pale testaceous, with short yellowish hair: *head* and *thorax* impunctured: *eyes* fuscous: *scutel* triangular, with a slightly depressed margin: *elytra* with a large common black disk; numerous small punctures furnishing hairs: *wings* black.

Length  $\frac{1}{2}$  of an inch.

Taken on the banks of the river Arkansa by Mr. Thomas Nuttall.

2. *C. ovalis*. Blackish, or yellowish-brown, pubescent; thorax narrow, transverse.

*Body* rather short, oval, considerably depressed, blackish or yellowish brown; with short, numerous hairs: *antennæ* and *palpi* pale yellowish-brown: *thorax* transverse, narrow, not rounded on the anterior edge; punctures more distinct each side: *elytra* with numerous impressed punctures gradually becoming obsolete behind: *feet* pale yellowish-brown.

Length  $\frac{1}{10}$  of an inch.

More rounded and less sericeous than *C. griseus* Fab., and somewhat larger than *C. padi*, Gyl.

LAMPYRIS, *Linn. Latr.*

1. *L. ruficollis*. Blackish; antennæ and thorax rufous.

*Lampyris ruficollis*, Melsh. Catal.

*Head* black, polished, with short hairs; *eyes* rather small, prominent; *antennæ* and *palpi* dull rufous: *thorax* transversely oblong-quadrate, with short hairs, polished; anterior angles rounded; anterior margin not extended over the head; rufous, a little dusky before the middle: *elytra* blackish, with numerous punctures furnishing short hairs: *pectus* rufous on the lateral margin: *tibiæ* obscure rufous.

Length  $\frac{3}{8}$  of an inch.

The smallest North American species I have seen and very distinct by its characters from any of them. It does not appear to be endowed with the power of yielding light.

2. *L. angulata*. Blackish-brown; thorax yellowish, with a vitta and lateral margin, black; *elytra* margined with yellowish.

*Lampyris marginata*, Melsh. Catal.

*Body* dilated: *head* dull rosaceous, with an obscure frontal spot and vertex, blackish; *antennæ* simple, blackish, basal joint pale; *palpi* blackish: *thorax* obtusely somewhat angulated before; a dilated black vitta attenuated before, on each side of which towards the base is a large pale rosaceous space, and towards the tip each side a dull yellowish one; lateral margin blackish; a longitudinal elevated line; lateral margin a little excurved near the posterior angles; posterior edge arcuated each side: *scutel* black: *elytra* with a broad outer margin and narrow sutural margin and tip, yellowish: *abdomen*, terminal segments bright yellow.

Length  $\frac{2}{3}$  of an inch.

In general form, and colour of the thorax, it resembles the *corrusca* Linn. which, however, is destitute of coloured margins to the elytra, and its thorax is rounded before; it is very different from the *marginata* Linn. by its much more dilated form. I have one specimen which is  $\frac{3}{5}$  of an inch in length.

3. *L. centrata*. Thorax rosaceous, with a black centre; elytra margined with yellowish.

*Lampyris limbata*, Melsh. Catal.

Body oblong: head blackish; mouth dull rufous; antennæ simple, compressed and with the palpi, black: thorax rounded before, destitute of a carinated line; a black vitta, each side of which is a large rosaceous spot; lateral margin not excurved towards the posterior angles, yellowish; anterior margin dull testaceous-yellow; posterior edge rectilinear: clytra brownish-black, a narrow exterior, sutural and terminal margin, yellowish: abdomen, terminal segments bright yellow.

Length from  $\frac{2}{3}$  to  $\frac{9}{20}$  of an inch.

Var. a. Thoracic vitta abbreviated.

Very similar in its markings to the preceding, but is less dilated, the thorax is rounded before, with its posterior edge rectilinear, and the lateral margin is not blackish, &c.

4. *L. reticulata*. Elytra dusky, with longitudinal elevated lines, and transverse ones in the interstitial spaces.

Body rather slender: head yellowish; eyes black:

*thorax* wider than long, accurately rounded before; depressed margin wide at the posterior angles; pale yellowish, blackish on the disk; lateral and anterior margins a little recurved: *elytra* fuscous, with longitudinal elevated lines, and intermediate, transverse, somewhat irregular ones: *pectus* pale yellow each side: *postpectus* and *feet* pale yellow.

Length less than  $\frac{1}{2}$  of an inch.

A single specimen was brought from Arkansas by Mr. Thomas Nuttall. It may be readily distinguished from the other species of the United States by its reticulated *elytra*, and slender form.

5. *L. scintillans*. Light brown; *thorax* rosaceous, with a yellowish margin and central black spot; *elytra* with a yellowish margin.

*Lampyris pyralis*, Melsh. Catal.

*Body* oblong: *head* blackish, more or less tinged with rufous; *mouth* paler; *antennæ* brown: *thorax* regularly arcuated before and on each side; bright rosaceous, with a black central spot and impressed line; anterior and lateral margins pale yellowish; posterior edge very slightly arcuated, which extends equally from one angle to the other: *elytra* pale brown, with a narrow exterior, sutural and terminal margin.

Length nearly  $\frac{3}{10}$  of an inch.

This is our very abundant "Fire-fly," and is familiar to every inhabitant of this country. It is very like the *centrata* nob., but is much smaller and of a much paler colour. With the late Mr. Melsheimer, I have always hitherto considered this species to be the

*pyralis* of authors; but on a careful comparison with their descriptions, and particularly that of Olivier and his figure, I have, after much hesitation, concluded that it is distinct from that species. The *pyralis* is described to be equal in size to the *splendidula* and *noctiluca*, but our species is smaller; my chief reliance, however, is on the figure given by Olivier, which is beyond all doubt that of a widely different species from the present.

The female differs from the male in having the elytra imperfect, being not more than one-third the length of the abdomen; they are, however, margined like those of the male.

#### CANTHARIS, *Fabr. Dej.*

1. *C. tomentosa*. Rufous; elytra blackish, covered with short hairs; thorax truncated before.

*Cantharis tomentosa*, Melsh. Catal.

*Head* prominent, somewhat elongated and attenuated behind the eyes, glabrous, rufous: *antennæ* dusky, pale rufous at base, second and third joints equal: *thorax* rufous, subglabrous, with very minute hairs, polished; lateral margins narrow, more depressed behind; anterior margin truncated; a longitudinal acute impressed line: *scutel* pale rufous: *elytra* blackish, with dense minute hairs, and close set small punctures: *postpectus* dark plumbeous, scriceous, with very short prostrate hairs: *feet* pale rufous; *tibiæ* dusky, the anterior pair somewhat arcuated, so as to have the appearance of being a little dilated

on the inner side towards the tip: *abdomen* dark plumbeous on the disk, lateral margins and tip pale rufous.

Length  $\frac{9}{20}$  of an inch.

2. *C. rotundicollis*. Pale rufous; elytra plumbeous, sericeous; thorax rounded before.

*Head* rounded, sericeous on the front, towards the tip a little varied with black; *antennæ* hardly darker than the head, third joint longer than the second, but not twice as long; *mandibles* black at tip and on the inner margin: *thorax* pale rufous, polished, with short hairs, somewhat unequal; lateral margins nearly obsolete behind, depressed before; posterior margin abruptly depressed; anterior margin regularly rounded, lateral angles none: *scutel* pale rufous: *elytra* plumbeous and decidedly sericeous, varying with the incidence of the light: *beneath* pale rufous, sericeous: *anterior tibiæ* simple.

