The terrestrial Adephaga of Iowa, including descriptions of all known species which occur in the state, with notes on their habits, distribution, synonymy, etc

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The Terrestrial Adephaga
of Iowa.

Including descriptions of all known species which occur in the State, with notes on their habits, distribution, synonymy, etc.

By

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Vol. 1.

State University of Iowa.

1895.
"Happy is he who lives to understand, not human nature only, but explore all natures to the end that he may find the law that governs each;"
Coleoptera are readily distinguished from all other orders of insects by the thickened horny anterior wings which are not actively used in flight, the free thorax, the presence of more than two volsellae, and the masticatory mouthparts. The metamorphosis is always complete; the larva is mandibulate, and the pupa inactive.

In order to make more clear the exact meaning of the terms used in the following pages I have thought best to give as briefly as possible a description of the external anatomy of a beetle, following this by the general classification of Coleoptera so as to show more clearly the relation of terrestrial Adephagous Coleoptera to all other beetles, then the body of the work. As far as possible the original description of each species has been given followed by one of my own where necessary. The life history has also been given when known. The localities in Iowa are from lists made by J. D. Putnam,近视 Dobson, Mr. Hickman, and King and Reutemüller. The authorities for all bring given in the body of the work.
Head.

The head, varying greatly in size and shape, is free from the thorax, being attached to it by membrane only. Sometimes the portion behind the eye is narrowed into a neck, or gradually narrowed and much prolonged so as to articulate with the thorax by a semicircular conoid, but usually it is but slightly narrowed and enters into the anterior portion of the thorax. It is usually horizontal in position.

The surface consists of a solid conical plate, above it is frequently marked by a single suture running transversely between or in front of the antennae — the clypeal or frontal suture. The portion in front of this suture when dilated so as to project over the mouth is the clypeus; it is sometimes membranous or coriaceous instead of horny like the rest of the head. In some insects the clypeus is divided into two portions, an upper — the name — and a lower or rhinarium. To the lower or anterior border of the clypeus is attached the labrum.

The upper surface of the head is divided into
the following regions, the back part or the occiput, the
middle or vertex, and the anterior or front, and on
each side are the eyes.

The eyes of Coleoptera are variable in size and
form. They may be either simple or compound. When the
latter they are composed of an aggregate of hexagonal
or quadrangular facets (Redhead) fitted against each other
perfectly. Each facet is the cornea of a distinct eye. The
number of facets varies from 30 to 30,000 (Conant). Rarly
are the compound eyes wanting, and equally rarely
are accessory or simple eyes seen. When present they are
situated between the compound eyes on the upper sur-
face, and are known as ocelli.

The underside of the head is widely excavated,
forming the mouth; the parts between the eye and be-
hind the mandibles are the maxillae, behind the mouth
or immediately below the occiput is the throat or gula,
the gular sutures separating the throat from the mentum.

These constitute the fixed portions of the head; the
movable parts are the antennae and mouth parts.
Antennae

The antennae are jointed appendages situated in front of, or more rarely between the eyes, usually under the side margin of the frontal. They vary in shape and in the number of joints (from two to twenty-five or twenty-seven), the usual number being eleven. The joints nearer the head are usually of slender consistency than the outer ones and less pubescent. The forms of the antennae may be reduced to the following types:

Diliform, having joints of uniform thickness, or nearly so.
Lanceolate, having joints more and more slender to the side.
Serrate, having joints triangular, arranged like saw teeth.
Clavate, having the apical joints much more elongate than the others.
Capitate, having the terminal joint greatly enlarged so as to form a knob.
Moniliform, having the joints globular.
Pectinate, each joint having a long process on one side, like the teeth of a comb.
Riminate, having processes on both sides, feather-like.
Camellate, having the terminal joints extended on one side into broad plates.

Mouth parts.

The mouth of Coleoptera is mandibulate, that is, it possesses two pairs of horizontally moving pieces for seizing the food. Above it is the labrum, or upper lip, articulating with the clypeus. Immediately below the labrum are the two or mandibles, usually one jointed and with a cutting surface on the inner side. This cutting edge may either be entire, that is unbroken, or toothed.

Below the mandible is the second pair of movable pieces, the maxillae, quite complex in structure. Each maxilla consists of two basal pieces, the maxillary palpae, and two lobes. The basal joint is the cardo or hinge, the second is the stigee or footstalk to which are attached the appendages. On the outer side piece the palpae, from one to six jointed; on the inner side the two lobes, the inner lobe being the cutting or chewing portion of the maxilla. It is often furnished with teeth or spines, and sometimes it has
a terminal joint, the digitacl.

Beneath the maxillae and between them, forming the floor of the mouth are the mentum and labium. The mentum articulates with the anterior margin of the gula. It varies greatly in size and shape, being usually small or moderate in size, and trapezoidal or quadrate, or frequently large in size. In the Carabidae it is deeply emarginate in front, usually with a prominence or tooth in the middle. When deeply emarginate, the lateral portions of the mentum are called the lobes; these are bordered on the inner side by a narrow piece somewhat inflected, extending from the bottom of the emargination and aiding in the formation of the tooth. These are the epilobes of the mentum. At the outer apical angles of the mentum is the palpiger, which bears the labial palp. This palp is usually three jointed, occasionally four or five jointed, sometimes even filamentous and not divided.

The labium is placed usually in front of the
mentum or in the emargination between the lobes; rarely is it almost entirely hidden. It consists of three parts, a central piece, the ligula, and one each side the paraglossae. The ligula is either cone-shaped or membranous; its size and form vary greatly. The paraglossae are usually membranous; they reach their fullest development in the Carabidae, but as they are often entirely absent, the term ligula is frequently used synonymously with labium.

Thorax.

The second division of the body is the thorax, consisting of three segments variously marked. The first segment, the prothorax, is separate from the other two, and is usually freely movable. It consists of a dorsal surface, the pronotum, of one piece at the sides; the dorsal surface is usually inflected forming the under surface of the prothorax. The inflected portion is often called the prothoracic epipleura. The under surface of the prothorax consists of a central median and a pair of pieces each side; the first is the pro-
sternum, situated in front of the coxae, and usually extending between them. The anterior lateral piece is the episternum, the posterior, the epimeron.

The cavities in which are inserted the anterior legs are called the anterior coxal cavities. They are either entire when they are enclosed behind the junction of the prothorax and the epimera, or open when a space is left. Protected only by a membrane, they are separate when a space is left between them, or confluent when there is no visible space.

The second segment is the mesothorax. It is very closely united to the third segment or metathorax, which in turn is closely connected with the abdomen.

These two segments support on the ventral surface the middle and hind legs and at the sides of the dorsal surface, the elytra and wings.

The dorsal surface of these segments is covered by the elytra, hence they are invisible; they are called mesonotum and metanotum, and
consist each of four pieces separated by sutures. The four are known as procutum, acutum, acutellum and postcutellum.

The ventral surface consists of the same pieces as the prothorax, i.e., metacutum with its episternum and epimeres and metasternum with the same.

Wings.

The anterior or mesothoracic wings are horny plates called elytra. They vary greatly in size, shape, and sculpture. They usually cover the dorsal surface of the abdomen, but in many species they are much shorter, sometimes they are united so as to form a single piece, and sometimes, but rarely, they are wanting.

The metathoracic or posterior wings are membrane one but with few venae, so arranged as to allow of the complete folding of the wings under the elytra. Frequently the wings are absent.

Legs.

The first joint, that by which they are attached
The body is called the coxa, on the inside of which, between it and the femur is an additional piece, the trochanter. The first long piece of the leg is the thigh or femur, the next is the tibia, attached to the tibia is a series of from one to six pieces constituting the tarsus, the last joint usually bearing two claws; these however are sometimes wanting.

Between the claws is seen, in some species, a small appendage, near the base, retractile, called the tarsichium; this often bears at the tip one or more bristled-like appendages, the tarsochlia.

The form of the legs varies greatly in the different families, being fitted for walking, ambulatorial, digging forefoot, or swimming, natatorial.

Abdomen.

The third and last portion of the body is the abdomen. It consists of a series of segments usually nine, the dorsal portions of which are covered by the elytra, the ventral portions being visible from below.

The spiracles are situated in the connecting mem.

brane, or in the upper inflected portions of the ventral segments.
Many different divisions of Coleoptera have been proposed by entomologists, but the one most commonly adopted in this country is that given by Leconte and LeConte, which is as follows:

I. _Coleoptera (genuine)_ having the mouth parts normal, strophied; rarely, but never departing from the ordinary type. Palpi always flexible, maxillary usually four-jointed, labial three-jointed. Sular sutures double at least before and behind. Proterum not cut off behind by the epimerum (except in some Polyphiliidae and in Cosyphon); prosternal sutures distinct.

II. _Physopliaera_ having the head more or less prolonged into a beak; the palpi rigid (except in Phaenomaceridae and Anthribidae), without distinct palparium; maxillary four-jointed, labial three-jointed; labrum about, except in Phaenomaceridae and Anthribidae. Sular sutures confluent on the median line. Proterum not cut off behind by the epimerum; prosternal sutures wanting. Epipleura of the elytra wanting, except in Physopliaera and Antelabidae.
Coleoptera (genuine).

I. Hind tarsi with the same number of joints as the others (except in a few Blainvilleae, e.g.)

II. Front and middle tarsi 5-, hind tarsi 4-jointed.

III. Front.

A. Fourth and fifth tarsal joints not connate;
   First three ventral segments connate, 1st. divided by the hind coxal cavities, so that the sides are separated from the very small medial part.

   Aedeagus.

   First ventral segment visible for its entire breadth (except in Rhysodidae);

   Antennae clavate, or capitate, very rarely serrate.

   Blainvilleain.

   Antennae serrate, very rarely clavate or capitate.

   Perrironia.

   Antennae with a lamellate club, the opposing surfaces with a very delicate sensitive structure;
This species contains some families, with but two of which we have to deal. The species are usually active, and their habits predaceous. They are separated in the following manner:

1. Antennae inserted on the front above the base of the mandibles.
   - Cicindelidae

2. Antennae arising at the side of the head between the base of the mandibles and the eyes.
   - Carabidae

3. Fourth and fifth tarsal joints, ankylosed; the former very small; antennae filiform, rarely serrate, or feebly thickened externally.  
   - Phytophaga

4. Antennae 11-jointed; hind coxae mobile and simple; habits terrestrial.
Gecinuleidae.

Head large, broader than the thorax, exserted, inclined, suboval; orbits usually rugose, elevated each side upon the eyes, convex on the sides. Eyes usually large, ovoid, prominent. Mandibles very large, acute, clavate within, a large compound tooth at the base and about three others nearer the tips. Maxillae recurved, two lobed, the interior armed with a spine or rigid bristle on the inner margin and usually terminated by an articulated hook. Palpi six, usually not longer than mandible, piliform, the anterior pair (maxillary palpi) biarticulate, the first joint elongated, rectangular, slightly dilated at tip, and almost attaining the length of the maxilla; the second joint somewhat shorter, linear, slightly recurved toward the maxilla and attaining the length of the terminal hook. The intermediate pair is situated on the back of the maxillae, four-jointed; the first joint short, articulated at its insertion, second joint elongated, cylindrical, extending beyond maxillae; third joint slightly longer than the first, gradually dilated at tip,
the fourth enlarged toward the tip, truncate. The posterior or labial palpi are pedunculated, approximate at base, nearly equal to preceding pair, three-jointed; first joint minute, reaching the tip of the inner division of the mentum; second, elongate, cylindrical, very hairy above, third, glabrous, shining, about one half the preceding in length, truncate at tip. Ligula small, hidden by the mentum tooth. Mentum concave, transverse, somewhat concave, edge three parted, inner division a tooth as long or nearly as long as the outer one, which are dilated and concave row the inner margin to admit of the free motion of the labial palpi, rounded row the outer margin. Antennae inserted upon the front, above the mandibles, nearly in contact with the eyes; always eleven-jointed, the four inferior joints glabrous and shining, the others pubescent; first joint dilated, attenuated at base, sometimes quite rough; second joint very small rounded; third joint long, cylindrical and slightly dilated at tip; the succeeding ones subequal or gradually decreasing in length, and
furnished with a few rigid hairs at the tips; terminal joint obtuse. Clypeus transverse, very short, and contracted in the middle.

The thorax subquadrate, sometimes cylindrical, rarely quadrate; the dorsal surface generally with an anterior and posterior impressed, transverse line connected by a longitudinal one, giving to the disc a lobate appearance. Prosternum narrow, not produced behind. Episternum and epimeron distinctly defined by sutures; coxae globular; coxal cavities entire. Mesosternum truncate, the widest part extending forward, deeply emarginate behind. Mesoventral, spinosa and episternal sometimes connate, without sutures, sometimes distinct. Metasternum pointed, both in front and behind, the spinosa are large in winged species, small in wingless ones, while the episternal are small and often indistinct. Posterior coxae triangular, prominent internally, concave behind to allow of free motion. They do not extend to the sides of the body but are enclosed by the metathorax and first ventral segment.
They are contiguous or separate.

The elytra cover the upper surface of the trunk and dorsal segments; rounded, bident; sometimes conical, sometimes embracing widely the flanks of the abdomen; wider than the thorax, humeral angles prominent, rounded before; sutures and margins nearly parallel. Surface punctured, granulated. Wings usually well developed, sometimes wanting.

The abdomen is subcordate or subtriangular, composed of six ventral segments in the female, and seven in the male. In Armbychila, the abdomen is alike in both sexes. The first segment is visible only at the sides; the second is acute in the middle; third, fourth, and fifth subequal, rather diminishing in size; sixth deeply emarginate in the male, while the last is small, coming above, truncate, breasted.

Legs slender, usually long, the tibiae with two, distinct terminal spines, tarsi filiform, the first three joints of the anterior ones, densely clothed with hair. Claws acute, simple.
The colours range from white with brownish markings, through red, and green to black, exhibiting brilliant metallic tints. The markings consist of abbreviated bands, humules, and spots of white or yellow.

The food is insects, worms, etc.

The Cicindelidae generally frequent hot sandy districts, where they may be observed flying in the sunshine with great velocity. Their flight is short but powerful, of short duration, but they immediately take wing again on the approach of a person. From the brilliancy of their colours, they have been termed sparklers, while the name Tiger beetles has also been conferred upon them, not only from the spots and stripes with which they are ornamented, but also from their savage propensities, preying upon every insect which they can over come, their extreme agility at the same time, rendering escape impossible to their luckless prey.

Of the four genera found in the United States
we have but two, *Tetracha* Hope, and *Cicindela Linne*. In both of which the posterior coxae are contiguous, the eyes large and prominent. They are distinguished as follows:—

2. Third joint of maxillary palpi longer than the fourth. *Tetracha* Hope.

3. Third joint of maxillary palpi shorter than the fourth. *Cicindela* Linne.

*Tetracha* Hope.

Large, metallic green species, which are winged but seemingly unable to fly.

But one species is found in Iowa.

1. *Tetracha virginiæ Linne*. Fig. 2. Pl. III.

"Cicindela nitida, ore saturinis pedibusque testacio."

Head large, broader than the thorax; eyes circular, large; labial palpi longer than maxillary palpi, with the first joint elongated; labium without a tooth; labium
crenate, having four stout bristles; thorax smooth, slightly broader than long, narrowed behind, posteriorly with a large triangular impression; elytra subparallel, convex, broader than the base of the thorax, rounded behind, coarsely punctured at humerus but gradually growing finer near the apex, which is nearly smooth; scutellum not visible; dark metallic green; last ventral segment, antennae, palpi, elytra, and legs fuscous; broad lateral margins of thorax and elytra green, the middle black.

Length: 30-34 mm.

6. Anterior tarsi dilated; last ventral segment triangularly emarginate; tips of elytra subtruncated; sutural angle rectangular.

7. The last ventral segment broadly oval at tip; tips of each elytron rounded; sutural angle obliterated.

Found under wood and stones from July to September; nocturnal in habitat.

F. virginica Linne is easily distinguished from F. carolina Linne, the other species found in the United
States by its size and color. The latter is smaller, more slender and in color a light golden green with the middle of the elytra purplish and the tip of the abdomen, apical humerus, legs and antennae testaceous. The two are often found together.

Loc: — Southwestern Iowa (Dubuque).

— New Jersey (Newark); Ohio (Hamilton); Washington, D.C. (Lieber); Indiana, Kentucky (Hamilton); Galicia, Kansas, 

Nebraska, Texas (Schaeffer); St. Louis, Mo. (Summers); 

Morgan City, La. (Nicholas); Enterprise and, Cedar Key, 

Fla. (Schuyler).

Celtis linearis virginica Linne, Prod. nat. 1. 2. p. 557, 1777.

Tab. Bl. 1. p. 233. 1801.


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. W. p. 77, 1885.

Corv. Fr. Am. ent. Soc. V. p. 234, 1876 (character).

Bicentenaria Lim.

Usually shining, bright colored species. Head large, eyes prominent; thorax narrower than head; elytra more or less spotted or banded with white; legs long and slender for running. The spots of the elytra are usual or complete where they are of the following type: — a humeral narrow curved spot, called lunule; a middle band, more or less bent, and descending internally; and an apical curved line usually but inward; at its anterior part. These spots are sometimes confluent on the margin, and sometimes separate; they are sometimes entire and sometimes interrupted; occasionally they are reduced to mere marginal spots.

The species of this genus live on sandy banks or road-sides. They are generally diurnal, but some appear at night as well. Many of them are seen only during the hottest sunshine, disappearing if there comes but a cloud. The hiding places are under stones, or bank, or in holes in the sand.

The larvae are somewhat elongate, whitish grubs.
with broad metallic colored head and prothorax, and a large bump bearing two hooks on the fifth abdominal segment. They live in holes from six to eighteen inches deep which they excavate in sunny spots and lie in wait for prey with the head closing up the mouth of the burrow; when an insect comes within reach it is seized, and the juices extracted.

The larvae of Cicindela and Tetracha may be separated in the following manner:

*Cicindela* — Maxillary palpi with third joint longer than second; fifth abdominal segment with one hook and two acute tubercles on each side.

*Tetracha* — Maxillary palpi with third joint shorter than second; fifth abdominal segment with two acute hooks on each side.

The species of Cicindela may be separated as follows:
1. Trochanters same color as under surface of body.
2. Thorax convex, narrowed behind; palpi black.
3. Elytra without well defined median band.
4. Green, with large humeral marginal
and apical dots. nigifrons Dej.
d. Purplesh coppery with some dots, sometimes confluent at margin.
            Geocentralis Held.
e. Unicolourous green or blue. unicolar Dej.
f. Green or blue with small rounded marginal, apical, anteapical and sometimes discal spots. sitiunita Fab.
ff. Elytra with distinct median band.
g. Reddish coppery with an oblique scarcely sinuate band not reaching outer margin, and rare apical dot.
            purpurea Blis.
h. Coppery with humeral, post humeral and apical dots; median band more pronounced.
            lineolata Klug.
i. Thorax green or blue, elytra coppery, with a short median band, ante.
            apical and apical dots splendidibus.
aa. Thorax convex, subquadrate. Palpi of 8 usually
j. Humeral lunule long, oblique, slightly say.
  k. Humeral lunule moderate, not oblique.

l. Markings complete, very broad.

m. Markings complete, narrower, humeral lunule C-shaped. npanda Dej.

n. Markings broken into spots.

12. guttata Dej.

a. Thorax subcylindrical, front bold.

o. Dark brown or black, with humeral and posthumeral dots, middle band broken, apical lunule complete. punctulata Obi.