Length nearly  $\frac{3}{5}$  of an inch.

The colours of this species, as well as their distribution, are so very similar to those of the preceding, that it might be easily mistaken for the same, but it differs in the anterior rotundity of the thorax and the simplicity of the anterior tibiæ.

3. *C. ligata*. Pale ochreous; head with two lines and thorax with a vitta, black.

*Body* pale ochreous: *head* with two very obvious black lines, proceeding from the base of the antennæ and converging a little to the neck; *antennæ* black, second joint very small, half the length of the third,

which is not more than two-thirds the length of the fourth; *mouth* prominent, with a black line each side above; *palpi* long, terminal joint but little dilated: *thorax* quadrate, not transverse; lateral edges rectilinear; angles rounded, posterior ones more acutely so; a broad black vitta, which, however, does not affect the anterior and posterior raised edges: *elytra* immaculate: *wings* black: *tibiæ* and *tarsi* black, *nails* simple.

Length more than  $\frac{2}{3}$  of an inch.

The form of the palpi prove this species to be closely related to *MALTHINUS*. I found the specimen near the cantonment of Major Long's exploring party on the Missouri river.

4. *C. jactata*. Pale ochreous; thorax with an impressed line, dull rufous, yellowish each side.

*Body* pale ochreous; *head* yellowish before, above the antennæ black, polished; *antennæ* black beneath, and basal joint rufous; second joint half as long as the third, which is equal to the fourth: *thorax* transverse, rounded before; posterior angles acute; yellowish each side, on the disk rufous with a blackish line, and with an indented line extending from the middle to the posterior raised edge: *elytra* immaculate: *postpectus* blackish on each side: *tibiæ* and *tarsi* black above, *nails* with a prominent tooth: *venter* blackish in the middle.

Length more than  $\frac{2}{3}$  of an inch.

I found this species when with Major Long's party, near the Rocky Mountains.



5. *C. parallela*. Black; thorax yellow, with a black vitta.

*Head* black; *mandibles* honey-yellow; *antennæ* with the first joint yellowish beneath, second joint half the length of the third, which is equal to the fourth: *thorax* yellow, with a slight tinge of rufous, with a black equal vitta, which occupies not more than one-fourth or one-fifth of the surface; anterior portion rather narrower than the posterior margin; angles rounded: *elytra* black: *beneath* black: *pectus* yellow: *nails* armed with a tooth.

Length more than  $\frac{1}{4}$  of an inch.

This species was labelled in my cabinet with the name of *lineola*; but that name is pre-occupied. The black line of the thorax is well defined, and its sides are parallel. Occurs in June.

6. *C. laticornis*. Black; thorax with the lateral margin yellow; *antennæ* serrate.

*Body* black: *head* somewhat yellowish before; *antennæ* a little dilated and serrate on the inner side; second joint very small, less than one-third the length of the third joint, which is equal to the fourth: *thorax* a little narrower before, lateral narrow margins honey-yellow; middle of the lateral edge contracted; posterior angles subacute: *pectus* yellowish: *nails* simple, posterior pair with a slight tooth.

Length nearly  $\frac{3}{10}$  of an inch.

7. *C. scitula*. Dusky; thorax, margin of the *elytra* and feet yellow.

*Head* black, anterior half yellowish; *antennæ* with

the two basal joints beneath yellowish, second joint rather large, two-thirds the length of the third joint, which is equal to the fourth: *thorax* yellow, immaculate; anterior angles obtusely rounded, posterior angles acutely rounded: *elytra* dusky, with a pale yellowish margin, the sutural margin very broad, near the scutel occupying nearly half the width of the elytrum: *beneath* pale yellowish; *postpectus* and *venter* varied with dusky: *nails* armed with a tooth.

Length more than  $\frac{1}{2}$  of an inch.

8. C. ? *bidentata*. Thorax bidentate, yellow; antennæ serrate.

*Body* black: *antennæ* dilated, joints short, serrate; second joint very small, not dilated, half as long as the third, which is equal to the fourth: *thorax* yellow; near the posterior angle on each side are two prominent, approximate, parallel teeth.

Length more than  $\frac{3}{20}$  of an inch.

#### MALACIUS, Fabr.

1. *M. flavilabris*. Purplish-black; head at tip yellow.

*Body* black, with a slight tinge of purplish, particularly on the elytra: *head* polished deep black between and above the eyes, anterior to which it is bright yellow; *antennæ* beneath one half the length yellow: *anterior pairs of feet* yellow, *coxæ* and *thighs* with a dilated black line; *posterior feet* dusky.

Length to the tip of the elytra more than  $\frac{1}{10}$  of an inch.

2. *M. pusillus*. Purplish-black; feet, excepting the posterior tibiæ, yellow.

*Head* polished black; *antennæ* at base yellow; *mandibles* yellow, piecous at tip: *anterior pairs* of feet excepting the patella, yellow; *posterior pair* yellow, tibiæ and line on the thighs, black.

Length more than  $\frac{1}{20}$  of an inch.

I received the two insects above described from Dr. J. F. Melsheimer, under the names I have given to them.

3. *M. seineetus*. Pale yellowish; thoracic disk black.

*Head* yellow, black at base: *thorax* deep black on the disk, each side and basal edge yellow: *scutel* black; *elytra* pale yellowish, suture excepting towards the tip blackish: *pectus* yellow, with a blackish spot each side: *postpectus* yellow, lateral and posterior margins black: *abdomen* black, incisures and lateral edge yellow.

Length  $\frac{1}{10}$  of an inch.

A common species, remarkable for its pale colour.

4. *M. apicalis*. Black; thorax sanguineous; feet and tip of the elytra whitish.

*Head* black, polished; *antennæ* yellowish: *thorax* sanguineous, dusky on the anterior margin: *elytra* black, polished; a large, rounded, whitish, somewhat hyaline spot occupying the tip: *feet* and posterior part of the venter pale yellow or whitish.

Length less than  $\frac{1}{10}$  of an inch.

I obtained this species when with Major Long's party in Missouri.

5. *M. terminalis*. Blackish; terminal margin of the elytra pale testaceous.

*Body* black, polished, somewhat hairy; *antennæ* at base, *clypeus* on its anterior margin and *labrum* dull rufous: *elytra* with the apical margin only pale testaceous: *anterior thighs* beneath, piccous: *abdomen* with the segments margined with pale testaceous.

Length less than  $\frac{1}{8}$  of an inch: of a more robust form than the preceding insect.

#### XYLETINUS, Latr.

*X. sericeus*. Brown; thorax indented each side behind; elytra striate.

*Anobium sericeum*, Melsh. Catal.

*Body* cylindrical, with minute prostrate hairs: *head* granulated; *antennæ* rufous; *mouth* with golden yellow hair: *thorax* granulated; an obvious longitudinal impressed line, terminating behind in a short carina, which separates two impressed transverse spaces; lateral edge prominent: *elytra* with regular impressed striæ, in which are equal, large, impressed punctures.

Length  $\frac{1}{3}$  of an inch.

If the short Fabrician description of *serricornis* be accurate, there can be no doubt that the present species is distinct.

#### ANOBIMUM, Fabr.

1. *A. gibbosum*. Thorax much elevated, acute, in the middle.

*Anobium gibbosum*, Melsh. Catal.

*Body* very hairy, brown; hairs more or less ferruginous: *antennæ* nearly naked, reddish-brown: *thorax* much elevated in the middle, the tip of the prominent part bifid: *elytra* with irregular striæ of punctures; a few more prominent tufts of hairs; *humérus* prominent: *postpectus* dusky.

Length more than  $\frac{1}{4}$  of an inch.

The hairy surface, and prominéce of the thorax render this a striking species. It is not common.

2. *A. bi-striatum*. Black; feet dull rufous; *antennæ* pale yellowish.

*Thorax* a little compressed before, with a slight oblique groove each side, proceeding backward and becoming confluent on the posterior submargin; lateral margin impressed, edge rather prominent; anterior edge slightly reflected: *elytra* with obsolete series of impressed punctures; on the lateral margin are two deeply impressed striæ.

Length more than  $\frac{1}{20}$  of an inch.

A small but very distinct species.

3. *A. notatum*. Above blackish, varied with cinereous; thorax with the posterior angles subacute.

*Head* with cinereous hair on the front; *antennæ* glabrous, rufous, as long as the thorax: *thorax* blackish-brown, a longitudinal impressed line, in which is very short cinereous hair, on each side of which is a small obsolete cinereous spot; base with a large cinereous patch; posterior angles rather prominent, subacute: *scutel* cinereous: *elytra* striate, punctured,

with short cinereous lines in the interstitial spaces, forming a band beyond the middle, and at base generally enclosing a black spot: *beneath* cinereous; *feet* blackish-rufous.

Length more than  $\frac{3}{20}$  of an inch.

This pretty species is not at all common.

4. *A. tenuestriatum*. Reddish-brown; sericeous; elytra with filiform striæ.

*Anobium villosum*, Melsh. Catal.

*Antennæ* moderate, the terminal joints not unusually elongated, the length of each not being equal to three times its breadth: *thorax* not remarkably convex, a little indented transversely each side on the posterior margin, but not carinated on the posterior middle; before the middle on each side, in a particular light, is a rounded spot of the general yellowish sericeous hair: *elytra* with very slender, not deeply impressed, punctured striæ.

Length less than  $\frac{3}{20}$  of an inch.

A very common species; it frequently occurs in our Museums. It is also very destructive to Iris root of the shops, and to various other farinaceous substances. It has some resemblance to the *A. striatum* Fabr. of Europe, but the terminal joints of the antennæ are less elongated, the thorax is less contracted before, and the striæ of the elytra are much narrower. The name given by Mr. Melsheimer is pre-occupied.

TILLUS, *Fabr. Latr.*

1. *T. bicolor*. Black; thorax rufous, anterior and posterior margins black:

*Body hairy: head black: antennæ dusky, pale rufous at base: mouth pale rufous: thorax contracted behind the middle, and a little dilated at the middle; rufous, anterior and posterior margins black: elytra black, with regular striæ of punctures: pectus rufous, anterior and posterior margins black: postpectus piceous: feet yellowish, knees and tarsi dusky.*

Length more than  $\frac{3}{10}$  of an inch.

Resembles *T. elongatus*, Linn. of Europe, but the middle of the pectus is not black, and the anterior and posterior margins of the thorax are black. Mr. Nuttall brought me a specimen of this insect from Arkansa, and Dr. J. F. Melsheimer sent me one under the name which I have adopted.

2. *T. undulatus*. Elytra pale testaceous, two undulated bands and tip black.

*Notoxus undulatus*, Melsh. Catal.

*Body long, slender: head black: eyes nearly entire: antennæ pale rufous, nearly filiform, slightly larger towards the tip, and hardly serrated: palpi pale rufous: thorax blackish, cylindrical, transversely indented on the anterior submargin, a little dilated on the middle of the lateral margin, and narrower behind: elytra with regular striæ of punctures, pale testaceous; basal margin blackish; an undulated band before the middle, another behind, the middle and tip black:*

*beneath* rufous, *stethidium* sometimes varied with blackish: *feet* pale testaceous; *nails* pectinated.

Length nearly  $\frac{2}{3}$  of an inch.

This insect has the habit of a *NOTOXUS*, but it cannot be congeneric with the *mollis*, owing to the conformation of the first joint of the tarsi, which agrees with that of the present genus. The antennæ are much less serrated than those of *elongatus* Fabr. and are proportionally longer, the nails also are pectinated.

#### CLERUS, *Fabr. Dej.*

1. *C. trifasciatus*. Rufous; elytra with a broad band on the middle, and tip black, an intermediate cinereous band.

*Body* hairy, bright rufous: *head* at tip dusky: *antennæ* black, terminal joint rufous at tip: *thorax* short, the transverse indentation rather deep: *elytra* rufous and granulated at base; on the middle a much dilated deep black band, undulated on its anterior and posterior edges, and with a narrow cinereous line at its anterior edge; behind this black band is a pale rufous band so covered by cinereous hair as to appear entirely cinereous; tip deep black: *beneath* rufous: *feet* hairy, black.

Length more than  $\frac{9}{20}$  of an inch.

This insect has considerable resemblance to the *ichneumoneus* Fabr. and *rufus* Oliv. but the black band occupies the situation of the rufous band of those insects, behind this band those two species have



a black band, but in our insect this is rufo-cinereous; the tip also is deep black, whereas in the above mentioned species, it is either spotted or margined with cinereous.

2. *C. pallipennis*. Blackish; elytra pale testaceous, bifasciate with black.

*Body* greenish-black: *antennæ* and *palpi* pale rufous, terminal joint of the former a little dusky: *thorax* widest before the middle, contracted behind; an indented transverse line on the anterior submargin, and a less conspicuous one on the posterior margin: *elytra* very pale testaceous, with a black band on the middle, and another at tip: *feet* pale testaceous, posterior pair rather long.

Length less than  $\frac{1}{5}$  of an inch.

Similar in form to the *humeralis* nobis.

3. *C. unifasciatus*. Blackish; elytra with a white band on the middle.

*Body* black, tinged with greenish: *antennæ* and *palpi* pale rufous: *thorax* widest before the middle, so as to resemble a tubercle on each side: *elytra* with a very narrow, pure white band on the middle: *feet* blackish; *tarsi* pale.

Length rather more than  $\frac{1}{10}$  of an inch.

Of a form similar to the preceding.

#### ENOPLIUM, Latr.

*E. dislocatum*. Black; elytra with a whitish band and spots.

*Body* punctured, black, hairy: *head* on the anterior

part reddish-yellow; *antennæ* brownish, yellowish at base, terminal joints not deeply serrated, somewhat rounded: *thorax* subcylindric: *elytra* with an oblique line from the humerus, having a spot at its inner tip, an angulated band beyond the middle, and a spot near the tip, whitish-yellow: *feet* pale.

Length from  $\frac{3}{20}$  to nearly  $\frac{1}{2}$  of an inch.