All forewings unfurled.

a. Humeral angles wanting.

b. Humeral angles distinct.

c. Arms green.

d. Supracorne, elytra coarsely and densely punctured.

cupracorne Dej.

dd. Bronze, elytra finely and sparsely
...punctured, sutura spinosa, maculae, coxae tectaeque.

c. Elytra broad and flat; white with a few narrow dark lines; antennae, palpi, and natural margine pale.

Lepida Hy.

2. C. celebens (Fig. 2 Pl. III) fusco senea, obscura, sericea, capite thoraceque granulato rugosis, illo striisque fortius striato, scutellum majoris, hinc cylindrico, latitudo seuque longior, postices subangulato, lateribus rectis parvis pilosis, elytris fortibus punctatis, anteromediae angustatis, humeris malleis, ad apicem late rotundatis, humo serrato, apices naturale magnae gutti striisque dicoidalibus (ad triumque, a fasi et apicis postices posterioris interiore, linea marginali ad medium, lunulisque apicalibus tenui albis; sub margine sericea, lateribus albo pilosis, trochanteris lacunis spinis tectae), labroc albo antice rotundato, medio binimato et unidentato palpis

...exsequi intrinsequ ad basin pallide...
Mae aurita integra; femina aurita retracta.


Brownish bronze, head granulated, rugose, eyes very large, labrum inner toothed; thorax long, cylindrical, impressions faint; elytra coarsely punctured, sparsely clothed with short hair, wings rudimentary. The markings usually consist of a discoidal humeral spot, a marginal line near the middle, and a faint apical lunule. They vary considerably, however, sometimes the discoidal spot is wanting and only the apical lunule and marginal line remain white, sometimes even the latter disappear.

Length 7.5 - 8.5 mm.

Habitat: Iowa City (Tischbein). Rare.


Long. 5 ½ lignes. Larg. 2 ½ lignes.

Elle ressemble beaucoup aux deux espèces précédentes (*C. modesta* DC.). Elle est entièrement dorée, d'un beau vert bleuté. Les tiges supérieure et inférieure sont de couleur bien marquées à sa partie antérieure ; dans le mâle, elle est brunière avec une grande tache jaunâtre de chaque côté ; dans la femelle elle est d'un vert bleuté. Les mandibules sont d'un noir brunâtre, et elles ont une grande tache jaunâtre à la base. Les palpées sont d'un vert luisant. Les antennes sont courtes ; leurs quatre premiers articles sont d'un vert-bleuté, les autres sont sombres. La tête est un peu moins large que celle de la *Pugilipes* ; elle est striée de la même manière entre les yeux. Le corps est un peu plus globuleux et plus arrondi sur les côtés ; les élytres sont un peu moins larges, un peu plus convexes, la ligne de petite pointe enfoncée est moins distincte.
et elles n'ont aucun brêge, de taches blanches.

Le derme du corps est d'un vert brillant, un

peu moins bleuâtre que sur de ces, de petites courtes et d'un vert bleuâtre. Dry. Sp. I. p. 52.

Green or blue without markings; head rugose, hairy,
labrum white, three toothed, front four joints of
antennae green, the remainder dark brown,
eyes large, light brown; thorax convex, rugose, hairy.
impressions very distinct; elytra obscurely punctured.

This is essentially a southern species and
its occurrence here is doubtful.

Length 12 mm.

Habitat. Annee, Io. (Osborn).

Georgia, Alabama (Le Conte); St. John's Bluff, Fl. (Lam.);
Texas (Schuyler); Nac. (Jay); Long Island (Johnson);
Northwest Territory (Tylor). The last is probably an
 immaculate variety of sexguttata Hub.


4. **Cicindela rugifrons** Dej. (Fig. 3, 4, Pl. III.)

"Dividie nitida, elytra masculine, decumbens, marginali-
bus tumidaque, apice albi.

Larg. 5/2 ligne. Long. 2/3 ligne.

"Elle est à peu près de la grandeur de la Lampetria,
mais elle est plus courte, la tête et le corps
sont proportionnellement plus larges, et le dernier
est plus arrondi. Elle est tout en dessus qu'en
dessous, d'une belle couleur verte brillante. Dans
la femelle, le seul sexe que je connaissie, la tien
supérieure est jaunâtre, et elle a trois petites
dent de sa partie antérieure, les mandibules
marquent dans l'individu que je possède. Les
jélype sont d'un vert-brun; les antennes sont
courtes; leurs quatre premiers articles sont d'un
vert-brun, les autres sont obscures. La tête est large;
elle est fortement striée entre les yeux qui sont gros,
mais qui ne sont pas très-saillantes. Le corps est
Presque aussi large que la tête ; il est assez court, arrondi, et il a quelques rides irrégulières très peu marquées. Les élytres sont assez larges, peu allongés, convexes; elles ont une rangée longitudinale de petites pointes enfouies près de la suture, deux taches marginales d’un blanc-jaunâtre, la première très petite au tiers de l’élytre, la seconde grande et triangulaire un peu au-dessous du milieu, et une troisième en forme de lunule à l’extrémité. Les pattes sont d’un vert brillant. (Op. de l. p. 51.)

Brilliant green, polished; head bluish green, longitudinally comicated, with long white hairs between the eyes; the four basal joints of the antennae brassy green, the remaining ones green; labrum tridentate, with six marginal punctures, of the 3 white edged with blackish brown; of the 7 entirely greenish black; mandibles very long, slightly accutate, slender, greenish black, labrum with a linear basal white spot; palpi brassy green in 3, greenish black in 7; eye brown; elytra brilliant aurigineux.
green, in certain lights blue or purple, with very minute distant punctures; a series of deep punctures with elevated centres near the suture, an abbreviated series of similar punctures near the humeral angle, and a few scattered ones around the scutel: external margin with three white spots, one of which near the middle of the margin is large, triangular, the apex of the triangle pointing to the suture; one very small and rounded between the former and the base of the elytron; and the third or posterior one elongated into a narrow oval not quite reaching the margin and confluent behind with the terminal liracle. Posterior and postpectus as well as thoracic green, with white decumbent hairs.

There is a great variation in this species, six different forms are given by Harris. They are as follows:—

1. Elytra purplish blue.
2. Anterior spot of elytron wanting.
3. Anterior spot wanting, triangular one reduced to
a transverse line, posterior one small, not reaching the terminal humule.

5. Two anterior spots oblong.

6. All spots wanting except the terminal humule, which is merely an abbreviated transverse line.

7. Elytra immaculate.

Another variety might be added in which the anterior spots are continuous and but slightly separated from the posterior one and terminal humule. See Fig. 4, Pl. III.

The distinctions between the black variety of rugifrons Dej. and unicolor Dej. are more easily seen than described. Varietæ is smaller, the thorax more smooth; the elytra more convex, and more rounded at the humeral angles and tine; the head rather smaller, and the labrum white. The whole surface has a smoother and more satiny lustre than rugifrons!

Rugifrons Dej. differs from purpureus Olivier, in the form of the intermediate band which is not sinuate, and in wanting the coppery crimson edge of the
elytra; from splendidula Lentz, in having the head and sides of the thorax crimson, and the humerus more reticulated.

Length, 11-12 mm.

Habitat: Iowa City (Weikham).
Cambridge Mass. (Carrie); Rhode Island (Schaufle);
Long Island (Johnson); Brooklyn, N. Y.; Lakewood, N. J.
(Steig and Beutenmüller); Curtis Bay, N. Y. (Johnson); Southwestern Virginia (Boon); Lawrence, Kan. (Pfeffer).


Steig and Beutenmüller Jour. N. Y. Ent. Soc. II. p. 90. 1874.


Lab. 2. Jl. 1830.


E. cuinosa lecontii (Fig. 5. Pl. III.) - supra cuprea purpurea.
hand vitidae, fronte fortiter striata parce punctata et pilosa, thorace course, rami a distincte rugosae, elytris
bivibus convexis obolate punctatis versus sunturum
veriain rugo foetatis, maculae marginalibus sope
cohaerentibus albis, subtus obscure cyanea ad latera
pilosa; labro sexus intraque albo tridentato.


Brown with a reddish or coppery tinge. Head some-
what hairy, scarcely rugose, labrum three toothed; thorax
corpus almost but distinctly rugose, slightly hairy;
elytra with humeral humule elongate, sometimes broken
into spots; middle spot triangular, apical humule well
developed.

Length 12 mm.

Habitat. Iowa City (Richmond); Ft. Madison, IA (Coburn).
Hancock (Schaupp); Wisconsin, Racine (Boy and Dem);
Ontario, and Quebec.

leurcei: Hald. is closely related to the preceding, not
suffering in form in any respect; the labrum is how-
ever, white in both sexes. The medial spot is often con.
6. Cicindela sexguttata, (Fig. 6, Pl. III), "mâles, métidae, élytres
junctae tribus marginalibus albae," Fab. Ent. sept. 1176.
6. sexguttata, d'un vert bléâtre brillant; élytres avec
trois pointes blanchâtres, sur le bord extérieur.

8. Ent. 33, tab. 2, fig. 21.
6. sexguttata, elle brille du plus beau vert; elle le pâtit,
sous les yeux, les yeux blancs. Herbst, March, 159, pl. 27.
Head green, sometimes glossed with blue, bald,
rugose behind; antennae with four basal joints, green,
the remainder brownish black; labrum white, edged
with brown, three toothed, and with six marginal
blackish punctures; each bearing a hair; mandibles
white, sabre, tips black; palpi green; eyes brown;
thorax slightly rugose; elytra strongly punctured, hind
margins rounded, each elytron with a marginal,  
antaeapical, apical and sometimes discal dot.  
The markings vary considerably, sometimes they  
are entirely wanting and again there are but two,  
the marginal and apical dots, or the marginal  
only are present.  

Length 10-14 mm.  

Lives in shady woods, or clear woods, and often  
hides under stones and loose bark. It is double  
brooded; the first brood appearing during May, the  
second in August. The colors of the first brood is  
as rich purplish brown, that of the second tinged  
with green; some specimens being quite green. Its  
season is quite short, lasting between two and three  
weeks. It is very sensitive to the weather, not being  
seen when the weather is bad.  

Habitat. Iowa City. (Nicholls) Common.  
Cambridge, Mass. (Barrie); Naldie, Mass. (Good);  
Staten Is. (Lug); Buffalo, N. Y. (Pfeiffer); Green N. Y.  
(Hayward & Savage); Philadelphia, Pa. (Liebeck); New  

(Smith); Maryland, Georgia (Schauff); Mississippi (Met); Texas (Schauff); Cincinnati (Ohio); Terre Haute, Ind. (Blatchley); Detroit, Mich. (Hubbard & Schwab); Milwaukee, Wis. (Ruttenberg); Dakota (Schauff); Rock Bluff, Ark. (Elliot); Eastern Kansas (Kenne); St. Louis, Mo. (Simmure); Louisiana (Seoute); St. John's Island (Seoute); St. James, Miss. (Gurney); Gurney's Cut (Petit).


Fab. Syst. Cl. 1. p. 241. no. 45. 1801.

Oliv. Cret. 33. tab. 2. fig. 2. 1790.

Herbit. Arch. p. 159. tab. 27. fig. 17.


violacea. Fab. Syst. Cl. 1. p. 332. 1801.

Cicindela punicea (Fig. 2, C. III.), puniceine eu-dorsum, d'une vert bleutée eu-dessous, elytres ane ene bande courte, et deux pointes blanches. Olivier d'Ess de, d.

Reddish or greenish cupreous, margins brilliant green; head hairy, rugose, with two distinct green lines between the eyes, originating at the base of the antennae, and approaching each other toward the vertex; thorax granulate, rugose, short, impressed; distinct, reddish cupreous surrounded by green; elytra covered with elevated punctures; the markings scarcely simulate band not extending to the margins and an antapical and apical dot, the former sometimes wanting.

This is said to be the most variable of our species in coloring and markings.

Length 12-16 mm.

Found in pastures, on grassy roads, early in the
spring, and again in September, and October.

Habitat. Iowa City (Nickle); Ames, Ia. (Osborn).
- Cambridge, Mass. (Carrié); Halden, Mass. (Audubon);
- Green, N.Y. (Hayward & Savage); Buffalo, N.Y. (Peirce);
- Staten Isl. (Putz); Penn. (Denny); Wa. Costa, A. (Leibrecht);
- Cincinnati, O. (Dury); Detroit, Mich. (Hubbard & Schwat);
- Bayfield, Wis. (Nickle); Bismarck, N.D. (Nickle);
- Sandy Point, N.S. (Snow); Salem, N.Y. (Jonesy); Ind. (Lee);
- Milwaukee, Wis. (Rautenberg); Platte Canon, Colo. (Snow);
- St. Louis, Mo. (Simms); Nw. Briz. N. Mex. (Dikel).
- Thunder Bay to Lake of the Woods, Can. (Hubbard and
- Schwat); Sault Ste. Marie I. (Harrington); St. Jerome;
- Que. (Hansen); Guelph, Ont. (Petit); Hamilton, Ont.
- (Neffat).

* Lepidura. Ohio. Low. 33. tab. 3. fig. 34. 1790.


* N. 1818.


* tab. 13. fig. 1. 1848.


Leq. & Bentwe, Journ. A. Y. Ent. Soc. II. p. 91. 1874.
marginalis Fab. Syst. C. I. 240. 1801.


5. S. linbaliæ, Klug. (Fig. 8, Pl. III).

A variety of the preceding.

Uppermost, margins, and undersurface green; humeral lunule, middle band, and apical lunule complete, sometimes a post-humeral dot present. Median band more or less than in purpurea. Ohio.

Length 13 - 15.5 mm.

Habitat. Iowa City (Wickham).

New York, Ohio (Leq. & Bentenmiller); Kentucky (Schaepf); Bayfield, Wis. (Wickham); Kent, Colo. (Leq. & Bentenmiller); Cheyene, Wyo. (Wickham).


? Coniidea splendida, bright green; disc of the elytra crimson or purple, with a submarginal subtriangular transverse line near the middle, and a terminal transverse line; whole margin green.

(Fig. 7, Pl. III). The markings exhibit a great variation, some specimens from Texas having none whatever, some have only an apical dot, some only a five spot at the middle of the margin, and some have the four marginal dots, and the middle band.

Length 14-16 mm.

Habitat. Harv. Port, De. (Putnam).

Cov: East Port, Mv (Carrie); New York (lung & Buteinmuller); New Jersey (Deovre); A. Cov (Schaupf); Indiana (lung & Buteinmuller); Missouri, St. Louis (Sommer); Jolins, Kans.

(Cov); Mo (lung & Buteinmuller); Arkansas (Schaupf); Idaho (Con); South Dakota, Cal (Dowditch); Tex (lung & Buteinmuller).


10. Cicindela gemmata (Pl. iv.), Sur pra. obscura cuprea serca;
elytri subviolaceo-nicantibus, margine laterali, linea
humerali apicali integri, fasciis mediae neurae
incumbente albo.

Long. 6 1/2, 7 1/2 lignes, Long. 2 3/4, 3 lignes.

"Elle ressemble à l'Alebohita, mais elle est plus grande,
la tête et le corps sont garnis de poils blancs moins
longs et moins serrés, et les élytres sont ordinairement
presque plus ovales, et moins violets. La tête est à
peine plus proéminente que celle de l'Alebohita. La tête supérieure
est moins transversale, un peu arquée, et elle se trouve
milieu du bord antérieur, trois petites dents bien diis-
tinctes, dans les deux sexes. Dans le mâle, les palpèbes
maxillaires et le dernier article des labiaux sont d'un
vert brouillé; dans la femelle, ils sont entièrement d'un
vert brouillé. Les mandibules sont un peu moins longues
et moins aiguës; les yeux sont moins saillants; la
corset est mou, plaqué, légèrement convexe et couvert de rides irrégulières, qui le font paraître un peu rugueux. Les élytres sont un peu plus larges, plus parallèles, et nettement dilatées vers le milieu; le bord latéral blanc est point interrompu; les autres taches sont un peu plus larges; la partie inférieure de la Hemera luminaire descend obliquement et ne se recourbe pas à l'extrémité; la partie supérieure de celle de l'extrémité ne paraît pas se recourber en dehors; le bord postérieur est denté en arrière. Le dessus du corps et les pattes sont à peu près comme dans l'Halbohirta."


Brown, semicor, opaque, undescribed unicolorous.

green; head and thorax granulate rugose, hairy, thorax broader than long, impressions very distinct; elytra punctured, markings complete, broad, humeral humule long, in some cases reaching the angulation of the median band; median band, usually rectangular, but, apical humule broad.

Length 16.5-18 mm.
Found in sandy fields and roads. It is double brooded and can be seen all summer long.

Habitat: Iowa City (Vickham).

Cambridge, Mass (Barrie); Conne (Secote);
Staten Isl (Leu); Pa (Leu + Reutenmüller); New Jersey (Smith);
Cincinnati (Putney); Kentucky (Ehrenk.);
Fort Brown;
Natch (Hubbard + Schwarz);
The, Falls of St. Anthony;
Miner (Secote);
Dodge City, Kan. (Pfefer);
St. Louis;
Mo. (Summerre);
Colo. Montana (Leu + Reutenmüller).


This is a variety of O. genovesa Say.

11. Cicindela vulgaris (Fig. 10. pl. iv.)—"Observe, on each elytron three white lines bands, two of which are curved, and the intermediate one refracted."

Head blackish or obscure coppery; spine at base above, front with cincereous hair; antennae, first, sec.
and, third, and fourth joints green, furnished with a few white hairs before, origin of the hairs in punctures, which are more obvious on the basal joint, remaining joints black, opaque, labium white, with three black teeth at tips and four marginal punctures, one of which behind each of the lateral teeth, and one at each anterior angle; mandibles white at the base, black within and at the tips; palpi paler green, beneath purple, the second joint of the labiale white. Thorax, thorax quadrate, inconspicuously narrowed behind, obscure coppery, with distinct hairs, submarginal impressed lines blue; feet green, tibiotarsi usually transversed; elytra coppery brown or blackish brown, with minute, irregular, green punctures; texture and external edge coppery, each elytron with an external humeral or curved line, originating on the humerus, sometimes interrupted on the margin, and curved inwards towards the tip of the elytron, intermediate band refrauded, at the centre of the elytron, in an obtuse angle, curved downwards, and terminating
near the outline, posterior band, somewhat lunate, terminal.
Abdomen, tergum greenish blue, segment brownish or
patent tips; ventral blue with a purple shade; tail and
sinus of the male purple.


E. vulgaria Say can be distinguished from the preceding,
E. genetorum Duf. by the long, oblique humeral suture.
Length, 13-17 mm.

Occasionally found at Iowa City, along sandy
roads.

Habitat; Iowa City (Hickham & Shumick).

Yale, Rd. (Hickham); St. Jerome, Ia. (Raudus);
Gretna, Out. (Pettit); Hamilton, Out. (Moffat); Ottawa,
Out. (Karrington); Nova Scotia (Sower); Cambridge, Mass.
(Carrie); Vienna, N.Y. (Sayward & Savage); Buffalo, A. Y.
(Réimeche); Philadelphia, Pa. (Liebeck); Sandierville, N. Y. (Liebeck);
Gloucester, N.Y. (Huygel); Maryland (Schaupp); Nidx.
Bayfield, Wis. (Hickham); Milwaukee, Wis. (Rauterberg);
St. Louis, Mo. (Summera); Ky. (Schaupp); Tolga, S. Dak.
(Francus); Nat. Creek, Ark. (Snow); Kau. (Schaupp);
Canion City, Grand Junction, Colo. (Wickham); Salt Lake City, Provo, Utah, Albuquerque, St. Mes (Wickham); Sals (Schaupp); The Walls, Oriz. (Wickham), Georgia (sic)

Culcagie, Day, Fraser, Am. Phil. Soc. I, p. 439, tab. 13, fig. 1, 1815

Sals, Fraser, Am. Phil. Soc. XII, p. 46, 1856.