Var. a. Spot at tip of the *elytra* obsolete or wanting.

Although the *antennæ* differ considerably from the characteristic form of this genus, yet as they have three large and separated joints at tip, and the *palpi* are all filiform, with five distinct joints to the *tarsi*, I have thought best to place the present insect in the genus *ENOPLIUM*.

### NECROPHORUS, *Fabr.*

*N. orbicollis.* Thorax orbicular; *elytra* with a rufous band before the middle, and spot at tip.

*Body* deep black, above polished: *clypeus* before, with a large, square, rufous spot: *antennæ* black; *clavum*, excepting its first joint, light ferruginous: *thorax* orbicular, margined all round, excepting on the anterior portion, which is truncated; the impressed lines are well defined, and the longitudinal one extends to the base undiminished: *elytra* minutely punctured, and with two obsolete nervures; the anterior band is rather before the middle, but does not extend to the scutel; it is undulated, and does not reach the suture; the spot at tip is somewhat

reniform or trilobate, and does not reach the edge or suture: *beneath* piceous: *feet* above black: *postpectus* yellow sericeous.

Length more than  $\frac{9}{10}$  of an inch.

It differs from *marginatus* Fabr. particularly in the rounded form of the thorax, which in that species is much narrowed behind; the elytra of *marginatus* have a rufous exterior margin, the basal band is not interrupted by the suture, and embraces the tip of the scutel; there is also a band at tip. The colours of the antennæ are arranged exactly as in *vespillo* Fabr. but the thorax is much more accurately rounded, and the elytral markings are different. The rotundity of the thorax is more complete than even that of *mortuorum* Fabr. The species occurs in the N. W. Territory: it is very rare in the middle states. I have received a specimen from Dr. T. W. Harris of Milton, Massachusetts.

#### NITIDULA, *Fabr. Dej.*

1. N. 6-*maculata*. Blackish, with a broad pale rufous margin and elytral spots.

*Nitidula 6-maculata*, Melsh. Catal.

*Body* blackish-brown, or deep piceous: *antennæ* pale rufous: *thorax* with a dilated pale rufous margin: *elytra* with a dilated pale rufous margin; an angulated line in the form of a U at base, a small spot on the submargin; sometimes connected with a line which runs towards the tip, and becomes confluent with the lateral margin; an angulated or rounded spot

behind the middle, rufous: *beneath* piceous: *feet* paler.

Length more than  $\frac{1}{4}$  of an inch.

The rufous angular line at the base of each elytrum, in the form of the letter U, is a striking character.

2. *N. ziczac*. Black-brown; elytra with an angulated band.

*Body* dark brown or blackish, with numerous prostrate hairs: *antennæ* piceous, two basal joints rufous: *thorax* with a rufo-cinereous lateral margin: *elytra* without striæ, an obsolete rufo-cinereous margin; on each is one or two obsolete rufous spots at base, and a very obvious ochreous spot on the middle, in the form of a V, the angle pointing towards the base: *beneath* blackish-piceous: *feet* and lateral margin of the *pectus*, rufous.

Length more than  $\frac{3}{20}$  of an inch.

This species was sent me by Dr. J. F. Melsheimer, who remarked, that "it resembles the European *NITIDULA undulata* very much, but differs in having the undula or lunule nearer to the apex of the elytra." With that species I am entirely unacquainted.

3. *N. undulata*. Yellowish-fulvous, varied with fuscous; an undulated, common immaculate space behind the middle of the elytra.

*Nitidula undulata*, Melsh. Catal.

*Body* above fulvous, more or less tinged with yellowish: *head* varied with fuscous, sometimes nearly all fuscous, with the exception of the anterior portion,

and the antennæ: *thorax* literate with fuscous, the broad lateral margins immaculate, with the exception of a single spot on the middle: *elytra* irregularly marked with small fuscous spots; a large, common, transverse, undulated, immaculate space behind the middle; slightly striated; striæ not obviously punctured, but furnished with very short recurved hairs; exterior margin immaculate: *beneath* rufous: *feet* and *tail* paler.

Length about  $\frac{1}{2}$  of an inch.

The European analogue of this insect is certainly the *N. varia* Fabr., but the spots of the elytra of that insect seem to be more distinctly arranged in abbreviated longitudinal lines, and the common immaculate space of the elytra appears to me to be less obvious, and less acutely undulated. I know of no species in this country, for which it can be readily mistaken. It may possibly prove to be a variety of the *varia*.

4. *N. rufa*. Dull rufous, immaculate; elytra somewhat truncated at tip.

*Nitidula rufa*, Melsh. Catal.

*Body* obscure rufous, with the margin a little paler: *thorax* with the lateral edge a little eurved inwards, so that the greatest breadth is anterior to the posterior angles: *elytra* destitute of any appearance of spots, lines or striæ, but on the sutural submargin is a longitudinal hardly elevated undulation; tip not reaching the tip of the tergum, truncated, or very obtusely rounded: *feet* and terminal segment of the *venter*, paler.

Length less than  $\frac{3}{20}$  of an inch.

5. *N. geminata*. Reddish-brown; elytra, each with 4 ochreous spots, placed 2, 2.

*Body* obscure reddish-brown, a little hairy: *thorax* widest at the basal angles; lateral margin rufous: *elytra* striate with elevated, acute lines, and with intervening regularly concave grooves; tip rounded, concealing the extremity of the abdomen; on each elytrum are four ochreous spots, of which one is on the humerus; another near the scutel, elongated, approaching the suture near the tip, and sometimes common; and two other rounded ones beyond the middle, placed transversely, equal; exterior margin obscure ochreous.

Length more than  $\frac{1}{10}$  of an inch.

The general colour of the elytra is sometimes so similar to that of the spots, that the latter are hardly observable.

6. *N. 8-maculata*. Dark reddish-brown; elytra with four rufous spots, placed 1, 2, 1.

*Body* very obscure reddish-brown: *front* with two indentations: *thorax* rather large; lateral margin paler: *elytra* striate with slightly elevated lines; a rufous oblong spot at the middle of the base, a rounded one behind the humerus, another on the sutural margin near the middle, and a fourth a little behind the middle, oval, oblique; tip rounded, concealing the tip of the abdomen, and rufous.

Length more than  $\frac{1}{10}$  of an inch.

The lines of the elytra are more obtuse than those

of the preceding species, the interstitial spaces are not so regularly grooved, and the spots are located differently. I found it in plenty, when on the Arkansas river with Major Long's party.

7. *N. unilineata*. Reddish-brown; thorax with a line and elytra, each with about five spots, rufous.

*Body* obscure reddish-brown: *thorax* with the lateral margins, and longitudinal dorsal line rufous: *elytra* destitute of striæ; a large oblong spot at base, near the scutel, a rounded one on the humerus, another near the middle; an obsolete longitudinal line on the middle of the exterior submargin, a rounded spot on the subsutural margin, rather behind the middle, another near the tip, and exterior and terminal margin, rufous; tip very obtusely rounded, almost truncate, not covering the termination of the abdomen.

Length more than  $\frac{1}{10}$  of an inch.

For this species I am indebted to Dr. J. F. Melsheimer.

8. *N. semitecta*. Piceous; elytra abbreviated, rufous, piceous at tip.