Tranguebarica, tab. El. X, 178, pl. 171, fig. 12, (wrong locality).


12. Cercidela rubanda (Fig. 12, Pl. VIII). "Loba cupreous, sub-viridesc: elytric margines laterali interrupt; humeralis apicaligae integra, striagae mediae curvae et umbilicato calbris.

Long. 5, ½ ligne; Larg. 2, 2½ ligne.
"Elle ressemble beaucoup à l'Hybrida pour la forme et la couleur; mais elle est plus petite, et les taches des élytres sont à peu près disposées comme dans la Triagnata, la tête supérieure, les mandibules, les palpes, les antennes, la tête et le corps sont presque absolument semblables à ces mêmes parties dans l'Hybrida. Les élytres sont proportionnellement un peu plus courtes et un peu plus larges, et le bord extérieur est un peu dilaté aux dehors de la lunule humérale; elles sont un peu moins fortement granulées. Les taches sont disposées à peu près comme dans la Triagnata; mais la lunule humérale est un peu moins recourbée; la première partie de la bande du milieu est un peu plus droite; la partie supérieure de la lunule de l'extrémité est recourbée du côté de la suture comme dans l'Hybrida, et le bord latéral est interrompu, et il ne touche ni la lunule de la face ni celle de l'extrémité. Le bord postérieur est légèrement dentelé en série de dehors du corps et les pattes sont courtes dans l'Hybrida."

Brownish brown; undersurface green; head hairy; granulate; labrum one toothed; eye black; thorax quadrate granulate; elytra punctured, humeral hump C-shaped, median band rectangularly but connected with a marginal line, nearly but never quite reaching the humeri, apical humeri inflected anteriorly.

Length: 12.13 mm.

Found on sand banks and bare.

The larva of *Capraea* Dru is yellowish white, head pinacoids, thorax slightly browned. The form is rather slender, cylindrical, slightly flattened, head and thorax at right angles to the body, the last four segments of abdomen gradually arcuate forward.

Length: 16.5 mm.

Head triangular, hind angles obtuse, coneous, concar in side, a strongly elevated transverse ridge posteriorly, and a feeble longitudinal impression on each side. Frontal margin with prominent middle lobe with sides slightly convergent, on each side a very feebly tooth at base, lateral lobes feebly prominent.
limited within by a moderate tooth. Head at sides moderately deeply sinuate. Beneath head very convex, more or
more or less long, form irregularly hexagonal, posteriorly e.
marginate at middle, median line with a moderately
deep impression at middle. Anterior margin trilobed,
median lobe most prominent, with convergent sides,
and oval tips. Lateral lobes triangular, limited behind
by an elevated line. There are two pairs of eyes on each
side of the head. The superior eyes are large, prominent
and equal in size, one near the posterior angle of the head,
the other a short distance in front. The smaller eyes are
situated as follows: one moderately convex on the cheek
in front of and beneath the upper front eye, the second
is on the under side of the head immediately beneath
the front superior eye. These are indistinct and may
escape observation. Antennae arising above and behind
the base of the mandibles, four jointed, first joint stout,
second longer, equal to the next two together, joints three,
and four more slender, the terminal one shorter. All
joints with moderately long whitish hairs. Mandibles
slender, falciform, acute, more prominent than the margin of the frons, armed with one acute tooth near the base. Maxillae with the small triangular basal piece, second joint moderately stout, attaining the sides of the head, with a few setae in front, third piece with the inner lobe tridentate near the tip, and a moderately long, more slender terminal articulation. Palpi shorter than the inner lobe, three-jointed, joints gradually longer, but more slender from first to third. Mentum oval, narrower at base, basal portion feebly corneous, apical portions membranous. Palpi two-jointed, first joint stouter and longer than second, and with moderately long stiff hairs. Prothorax more than twice as wide as long, crescentic, apical margin deeply sinuate, disc feebly convex, median line finely sinu-pressed, posterior and lateral margins with moderately long whitish hairs. Mesothorax less than half as wide as prothorax, sides feebly incurved and gradually but feebly narrowed to the front. Metathorax as wide as mesothorax, and a little shorter. Abdome...
The segments, first to fourth, gradually longer, fifth longer, gibbous posteriorly, and emarginate with a slender tubercle on each side of the emargination. Hooks one on each side, long, slender, directed upward and forwards; segments sixth to ninth gradually narrowed, anal segment moderately long, truncate, opening terminal. Legs—antero and posterior pair of equal length, the middle pair somewhat shorter.

The coxae conical, prominent, nearly equal to the rest of the legs. The second piece seems to be composed of a conicate trochanter and femur, the separation indicated by an oblique impression and a feeble subangulation on the lower margin. The tibia is short, slightly conical, and rather densely fimbriate, with a short tarsal piece from which arise somewhat long unequal terminal claws. There are nine pairs of spiracles. The anterior pairs are situated, one on each side, under the margin of the prothorax behind the base of the anterior coxae, much larger than the others. The other spiracles are in the abdominal segments.
come to eight, and are situated in the sides of the segment in front of the middle, and in the deep fold which is nearest the dorsal aspect of the segment (Fig. 4).}

Habitat: Iowa City (Hickham), Waukegan (Putman).

Exact, Ore. (Potter), Ottawa, Ill. (Karrington); St. Jerome, Kan. (Bauer); Green River, Utah (Hayward and Savage); Buffalo, N. Y. (Reichenbach), Staten Isl. (Leyn), Penn (Schaupp); Allegheny, Pa. (Hamilton); Cincinnati, O. (Wury); New Jersey (Smith); Md., Ky. (Schaupp); Va., D. C. (Schaupp); Detroit, Mich. (Hubbard and Schuy); Bayfield, Wis. (Hickham); Milwaukee, Wis. (Rautenberg); St. Louis, Mo. (Summere); Dakota, S. Dak. (Furman); Omaha, Neb.; Eastern Kansas (Popenoe); New Orleans, La. (Furman); Pocatello, Idaho (Hickham); Garden of the Gods, Colo. (Barkard), Canon City, Colo. (Hickham), Utah (Furman); Cerro, N.M. (Furman); Ore. (Schaupp); Columbus, Tex. (Hickham).


13. *Cicindela 12-guttata* Dej. (*Fig. 11. Pl. III*).

"Integra venter acer; spinae terga humerali apicali que interrupta; striaque media flexuosa, abbreviata interrupque albi.

Long. 5/5, 6 lignes. Long. 6/5, 2 1/2 lignes."

"Elle ressemble un peu à l'Obliquata, mais elle est un peu plus petite, et proportionnellement un peu plus courte. Elle est enduite d'une couleur brunâtre, sécure un peu cuivrée. Dans la femelle, le seul sexe que je connaisse, la livre supérieure est blanche, trouvée, avec une petite dentée à sa partie antérieure. Les palpès sont d'un côté brunâtre. Les mandibules sont d'un côté brunâtre avec l'extrémité et les dents interieures noircissent, et une grande tache blanche à la base.

Les quatre premiers articles des antennes sont d'un vert brunâtre avec des nuances cuivrées; les autres..."
sont obscurs. La tête est finement striée entre les yeux et légèrement granulée à sa partie postérieure. Elle a quelques poils blancs, principalement entre les antennes. Les yeux sont assez gros et brunâtres. Le corps est un peu moins carré et un peu plus courbe que celui de l'Hybrida; il se rétrécit un peu postérieurement, et il est finement granulé. Les sillons transversaux et la ligne longitudinale sont un peu plus marquées que dans l'Oblignata, et le fond des sillons est d'un vert un peu doré. L'écaillure est d'une couleur bronzée un peu cuivrée. Les élytres sont plus larges et moins convexes que ceux de l'Hybrida, plus courtes et plus en oval que ceux de l'Oblignata; elle sont légèrement granuleuses, mais pas aussi fortement que celles de l'Hybrida; elles sont un point blanches à l'angle de la base; un autre arrondi, un peu plus bas, qui remplace l'extrémité de la ligne luminaire; au milieu, une bande étroite, traversée, courte, un peu rincée, qui se recourbe pour se jolindre à un point rond, placé plus bas, près de la extrémité, mais dans la partie qui la joint à ce point marqué presque entièrement; une
...contrary Point, Près de l'extrémité qui remplace la partie supérieure de la cuisse, et une petite tache en forme de virgule allongée tout à fait à l'extrémité. La cuticule est terminée par une petite pointe, et le bord postérieur est finement dentelé en soie. Le dessous du corps est d'une belle bleu-vertâtre brillant. Le côté, du corslet et de la poitrine ont quelques reflets cuivrés. Les pattes sont d'un vert un peu bronzé avec des reflets cuivrés, principalement sur les cuisses.  

"De Sp. Enc. I. p. 73. 1825.

Black, brown or bluish, beneath green or blue with epaulets, pleurals, head and thorax in ombilica.
elytra granulated, punctate, all markings broken into dots, middle band thin, never reaching the discal dot. Varies considerably not only in colour but also in the markings, which are sometimes scarcely visible, the middle band is often small and imperfect and the elytra only sparsely granulated. When the colour is brown, olives, or coppery, the punctures are blue and very distinct.

It occurs near wet and muddy spots on sand bars,
and on fatlets through marshes near Ponds and river; Common.

Length 12.6-15 mm.

Habitat: Iowa City (Mitchum), Davenport, Ia. (Putnam).

British Columbia: Endeavour Bay Fer. (Schauo); Pinawa Lake, B.C. (Hamilton); Grindle, B.C. (Pool); St. Jerome, Que. (Bauer); Nova Scotia (C. Jones); Green Nature (Payward and Savage); Buffalo, N. Y. (Reinecke); New York, N. Y. (Smith); Detroit, Mich. (Gunnard & Schwartz); Bayfield, Wis. (Mitchum); Milwaukee, Wis. (Rantburg); St. Louis, Mo. (Simmons); Eastern N.Y. (Deezer); Yellowstone Park, (Putnam); Plateau Canon,show), Col. (Snow); Bear Creek, Col. (Heller); Utah Lake, Utah (Putnam); Cal. (Schauo).


Des. Franz, Ann. Phil. Soc. II. p. 42. no. 4. 1856.


spp. v. desic.
"Cicindela punctulata" (Fig. 13, Pl. III), brownish, emerald blue, obscure; elytra with a few points, some white, and a series of points, enframed, brillian.

Olivier, loc. 33, tab. 3, fig. 37, p. 6, 1790.

"C. punctulata, capite thoraceque cupreae, elytri punctatius obscures; puncta lumulagae apicee albo.

Magnaude "C. marginalis, caput et thorax cupreae, mystica, labio niveo. Elytra obscure, cupronitidula, puncta indistentiis, lumulagae apicee maior albo.


Dark brown or black with cupreous macula, under surface blue; head and thorax finely granulate-nigrescent, somewhat bronzed, cheeks, two lines between the eyes, margin and impressed. Lines blue, labrum white, molarothete, labial palp white, last joint green, external maxillary palp white, third and fourth joints green, elytra oblong, strongly and irregularly punctured with green, with a row of large, bluish forae near the sides, four marginal and two discoidal white spots, and a complete apical lumulagae.
anteriorly, forming there a sharp right angle, and

Occurs on dry roads or sandy spots, sometimes
seen in the streets of cities, from July to September,
at all times of day, and occasionally at night.

Length 12.5-15 mm

Habitat: Iowa City (Tichanan), Near Portland (Putnam),

Camden, N.Y. (Pettit), Cambridge, Mass. (Carrie);

Hartford, Conn., (Leconte); Green Haven (Rayward & Savage); Buffalo,

N.Y. (Reincke); Staten Isl. (Lebz); Rome (Gay); Asbury

(Smith); Cincinnati, Ohio (Dury); Southeastern Virginia,

(Corn); Tallahassee, Fla. (Korbel); Texas (Leconte); St. Louis,

Mo. (Simmers); Milwaukee, Wis. (Rautenberg); Lake Superior

region (Hubbard & Schwag); Eastern N.J. (Pfeffer); Garden

of the Gods, Colo. (Packard); Canon City, Colo. (Ulke); Camp

Bowie, Okla. (Ulke); Albuquerque, N.Mex. (Tichanan).

C. feminita Ohio. loc. 59, tab. 3, fig. 37. 1790.

Tab. Cr. I. p. 241, no. 44. 1801.


15. Cicindela cupreae (Fig. 14 P1. III) modesta elongata, cylindrice, cupria, vel solivaceo-aenea, subruitida, capite thoraceque albo-pubescentibus, hoc latitudine hand longior, lateribus rotundatis, elytris valde punctatis ad apicem verrucatis, macula basali, margine lobato, varico subhumerali subobliquus brunato, facies media sine tortuosa, filamentata, lunulique apicali, utrinque reflexa latior albice; subies varioviscente densae albo-pubescentae, medio glabra, trochanteribus rufio, pedibus longissime, labro brevi inciduntato. Mac elytris ad apicem oblique subcinnatius, sutura hand retracta.

Femina elytris ad apicem oblique cinnatius, angulo externo acute prominentul, sutura paulo retracta.
Greenish or coppery bronze, shining, underside greenish bronze; sides thickly covered with white hairs; head and thorax hairy; labrum short, one-toothed, eye brown; elytra coarsely and densely punctured, with a white basal dot, humeral lunule hooked at tip, median band tortuous and confused before the dilated tip, apical lunule reflected at both ends, and a white margin connecting all the markings.

3. Right mandible not toothed, outer margin of the elytra cinctate near tip, tip obtuse.

4. Outer margin of elytra strongly cinctate, with a tooth one-fourth from the tip, tip rounded.

Length: 13-14 mm

Habitat: Ames, la. (Oken), Eastport, la. (Shimel).

Cincinnati, 0. (Dury); Illinois, Kentucky (Leng and Reutemüller); St. Louis, Min. (Schweiter); Dakota (Schaupp); Lawrence & Topeka, Kan. (Pfeiler); Nebraska (Schaupp); Montana (Leng and Reutemüller).


Hendel & Reuter. *Joum. A. Y. Ent.* Soc. III. p. 94. 1894

Hendel var. b. Lec. (see Dej.).

16. *Cicindela macra* (Fig. 15, Pl. III.), valde elongata, cylindrica

fuoco-amara, capite thoracique albo. Subsectantibus, hor

latitudine fere longior, lateribus vix rotundatis, elytris

confertibus punctatis, ad apicem oblique angustatis

serrulatis, macula basali, margine lobato, sterno sub.

limnerei oblique hamato, faccia media tortuosa

fimbriata, lunulisque apicali striisque inflata, albic

subtrix viridi-amaea, dense albo pubescentem, medio

glabram, trochantis rufis, pedibus longissimis. Ped-

bis sexus striisque pallidius ad apicem amara, labio

bini unidentato.

Mae elytris sublineatis oblique angustatis, aurata

prominent.

Femina elytris majis sinuatis oblique angustatis.
anguis, externo oblique, latus, rotundato; sutura hand
Brownish bronze, under surface brown, or greenish
bronz, sides, densely clothed with white hairs, head
and thorax pubescent, rugose; elytra finely and more
sparingly punctured than C. cupreascens Lec. with similar
markings. It differs from it in being usually more
slender, less shining and, by having narrower markings.
The elytra are more than twice as long as wide, and the
external angle of the obliquely sinuate elytra of the f is
obtuse, at most rectangular.

Length 12-14.2 mm.

Habitat. Iowa City (Hickham); Eastport, Ia. (Shumard);
Minnetonka (Leconte); Milwaukee, Wis. (Rauterberg);
Illinois (Schaupp); St. Louis, Mo. (Summers); Tennessee
(Schaupp).


17. Cicindela lepida Oly. (Fig. 16. Pl. III).

"Viridi: aenea, visco pilosa; elytris, glabris, albis,

punctis basee fasciisque, duabus, obliquis, abbreviatis,

abolitis: feco aeneis; antennis, pedibusque pallide testaceis.

Long. 4½, 4½ ligne. Larg. 1½, 1½ ligne.

Elle se rapproche un peu de la Conoperae par la

forme, la grandeur et la couleur. La tête et le corselet

sont d'un vert bruné et entièrement couverts de poils

blancs. Dans le mâle, le seul sexe que je possède, la

tête supérieure est blanche, assez courte, pressée trave-

rmeal, et elle a au milieu du bord antérieur une

petite dent à peine distincte. Le mandibules sont

d'un blanc un peu jaunâtre, avec l'extrémité et les

deux interies d'un brun noirâtre. Les palpes sont

d'un blanc roussâtre, avec l'extrémité du dernier

article un peu brunâtre. Les antennæ sont entière-

ment d'un jaune testace assez pâle. Les yeux sont

d'un brun noirâtre, assez gros et très saillants. Le cor-

selet est à peu près de la largeur de la tête, sans y
comprendre les yeux, aussi long que large, presque carré, très légèrement arrondi sur les côtes, un peu convexe et presque cylindrique; les deux sillons transversaux et la ligne longitudinale du milieu ne sont pas très marquées. Les élytres sont glabres, flausse, à peu près le double plus larges que le corps, peu allongée et légèrement convexe; elles s'élargissent un peu vers l'extrémité, qui est une peu déprimée, et le bord postérieur est assez fortement courbé et nullement denté en arrière; les faces et les bords de la suture sont assez distinctement pointées; le reste des élytres paraît lisse; elles ont près la base quelques pointes distinctes d'un vert-brunâtre très-obscur et deux bandes obliques un peu sinuées de la même couleur, qui se rapprochent beaucoup plus de la suture que du bord extérieur; la première est peu près au milieu, et la seconde aux deux tiers de leur longueur; ces bandes sont peu marquées et quelquefois presque effacées. Le dessus du corps est d'un vert-brunâtre, avec les côtes couronnées de poils flausse. Les pattes
sout d'un jaune testaceux, et leurs extrémités sont couronnées de poils blancs, et leur base est d'un vert brunâtre.


Head and thorax brown, blue or green, hairy; eyes black, large, prominent; labrum white, without teeth; elytra white, glabrous, finely punctured with a few scattered brown or bronze lines, anteriore pale; ante-testaeus, undersurface greenish bronze, densely clothed with white hairs; legs, antennae, and palpi, except tips, which is brown, pale.

3. Elytra scarcely sinuate and obliquely narrowed at apex.

4. Elytra sinuate; exterior angle obtuse, not rounded, apex nearly truncate.

Length 11-12.5 mm.

3. Lepida Dej. while at rest is not readily seen and it rarely moves until in danger of being trampled on, seeming aware of the protective color of the sand on which it is found. On dark ground it is extremely wary and difficult to capture.
Habitat. Iowa City (Dickhaus);
New York; Cony Del. (Menute); Trenton, N.J. (Leconte);
Jamesburg, Angola, A.J. (Smith); St. Louis, Mo. (Summers);
Illinois (Schauppe); Douglas Co. Iow. (Snow);
Texas, Sotol. (Schauppe).