*Nitidula hæmiptera*, Melsh. Catal.

*Body* dark rufo-piceous, punctured: *head* with an indentation each side above the antennæ; *antennæ* rufous: *clava* oval, dusky: *elytra* about half the length of the abdomen, truncated, yellowish-rufous, or testaceous; exterior margin and tip rufo-piceous.

Length nearly  $\frac{3}{20}$  of an inch.

The name given by Mr. Melsheimer is preoccupied.

9. *N. unicolor*. Piceous, immaculate; elytra abbreviated, slightly sericeous.

*Body* rufo-piceous: *head* with dense, confluent, small punctures: *thorax* with small confluent punctures: *elytra* darker, about half the length of the abdomen, a little sericeous in a particular light: *beneath* somewhat paler.

Length less than  $\frac{1}{2}$  of an inch.

I have found this species under loose bark of the yellow pine, in October.

10. *N. brachyptera*. Piceous, immaculate; elytra two-thirds the length of the abdomen.

*Nitidula brachyptera*, Melsh. Catal.

*Body* entirely piceous: *head* with an impressed, transverse line between the antennæ; *antennæ* rufous: *thorax*, posterior angles rounded: *elytra* abruptly truncate at tip, rather more than two-thirds the length of the abdomen: *feet* rufous.

Length less than  $\frac{1}{10}$  of an inch.

The smallest species I have seen.

#### SCAPHISOMA, Leach.

*S. convexa*. Highly polished, black; antennæ, mouth, feet and tail piceous.

*Scaphidium convexum*. Melsh. Catal.

*Body* black, very highly polished; *head* piceous, paler before, with a deeply impressed transverse arcuated line between the eyes: *thorax* with minute, rather distant punctures: *elytra*, punctures, excepting towards the base, more obvious than those of the



thorax; terminal and posterior lateral margin obscurely piceous: *feet*, *abdominal incisures* and *tail* piceous.

Length  $\frac{1}{10}$  of an inch.

I received this species from Dr. J. F. Melsheimer, under the denomination I have adopted. From all I can learn, it seems to be very closely allied to the *S. agarica* of authors, of which, in fact, it may possibly prove to be a variety.

#### CATOPS *Fabr.*

1. *C. opacus*. Brownish-black, opaque; terminal and two basal joints of the antennæ rufous.

*Ptomophagus opaeus*, Melsh. Catal.

*Body* sericeous, with minute hairs, which, in a particular light, are pale ferruginous: *antennæ* with the seventh joint largest, the eighth smallest: *elytra* not striated, but with a subsutural impressed line, and very numerous minute punctures, furnishing minute hairs: *feet* blackish-piceous.

Length less than  $\frac{1}{3}$  of an inch.

Occurs frequently in a species of HYDNUM.

2. *C. simplex*. Pale brownish, sericeous; terminal and five basal joints of the antennæ rufous.

Inhabits Arkansa.

*Head* dark ferruginous; *antennæ* dark ferruginous, the five basal joints and terminal joint rufous; *palpi* and mandibles ferruginous: *thorax* rather paler than the head, quadrate, a little transverse; sides regularly arcuated; posterior margin not wider than the an-

terior; posterior edge rectilinear; angles rounded: *elytra* paler than the thorax, light brownish, with obsolete striæ, more obvious towards the tip; very numerous minute punctures, furnishing minute hairs: *beneath* piceous: *feet* rufous; *thighs* yellowish beneath.

Length nearly  $\frac{3}{20}$  of an inch.

This species occurred on dung.

#### ATTAGENUS, Latr.

*A. cylindricornis*. Reddish-brown; antennæ and feet pale rufous.

*Dermestes cylindricornis*, Melsh. Catal.

*Body* reddish-brown, with very numerous, short, ferruginous, somewhat rigid, sericeous hairs: *head* blackish, with an obscure rufous frontal spot; *antennæ* pale rufous, terminal joint dark brown; *mouth* rufous: *thorax* nearly as dark as the head: *elytra* paler than the thorax: *beneath* piceous-black: *feet* pale rufous.

Length ♂  $\frac{3}{20}$  ♀ less than  $\frac{1}{3}$  of an inch.

Var. a. Smaller.

*Dermestes floricola*, Melsh. Catal.

Var. b. *Elytra* almost rufous.

*Dermestes obscurus*, Melsh. Catal.

This species is common.

#### MEGATOMA, Herbst, Latr.

*M. ornata*. Blackish; *elytra* undulated with rufous.

*Dermestes undulatus*, Melsh. Catal.

Body with short, numerous hairs; *antennæ* pale rufous, terminal joint dusky: *thorax* somewhat variegated with irregular lines of rufo-cinereous hairs: *elytra* with one half its surface occupied with rufous spots or irregular lines: *beneath* blackish-brown.

Length  $\frac{3}{20}$  of an inch.

The name *undulatus* is pre-occupied by a species described by Herbst. The short hair with which the body is furnished, is deciduous, particularly that of the thorax.

#### BYRRHIUS, Latr.

*B. alternatus*. Blackish-brassy; *elytra* with alternate darker lines.

*Head* and *thorax* minutely punctured, black brassy; with short, prostrate hair; *antennæ* black; the thorax with a slender, impunctured, dorsal line: *elytra* black, very slightly tinged with brassy; *striæ* very narrow, well impressed, and with very small punctures; *interstitial lines* flat, alternately more obviously polished; very minute hairs: *beneath* blackish, with small very regular punctures: *feet* blackish-piceous.

Length less than  $\frac{1}{2}$  of an inch.

I am indebted to Mr. Charles Pickering, of Salem, Massachusetts, for this species. I have never before met with it.

#### ELMIS, Latr.

1. *E. cinetus*. Blackish; *elytra* with a large rufous, arcuated line and spot at tip.

*Parnas einctus*. Melsh. Catal.

*Head* black; *antennæ* and *palpi* yellowish, dusky on the terminal joint; *thorax* black, anterior and posterior margins pale rufous; a transverse slight elevation each side of the middle, with a corresponding indentation before: *elytra* convex, black, with a large arcuated pale rufous line, extending nearly straight from the humerus obliquely to near the sutural middle; thence it curves outwards and backwards towards the margin; towards the tip, a dilated longitudinal pale rufous line: *feet* elongated; *tibiæ* and base of the *thigh*, pale rufous.

Length rather more than  $\frac{1}{10}$  of an inch.

The *antennæ* are very obviously eleven-jointed, and the terminal joints are slightly enlarged.

2. *E. 4-notatus*. Black; *antennæ*, two spots on each elytrum, and *tarsi* rufous.

*Body* black: *antennæ* entirely rufous; *thorax* simple: *elytra* with *striæ* of punctures; a large rounded rufous spot at the base of each, chiefly on the humerus, and a rufous elongated, obsolete one on the posterior declivity: *tarsi* rufous.

Length less than  $\frac{1}{10}$  of an inch.

#### MACRONYCHUS, Mull.

*M. glabratus*. Blackish; feet slender; *antennæ* pale rufous.