Leng & Reuternpiller. Jour. A. Y. Ent. Soc. II. p. 70.
Carabidae

Head usually oval, rarely very broad, very elongate; neck often suddenly constricted; elytra usually narrower than the front and more or less prolonged. Eyes usually present, round or oval, size and prominence variable. Antennae always slender, jointed, usually falcate, or setaceous sometimes moniliform or compressed, inserted behind the base of the mandibles under a frontal ridge; three kinds of pilosity are found, any or all of which may be present at the same time, dense, fine, short, recumbent pubescence on joints with fine dense punctures, longer hairs, diffusely scattered over the joints and stiffer hairs around the distal end of the joints. Mandibles variable in form and prominence, toothed within, serrulate or simple, tip usually acute, the left mandible overlapping the right. Sometimes the rear piece-like. The outside is usually concave, forming an elongate groove (erect) in which, beyond the middle, a puncture having a seta is sometimes found.
Maxillae with inner and outer lobes always present, the outer lobe planiform, usually biarticulate; joint of variable length, together equal at least to the inner lobe, usually curved, usually hooked at tip, hook ciliate or with spine, never articulate. Maxillae, deeply emarginate, simple, or furnished with a tooth; ligula more or less developed, generally square and with more or less distinct paraglossae. Prothoracic spines and episterna usually distinct. Scutellum never large, sometimes concealed, usually triangular. Elytral sculpture variable, normal form striate, but this is far exceeded in some genera. Metasternum pointed behind, rarely meeting second, natal, segment. Abdomen with the three anterior segments concurved, usually six, rarely seven or eight, natal segments, first lateral, edge slender, formed for running; anterior and middle coxae globular; posterior dilated internally, usually not attaining the sides of the body; tarsi five-jointed.

The body of these insects is of very firm consistence, thereby enabling them to creep about under
stones and other hard substances, as well as protecting them from the insects upon which they prey; most of the species are insectivorous, prowling about on the surface of the ground, under stones, beneath the bark of trees, &c., in search of their prey which consists of larvae or of herbivorous beetles and other insects. They are of essential service in keeping down the number of noxious insects with which our gardens and pastures might otherwise be overrun. The habits of the family are not known, exclusively carnivorous, young and tender herbs and grains form a portion of their food.

Some of the species exhale a fetid odour, discharging at the same time from the nasal glands a caustic and acid fluid.

The larvae of this family are generally long, with the body of equal breadth throughout, and the head of moderate size with the rudimentary eyes equal; a scaly square protothorax, and with the eighth segment simple and resembling the remaining joints.
Numerous efforts have been made to indicate rational distribution of the genera of this most num-
erous family but that revised by Dr. Corn dividing it into three subfamilies seems the most satisfactory. It is as follows:—

A. Middle coxal cavities not entirely enclosed by the sternum, the spinerons of the meso-tergum reaching the coxa. Carabinae.

A2. Middle coxal cavities entirely enclosed by the sternum, the spinerons not reaching the coxae.

a. Head without antennal grooves beneath and with distinct supra-orbital setae. Ambulatory setae of abdomen usually well developed. Harpalinae.

aa. Head with distinct, usually large antennal grooves beneath and without distinct supra-
orbital setae. Ambulatory setae of abdomen feebly or wanting. Pseudoneophinae.
Subfamily Carabinae.

A. Anterior coxal cavities open behind.
   a. Posterior coxae separate. Labrum bifurcate.
      2. Tribe Cyclinini.
      2a. Posterior coxae contiguous. Labrum not bifurcate.
      2b. Mandibles without setigerous punctures.
         externally.
   3. Tribe Carabini.
   3a. Mandibles with setigerous punctures.
      4. Tribe Elephnini.

AA. Anterior coxal cavities closed behind.
   c. Proternum prolonged and dilated, entirely con-
      cealing the mesoternum.
   d. Mandibles with setigerous punctures. Scutellum
      entirely concealed.
      1. Tribe Omophonini.
   cc. Proternum not concealing the mesoternum.
   e. Antennae free, not base.
      f. Mandibles with setigerous punctures.
      Anterior tibiae feebly exposed. Two
      supra-orbital setae.
      4. Tribe Elephnini.
   cc. Antennae rasing either under or distinct.
frONTAL plate or a ridge which extends back over the eye.

2. Posterior coxae contiguous. Anterior tibiae emarginate within, the outer angle prolonged.

1. Tribe Oonophronini.

This tribe has but a single genus remarkable for its round convex face and the absence of a scutellum.

Antennae slender, inserted under a slight frontal margin, four basal joints glabrous. Eyes round, moderately prominent, distant beneath from the buccal opening. Head deeply inserted, with one supra-oral striae, broad, pointed in front. Labrum short, emarginate. Mandible, not prominent, flattened above, acuminate, acute at tip, simple within, or slightly toothed near the base, outer side slightly concave with a stigmatic puncture. Maxillae slender, inner lobe hooked at tip, spinulose within, outer lobe slender, biarticulate; palpi slender, the last two joints equal. Ken-
turn deeply emarginate, with rare acute tooth in the
middle; ligula truncate, slightly broader at tip, bi-
seate; the paraglossae free at tip but not longer; the
palpi slender, second joint longer than the terminal
and pluristome in front. Thorax applied directly
against the base of the elytra, sides with a single
setigerous puncture a little behind the middle. Scutellum
invincible. Elytra convex, margined at base, sides
narrowly inflexed, margin continuous. Prosternum
rather widely separating the coxae, prolonged and
dilated behind them, completely covering the meso-
sternum; coxal cavities closed behind. Metasternum
in front vertical, carinate, with two fossae to receive
the under side of the anterior coxae. Metasternum
short; epimera not distinct; posterior coxae contiguous.
Tibial finely spinulose externally, the anterior
slightly broader at tip, within obliquely ground;
inferior spur above the apex. (Figs. 11, 21, Fig. 3, Pl. x.)

The males have one or two joints of the anterior
tarsi dilated and spiny pubescent breast.
18. *Onophrus americanus* Déj. (Fig. 1, Pl. xx).

Testacea ferrugineus; capite postico, thoracie, diceo, elytronus sutura fasciisque tribus latie undatis fusco-puniceus.

Long. 2 ½ ligne. Larg. 1 ½ ligne.

Il ressemble aussi beaucoup au *Limbatium* par la forme et la grandeur, mais les taches de la tête, du conelet et des élytres sont d'une brune très obscure et presque brune à. La tache de la tête est à peine frène comme dans le *Limbatium*. Celui du conelet est beaucoup plus grande, et les bords latéraux seulement sont d'un jaune ferrugineux. Les hautes des élytres sont plus larges et réunies en plusieurs endroits; la partie postérieure de la suture est aussi plus large et ne...
va pas tout à fait jusqu'à l'extrémité; les stries sont un peu plus marquées et plus fortement crénelées; les intervalles sont un peu moins plisses. On distingue la tête, le corps et la poitrine sont d'une brune rousseâtre.


Bronzy or greenish black. Elytra with fifteen striae. Punctures of striae fine, approximate, distinctly visible to eye; markings of elytra more or less confluent, margin testaceous; thorax with lateral margins pale, very narrow; median line faint, due, dark brownish, slightly tinged with metallic green; underside pitchy black, tip of abdomen paler.

Length. 6.7 mm.

Habitat. Ford City (Dickham).

Utica, Ont. (Petit); A. England, States (Corn); Buffalo, N.Y. (Reineche); Staten Island; Atlantic Co, Gloucester, Green- ville, N.J. (Smith); Cincinnati, O. (Dury); Detroit, Mich. (Hubbard & Schwarz); Bayfield, Wi. (Dickham); Milwaukee, Wi. (Pauterburg); St. Louis, Mo. (Summers); Kansas (Corn, Faxon); Ta. Pita, Colo. (Leconte); Albuquerque, N.M.
Valient Creek, t. Mex. (Snow).

Found on muddy or sandy banks of streams, and ponds hidden in grass bunches.

**D. americanum**

*Hop.k. Gen. N. Am. III. p. 583. no. 6. 1831*


*Says* *Hop.k. Gen. N. Am. IV. p. 11. 1837.*

17. *Dresenon tessellatum* Say. (Fig. 2, Pl. 1.)

Pars, varied with green; elytra somewhat tessellated with green.

Body rufous, punctured; head green behind, between the eyes a longitudinal and oblique dilated line, running in the form of a w; labrum white; thorax with a green discus and longitudinal impressed line; elytra with punctured striae, green; margin, two undulated bands and tip, pale rufous; prothoracic and post-predictic, darker rufous; feet whitish.

*Say* *Hop.k. Nat. Sci. III. p. 152. 1823.*

The punctures of the elytra are more closely
placed on the side than at the apex; the thorax is
coarsely but sparsely punctured, the disc and basal
regions with but few, discal spots rather small,
equaling about one third the width of the thorax,
with a narrow process along the median line, extend-
ing to the front and hind margins; underside pale
ferruginous; elytra with fifteen striae.
Length 4.5-7 mm.

Habitat. Iowa City (Hickham); Ames, Ia.; Fairfield
(Osborn).

Can. (Gree); Buffalo, N. Y. (Reinecke); Grafton, Rock-
avay Beach, N. Y. (Schaefer); Atlantic Co., N. J. (Huegel);
Cincinnati, O. (Berry); Bayfield, Wis. (Hickham); Milwaukee,
Wis. (Rautenberg); St. Louis, Mo. (Dumestre); Lincoln,
Nebr. (Shimel); Eastern Iowa. (Popovich).

Oteriellum Say Jour. Linn. Soc. (1838), 152. 1838.
Horn. Ame. Ent. Soc. 74. 1870.
2. Tribe Eicheni. (Pl. 2. Fig. 2.)

Head elongate, more or less constricted behind the eyes, with one setigerous puncture above the eyes, neck often semi-globose. Antennae slender, setaceous, two or four basal joints glabrous, inserted under a feeble frontal ridge; first joint long, often stout, third longer than second, the rest subequal. Eyes round, moderately prominent, labrum deeply bifurcate. Mandibles long and prominent, carinate, acute at tip, at least bidentate with one, with no setigerous puncture, externally ligulate, acute, bisetose at tip. Labial palpi long. Maxillae with inner lobe slender, hooked at tip, ciliate or spinous within, outer lobe stout with terminal joint longer, palpi long and slender. Notum deeply emarginate, without tooth. Thorax variable, with lateral and antebasal setigerous punctures. Scutellum scarcely evident. Elytra not margined at base, sides rather widely inflexed, margin acute and not interrupted. Posterior coxae separated by a triangular process of the abdomen. Legs long, usually slender.
The males have one or two joints of the antennae tarsi dilated, and pungent, pubescent, beneath. (Fig. 3: Pl. XIII.)

Two genera form this tribe, both of which are found in Japan.

Antennae with four basal joints glabrous.

 Cyclura Fab.

Antennae with two basal joints glabrous.

Somaterus Lac.

 Cyclura Fab.

Found in woods under leaves and stones in moist places. They feed principally upon snails, the head being well adapted for extracting the animal from the shell.

Thorax not elevated at sides.

Elytral striae interrupted only at apex sternitumus. (4)

Elytral striae entire at base, and interrupted behind the middle.

var. laccatai Dej.

Thorax nearly as wide as elytra, much elevated at sides; violaceous or cupreous. (5)

 elevated Fab.
20. *Cyclus sternotomus* Hb. — Head black, glabrous, impunctured; antennae brownish towards the tip; thorax black tinged with blue, broader than long, sides arcuate, slightly oblique posteriorly, hind angles obtuse, basal transverse impression moderate, longitudinal impressions rather sharply defined. Moderately elongate with few punctures; elytra dark cupreous, margin dark blue, striae numerous (fourteen to eighteen), punctures closely placed, intervals entire or disc, sometimes interrupted in the apical region, humeral edge not dilated or reflected.

Length, 12 - 15 mm.

Habitat. Iowa City (Dickham).

Mass. (Pickering); Philadelphia, Pa. (Liebich); Gloucester, N.J. (Hugel); Newark, N.J. (Smith); Cincinnati, O. (Dury); Waukesha, Wis. (Rautenberg); A. Gar. (Kem. Diphtherus sternotomus* Hb. Obs. Ent. p. 43. 1861.

Dyer. Obs. Ent. II. p. 15. 1866.

Dyer. Obs. Ent. tab. 45.
31. Cyclone acutis (Fig. 3, Pl. xx.).

Figuré, thorax, antennæ multo bæc pedibusque ferrugineis,
æstìres brunneus.

Long. 7½, 8¼ lignæs. Long. 2¾, 3 lignæs.

Elle ressemble aussi beaucoup à l'Ameriana, mais
elle est ordinairement plus petite, proportionnellement
moins allongée et, comme dans la Cyclone, le
courant dont elle est couverte est moins serré, plus
court et moins soulevée. La tête est un peu plus large,
moins allongée, et elle a dans son milieu une petite
tache soulevée, peu apparente. Le premier article des
antennes est de la couleur du corselet, avec une tache
obscur à l'extrémité; les trois suivante sont d'un brun
noirâtre, avec la base et l'extrémité un peu soulevée;
les autres sont d'une brun un peu soulevée, avec
l'extrémité de chaque article un peu plus obscur. Les
yeux sont un peu plus saillants. Le corset est un peu plus large vers la base, et la marge postérieure est un peu plus relevée. Les élytres sont noircis et proportionnellement plus courtes que celles de l'Americana et de la Guanipecus. Les stries paraissent lisses à la vue simple, mais avec une forte loupe, on voit cependant qu'elles sont très légèrement piquées. L'indice du corps et les pattes sont à peu près comme dans la Guanipecus.

Dej. 9th Ens. 1st. p. 395. no. 10. 1831.

Similar to the preceding, with the intervals on the elytra interrupted from the middle to the apex, at the apical third, the interruptions assume the form of tubercles, often elongated. It is very difficult to separate from Ateneosternus Dej. with which it intergrades imperceptibly.

Length, 15-17 mm.

Habitat. Independence, Va. (Hickham).

Vermont, Ont. (Bettel), Staten Is.; New York; Delmar, N. 
J. (Hengel), Newark, N. J. (Smith) Haverhame Co. Ga. (Smith), 
Bayfield, Wis. (Hickham), Milwaukee, Wis. (Rautenberg),
St. Louis, No. (Pammene).


22. Cyphena elevata. (Fig. 4 Pl. 22.) thoracic margins reflexed; elytra violaceous; corium rufes. Tab. 1. 1832. 33. 1793.

Forme moderately robust, colour variable from bluish to bright copperous; head black; moderately elongated; eye prominent; antennae black at base, brownish towards tip; thorax black tinged with violaceous, the sides in front angular, posteriorly oblique, margin more or less reflexed, much wider posteriorly; hind angles prolonged over the elytra, disc coriaceous, surface wrinkled, margin more or less finely punctured; elytra broadly oval, moderately convex, margin reflexed, gradually narrow towards the tip, arise sixteen to eighteen, rarely twenty,
intervals, moderately convex, narrower than the striae, slightly constricted at tips and sides; body, mouth, and legs, smooth, shining. (Fig. 7, 7a, Fl. XX tame).

Length: 15-25 mm.

Habitat: Iowa City (Hickmann); Burlington (Griffith); Ames, Fairfax (Dobson). Common.

Onglemarie Canova, Solo (Snow); Mus., Peckou, Milwaukee; Wis. (Rautenberg); St. Louis, Mo. (Summers); Red River, D. (Scourte); Cincinnati, O. (Kerry); Canons, Pa. (Mclsheiner); Cape May, I. J. (Schulz).

Cercane elevata Fab. Ent. cjet. I p. 132. 1792.

Oliv. loc. III. p. 46, pl. 7, fig. 32.

Cercane elevata Fab. El. I p. 166. no. 7. 1801.


Jay, Am. Ent. I. p. 103. Plate XCV.


Sphinctus lec. | Artimus, with two basal joints glabrous, elytra with eleven striae.

Found on woody hills and creek bottoms. Rare.

Disc of thorax not punctured.

Disc of thorax coarsely punctured.

33. Sphinctus bilineus Say. (Fig. 5. Pl. XIII).

Violaceous; breadth black; margin not reflected; basal thoracic lines obsolete.

Body, breadth black; thorax purple-violaceous, polished, broadest rather before the middle, much narrowed behind; lateral margin not dilated nor reflected; face depressed, and much punctured; basal lines obsolete.
Ventral edge rectilinear, not wider than the particle of the propsectus, disc somewhat bilobate, being convex each side and gradually indented in the middle by the dorso-lateral line; anterior margin depressed, and suture in the middle; elytra cupreous-violaceous, striae numerous, punctured; pubescence-rough, postpectus, and abdomen each side punctured. Say Am. Ent. I. p. 101.

Length 11.14 mm.

Habitat. Iowa City (Frickham); Council Bluffs (Fickham).
Bayfield, Wis. (Frickham); Marquette, Mich. (Hubbard + Schwanz); Eastern Iowa (Dobson); N.Y. (Say), Ohio (Say).


Cyphurus bilobus Say. Trans. Am. Phil. Soc. II. p. 73. 1823.


Long. 84. Boston J. L. Y. Ent. Soc. II. 137. 1874.

24. Hamarurus canicolliis,annuum, purpureum, nitidum, thorac.
lobovalvis, postice valde aiguostato, sulco dorsoalis profundo.
antice disperse punctato, postice latius concavo, profunde
impressed et punctato, elytris striis utrinque 13 fortiter
crassatis. Lec. Smithsonian Cent. p. 3. 1859.

Length 11.25 - 12.25 mm.

A. canicollicius, differs from bicolorius by having
the anterior half of the thorax covered with scattered
punctures, and the posterior half broadly concave and
deeply punctured.

Habitat. Iowa. (Leng + Reutermann).

Buffalo, N. Y. (Reiche); Missouri (Bolter); Tex. (Leng +
Reuten.); H. Riley, Kan. (Leconte).

A. canicollicius. Smithsonian Contributions to Knowledge,
p. 9. 1859.

Leng + Reutermann Jour. A. Y. Ent. Soc. Ill.
p. 198. 1894.

3. Tribe Carabini.

Head not constricted behind the eyes, with suborbital
supra-orbital setigerous puncture. Eye round, moder-
ately prominent. Antennae slender, with four basal
joints glabrous, raising under a feeble frontal ridge.
Labrum broad, emarginate. Mandibles stout, carinate, acute at tips, concave on the outer side, and without setigeous punctures. Mentum broad, emarginate, with a variable tooth. Ligula variable, the paraglossae distinct. Maxillae with inner lobe strongly hooked, densely pilate within, outer lobe stout. Palpi moderately long, last joint of both pairs recurved. Thorax with a setigeous puncture at the side, and one near the posterior angle.

Body not pedunculate. Punctation small. Elytra softly embracing the sides of the body, the lateral margins continuous. Notaexternal epimera invisible, posterior coxae contiguous. Anterior tibiae growing gradually broader to tip, slightly grooved within, the apical terminal but placed obliquely to each other. Femora moderate, the anterior shorter. Middle and posterior tarsi long and slender, the anterior shorter (Figs. 44, 45, XIX).

In the males the anterior tarsi are dilated and deeply furrowed beneath, the dilated joints variable in number.

This tribe is composed of species of medium and
large size, remarkable for their beauty of form, colour, and sculpture.

Two genera occur in Iowa, separated by the third antennal joint.

Third joint of antennae cylindrical. *Carabus Line.*
Third joint of antennae compressed. *Calosoma Phil.*

*Carabus Line.*

Exterior maxillary and labial palpi subtriangular; dilated; mandibles not elongated, robust; labrum short, transverse, not bifurcate; labium emarginate and with a central tooth; antennae with second joint half as long as the third, cylindrical; thorax subcordate, emarginate behind; elytra oval; posterior coxae touching; spurs of anterior tibiae terminal.

A. Elytra sorrata.

A4. Elytra catturate.
   b. Margin serrate near humeri, black with blue
Carabinae, Cyphus Say. (Fig. 1, Pl. vii.)

Apópere, black; thorax, and elytra margined with violaceous; the latter with a triple series of excavations.

Punctures!

Body black, pubescent; antennae brownish towards the tips; palpi terminal joint dilated; thorax margined, margin violaceous, gradually more nerved to the posterior angle, very obtusely rounded, slightly extending backwards beyond the basal line, here depressed, and with the lateral margin acaceous; dorsal line obsolete; basal lines wanting; elytra black, margin violaceous, disc nearly smooth with about thirty striae of minute
impressed punctures, and three distant series of minute excavated punc-


Length. 23-26 mm.

Habitat. Iowa City (Nicholau); Ames, Iowa (Bolton).

Farnsworth, Ont. (Hamilton); Grimsby, Ont. (Petit);

New York (Corn); Philadelphia, Pa. (Lieber); Stewart, A. J.

(Smith); Milwaukee, Wis. (Kaltenberg); Eastern N.Y. (Pfeffer).

Tex. (Hinj & Reutermüller); Bres (Deevote).


35. Carabus serratus Say. (Fig. 1 Pl. 1).

Opined, black; thorax and elytra margined with

rubricure violaceus; interstitial lines reticulated; three

interrupted rows!

Body black, glabrous; head smooth, unpunctured;

antennae funiculi beyond the middle; thorax, exterior mar-

gin rubricure violaceus, and with the face somewhat
scabrous, disc Impressions, dorsal and basal lines obsolete, the latter oblique; elytra margined with obscure violaceous edge near the base slightly serrate, interstitial lines about fifteen, obtuse and smooth, connected by numerous transverse septae which are equally prominent and obtuse, not continued, fourth, eighth, and twelfth line dilated, interrupted, obtuse. Postpectus and venter each side punctured. — Bay Fraz., Amer. Phil. Soc. II, 77, 1833.

Length, 15-25 mm.

Habitat: Iowa City (Hickham), Ames, Ia. (Dobson).

British Columbia (Harrington), St. Jerome, Que. (Hareer).

Buffalo, N. Y. (Reiche), Goboken, New York State (Schaupp).

Philadelphia, Pa. (Liebke); Newark, Madison, N. J. (Smith).

Lake Superior region (Hubbard & Schwat); Milwaukee, Wis. (Pauterling).

Topeka, Kan. (Veipert); Carlinia (Pauger); Souris; d'Alene, Idaho (Hickham); Ore. (Smate); Denver, Colo. (Ube).


canadensis Linn. Melanchora Cat. Col. p. 10. 1858.

2. seratta Say is nocturnal in habits. The single
food attains maturity in August, and the beetles emerge
from their places of concealment, and frequent the roots of
large trees in localities somewhat moist, and comparatively
free from underbrush, searching for food. They are both
 carnivorous and herbivorous.

37. Carabaeus limbatus Say (Fig 8. Pl. xx.).

Dorsum black, margin of the elytra purplish;
 fourth, eighth and twelfth interstital lines interrupted.

Body black, glabrous; head absolutely coriaceous above
the eyes; antennae fusco; at the thorax imbricated,
scutellum at base; elytra margined with purple, striae with
transverse linear punctures; interstital lines elevated,
equal, distinct, marginal ones and type slightly reticulated,
fourth, eighth and twelfth interrupted; punctures imbricated;
each side at base absolutely punctured; feet black, under
each side absolutely punctured. Say Trans Phil. Soc. III. 77. 1823.

Length 20 - 28 mm.
Habitat. Iowa City (Nichols).

Erinaceus, Ont. (Petrie); Buffalo, N. Y. (Reinche); New York City (Southwick); Philadelphia, Pa. (Liebick); Gloucester, N. Y. (Smith); Maryland (Say); Nashville, T. (Dietz); Cincinnati, O. (Wury).


23. Carabus vincentii Phil.

Head black, oblong, incipiently punctured, separated from the neck by a transverse, slender curving ridge forming anteriorly a deep sinus; frontal impressions long, not deep; antennae not much longer than the thorax, deep, pierced, incurved toward tip; thorax black with greenish tinge; at borders, with numerous minute, indented punctures, which are obsolete on the disc, dorsal and basal lines conspicuous, margin towards the posterior angles slightly reflexed; posterior angles rounded, prominent behind the basal line; elytra brown, or black.
longed, strike with a somewhat lateral series of punctures, and numerous elevated ones, interstitial lines fifteen, fourth, eighth and twelfth interrupted, acute behind, a submarginal series of elevated punctures; feet black; under surface piceous or black, smooth, with a few minute punctures on the sides.

Length 25-30 mm.

Habitat. Iowa City (Richman); Ames, la. (Oeben).

Can. (Rigby); New York City, Staten Isl. (Schw.).

Jersey City, Newark, Camden, New Brunswick, N. J. (Smith).

Philadelphia, Pa. (Liebch.); Cincinnati, O. (Dury); Detroit, Mich. (Hubbard & Schw.).


Kby. Bor. Am. IV. p. 18. 1837.
granulatus Hkeki. Ctol.

Galoecoma Hub.

Large species with mentum toothed and third joint of antennae strongly compressed instead of cylindrical.

They live under stones, etc.

4. Elytra with three rows of golden impressed spots.

    calidum. Fab.

3. Elytra without rows of metallic spots:

   a. Black, elongate, elytra with blue border.

       externum Say.

   b. Metallic green with red border.

    c. Size large, middle tibiae of male hairy.

        scrutator Fab.

    cc. Size small, middle tibiae of male not hairy.

        millerai Lea.

29. Galoecoma externum Say. (Fig. 1, Pl. xiv.).

    Winged, back margined with purplish; elytra with three series of obsolete punctures.
Body elongated, deep black; antennae brown at tips; thorax punctured, margined with bluish purple; lateral edge regularly curved to the base; dorsal and basal lines distinct; basal angles obtusely rounded; elytra striate; striae well impressed, much narrower than the interstital lines, and with conspicuous, definite, punctures; interstital lines convex, equal, the fourth, eighth, and twelfth each with a series of obsolete, and all punctures, which do not interrupt them; exterior margin bluish purple.


Length, 29.30 mm.

Antennae with the fifth and following joints cylindrical and nearly equally punctate. The joints one to three of the anterior tarsi of the male are clothed beneath with a brush of hair; the fourth joint is hairy for a short space at the middle, and strongly spiny at the sides.

Habitat: Iowa City (Hickham). Rare.

Gloucester, Camden, Cape May, Newark, N. J. (Smith).
Sicinnati, B. (Dury); Huntsville, Ala. (Shirck); St. Louis, Mo. (Summers); St. Louis, Mo. (Viehmeyer); New Orleans, La. (Pope); 27. 9. 1894.; Eastern St. Mary's, La. (Pope).


Calosoma extenuata Lewis & Rentz, Jour. N.Y. Ent. Soc. II. p. 140. 1894.


30. Calosoma acuminatum, (Fig. 1. Pl. IX.), alatum, elytra sinuatile, viridibus, femoris tripli caesiis, thoracis ignavicis, margine reflexo curvato. Fab. Ent. syst. I. 147. 110. 1792.

Body large, rotund, metallic blue or green with red margins, breast green varied with golden cupreous, head impunctuated, black, somewhat tinged with violet; eyes yellow; antennae dark with ferruginous tips; tooth of labium very short, hardly prominent; thorax short and broad, impunctuated, blackish violaceous, with an anterior, rounded, golden or green margin, dorsal line abbreviated, obsolete, basal line wanting, lateral margins straight, with angles not extending backwards; elytra metallic.
green, margins golden-red; striae reticulated by much smaller transverse lines which are more deeply impressed in the striae so as to resemble transverse punctures, striae fifteen, transverse lines numerous, fourth, eighth, and twelfth interstitial lines each with some distant impressed punctures; feet violaceous; middle tibia of male curved, both middle and hind tibiae of male furnished with a dense brush of hairs on the inner face near the tips.

Length 25-38 mm.

The larva is described in Chapuis et Condé's Catalogue des Lames, etc., p. 371. It is of a dirty yellow color; the conical scutes above blackish brown, beneath lighter brown.

Habitat: Iowa City (Richardson);
Newfoundland (D'Orono); Prince, Ont. (Petit); Spaniard Lake, Ont. (Hamilton); Port Hope, Ont. (Bethune); Buffalo, N.Y. (Reiche); Grey del. (Schaefer); New York City (Clarkson); New Jersey (Smith); Penn. (Day); Cincinnati, O. (Dury); Detroit, Mich. (Hubbard & Schwaz); Milwaukee, Wis.
(Rautenberg, St. Louis, Mo. (Summers); Kansas (Corn, Pope-
no); Texas, St. Mary (Le Conte); Muselus Korg. (Nichlash).}

Galaxoma scrutator Tab. Syst. Pl. 2, p. 271, no. 8, 1801.


31. Galaxoma willcoxi Dej. — Smaller and bee shorter than
the preceding, metallic green, under surface green varied
with cupreous; head cupreous black, im punctured,
eyes moderately prominent; antennae dark with firm
internal type, frontal ridge prominent; palpi dark, longer
broader than long, sides arcuate, hind angles obtuse, not
extending backwards; facial and longitudinal impressions
distinct, disc metallic blue, wrinkled, margined
green or golden, not im punctured: elytra green with
golden red margin; striae as in scrutator Tab. only.
fines, confused on margins, three rows of distant impressed punctures rather indistinct, like of Clytra more prolonged than in the preceding; abdomen smooth, with a few punctures on the sides; legs violet; middle tibia of male straight and not hairy.

Length. 17-18 mm.

Habitat. — Iowa City (Neckham).

Syracuse, Ont. (Pétit); Shanghai Lake, Ont. (Hamilton);
Buffalo (Reiche); New York City (Schaeffer); Cape May,
Atlantic City, N. J. (Smith); Cincinnati, O. (Dury); Ind.;
Milwaukee, Wis. (Baehrberg); St. Louis, Mo. (Jenner);
Texas (Deconne).


32. Calisoma calidum (Fig. 2, Pl. 10)."Antenna nigra, Clytra
crenato-striata; striae angulibus punctisque inaequali
crassata; punctis dipteri serie. Tab. Ent. syst. 1p. 47. 1792.

Body black; head with crowded, minute, confluent
Punctures, frontal ridge distinct, tooth of labium very short, hardly prominent; thorax broader than long, side arcuate, hind angles obtuse; and extending beyond the basal line, base emarginate, minute confluent punctures, idoral line abbreviated, obsolete, basal line wanting, blackish violaceous with rare uninterrupted greenish margin; elytra with three rows of large, equally distant, orbicular, impressed golden spots, and a solitary one near the scutellum; fifteen striae, reticulated by smaller transverse lines, which near the base are more deeply impressed, external marginal groove slightly greenish; proter repose; sternum im punctured; post proter and each side of the abdomen with large punctures.

Length 17-26 mm.

The larva of *C. calidum* Fab. is entirely black, and shining. Head rounded, somewhat broader than long, anterior angles small rectangular, hind angles rounded, elytra sulcate at middle, carinate in front. Ocelli sit, placed at the margin behind the antennae, distant from each other. Antennae four-jointed, arising near the base of
mandible, and just as long as these, first joint stout, somewhat club-shaped, second joint twice as long, truncate at tip, third joint as long as the first, fourth slender, half as long as the third. Mandible very long and broad, with blunt tip, slightly truncate, with a very large blunt tooth situated near the base, and a small straight brush. Maxilla with palpae as long as mandibles, but much farther projecting; the last antennal joint scarcely reaches the tip of the mandible, while almost three joints of the maxillary palpæ project farther. Basal joint of maxilla short, second five times longer, a little broader at apex, clothed with dense bristles especially on the inner side, supporting a four-jointed palpæ, a two-jointed lobe, and a small lobe-like process. The palpæ joints are very short and stout, the fourth and longest oblong oval, the lobe scarcely half as stout as the palpæ, the two-joints about the same length, and both together are long as the first three palpæ joints; the process arises near the inner base of the lobe, is very slender, one-third the length of the total joints, and set with bristles at
the tip. Mentum small, four-toothed, broadly rounded anterior, and triangularly pointed posteriorly; ligula with lateral sides subparallel, terminating in a truncate triangle with a narrow middle of apex and supporting the two-jointed stout labial palpus; first joint clavate, second oblong ovate, both longer and stouter than the maxillary palpus. Prothorax transverse, narrower in front, broader than the head, sides margined. Mesothorax and metathorax shorter, and broader than the prothorax, sides parallel with depression near the anterior angles. Sutures of abdominal segments one to seven of nearly equal breadth, with rounded angles, impressions, and foveae near the anterior angles; the posterior margin very broadly elevated; hind angles of the eighth segment rectangular; of the ninth acuminate, anal fork straight with uneven outlines and three bristles on the outer side. Legs set with interpersed spines. Spiracles nine, those of the thorax much larger than the seven abdominal ones. Tarsi linear, length 40 mm.

The body is yellowish white, 18 mm. long, crayate,
narrowed toward apex, first five abdominal segments clothed with a long brush of hair; last segment with two sharp pointed teeth; at posterior margin, anago appeared in nine days.

Habitat. Iowa City (Nicking); Danaport, Pa. (Putnam); British Columbia (Harrington); Princeps, Ont. (Pettit); SparrrowLake, Ont. (Hamilton); Nova Scotia (Jones); New York City (Schuchert); Atlantic City, N. J. (Leibek); Pen. (Say); Cincinnati, O. (Dury); Detroit, Mich. (Hickland & Schwarz); Bayfield, Wis. (Nicking); Milwaukee, Wis. (Ruterburg); St. Louis, Mo. (Scaucus); Kansas (Kors; Pfeiffer); Ore. (Steele); Helena, Mont.; Coolidge, A. Mex. (Nicking).


Oliv. Spec. 35. tab. 1. fig. 45.


Eurabius calidus

Fab. Sept. Ed. I. p. 211. no. 2. 1801.


4 Tribe Elaphrine.

Antennae moderate in length, rather longer than head and thorax, three basal joints glabrous, the fourth and following pubescent. Ocelli round, usually prominent, moderately distant from the buccal fissure. Front more or less deflexed, with two supra orbital setae. Labrum moderate, truncate. Mandibles stout, concave externally, with a retiaceous fracture, carinate, acute at tip.

Maxillae hooked at tip, ciliate or spinulose externally, outer lobe slender, biarticulate; palpi moderate in length, terminal joint longer than the preceding. Mentum emarginate with a bifid or emarginate tooth, ligula free at tip, fronsore, acute in Elaphrine, broad in the
Other genera, paraglossae slender, longer than the ligula, the palpae moderate, the last two joints equal, the penultimate bilateral in front, except in Parachila. Thorax variable in form, the setae in the posterior angles always present, the lateral, about in most Ophlumae. Body not pedunculate, centella distinct. Elytra not margined at base, except feebly near the humeri in Plectina, sides narrowly inflexed, margin entire. Posterior setae at tip not prolonged behind the coxae, the coxal cavities closed.

Metaventer not prominent. Metasternal setae not distinct, the posterior coxae contiguous. Elytra moderate. Middle and posterior tibiae slightly spinulose externally, the anterior obliquely ground, the inner spine above the apex. Tarsi slender. (Fig. 3, 5, Pl. VIII.)

Three genera belong to this tribe, only one of which is found in Nova Scotia. Metaventer tooth large, nearly as long as the lateral lobes emarginate. Thorax without lateral setae. Elytra with variolate foveae, not striate. Chrysocerus Fab.
Olapheus Fab.

Bronged and metallic. Eyes large and prominant. The elytra with rows of large, shallow, round, foveae. Anterior tarsi of male in larger species with four dilated joints, in the smaller with but three. Thorax sparsely punctured. (Fig. 5. pl. xix).

The species of this genus resemble Cicindelini, form and Beauhidiuni in habits; they are found running on mudflats near streams and pools, during the sunshine, and hiding under plants at other times. Front with deeply impressed elevations between eyes, mandibles pincer, foveae of elytra surrounded by a smooth ring. Clairvillei faby.

Front slightly corrugated between eyes, mandible greenish at base, foveae of elytra not surrounded by ring. Pneamnius Bay.

3. Olaphne clairvillei, — body glossy; underneath green-bronged; above black slightly bronzed, covered with minute, scattered, gilded punctures. Mandibles and
palpi, piercing, antennae, black, with the first three joints dark bluish; front with an elevation between the eyes, rather deeply impressed in the centres; prothorax longer than wide, square, with two large, discoidal elevations separated by a dorsal channel, each with a central impression; a single fascial impression at the posterior angle, tinted with blue; elytra with four irregular rows, containing in all twenty-one slight circular impressions, punctured and tinted with blue, each except the marginal ones surrounded by an elevated ring, and placed in a wider impression; between each of these impressions in the first two rows is an elevated and tegulated space; thighs glossy green, the posterior pair unarmed at base; tibiae and tarsi pigmented.


Length. 7. 1/2 mm.

Habitat. Iowa City (Nicholson).

Ridgeway, Ont. (Kilman); Gainesby, Ont. (Petit); Toronto; Cash (Kirby); New York (Crotch); Bayfield, Wis. (Nicholson); Milwaukee, Wis. (Rautenbug); St. Louis, Mo. (Summers).
34. Glaucus recurvus Say. (Fig. 5. Pl. X.)

Dark brownish green, a little bronzed; elytra with dilated, orbicular, impressed spots, and three elevated stipes each side of the suture.

Body dark brownish green, opaque, breadth rather pale, polished, glabrous, punctures very numerous, crowded; head slightly cornutated between the eyes; antennae and labrum blackish; mandibles green, each side at base, pieceone within near the tip; palpi in one pieceone, breadth pale, gula impressed; thorax broadest before the middle, narrower than the elytra, a transversely indented curved line before the middle, and a longitudinal abbreviated one, lateral edge hardly prominent, slightly excurred behind, posterior angles inconspicuous, base not wider than the petiole; elytra equally punctured with about twenty large, dilated, orbicular, impressed, purplish spots,
and two or three equidistant, elevated, elongate, subquadrate, punctured; browned spots each side near the surgery, the anterior one largest, a few obsolete elevated lines, postocular green, tinged each side with emerald; feet green; femora and tibiae picnomal base; outer green, disc punctured, segments brassy at tips. Say, Trans. Ann. Phil. Dec. 21, p. 80, 1826.

Length 6-7 mm.

Habitat. Iowa City (Richards), Eddyville, la. (Shumard), Davenport, la. (Putnam).

Erinoma, Diet. (Petit), Iowa Scotia (Jones), Buffalo, N.Y.
(Peirce), New York City (Schauff.). Camden, Elmsford, N.Y. (Sharpe); Newark, Paterson, N.J. (Liebich); Penn. (Say); Cincinnati, O. (Dury); Detroit, Mich. (Butler & Schwartz); Bayfield, Wis. (Richards), Milwaukee, Wis. (Cauterberg); Eastern Kansas (Popenc); St. Louis, Mo. (Summner), Mo.; Arkansas (Say), Colo. (Dray.)


5. Tribe Araini.

Head horizontal (front deflexed in Opiathine and with two supraborbitals setae), and with one supraborbital seta.

Mouthparts variable, mandibles always with setigerous punctures. Antennae with four basal joints glabrous, inserted under a slight frontal plate which is not extended backwards over the eyes in a supraborbital ridge. Eyes round, moderately or prominently large. Those usually with a setigerous puncture at the side and hind angles; both are absent in Opiathine, and the posterior one in Lecius. Elytra margined at base except in Opiathine, sides narrowly inflexed, margin entire.

Posttergum horizontal and prolonged behind the coxae, the cavities open behind; lateral sutures of thorax breath normally distant from the margin except in Opiathine. Metasternum carinate in front. Metasternal siphunculi indistinct. Posterior coxae contiguous. Legs slender, middle and posterior tibiae spinylose or ciliate externally. Tarsi slender, ciliate beneath.