*Macronychus glabratus*, Knoch, J. F. Melsheimer:

*Body* entirely blackish; slightly hairy: *thorax*

with a slightly elevated line each side at base, hardly extending to the middle: *elytra* with series of large punctures not very deeply impressed; a more distinct series of hairs near the suture; an elevated, crenate, submarginal line extends from the humerus, but is abbreviated before the tip: *feet* elongated.

Length rather more than  $\frac{1}{10}$  of an inch.

HYDROPHILUS, *Linn. Fabr.*

1. *H. rotundus*. Very convex, oval; *elytra* destitute of striæ, excepting the sutural one.

*Body* black, polished, with very numerous, minute, regular punctures: *palpi* piceous: *thorax* with the lateral margin piceous; this colour extends a short distance on the basal margin: *elytra* very obscurely piceous on the lateral margin, without any appearance of striæ or large impressed punctures; the sutural striæ very obvious, not reaching the base, generally hardly surpassing the middle.

Length  $\frac{3}{10}$  of an inch.

For this species I am indebted to Dr. J. F. Melshemer, who informed me that it inhabits "marshy places in forests near the first ridge of the South Mountain, in Adams County, Pennsylvania." I also found it in Georgia. It resembles *globosus* Nob. but is less convex, and is destitute of striæ of the *elytra*.

2. *H. striatus*. Dull testaceous; head dark greenish; *elytra* striate, and with small remote black spots.

*Hydrophilus striatus*, Melsh. Catal.

*Head* dark greenish, with a cupreous gloss: *thorax* tinged with rufous, with a double, longitudinal abbreviated line: *scutellum* black: *elytra* with acute, closely punctured striæ; a small spot on the humerus, and two others arranged in a very oblique series, with respect to the first; then a transverse, much unclashed series of five or six small spots; then two small spots near the sutural tip, black: *beneath* black: *feet* pale rufous.

Length more than  $\frac{1}{2}$  of an inch.

About equal in size, and closely allied to the *peregrinus* of Herbst, but that species is represented to be altogether destitute of the black spots on the *elytra*, and of the double thoracic line.

3. *H. exiguus*. Pale testaceous; *elytra* with punctured striæ.

*Body* with numerous small punctures: *head* with the transverse line very distinct: *elytra* rather larger than the thorax, with the striæ rather obtuse, punctured: *beneath* slightly tinged with rufous.

Length  $\frac{1}{10}$  of an inch.

This small species I obtained on the sea shore of Clinchcoteage Island.

4. *H. subcupreus*. Black, obsolete tinged with cupreous; *elytra* destitute of striæ, except the sutural one.

*Hydrophilus minutus*, Melsh. Catal.

*Body* oval, punctured, black, with a slight cupreous reflection: *thorax* obsolete piceous on the lateral margin: *elytra* with rather larger punctures than

the of the head and thorax; striæ none, excepting the natural one, which is obsolete in the middle, and do not approach the base; exterior margin and tip obsolete piceous: *beneath* blackish-piceous: *feet* piceous.

Length much less than  $\frac{1}{10}$  of an inch.

Closely allied to the genus SPHERIDIUM. It is much smaller than the *minutus* of Herbst.

### SPHERIDIUM, *Fabr.*

1. *S. prætextatum*. Black; elytra with a yellowish lateral and terminal margin.

*Sphæridium prætextatum*, Melsh. Catal.

*Body* oval, black, polished, punctured: *palpi* which: *antennæ* piceous: *elytra* striate; striæ very distinct, impressed, punctured; interstitial spaces punctured; a broad pale yellowish outer margin, commencing at the anterior angle, and gradually dilating into the tip: *feet* piceous.

Length  $\frac{3}{20}$  of an inch.

2. *S. nigricolle*. Black; elytra and feet pale testaceous.

*Sphæridium glabratum*, Melsh. Catal.

*Body* oval, polished, punctured: *head* black: *antennæ* piceous; *capitulum* dull rufous: *palpi* piceous: *thorax* black: *elytra* testaceous: *striæ* slender, not deeply impressed, punctured; terminal margin obsolete paler, interstitial lines punctured: *feet* pale testaceous.

Length more than  $\frac{1}{10}$  of an inch.

Var. a: Elytra and feet dark reddish-brown, the former with a very obvious pale spot at tip, somewhat similar to the *unistriatum* of Beauvois, but much smaller than he represents that insect to be.

3. *S. occallatum*. Black; elytra with a pale tip; feet piceous.

*Body* oval, black, polished, punctured: *palpi* piceous: *antennæ* blackish-piceous: *elytra* with very distinctly punctured, impressed striæ; a large dull yellowish spot at tip, rounded on its anterior termination, and extending further on the lateral margin than on the suture: *beneath* blackish: *feet* piceous.

Length much less than  $\frac{1}{10}$  of an inch.

Found in putrescent animal substances at Senipuxten. It is about the size of *apicialis nobis*, which it much resembles, but it is distinguishable by its black colour, and firmer consistence.

#### APHODIUS, Illig. Fabr.

*A. vittatus*. Black; clypeus trituberculate; elytra with a dull rufous vitta.

*Scarabeus vittatus*, Melsh Catal.

*Head* minutely punctured; three tubercles placed in a transverse line, the intermediate one largest, and the lateral ones elongated in a line to the eye; tip of the clypeus slightly and very obtusely emarginated: *thorax* with numerous small punctures: *elytra* with narrow punctured striæ; the interstitial spaces flat; a dull rufous vitta including the humerus at base,



extending somewhat obliquely towards the apex of the elytrum, and contracted in the middle: *feet* obscure rufous.

Length more than  $\frac{3}{20}$  of an inch.

This insect is very like the *terminalis* nobis, but it may be distinguished by the vitta of the elytra, and the much less profoundly emarginated clypeus.

### Trox, Fabr.

1. *T. striatulus*. Elytra with elevated acute lines, and intermediate regular grooves.

*Trox striatulus*, Melsh. Catal.

*Head* blackish-brown, with confluent punctures; tip widely emarginate: *thorax* blackish-brown, with dilated confluent punctures; a slightly impressed longitudinal groove; sides very much decurved: *elytra* light brown, with numerous profound grooves, which are separated by elevated acute lines.

Length  $\frac{3}{20}$  of an inch.

The smallest species known to inhabit the United States, and so perfectly distinct in the striking character of its grooved elytra, as not to require any comparative observations.

2. *T. terrestris*. Elytra with raised obtuse lines, on which are round fascicles of short hairs.

*Trox terrestris*, Melsh. Catal.

*Body* blackish-brown: *head* with two small tubercles on the front: *thorax* with the dorsal groove very distinct, contracted and almost obliterated in its middle, so as to be nearly interrupted into two, on each

side of the posterior portion of it is another groove equally profound; posterior angles obliquely truncated: *elytra* with the fascicles of yellow hair, on the elevated lines, rounded and not oblong, equal; interstitial spaces with small tubercles:

Length nearly  $\frac{1}{4}$  of an inch.

This insect is about equal in size to the *arenarius* Fabr., from which it differs in having no capillary lines in the interstitial spaces of the *elytra*. The *variolatus* of Melsh. Catal. if not altogether the same as the *arenarius* of Europe, is certainly most closely allied to it.

3. T. *porcatus*. *Elytra* with elevated interrupted lines and numerous transverse punctures on the interstitial spaces.

*Trox porcatus*, Melsh. Catal.