In Photophilus the anterior tibiae are mossoth-
equiside truncate, the inner spur above the apex. In the
other genera, both spurs are terminal but placed
slightly obliquely to each other.
All the genera except *Astoiphilus* place their
antennae backward over the body in a snout, or less
curved position when in repose, while in *Astoiphilus*
the antennae are bent down under the head and
encircle the margin of the eye.

Two genera are included in this tribe, two of
which occur in our fauna.

They are separated as follows:

Anterior tibiae very obliquely truncate, the inner spur
above the apex, rectly acute. *Astoiphilus* Henn.

Anterior tibiae scarcely obliquely truncate, spur termi-
nal, mandible stout, not explanate; maxillae with-
out processus, setose at base, anterior tarsi of male
feebly dilated. *Arxia* Lat.

*Astoiphilus* Henn.

Head triangular, as broad as the thorax; color bronze.
(Fig. 6.68. *Prin*).
live in damp, sunny places, under fallen leaves, etc.
Legs red, thorax much constricted behind.
Tibiae pale, femora metallic black, thorax but little constricted behind.

35. Astilphilus rainier Hbst. (Fig. 7. Pl. VIII.)

Body bronzey-black, glabrous, breast black; head triangular, broader than the thorax, with scrobal, at least six, longitudinal, elevated, frontal lines, elytral sulcate at tips, and with a transverse, interrupted line at the base.
Antennae and palpi ferrugine, paler at base; thorax wider than long, transversely quadrate, much narrowed behind, sides more acute, recurved at base, hind angles rectangular; acute, anterior basal and dorsal lines distinct, glabrous; punctured, margins finely punctured; scutellum ovovoid, shining; elytra with striae coarsely punctured, interstital lines wider than striae, a dilated glabrous, longitudinal, continued space between first and second striae; feet robust.

Length 5 mm.
Habitat. Iowa City (Nichols). Rare.
Ontario and Quebec; Marquette, Mich. (Hubbard & Schwarz); Detroit, Mich. (same authority); Bayfield, Wis.
(Hickham); Calvera, S. J. (Grave); New York City.
Ephraim, near Harriet Col. x. p. 335. (1788-1806).

36. Isotiphulus semicinctuor Day.

Brownish-brown, front corrugated; elytra with punctured striae and a longitudinal equal space near the sutures.

Body brownish-brown, glabrous, immaculate, beneath blackish; head with six or eight frontal, longitudinal, elevated lines, abbreviated on the vertex; neck with serial elevated lines, at base, and a transverse, interrupted one at base; labrum, a single impressed, longitudinal line; antennae, and palpi deep fuscon; paler at base; thorax as broad as elytra, transverse, quadrant, broadest before the middle, slightly contracted to the base; puncturesnumerous, approximated,
obsolete each side of the disc; dorsal line impressed, punctured, basal line indented, lateral edge slightly curved, posterior angles rectangular; scutell rounded, at tip, impressed; elytra, striae oblique with large punctures, interstital lines hardly wider than the striae, as dilated smooth, polished longitudinal, continued space separated from the striae by a series of impressed rounded punctures; ferrule punctured, post. ferrule with a few punctures, each side; feet black.

Length 4.5 mm.

In comparison with species (obbt, the chomx is much less contracted behind, labrum smaller, and striae more deeply impressed.

Found in woods under logs, re. from June to Sept. Habitat. Iowa City, Wickham.

Primey, Ont. (Petit); Detroit, Mich. (Hubbard and Schwarz); Milwaukee, Wis. (Rauterburg); Cincinnati, O. (Veny); Penn. (Say); Lawrence and Manhattan, Kan. (Snow); Little Rock, Ark.; Houston, Tex. (Wickham); California (Schauff).

Halia Lat.

Middle sized species, having the maxillae armed beneath with bristles; antennae slender, joints all cylindrical, equal to two thirds the length of the body; scutellar striae always distinct, anterior tarsi of 8 moderately or fully dilated. (Fig. 4, P. viii).

Live under stones, &c. near brooks and rivulets.

Thorax much narrowed behind, hind angles not rectangular, sides of elytra strongly arcuate, legs pale.

**37. Halia pallipes** Say. (Fig. 5 P. viii).

Black; thorax dilated, very short; feet testaceous.

Body black, glabrous, depressed; head with two obsolete piceous spots on the vertex; mouth piceous; palp palp. paler at base, antennae reflex, paler at base.
labium elongated, nearly as long as labium, bicorne near the tips, thorax much abbreviated, as broad as the elytra, much contracted behind, exterior and posterior margins depressed, lateral edge reflected, dorsal line conspicuous, posterior angles acute, elytra profoundly striated, striae punctured on the sides, interstital lines convex; punctae and porotiae with obsolete, dilated punctures; foot-tarsi one, outer tarsae towards the tips, infuscated.


Length, 10-11.5 mm.

The third stria has five very distinctly impressed, longer punctures, the humeri are rounded. Leconte says the wings are sometimes wanting.

Habitat. Independence, (Wichman). One specimen.

Erinose, Ont. (Pettit); Nova Scotia (Leconte); N.B.

Washington, A.T. (Kleene); Staten I. (Schroder); Cam-

den, Gloucester, A. (Hevel); Allegheny, Pa. (Hamilton),

Virginia (Leconte); Cincinnati, O. (Dury); Marquette,

Detroit, Mich. (Hubbard & Schwanz); Bayfield, Wis.
6. Tribe Scaritini.

Head variable in form, with one (Scarites), or two (Climinae) supro-orbital setae. Labrum short, emarginate or sinuate. Mandible at least moderately prominent, without retinaculum punctures, simple or dentate. Maxillae with the inner lobe often obtuse, at tip, in some genera, normally hooked, ciliate or spinulose. Maxilla with the inner lobe often obtuse, at tip, in some genera, normally hooked, ciliate or spinulose. Maxillary palp variable in form. Mentum emarginate, often deeply; the tooth variable in size, epilobe narrow, (very wide in Pachytychus). Ligula either broad and large (Scarites), or small and prolonged (Climinae), the tip narrow and bicurcated, except in Pachytychus in which it is but little prominent at middle and with two setae very closely
Paraglossae usually slender and longer than the ligula, spinulose within in the Scarites. Palpi moderate, terminal joint variable in form, shorter than the penultimate (Scarites) equal or longer (Olivinae), the penultimate twice in length (Olivinae), the antennae moderate in length, inserted under a frontal plate with a variable number of glabrous joints. Eyes comparatively small, very finely granulate and distant from the buccal opening (Scarites), or normally convex and granulate, and not distant from the mouth (Olivinae). Thorax variable in form, hind angles rarely prominent, sides margins with a reticulate puncture in the hind angles (Scarites), or with two lateral punctures (Olivinae). Body pedunculate, scutellum not visible between the elytra. Elytra rarely slightly margin ed at base, sides narrowly in flexed, margin entire, except in Ardisiometes where there is a distinct interruption posteriorly, and an internal plia. Pro sterna not prolonged behind the coxae, the cavities
closed behind. Metaxosternum vertical, not carinate in front. Metaxosternal spines not visible in Perineachus, more or less distinct in all the other genera. Posterior coxae contiguous. Legs stout, more or less foveolar, the anterior femora especially stout. Middle and posterior tibiae ciliate, or spinose externally, but often very finely, anterior tibiae palmate, the outer apical angles prolonged, inner side deeply euvanicular, with the inner spur above the euvanicular. Tarsi slender.

The tribe is subdivided into two groups as follow.

Basal joint of antennae long, Mentum broad, concealing at the sides the base of the maxillae. Head with one supra-orbital setigerous puncture. Thorax with one setigerous puncture at the hind angle.

Scarites

Basal joint of antennae not elongated, Base of maxillae not covered by the mentum. Head with two supra-orbital setigerous punctures. Sides of thorax with two setigerous punctures. Caliones
Group Oeristes.

In our fauna two genera occur, which are separated in the following manner:

Broad angles of thorax distinct,elytra with humeral carina of variable length. Maxillae very obtuse at tip.

Psimachus Bou.

Broad angles of thorax wanting, elytra without humeral carina. Maxillae slightly hooked at tip. Oeristes Fab.

Psimachus Bou.

Large species with antennae inserted under a frontal plate; anterior tibiae palmate; hind angles of thorax distinct. Some of the species have the posterior tibiae of the 8° pubescent, within near the tip. There are no marginal punctures on the last ventral segment.

In the 8° there will be observed on each side, one anteapical puncture, in the 79 two, but these are not constant in any respect. (fig. 1, 79 Pl. xiii).

Found under stones, or old logs, mostly in sandy places.
Head tibiae of false, densely pubescent, on inner side near the tip, humeral carina long, elongate, Lee.

38. Pachycheirus elongatus Lee. (Fig. 3, Pl. VIII).

Black, glabrous; head quadrate with two impressed longitudinal lines more than half its length and two transverse impressed ones extending from near the margin in front of the eyes to the longitudinal ones, antennae black, lighter at tips, four basal joints glabrous, not as long as head and thorax together; labrum broadly three lobed, middle lobe wider than side lobes, ciliate; mandible about as long as the head, very finely striate, strongly denticulate in the middle, tooth in the left one double; thorax quadrate, narrowed behind, sides arcuate, a little excurred at base, hind angles acute, with impressed dorsal and basal lines, and two indentations near the base and midway between the margin and the dorsal line, base incirrinate, margin bright blue,
elytra, glabrous, slightly convex, humeral carina long and curving outward in front, traces of very fine rows of punctures, approximate by pair may sometimes be seen, margin bright blue, sternum striate at tips.

Length 3.2 - 26 mm.

Habitat: Iowa City (Hickman), Eddyville, IA (Shinick), Atlantic Co. Mo. (Tuzig); Cincinnati, O. (Dury); Milwaukee, Wis. (Ranterberg); Illinois (DeSoto); St. Louis, Mo. (Deering); Kansas (Popenoe); Denver, Colo. (Phee); Colorado Spr. (Snow); Le Veta, Colo. (DeSoto); Luna; Coolidge, N. Mex. (Hickman), Santa Fe, N. Mex. (Cockerell).


Scaritea Tab. (fig. 9, 9. Pl. VIII).

Of the same form as the preceding genera but narrower and with the posterior angles of the thorax
wanting. The last ventral segment has four marginal punctures; in the & the two inner ones are more distant from each other than from the outer, in the & they are equidistant. The four basal joints of the antennae are glabrous, and in repose the scape is retracted in a depression beneath the eye.

Commonly found under stones.

39. Scarite subtruncata Fab. (Fig. 4, Pl. XII).

"S. rata, pedibu; antennae digitatia, capiti antice sulcato, elytrar striatia: striae laevisent.

Fab. Syt. I. p. 124, no. 8, 1831.

Body black, immaculate; head tubulate before; mandibles strongly striate; antennae short, attaining the base of the anterior feet; funiculus, darker at base; labium subcarinate on the middle, with a deep impression at the base; thorax shield-shaped, smooth, shining, hind angle wanting, anterior, and dorsal lines impressed, posterior edge revaginate; elytra distinct, and rather strongly striate, striae incised.
margin scabrous, humerus carinulate. Fore, carina terminating abruptly in an angle; second pair of legs armed with prominent spines, the inferior one being the largest.

Length 16-27 mm.

Larva. Color, black above, excepting the side margins of the metathorax and of the abdominal segments which are a dirty white. Sides of abdomen white with a longitudinal series of small brown spots. Legs brown.

Form elongate, subcylindrical. Length about 33 mm.

Head about as wide as the prothorax, brittle. Frontal margin tridentate.

Eyes situated behind the antennae, composed of six sockets, in two transverse rows.

Antennae four-jointed, inserted on a tubule, first joint short, second, a little more than twice as long, third a trifle longer than the first, fourth about one third as long as first, and tipped with three long bristles.
Mandibles stout, curved, with a double median tooth, then in the fully grown larva.

Maxillae with a long basal joint equal to the first two joints of the antennae, slightly curved, not tapering, and very densely spinose on the inner surface, with long bristles on the outer side. The other appendage is four-jointed, the first joint stout, about half the length of the second and somewhat exceeding the third, the fourth very small and pointed at tip. The inner appendage is two-jointed, the first joint stouter and a little longer than the second.

Neurium small, broader at apex, extremely bristly. Palpi two-jointed, the first joint stouter and about one half longer than the second.

Legs stout, the coxae conical and prominent, the femora a little shorter, the tibiae of the trochanters distinctly marked.

Pupa: dirty white, 16 mm. in length, the head and jaws very large. Remarkable chiefly for the large
bunch of bristles which adorn the first few segments of the abdomen. (Pgs. 2, 2a, Pl. XIX).

Habitat: Iowa City (Dickham), Davenport (Rutman).

Sparrow Lake, Ont. (Hamilton); Green Lake (Raynard & Savage); Buffalo, N.Y. (Reincke); New York City, N.Y. (Schäuffle); N.J. (Smith); Fla. (Schwarz); Cincinnati, Ohio (Dury); Detroit, Mich. (Hubbard & Schwarz); St. Louis, Mo. (Summers); Kan. (McCoy); Ark. (Shumick); New Orleans (Townsend); Morgan City, La.; Harwood, Tex.; Coulidge, N.Mex. Ga.; Bridge, N.Y.; Yuma, Cal. (Dickham); San Diego, Cal. (Leconte).


San Francisco, Cal. Phil. Soc. II. 17. 1833.

Bo. Ed. I. 364. 1835.

Oliv. Sess. 2. 36. tab. 1. f. 10.

indue. Oliv. Sess. 2. 36. tab. 1. f. 2.


Carabaeus intermedius Tucke. Arch. 6, 133, tab. 24, f. 4.

Group Chirinae.

Of the five genera under this group but three occur in Iowa.
A. Anterior tarsi slender in both sexes.
   a. Palpi dissimilar in the sexes, terminal joint more dilated in $\delta$, excavated beneath. Thorax globoso or globoso oval.
         Dyachius Bez.
   as. Palpi similar in the sexes, not dilated or excavated in $\delta$. Thorax more or less quadrato. Chirina Lat.
B. Anterior tarsi more or less dilated in both sexes. Mentum deeply emarginate. Head with numerous, long, longitudinal grooves.
         Schijogerius Putz.
In all four genera the ligula is small and usually
hidden by the scape of the labial palp. It is slender, the tip more or less acute, free and biserrate; the paraglossae slender and acute, not longer than it. Clychinae and Dynichinae are best separated by the form of the palpae as other characters fail with large series of specimens.

The species are of small size and rare, mostly found in moist places, although sometimes under the bark of trees.

**Dynichinae Bow.**

Species small, shining, often browned. They live in holes which they dig in wet places on the banks of streams, &c. Figs. 8, 8b. Pl. [VIII].

Elytra with third stria or interstice trigonate.

Elytral striae feeble; antennae and legs black.

seneclus Lec.

Elytral striae strong; antennae and legs reflex.

globularia Say.

Elytra with third interstice trigonate.

Phericollie Say.
40. Dytcheius aeneolue Lec.

Bronzy black above and beneath; head moderate, smooth, eyes prominent; thorax purplish or bronzy black, glabrous, glabrous, wider in front than behind, hind angles wanting, dorsal line impressed; elytra wider than thorax, striae punctured, third trigonate, punctures obsolete at apex; feet and antennae black.

Length 3.5 mm.

Habitat: Iowa City (Hickham).

U.S., British Columbia (de L.); N.Y., N.J., Pa., Fla., La. (Hamilton); Marquette, Mich., Detroit, Mich. (Caldwell & Schwarz); Bayfield, Wis. (Hickham); Garland, Alabama, Colo. (de L.); Durango, Cal. (Hickham).

Europe, Siberia, Japan, Austraia (Hamilton).

D. aeneolue Lec., Agassiz, Lake Superior, p. 204. 1859.


Dycheinae globolusae, Say.

"Black; mouth, antennae and feet rufous; elytra
with punctured, obtuse, striate.

Head black, longitudinally indented on each side;
mouth, and antennae rufous; neck beneath rufous;
trunk beneath black, tinged each side with rufous;
thorax purple black, globose, rounded. Front and
behind, lateral edge obsolete near the base, recurvate
district before, and distinct before, and obsolete; of projecting, angulate
behind; an impressed, dorsal line; elytra black,
striate, punctured; punctures equal in length to the
intermediate spaces, and nearly equal in breadth
to the interstitial lines; feet rufous, Winter black."

Length 2.25 - 3 mm.

Habitat: Iowa City (Williston).

Bismarck, N. Dak. (Pettit); Buffalo, N. Y. (Reineche);
New York City (Schroep); Peru, (Say); Camden, N. J.
ark; Gloucester, N. J. (Smith); Tampa, Fla. (Schwartz).
Cincinnati, O. (Dury); Marquette, Mich. (Hubbard and Schwarz); Bayfield, Wis. (Nickham); Milwaukee, Wis. (Rauterburg); St. Louis, Mo. (Semmes); Eastern Kansas (Popenoe); Pocatello, Idaho, Albuquerque, N. Mex. (Nickham).


*Sy.* Sp. New II. 480. 1826.


*Dyschirinus roundus* de Azacuy. Lake Superior 264. 1858.

42. *Dyschirinus aphaniollicus* Day. (Fig. 9, Pl. VIII.)

"Thorax globoso, with an impressed line; elytra with punctured, distant striae; body incrusted, with a few scattered hairs, breast black; head black, longitudinally indented each side; mouth and antennae reflexus; thorax purple black, rounded before and behind; lateral margin obsolete near the base, more distinct before, and obsolete at any angles behind; an impressed dorsal line, elytra reddish brown or bronzed, with punctured striae, striae distant; feet reflexus, inner black."


This differs from the preceding species by being larger, and having the stripes more distant from each other, the third interspace bipunctate, and the apical vein of the front tibia long.

Length 5.5 mm.

Habitat. Iowa City (Heickmann).
Ontario and Quebec, Buffalo, N. Y. (Roeske), New York City (Schaupp), Gloucester, N. J. (Liebrech), Cincinnati, O. (Wey), Marquette, Mich. (Hubbard & Schwarz), Milwaukee, Wis. (Rautenberg), Illinois (Leconte), St. Louis, Mo. (Summers), Topeka, Kan. (Phlebor), San Bernardino, Cal. (Riley), Albuquerque, N. Mex. (Heickmann).


Riviera Lat. (Fig. 10, 11, Pl. VIII).

Middle tibiae with a suture near the outer tip.

Black, anterior femora dentate near tip, vertex of head not furcate

Riviera, anterior femora not dentate, channeled, vertex sulcate, head punctured behind, vertical grooves
43. *Olivia dentipes* Dej. (Fig. 10, Pl. XII).

Signs: thorax quadrato; elytra elongatiss. paralleli; profunde creato-striatiss. punctisqu quinque inspicieb; iunonisbus antecordi apicis acutis dentatiss.

Long. 3½ lignes. Larg. 1 ligne.

Elle ressemble beaucoup à *Alorumia*, mais elle est un peu plus grande, et ses formes est un peu plus cylindrique. Elle est entièrement sous-secus, d'un noir assez brillant. La tête est proportionnellement un peu plus grande; elle est un peu moins retirée derrière la...
ux, et elle a deux lignes transversales enfoncées ;
une entre les antennes, et l'autre derrière les yeux.
Les antennes marquent dans l'individu que je possède.
Le corps est à peu près comme celui de l'Anaxaria;
il est seulement proportionnellement un peu plus
large et un peu plus courtois. Les elytres sont un
peu plus allongés et un peu plus parallèles ; elles
sont des stries très fortement marquées, qui sont
assez fortement ponctuées, et qui paraissent crevées.
On voit outre, sur le bord de la troisième strie, du
côté de la ventre, cinq pointes enfoncées distinctes,
un peu moins marquées que dans l'Anaxaria, et
placées à peu près à égale distance les unes des
autres. Le dessus du corps et les pattes antérieures
sont à peu près de la couleur du dessus. Les quatre
pattes postérieures marquent dans l'individu que
je possède. Les cuisses antérieures sont un peu
marquées, et elles ont une dent assez forte et assez
raîgée à leur extrémité du côté extérieur. Les jambes
antérieures sont trois dents, une peu plus longue.
que celles de l'Armorica; et une quatrième, plus petite." Ogil. S. Zool. t. 415. no. 3, 1825.

Black, shining; head smooth, front with two impressed lines extending back beyond the middle, a transverse impressed line in front, and one behind the eye;clypeus with lateral lobes, mandibles without teeth; antennae and palpi effuse, the former short, reaching the middle of the thorax, first two joints glabrous; eyes moderately prominent; thorax longer than broad, sides subparallel, rounded behind, with no posterior angle, smooth, with a dorsal impressed line, margin distinct; no scutellum evident; elytra wider than the thorax, humeral angles prominent, rectangular, margin continuous, striae faintly punctured; legs effuse-pubescent, anterior femora dentate near tip, middle tibiae with a spur near the outer tip, claw terminal; undersurface smooth.

Length 7.6 - 8.0 mm.

Habitat. Iowa City (Wickliffe), Topeka & Lawrence, Kans. (Pfeiffer); Cal. (Le Conte).
Fla. (Schwarz); San Antonio & Columbus, Tex., Melehe & Yuma, Cal. (Richhann); Cuba (Dejean).


prosp. 607 1845.


44. *Columb. americana*. Dey. (Fig. 9, Pl. XXI.)

*Fig. pros. capite postice transversum impresso; thorace quadrato; elytris elongatis, parallelo, profunde striatis, striis punctatis, punctisque quattuor impressis, antennis pedibusque rufis.*

*Long. 3/2 ligne. Larg. 3/2 ligne.*

Elle est une plus petite que l’Américain, et sa couleur est en-dessous d’un noir peu brumatière. Sa tête est un peu plus allongée et moins convexe, l’impression longitudinale que l’on voit de chaque côté est un peu plus marquée, et elle se derrière les yeux une impression transversale peu apparente, dont le fond
est un peu rugged. Les lèvres supérieure, les mandi-
bulae, les palpéres et les antennes sont d'un rouge
ferrugineux. Les yeux sont un peu plus gros et plus
soutenus que ceux de l'Aromaria. Le corps est à
peu près comme dans cette espèce, mais l'impression
transversale près du bord antérieur est plus forte-
ment marquée. Les elytres sont un peu plus parallele,
les stries sont plus fortement marquées et bien dis-
tinctement pourtries, les intervalles sont plus relevés,
et l'on voit sur la troisième quarte pointe enfouie
asséz gros et bien marquée, qui en occupent presque
toute la largeur. La couleur du corps est d'un brun
doux brun. Les pattes sont d'un rouge ferrugineux. Les
trois dents des jambes antérieures sont un peu
plus grandes que celles de l'Aromaria; les jambes
intermédiaires n'ont pas d'épine distincte sur
l'extrémité.  

"Rej: Sp. Luc. v. 583 no. 32. 1831."

Black, glabrous; head small, foraste in front,
elytres with lateral lobes, antennae and palpi
refuse; thorax quadrate, sides subparallel, rounded.
blind, very feebly and sparsely punctured, dorsal line impressed, elytra with striae entire, finely punctured, scape with 1 st cranial tache extending nearly to the extreme, middle black, legs yellow, pinnate, middle tibiae with 1 spine on the outer tip, anterior femora deeply sinuate to 1/2 near the tip.

Length 6 mm

Habitat: Iowa City (Hickman).

London, Ont. (Carruth), Lake Superior (Leonard), Detroit, Mich. (Hubbard, + Schwarz), Maywood, Ill. (Daubert), New York City (Schaeppi), Hoboken, N. J. (Smith), Fla. (Schwarz).


Pygmaeus, glabrous; head smooth, frons longitudinally
subcylindrical, apex rounded at the sides; undersurface punctured; thorax elongate, sides subparallel, rounded behind, smooth or very slightly wrinkled, dorsal, frontal, and lateral lines impressed; elytra with entire punctate strie, anterior funnula thickened but not sinuate beneath; furrowichium shorter or wanting.

Length 5.25 mm.

Habitat: Iowa City (Hickshaw), Bathill, N.J. (Ulke), Gloucester, N.J. (Hurlen), Indiana (Blatchley), Illinois (Leconte), Milwaukee, Wis. (Rutledge), Dr. Louie, Nos. (Sumner), Kansas, Texas (Leconte), Tucson (Hickshaw).


46. Clivina imparifrons de I.

Pronotum, elytra, head shining, finely punctured, vertex sulcate, grooves long and deep; elytra with small, lateral lobes; eyes not prominent; undersurface punctured; thorax elongate, smooth, shining, no
lateral angles, anterior, posterior and dorsal lines impressed; elytra striate, striae entire, punctate, punctures fine and closely placed, third stria with at least five equally distant impressed punctatures, inner smooth; anterior femora thickened but not dentate near the tips, paramyelia longate; middle tibiae with a spur near the outer tips.

Length 6.5 mm.

Habitat: Iowa City (Frickham).

Douglas Co., Kansas (Brown); New York, Kentucky (LeConte).


LeC. 81. 1857.

47. Elvira bifasciata Fab. (Fig. 11, Pl. VII.).

"3. rater, elytra striationis; macula postica ferruginea."

Fab. Ent. suppl. 44. 8. 1798.

(Black; head small, front faintly sulcate, elytra rounded at sides, antennae and palpi reddish brown; thorax smooth, quadrato, longitudinal impressed line
joining the anterior transverse angulated one, lateral carinated edge abbreviated and recurved at the tip; elytra strongly striate, striae nearly equal to the intermediate lines, with excavated punctures, a sublunular spot near the tip; epipleura with large and profound punctures at the base; anterior femora thickened; anterior tibiae with two lateral teeth, the terminal one gradually curved; tarsomeres wanting.

Length: 5.8-7.5 mm.

Habitat: Iowa City (Hickham).

Detroit, Mich. (Hubbard & Schuyzen); New York (Coutes); Pens. (Dey); Eerudens, Gloucester, N.Y. (R pigmento; Cincinnati; D.C. (Dey); District of Columbia, Flora (Coutes); St. Louis, Mo. (Summers); Kansas (Howard, Copeneor), Louisiana (Coutes); Dallas, Tex. (Hickham).

Arautes bipunctatus Fab. Ent. suppl. 44, 3, 1798.


*maculatus*, Deane. 15. 1804, p. 107 tab.
Say. " " " IV. 415. 1824.
Say. I. 417. no. 5. 1825.
Say. C. 1. p. 4.

Dichogenaicaa Ritz. (Fig. 1, 2, Pl. 18.)

Small species resembling Oliunia very much in appearance, but with the anterior tarsi more or less dilated in both sexes, the antennae deeply serrate, and the head with numerous longitudinal spines. Found in moist places under stones.

46.

Dichogenaicaa speciosa Say.

"Blackish, head with several elevated lines, thorax with three impressed rufes; elytra striate.

Head with several elevated lines, of which the two interior ones are the largest, forming a groove between them, and continued and continued upon the labrum, behind the elevated lines punctured; thorax the impressed longitudinal lines; intermediate one
attaining the anterior tines were angulated and lateral
ones subordinated near the anterior margin; lateral
edge continued and projecting into a slight angle
behind the middle; elytra black, brown or greenish,
striae punctured, profound, and equal to the inter-
mediate lines; feet destatured.

W. 1838. p. 33.

Length: 4.8 mm.

Habitat: Iowa City, (Hickam).

Erie by, Osk. (Potter); Buffalo, A. J. (Reincke); Sandus,
Gloucester, A. J. (Angell); Cincinnati, C. (Dury); Milwaukee,
Wis. (Rutledge); Topeka, Kansas (Potter); Texas (Deoute).

Lindina linolata Day. Trans. Amer. Phil. Soc. 11, 22. 1838.
S. sulcirose H. New. 652.

Subfamily Harpalinae.

Middle coxal cavities entirely inclosed by the cen-
tral piece of the meso- and metasternum, the spinae
not attaining the coxal head with estigmatic struc-
tures over the eyes. Thorax with estigmatic structures
at the side and posterior angles, very rarely without the latter, and still more rarely without either. Anterior tibiae always either obliquely emarginate or deeply emarginate within, the inner spurs remote from the apex.

For convenience of study the subfamily may be divided into two sections:

Head with two supra-orbital setigerous punctures.

Carpaliinae bicostata.

Head with one supra-orbital setigerous puncture.

Carpaliinae unicostata.

When two setae occur the anterior is close to the margin of the eye in front, the posterior is a little remote from the eye opposite the posterior margin.

When but one seta is present it is almost always remote from the margin of the eye, and is situated opposite the middle of the eye or a little posterior to that point.

Carpaliinae bicostata.

A. Mandibles with a setigerous puncture in the
A. Mandible without atriglaris branching in the abdominal segment

4. Posterior corona continuous

5. Margin of atriglaris uninterrupted at posterior end and with a distinct central portion

6. Posterior corona constricted behind
maxillary palpae arising obliquely from the preceding joint.

Panaeaeini.

dd. Head not constricted behind the eye. Terminal joint of maxillary palpae arising normally from the end of the preceding joint.

Paroetichini.

bb. Margin of elytra not interrupted posteriorly, without internal flaps.

c. Front short, labrum impressed.

Pericini.

d. Front normal.

j. Penultimate joint of labial palpæ bisetose.

q. Head elongate, prolonged behind the eyes, neck constricted and dilated behind in a semicircle.

lar condyle.

l. Elytra truncate.

Odacanthini.
Tread not prolonged behind the eye, neck not extension of
Elytra obliquely sinuate. Humeral
simple, or feebly pectinated.

Platynini.

ii. Elytra truncate at tip.

j. Anterior tibiae slender.
Paraglossae membranous.

Leiini.

jj. Anterior tibiae stout,
gradually broader. Paraglossae cornose.

Heliconini.

f. Penultimate joint of labial palp
 plurisetose in front, and always
longer than the terminal joint. First
antennal joint elongate.

Dryptini.
Carabinae unarmed.

A. Metacoxal spines usually wide, sometimes nearly as wide as the episternum. Clytra truncate.
   Mandibles with retignose suture. Posterior coxae often separated, the first ventral segment
   visible between them. Brachynini.

B. Metacoxal spines very narrow, and indistinct. Clytra always entire.
   a. Mandibles without retignose suture.

   b. Posterior coxae contiguous.
      c. Clytral margin more or less interrupted
         and with an internal plica. Antennae with three glabrous joints.
         d. Anterior tarsi of male with three,
            rarely four, joints, always pubescent
            beneath. Clytral plica feeble.
            Chlaenini.

   d. Clytral margin not interrupted, no internal
      plica. Antennae with two, rarely three,
      glabrous joints. Male tarsi variable.
      Carabini.
Tribe Panazceini.

Antennae slender, arising under a distinct frontal ridge, three basal joints palpable, without fine punctuation and pubescence, but ciliated. Head usual, strongly constricted behind the eyes and dilated to a semiglobular neck, front with two supra-orbital setae. Eyes round, rather prominent, distant beneath from the buccal opening. Labrum with only four setae. Maxillae small, the inner lobe slender, hooked at tip, ciliate or spinose within; outer lobe stout, biarticulate; palpi elongate, the last joint trianuglarly dilated and inserted obliquely on the preceding, these two hairy. Mentum emarginate, toothed at bottom, the basal cuticle distinct. Ligula moderately prominent, biarticulate at tip; the paraglossae adherent and rarely longer than it; palpi moderate in length, the terminal joint triangular. Thorax variable in form. Body not hexadactylic, scutellum distinct. Elytra not margined at base, sides narrowly inflexed, margin interrupted posteriory and with saw
interval Plica. Posternum not prolonged. Mesosternum oblique, the spinnera very narrow. Metasternum al spinnera distinct; posterior coxae contiguous. Their ciliate externally, the anterior submarginal within, the spines distinct. Tarsi slender. (Fig. 2, 24, Pl. IX).

The males rarely have the anterior tarsi dilated. In our genera, the first two joints are dilated and hairy beneath.

But one of the two genera occurs in our fauna.

Panagaeus Sat.

Olygaea prolonged beyond the base of the mandibles. The latter decoratating, scissor-like.

This genus is represented by one species in Iowa.

49. Panagaeus fasciatus Say (Fig. 12, Pl. VII).

Ferrugineous, hisrate, punctured; elytra fulvous, with a black band and tip.

Head punctured; maxae unpunctured, glabrous; antennae ferrugineo; palpi black; thorax widest behind the middle, convex, punctures numerous, large, lateral
edge, deeply and widely excavated behind, posterior angles prominent, distinct; elytra fulvous, with a common black band rather behind the middle, contracted on the sides, and dilated at the sutures and margins; deflected base and tip black; striae obtuse, punctures large, distinct, transverse; epipleura with a distinct, impressed, punctured stria; punctures and postpunctures with dilated punctures, feet black; ventrites fulvous, punctured each side of base.

Length 8.5-9 mm.

Habitat: Iowa City, (Nicholas), Caldwell, A. J. (Caner), Newport News, Va. (Barley); Cincinnati, O. (Wing); Milwaukee, Wis. (Rauterberg); St. Louis, Mo. (Summers); Lawrence, Topeka, Kansas (Popenoe); Nebraska City, Neb. (Shinick); Columbus, Tex. (Nicholas).

P. fasciatus Say Fraser, Ann. Philos. Soc. II. p.76, 1833.

By Sec. Jan. II. 219. 1826.
Aedeagus narrowly, but distinctly, narrow behind. The eye to a weak, with
two supraorbital setae. Ocelli round, prominent, very narrowly
separated, but not from the mouth. Ocelli usually moderately
prolonged, but with an extra seta on each side.
Labium transverse, erected in front; rarely quite small.
Mandibles feebly incurved, acute at tip, and with a sub-
ligular seta externally. Maxillae slender, hooked at tip,
ciliate or slightly spinulose within, the outer ciliated
and biciliate, the palpi moderate in length, the last
joint usually small, subulate, sometimes conical, the
penultimate club-shaped and pubescent. Mentum with
soap-like, distinct, variable emargination, toothed,
the tooth simple or notched, the ligula broader in front;
free and truncate at tip, and biciliate; the setae usually
very closely approximated; the paraglossae slender, longer
than the ligulae and not ciliated within, the palpi moder-
ate in length, the terminal joint small, subulate, the
penultimate more or less club-shaped; and biciliate in
front. Mnternala slender, arising under a slight frontal
margin, the first two, or often the first only, glabrous; third joint sometimes not longer than the second. Thorax with a reticulated puncture at the sides and at the hind angles. Elytra sometimes margined at base, sides narrowly inflected, the margin interrupted post-triradiate and with 2 distinct internal plia, disc with dorsal punctures or fossae, usually two, rarely three, and in a few instances numerous. Prosternum not prolonged. Mesosternum moderately separating the coxae; the episternae moderately broad and wider externally. Metasternal episternae distinct, posterior coxae contiguous. Legs moderate, the middle and posterior tibiae slightly ciliate externally, the anterior deeply emarginate within and sometimes with the outer apical angle obliquely truncate (certain Tachys). Tarsi slender, claw simple, rarely serrulate. Surface usually glabrous.

The males have usually two joints of the anterior tarsi dilated and squamulose or pilose beneath, but in some Tachys the tarsi are similar in both sexes.
The genera known to occur in our fauna are separated as follows.

Anterior tibiae not obliquely truncate at apex. Lateral stria not recurved at apex.

Eyes large or moderate. Posterior coxae contiguous.

Elytra striate or strio-fuscate, glabrous.

*Benudia* Lat.

Anterior tibiae obliquely truncate at apex. Lateral stria recurved at apex.

Elytra with eighth stria interrupted or less deep at middle.

*Eylea* Schumm.

*Benudia* Lat. (Figs. 1, 2, 3, 4, 5, Pl. 1.)

1. Elytra with angulate humeri, eighth stria remote from margin, third interstria punctured.

A. Mentum short, tooth bifid, elytral striae abbreviated.

a. Metallic green, immaculate, striae not impressed.

b. Metallic green, sinuaculate, striae not impressed.

B. Mentum with large, entire tooth, striae entire.
b. Elytra with quadrangular form.

c. Elytra, form rather indistinct.

cc. Elytra, form very distinct.

b. Elytra not fuscate. 

1. Elytra with rounded humerus, third stria bifurcate.
   a. Eighth stria moderately approximating the margin.
      a1. Elytra with subangulate humerus, fifth stria reaching apex.
      b. Brilliant brown, posterior angles of thorax rectangular. 
         americanum Dej.
      b1. Dull brown, posterior angles of thorax obtuse. 
         chalcinus Dej.
   b. Elytra with round humerus, eighth stria very close margin.
      a. Thorax flat, trapezoidal. 
         lugubris Dej.
      a1. Thorax convex, subcordate. 
      b. Elytra immaculate. 
         piceus Dej.
68. *Ohytra maculata.*


6c. Each elytron with two yellow spots.

assimile syll.

III. *Ohytra* with rounded humerus, third instar, utractured.

A. Frontal striae normal, elytral striae entire.

a. Large, elytra testaceus with two dark undulating bands.

b. Small, elytra testaceus.

B. Frontal striae double, outer interrupted, convex, elytral striae all dorsal and abbreviated, thorax cordate.

b. Posterior angles of thorax coniculate.

affine Day.
48. Posterior angles of thorax not carinate.

Posterior angles of thorax not carinate.

49. Maculation line.

50. Benildius littoralis Oth. (Fig. 101, Pl. 392-1).

Brown or brassy bronze, beneath blackish green.

Brown or brassy bronze, beneath blackish green.

Head and thorax smooth, shining; base of antennae

head and thorax smooth, shining; base of antennae

and palpi fuscous; thorax quadrate, with a dorsal

and palpi fuscous; thorax quadrate, with a dorsal

impressed line, and two impressed funicules near

impressed line, and two impressed funicules near

the hind angle, which are small, acute; elytra striate,

the hind angle, which are small, acute; elytra striate,

striae finely punctured, third and fourth crossing

striae finely punctured, third and fourth crossing

near the humeri, fifth and sixth more or less

near the humeri, fifth and sixth more or less

irregular, interstitial lines wider than striae, some

irregular, interstitial lines wider than striae, some

what irregular, the third and fifth wider than the

what irregular, the third and fifth wider than the

nec, third with two large quadrate impressed

neck, third with two large quadrate impressed

funicules, sometimes golden; legs greenish black.

funicules, sometimes golden; legs greenish black.

face smooth.

face smooth.

Length 6-8 mm.

Length 6-8 mm.

Habitat. Iowa City. (Hickham).

Habitat. Iowa City. (Hickham).

Buffalo, N.Y. (Pierce); Allegheny R. (Carrington);

Buffalo, N.Y. (Pierce); Allegheny R. (Carrington);

Ohio (Dury); Lake Superior region; Milwaukee, Wis.
Stephanus litteralis

B. 34. p. 6. no. 4. tab. 1 f. 7. R. B.


Bembidium pallidum. Raff. 34. 1845.

Sturmi. 34. 179. no. 43.


R. 34. p. 1. 40. 1831.


Brown; elytra of unequal surface, and two impressed spots on each elytron.