*Body* brownish-black: *head* somewhat unequal, with a more distinct frontal groove: *thorax* with short brownish hair; a deep and well defined longitudinal groove, sides unequal; lateral edge entire; posterior angles projecting: *elytra* with regular series of interrupted hairy lines, the series alternately smaller; interstitial spaces with dilated transverse impressed distinct punctures.

Length nearly  $\frac{9}{20}$  of an inch.

A little larger than *canaliculatus* nobis, which it resembles, but it differs in having the transverse punctures of the *elytra*; *capillaris* nobis is smaller than the above-mentioned species, and may be distinguished from the present by the capillary lines of its *elytra*.

SCARABÆUS, *Latr.*

*S. relictus.* Head with an elevated transverse line, interrupted in the middle; clypeus at tip elevated and bidentate.

*Body* brownish-black: *head* with a transverse elevated line between the origin of the antennæ, interrupted in the middle, and most prominent near the interrupted part; tip of the clypeus with two reflected, acute denticulations: *thorax* with rather sparse punctures: *elytra* punctured, and with three double series of punctures, converging towards the apical angle; the second and third double series do not reach the angle, a fourth double series is on the exterior submargin, but is not so distinct as the others: *beneath* piceous: *pectus* and *postpectus* hairy: *feet* above blackish: *venter* blackish.

Length more than  $\frac{4}{5}$  of an inch.

It may be compared with the *S. punctatus* Fabr. of Southern Europe, but is of a more slender form, and is otherwise distinguished by the armature of the anterior termination of the head. I have found specimens in Pennsylvania. It varies in having the reflected tip of the head emarginate, and not deeply divided into two teeth. I have received a specimen from Dr. T. W. Harris, of Milton, Massachusetts.

MELOLONTHA, *Fabr.*

1. *M. balia.* Chesnut-brown; head and thorax blackish-brown; the former and the inferior surface of the stethidium hairy.

*Body* cylindrical; *head* blackish, with small but dense and confluent punctures; *front*, below the vertex, and above the transverse impressed line, with a band of rather long dense ochreous hairs, terminating at the eyes; *clypeus* deeply and widely emarginated, the edge reflected, and beneath the edge is a fringe of recurved hairs: *thorax* rather prominent on the middle of the lateral edge; nearly as dark coloured as the head; punctures numerous, irregularly disposed: *scutel* with a few punctures, and with reflected prostrate yellow hairs at its base, partly covered by the base of the thorax: *clytra* confluent punctured, chesnut-brown: *stethidium* beneath, with dense pale yellow hair: *nails* with a prominent tooth on the middle, and an angle at base.

Var. a. Thorax rufo-castaneous.

Length more than  $\frac{1\frac{3}{8}}$  of an inch.

This common species was sent to me by Dr. J. F. Melsheimer, under the name which I have adopted. The following are his remarks: "it differs from *M. quercina* in being more cylindrical, from *M. quercus*, in the absence of the "rore cœrulescenti," &c. and from *M. hirticula*, in the want of the triple series of fuscous erect hair on each elytrum. In its proper season this insect may be found in vast numbers under the deciduous leaves of forests; during the night the millions of wings that fan the air, produce a loud humming sound, not unlike that emitted by the enraged occupants of a humble-bee's nest."

It is much smaller than the *quercina*, smaller than the *hirticula*, and larger than *quercus*.

2. *M. ephilida*. Ochraceous; thorax somewhat rufous; head blackish; clypeus nearly entire.

*Head* blackish, with sometimes an obscure chestnut disk; very densely and confluent punctured; punctures small: *clypeus*, anterior termination widely, but slightly truncated, not at all emarginated, the edge reflected: *thorax* pale rufo-castaneous, polished; punctures irregularly scattered; middle of the lateral edge rather prominent: *scutel* with a very few punctures, and with reflected prostrate hairs at its base, partly covered by the base of the thorax: *elytra* pale ochraceous, densely punctured: *stethidium* beneath, with pale yellow, dense hair: *nails* with a strong prominent tooth on the middle.

Var. a. Scutel entirely destitute of punctures.

Length  $\frac{3}{8}$  of an inch.

This species closely resembles the preceding, but it has a more robust form, it is somewhat shorter, destitute of the frontal band of hair, and is of a paler colour. I adopt the name given to it by Dr. J. F. Melsheimer, who remarked in a letter to me, that "it approaches nearest to a *MELOLONTHA* described by Professor Knoch under the name of *angularis*, but as the thoracic angles of that insect are covered with a substance resembling Mother of Pearl, or, as the Professor expresses it, "einer farbe die völliig mit der kalkerde überein kömt; welche von den Mineralogen Schauererde genannt wird," we cannot connect with propriety, our insect with the *M. angularis*." In colour it closely resembles the *longitarsa nobis* (in Long's second expedition) but that

insect is somewhat smaller, with an emarginate clypeus and much longer tarsi.

3. *M. moesta*. Elytra punctured, and with two double series of punctures; clypeus slightly emarginated.

*Melolontha moesta*, Knoch in Melsh. Catal.

Head with very dense profound punctures; transverse line between the eyes rather deeply indented: *clypeus* with the margin recurved, the tip very obtusely, but not very profoundly emarginated: *thorax* with scattered profound punctures; lateral edge obtusely projecting a little, rather behind its middle: *elytra* with numerous punctures, and with two regular double series of punctures on the disk, one or two on the exterior submargin, and a single subsutural series: *beneath* glabrous: *nails* with a robust prominent obliquely truncated tooth beyond the middle.

Length about  $\frac{1}{2}$  an inch.

The colour of young specimens is rather pale chestnut, but, as is the fact with respect to many species, as they grow older, the colour becomes darker, and it is not uncommon to find individuals that are almost black.

4. *M. sordida*. Covered with short dense hair.

*Melolontha sordida*, Melsh. Catal.

Superior surface entirely covered by short close set hairs, which are longest on the head, thorax, and base of the elytra; the punctures are also dense and confluent: *clypeus* with the edge reflected; tip widely emarginated: *thorax*, lateral edge reflected, and

a little dilated rather behind the middle: *elytra* having the subsutural line obliterated: *beneath* nearly glabrous: *nails* with an obliquely truncated, very robust tooth beyond the middle.

Length about  $\frac{2}{3}$  of an inch.

The colour varies considerably. I have a specimen that is of a pale chesnut colour, and others that are dark dull brown. I have found this species in May; and at Chinquoteage Island, many individuals occurred under yellow-pine trees in company with the preceding species in October. It is very well distinguished from other species by its equally distributed hairy covering.

5. *M. frondicola*. Elytra punctured, and with two double series of punctures; clypeus entire.

*Melolontha frondicola*, Knoch, Melsh. Catal.

*Body* pale chesnut: *head* dusky, with large confluent punctures; transverse line angulated in the middle; *clypeus* very obtusely rounded at tip, almost truncated, the edge reflected: *thorax* with rather large, very numerous punctures, more dense and confluent on the sides; lateral edge a little obtusely dilated at the middle: *elytra* with numerous punctures, and with two double striæ of punctures on the disk, one or two on the exterior submargin, and a single subsutural one: *beneath* glabrous: *nails* with a remarkably robust broad compressed truncated tooth.

Length  $\frac{3}{10}$  of an inch.

Although this species is very similar in some respects to the *moesta*, yet it is so much smaller as to

be readily distinguished; the clypeus also of that species is emarginated, and the punctured series are much more regular than those of the present species, in which the punctures of the series are often confluent with the punctures of the interstitial lines. As regards size, it is but little smaller than *vespertina*, which has numerous indented striæ on the elytra.

6. *M. unifasciata*. Thorax very dark green; elytra testaceous, with a black abbreviated band or spot on the middle.

*Head* densely punctured, particularly before, very dark greenish on the vertex, and tinged with cupreous before: *clypeus* entire at tip, the edge reflected: *thorax* blackish-green, rather sparsely punctured, punctures small, lateral edge a little dilated rather before the middle: *scutel* dark green, sometimes tinged with cupreous, with a few punctures: *elytra* pale testaceous, in a particular light having a slight metallic tinge, each with seven or eight regular striæ of punctures, and a few scattered ones near the suture; margin and suture dusky; on the middle is a blackish band, which is more or less interrupted and undulated: *beneath* black, slightly tinged with green and cupreous: *stethidium* a little hairy: *acetabulum* with an indented longitudinal line: *nails*, of the anterior and intermediate feet, having one nail simple, and the other bifid at tip, of the posterior feet simple.

Length  $\frac{2}{3}$  of an inch.

Var. a. Elytra, excepting at base, black.

This species is very closely allied to *varians* Fabr., but it may be distinguished by its much larger size.



The *varians* is not uncommon in Pennsylvania, but the present is a Southern species. Dr. J. F. Melsheimer gave it the name of *vernalis*, which is pre-occupied in this genus; he informed me that it "was captured in Virginia, in the early part of the year 1807. Male and female were flying about in a ploughed field, in innumerable multitudes."

Judging from its habit, it belongs to Megerle's genus ANOMALA.

### HOPLIA, Illig.

*H. trifasiata.* Head black: *clypeus* at tip reflected: *thorax* densely covered with reddish-yellow scales: *feet* brownish-red: *scutel* blackish: *elytra* light brownish-red, with sparse yellowish scales, which, however, are more dense in some parts, so as to form three bands, which are tolerably distinct; of these, one is at the base, the other on the middle, and the third near the tip; they are somewhat undulated: *anal segment* and *beneath* densely covered with pale cinereous scales, which have in some parts, a cupreous reflection. The opposite sex is black on those parts, which in the other are brownish-red, and the bands of the *elytra* are hardly discernible: in both sexes the *humerus* is prominent, and at the decurvature of the *elytra* near the tip, they are elevated almost into an angle.

Length nearly  $\frac{1}{3}$  of an inch.

The great difference in colour between the two sexes of this species, may readily deceive naturalists into the belief that they are two distinct species.

CETONIA, *Fabr.*

*C. vestita.* Hairy; elypeus emarginate; elytra with a few white spots.

Body brownish-black, with very numerous, rather long, reflected, cinereous hairs: *head* with the hairs smaller and sparse before; *elypeus* widely emarginate at tip, the lateral angles subacute and a little elevated; lateral margin not recurved: *thorax* with a carinated glabrous line, little elevated but very distinct: *elytra* with two hardly obvious elevated lines on the middle, confluent behind; striæ slightly impressed, with small punctures; on each elytrum is a small white dot on the middle of the sutural submargin, another behind the middle and approaching nearer to the suture, three oblique ones on the exterior submargin, and a transverse one at tip near the suture.

Length  $\frac{2}{3}$  of an inch.

This species resembles the *sepulcralis* Fabr., but it differs in having the elypeus emarginated, the hairs of the body elongated, and the spots of the elytra fewer in number. In form, it is more slender than that well known species, and its colour is more opaque and less metallie. It is much more closely allied to the *C. hirta*, Fabr. of Europe, the spots being nearly similar; but the *vestita* is one half smaller, and the hair is much coarser and much less abundant; can it be a variety of that species?

I have met with but two specimens, one belonging to the Philadelphia Museum, and the other sent to me by Dr. T. W. Harris, of Milton, Massachusetts.

LUCANUS, *Linn. Latr.*

1. *L. placidus*. Head small, slightly concave; tooth of the mandibles emarginate.

*Body* dark reddish-brown: *head* slightly concave, rather narrower than the thorax; *mandibles* hardly as long as the head, regularly curved; tooth a little beyond the middle, not very prominent, but rather wide and emarginate at tip: *elytra* without striæ: *anterior tibiæ* about four toothed, superior tooth small.

Length one inch.

I found this species when with Major Long's party in Arkansa. It differs from the *dama* Fabr. in being smaller, in having the head narrower than the thorax, the mandibles shorter and less arcuated, and their tooth wide and bifid at its tip.

2. *L. brevis*. Short and wide; mandibles one-toothed; *elytra* smooth, humerus mucronate.

*Body* robust, reddish-brown: *head* wide, rather narrower than the thorax, minutely punctured, a little concave above the mandibles; *mandibles* short, with one simple oblique tooth on the middle, extending inwards and forwards: *thorax* wide, with minute punctures, angles rounded; posterior ones not obliquely truncated: *elytra* nearly smooth, having numerous small punctures, and obsolete, hardly impressed lines; *humerus* mucronate: *anterior tibiæ* with five or six small denticulations, and a broad terminal, prominent one widely emarginate; *intermediate tibiæ* with a single spine on the middle.

Length nearly  $\frac{9}{10}$  of an inch.

This species seems to be related to *parallelus* nobis, but it is much wider in proportion to its length, and there are no distinct striæ on the elytra.

TENEBRIO, *Fabr. Latr.*

1. *T. reflexus*. Blackish-green; edge of the clypeus reflected; thorax subquadrate.

*Tenebrio æruginosus*, Melsh. Catal.

*Body* very dark green, almost black: *head* minutely and densely punctured, anterior edge of the clypeus regularly arcuated and reflected; *antennæ* black; *palpi* blackish piceous; *thorax* rather transversely quadrate, minutely and densely punctured; angles subacute: *elytra* with impressed, punctured striæ; interstitial lines depressed, almost flattened, obsoletely punctured: *tibiæ*, anterior pair of the male with a prominent angle above the middle, and with the second pair much arcuated on the inner side.

Length  $\frac{3}{4}$  of an inch.

The specific name *æruginosus* is preoccupied.

2. *T. rufipes*. Black, polished; terminal joint of the antennæ pale fulvous; thighs bright rufous.

*Tenebrio rufipes*, Melsh. Catal.

*Body* oblong, black, polished: *antennæ* black, two basal joints piceous, terminal joint, except at its base, fulvous: *thorax* rather narrower than the elytra, and with the head densely and minutely punctured: *elytra* with impressed, punctured striæ, and convex interstitial lines: *thighs* bright rufous; *tibiæ*, anterior

pair of the male with a short spine on the inner middle.

Length  $\frac{1}{2}$  an inch.

I have stated this insect to be polished, in order to distinguish it from the *UPIS fulvipes* Herbst, which it very much resembles, and with which it is strictly congeneric.