Body brown; above, blackish green; base of the antennae, and of the palpi pale yellow; thorax, dorsal impressed lines, and anterior and posterior lines very distinct; elytra, surface smooth, with two very obvious, dilated impressed spots on the third
interstitial line; strie widely, and profoundly, punctured. The fourth strie undulated, feels blackish green, reflexed at base.


Very closely allied to littorale Obliv, but is somewhat smaller, the thoracic impressed lines more distinct, particularly the transverse basal ones, and the strie of the elytra are more dilated, and the furcatures more obvious.

Length: 6 mm.

Habitat: Iowa City (Hooker).

St. Jerome, Que. (Laurence); Erie Bay, Ont. (Petett); Green Mine (Raynard & Savage); Camden, Gloucester, A. J. (Heyg); Cincinnati, O. (Dury); Milwaukee, Wis. (Randall); St. Louis, Mo. (Summer); Eastern Kansas (Daperon).


Crenarius Syr. Lyc. Acad. IV. 80. 1834.
53. *Dendroctonus ponderosae* Say.

"Dorsum, brassy, breadth green; tibia and anterior coxal hairs testaceous; thorax, basal line, oblique each side.

Body, greenish brassy, polished; labrum, green; antennae, dull green, covered with light brownish hair; basal joint testaceous below and greenish behind; palpi, greenish, hairy, testaceous; on the inferior face; thorax with a green exterior margin; exterior edge excurved at base; dorsal line slightly impressed, narrow; transverse basal line very distinct; basal margin a little rugose, particularly near the angles; angles, acute; elytra with a green margin; striae with rather large punctures; breadth, dark green; coxae, tibiae and knees, breadth testaceous." Say *J. N. A. C. III.* 151. 1823.

Antennae, with the three basal joints, and the base of the fourth pale yellow; face with an impressed line on each side; metax, longitudinally wrinkled; elytra with anterior and posterior obscurely testaceous markings; third interstitial line bifurcated.
Length 6 - 6 1/2 mm.

Habitat. Burlington, Is.
Lake Superior region (Lacorte); Milwaukee, Wis. (Pau- Werzig), St. Louis, Mo. (Summers); Maneau (Horn).

P. cozendezi Say, Jour. Acad. Sci. III. 151. 1823.
Say, Trans. Phil. Soc. IV. 404. 1834.


52. Rembiiium americanum Dej.

"Supra arenaceum; thorax transluzcens, subquadrate; prothorax subirrurato, utrinque striato, angulis notitie rens; elytris oblongovatis, utrinque striato-punctatos, foroboeig, duabus impressionibus antennarum, funiculis tibiaeque basi testaceis.

Long. 2 1/2 ligne; larg. 1 ligne.

Il est à peu près de la grandeur du Foraminifere, mais il est un peu plus allongé, et sa couleur est un peu plus sombre, d'une brûlée moins intense et plus brillante. La tête est à peu près comme celle du Foraminifere.
Premier article des antennes et la base du second et du troisième ou dessus sont d'une jaune testacé un peu rougâtre. Le corselet est plus court, plus transversal, plus arrondi antérieurement sur les côtés et moins sinié près de la base; le bord antérieur est légèrement échançé; les angles antérieurs sont moins avancés et presque obliques; les postérieurs sont à faîne saillante. Les élytres sont moins ovales et un peu plus allongées; elles sont striées à peu près de la même manière, mais les stries sont un peu moins marquées; on voit sur la troisième des gros points enfonce, arrondis, très-fortement marqués: le premier un peu avant le milieu, et le second à peu près aux trois quarts des élytres. Le dessus du corps est d'un velours brun assez brillant. Le pattes sont d'un velours brun, avec la base des cuisses et des jambes d'un jaune testacé. D'Or, Spec. 7, n° 47, 1881.

Brongniart, 1881.
sides, arenaceous, basal furcae shallow, dorsal line distinct, elytra with finely punctured striae, intervals plane, the third with two large punctures, legs unknown.

Length: 5.55-6 mm

Habitat: Iowa City (Hickham), Camden, Gloucester, N.J. (Huyghe), Cincinnati, C. (Bury), Detroit, Mich. (Hubbard & Schwanz), Milwaukee, Wis. (R. & Czwik), Blansing, Ill., St. Louis, Mo. (Deceweers), thousands (Hew.), Boone Lake, max. of Dena, Colo. (White).


54. P. bicarinum chalceum Dej.

"Super obscura scenery, thorax subangustato, quadrate, postice sinuato, utrinque striato, angulis posticis obtusiis, elytris oblongo-ovatis, profunde striato-impunctatis, punctisque duobus impressis; antennae, femorae, abdomine, facie testaceae.

Long. 3½ lign., Larg. 1 lign.

Il ressemble beaucoup à l'Antiguanus, mais sa...
condur est enduite d'une laine plus blanche et plus
quefois presque noireâtre. La tête est un peu plus allon-
gée. Les antennes sont à peu près comme celles de l'
Antigune. Les yeux sont un peu moins grands et
moins saillants. Le concleb est plus étroit, un peu
moins arrondi antérieurement sur les côtés plus
conexe, l'impression transversale antérieure est à
peine sensible; la postérieure est fortement marquée et
forme un angle très-oblique sur la ligne du milieu.
L'impression de chaque côté de la base est un peu
moins marquée; la base est coupée un peu moins
obliquement sur les côtés, ce qui fait paraître les
angles postérieurs un peu plus saillants et moins
obtus. Les élytres sont un peu plus ovales et un
peu plus courbes, elles sont striées à peu près de
la même manière, mais les stries sont un peu plus
marquées et un peu plus fortement foncées; les
intervalles sont moins pliées et paraissent un
peu relevées; un voile sur le troisième, presque sur la
troisième strie, deux pointes suffoquées placée à peu près
como dans l'Antique. La dessous du corps est d'un rub rouge assez brillant. Les pattes sont à peu près comme celles de l'Antique; je pensive un individu dans lequel les cuisses et les jambes sont presque entièrement d'un jaune taché.


Brown, head smooth, shining, an impressed line at the base of the antennae; labrum black, antennae with two basal joint glabrous, testaceous, thorax quadrat, feebly rugose, dilated posteriorly but embracing the body anteriorly; hind angles nearly rectangular, dorsal line distinct, anterior and posterior ones obsolete, basal impressions distinct; elytra with eight entire striae and a very short ventral one; interstital line nearly equal, wide, the third stria with two impressed punctures near the middle; under surface greenish black, smooth; legs and trochanters testaceous.

Length 8 mm.

Habitat: Iowa City (Shickshinny).


Black, greenish-raven, nearly flat, head smooth, shining, front with two longitudinal impressed striae, labrum base of antennæ and palpi rufous; thorax broader than long, sides carinate, base truncate. Posterior angle of elytra rectangular, basal foræ large, dorso-lateral line faint, elytra with eight coarsely punctured striae, all nearly obliterated at apex, the seventh almost sometimes entirely obliterated, the third bifurcated, intervals a little wider than the striae; legs and tip of abdomen rufous.

Length: 7 mm.

Habitat: Iowa City, (Vicklamer).

Salemburg, Ill. (Kromberg); Chapman's Creek, Kan. (Kneeland); Canonsville, Colo. (Vicklamer); Texas (DeCoule). B. lugubris Lee Prox. Acad. Nat. Sci. 1857. p. 9.

56. Bembidium jucundus Kirk.

Body black, glossy, abdomen scarcely at all bronzed. First joint of the antennæ rufo-piceous; sculpture
of the head and thorax and elytra. Precisely that of the preceding species of the genus [nepticula Hb.], elytra unspotted, with two punctiform impressions situated, as in *Percoptolas* (*Bembidium Jostremon Day*), legs rufous pruinose. *Hb.* Fanns. Bor. Am. p. 54.

Length. 4.5-5 mm.

Habitat. Iowa City (Vicklund).

Gained by Out, (Petit); Reiss, Nature (Skrap); Long Island (Casey); Cincinnati, O. (Dury); Lake Superior region (Leconte); Thunder Bay to Lake of the Woods, (Barrington); Milwaukee, Wi. (Kunterburg); Indiana (Blatchley); Lawrence, Kans., (Popov).


Kauss Bull. North. 1863. 57. no. 5.


militae Casey Cont. Colec. 15. 65. 1874.

57. *Bembidium donaldii* Bay. (Fig. Pl. XIII).

Inenish, polished, beneath blackish; elytra testaceous, with two obsolete undulated bands.

162.
Body almost black, polished; head green, somewhat brassy; front longitudinally convex in the middle; antennae brown, testaceous towards the base; palpi testaceous, darker towards the tip; thorax green, slightly tinged with copper, marginal group interrupted at the posterior angles by an oblique carinate line, dorsal line obsolete, basal once dilated, basal edge obsolete each side; elytra whitish-testaceous, striae punctured, profused, not obsolete near the tip; interstitial lines hardly convex, third with a transverse linear impression before and one behind the middle, area of the scutellum greenish, two fusco-testaceous, obsolete undulated bands behind the middle, the posterior ones less definite; feet whiteish-testaceous.


Length: 5 mm.

This species varies considerably. The dorsal line of the thorax is more or less obvious, and sometimes it is rather deeply impressed. Occasionally there is a slight appearance of puncturing on the middle of
the thoracic base. The thorax is more or less marked with undulating lines which are sometimes almost imperceptible.

Habitat. Iowa City (Hickham).

Lexington, Ohio; Rochester, N.Y.; New York, N.Y. (Peck);

Cincinnati, O. (Avery); Milwaukee, Wis. (Rantburg);

Illinois, St. Louis, Mo. (Bennett); Lawrence, Kansas;

Poplar) (Edinburg, Nov. (Hickham).


B. dorsalis Say. J. IV, 1837; 1834.


58. Rembicidium reinwardtii Say.

"Blackish; elytra brownish, obscure yellowish at tips. Head greenish black, face with an indented line in each side, between which and the eye is a large oval circular puncture. Antennae fuscous, picose at base. Halpi dark brown, yellow. Mandible at base. Picoseo, thorax brown black, very obscurely picoseo on middle of the anterior margin, contracted behind. Posterior
angle obtuse, angular; dorsal line impressed; anterior transverse very obvious, arched; basal line dilated, suborbicular; basal margin with slight inequalities or punctures between the basal lines; a slightly elevated line on the lateral margin, forming a promont with the slightly elevated edge, more obvious near the angle, and becoming obsolete before; elytra very dark honey yellow or brownish, much paler at tip; striae somewhat dilated, and with dilated, quadrate, notched punctures; striae more slightly impressed towards the tip, and the punctures obsolete; third interstitional space a little broader than the others, with a puncture before the middle and another equidistant behind the middle, both nearer the third stria; wings perfect; beneath black; abdomen tinged with fuscous; feet pale yellowish.

Length 5 mm.

Habitat: Iowa (Rheinsch).

Nests (Blanchard); Paws (Say, Bolter); Illinois (Storace); Missouri, Colo. (Boudinot); Idaho Pass and
La Veta, Colo. (Schwarz); Utah.


IV. 464. 1838.

59. Humilidium Patrice nov. de (Fig. 2. pl. 341).

“Super obscurum violaceum, thoracis quadrato,
† Portae triunguis bistrato, anguli Portae rectis;
† elytris oblongo-similis, striato-fuscatis, fasciis undatis.
† maculariibus trigus apicibus pallide testaceis obsoletis,
† punctisque usque usque impressis; antennaeus latis
† pedibusque testaceis.

Long. 1/4 ligne. Larg. 1/3 ligne.

Il ressemble beaucoup à l’Obliquum par la grandeur, la forme et la couleur. La tête et le corps sont
à peu près comme dans cette espèce. Le premier
article des antennes et la base des trois suivantes
sont d’une couleur testacea un peu rougeâtre. Les
elytres sont à peu près la même forme, mais les
bands of tache on a peu prés connue dans l'Entomologie; elles sont striées et foncees comme dans cette dernière espèce. Le dessous du corps est d'un noir un peu verdâtre. Les pattes sont d'un jaune testace; quelquefois les cuisses sont couvertes d'une très légèr reflex bronzé. Dej. Sp. Gen. £. 69. 1831.

Head and thorax greenish, with a slight coppery tinge; head incertuated above, with two moderately deep frontal grooves extending behind the eyes; the space between longitudinally convex; eye moderately prominent, antennæ and halari testaceous; thorax smooth, quadrate, sides arcuate in front, subparallel behind, posterior angle rectangular; dorsal line obsolete, basal line dilated, somewhat interrupted near the hind angles by an oblique line; scutellum very small, green; elytra whitish testaceon, striae finely punctuated, third interval with two punctures, one before and one behind the middle, intervals hardly convex, entire, broader than the striae; three undulating bands of black forming a continuous
pattern, apex and linewa testaceous; undersurface
smooth, shining, black; legs testaceous.

Length: 4 mm.

Habitat: Iowa City (Nicklau); Ames (Ottone).
British Columbia (Harrington); Sparrow Lake,
Ontario (Hamilton); Grimesby, Ont. (Petrik); Ottawa, Ont.
(Harrington); London, Ont. (Saunders); Buffalo, N.Y.
(Reiche); Passaic River, N.J. (Schaupe); Cincinnati,
Ohio (Dury); Marquette, and Detroit, Mich. (Hubbard
+Schacht); Lebanon, Kansas (Borditch); St. Louis,
Mo. (Summers); Milwaukee, Wis. (Rautenberg).

(9) Patruel Deip Sp. Lee, t. 69, no. 32. 1831.

60. Beneblidium juscicolen. Lee. (Fig. 3. P. 183.)

Black; antennae picene; basal joints suffusc; palpi
black; thorax a little broader than long, narrowed behind;
scutum carinate, hind wings rectangular, basal fossae
deep, dorsal and posterior lines distinct; elytra rich
strongly punctured, striate, and piceous markings; under
erface black; feet rufescent.

Length, 3-4½ mm.

Habitat. Iowa City (Nichols).

British Columbia (Harrington); St. Jerome, Que. (Kearns);
Spamans Lake, Ont. (Hamilton); Stranby, Ont. (Petit); Not.
Washington, W. Va. (Harstein); Charlemont, Mass. (Clark);
Buffalo, N. Y. (Reiche); Pekoa Hill, A. Y. (Clark); Camden
Gloucester Cov., N. J. (Angell); Cincinnati, O. (Dugg); Lake
Superior region (Scout); Detroit, Mich. (Hubbard and
Schwarz); Milwaukee, Wis. (Kautz); Oklahoma and
Florida, S.C. (Scout); Tampa, Fla. (Schwarz).


G. IX. 462. 1848.


41. Burnbiddiea flavifasciata Kirt. (Fig. 4, Pl. xxiv).

Head and thorax greenish, smooth and shining.
Antennae dark brown, not much longer than the
Head and thorax; eyes very large; thorax quadrate, zede, truncate before, subparallel behind; posterior angles rect-angulur; dorsal line distinct, basal and anterior lines nearly obsolete; scutellum pierced; elytra dark pierced, striae finely punctured; punctures nearly obsolete at apex, interstitial lines broad, scarcely covering the third with two punctures, one before and one behind the middle, each elytron with three undulating bands of dark brown or black, the anterior band extends from the humerus obliquely across the disc to the first dorsal puncture in the third interstitial line, thus leaving a triangular space near the scutellum; the middle band runs from the margin to the suture; the posterior band is midway between the second and the apex. These bands are connected by a lighter vitta running the entire length of the elytra near the suture, eige suffo-rience, as in the underside face.

The markings are quite variable. Sometimes, a third puncture is found on the third interstitial line near the apex.
Length 3-3½ mm.

Habita: Iowa City (Nickham); Abner (Oleena), Camden, J. (Siebeck); Cincinnati, O. (Dwyer); Milwaukee, Lee, N.Y. (Rauterberg); Illinois; St. Louis, Mo. (Summers), Kansas (Cone, Pfeiffer); Starland, La Plata, Colo. (Schweng); Dallas, Big Spring, Tex., Tucson, Riverside, Coldbrook, Ariz. (Nickham); San Diego, Cal. (Leconte); Salt Lake City, Utah, Osseo, 14th, Elko, 1st. (Nickham), Green River City, Wy., (Bowditch); The Wallie, Oregon, Victoria, B.C., T. Wrangel, Alaska; Kamloops, B.C. (Nickham).

B. pseudopulchra Noto.

6. R. candidissimum Day.

Black, clytra, each with two large, distant, obsolete, pale spots, and a smaller one on the humerus before.
Thorax black, wider before the middle, much contracted behind, posterior angles salient, acute, basal edge oblique, each side, and, excluding the angles, hardly wider than.
the peduncle, elytra blackish, each with obsolete marginal, pale spots, one placed before the middle, not attaining the humerus, one smaller behind the middle, attaining the margin, and one smallest before the humerus, striae impressed, wanting at tip, striae distinct; first testaceous. Say, Trans. Am. Phil. Soc. II. 64, 1833.

Length, 3-3.25 mm.

Habitat: Iowa City (Richhame); Oddville (Shnek); Buffalo, N.Y. (Reiche); Camden, N.J. (Lobik); Cincinnati, O. (Dury); Florida (Schwarz); Lake Superior region (Lecorte); St. Louis, Mo. (Schreter); S. Korn; Wincow, Ariz. (Richhame).


followed by: Say, Sp. Gen. V. 157, n° 132, 1831

63. Pemphidine cerintha Say.

Head small, smooth, black; frontal striae double, outer one interrupted; antennae dark with pale testaceous base, thorax broader than long, narrowed.
behind, sides arcuate, posterior angles acute, dorsal and basal lines distinct, two large impressed spots near the dorsal line on the anterior margin; elytra black with a slight brownish tinge, striae on the disc not extending to apex, marginal ones shorter, punctured, interstital lines about the same width as the striae, not convex, a large testaceous spot behind the middle and a smaller one on tip; legs testaceous.

Length 1.2-3 mm.

Habitat. Boreal (Dobson).

Ontario; Quebec; Rhode Island; Lake Superior region (Secwépemc); Detroit, Mich. (Hubbard & Schweng); Allegheny Pa. (Hamilton); Milwaukee, Wis. (Rauterberg); N. Y.; N. J.; N. Mex.; Eng.; Western Siberia (Hamilton).

Brassica.Lyll. II. 26. no. 13; IV. 410. no. 12.

Bis. S. P. Econ. 15. no. 132. 1891.

Bis. 13. Econ. 15. no. 132. 1891.

S. P. Econ. 20. no. 122. 1891.

64. **Perisidium quadrimaculatum Linne.** (Fig. 5, Pl. XXXI)

- thorax flavo, elytris obtusissimis, fuscis, manubri duobus, albis. Ex. sext. 310.

- Elytris, sexta, no. 532. Carabae nigres, thorax ferrugineo elytronque manubri 4 lividiis.

Linnae. Syst. Nat. I. 673. no. 41.

Black, head smooth, frontal striae double, outer one interrupted, antennae brown, lighter at base, long; palpi testaceae, thorax reddish black, smooth, wider below the middle, sides strongly arcuate before, narrowed behind, posterior angles subacute, aedeagus basally, reabs oblique each side, and, excluding angles, hardly wider than the peduncle, slightly punctured, dorsal line obsolete; elytra blackish, each with two large white spots on the anterior subtoval, attaining the humerus, and external margin, distant from the cuticle, the posterior much smaller, rounded, placed...
on the sides behind the middle, not reaching the external
margin, striet punctured, not attaining the apex; third
interstitial line, one puncture before the middle, and
sometimes one behind; undersurface black, smooth,
just destressed.

This species is subject to considerable variation in
the size and depth of coloring on the elytra.

length: 4 mm.

Habitat: Iowa City (Wickham); Ames (Osborn).
Hudson Bay country (Harrington); St. Jerome, Que.
(Canada); Yale, B. C. (Wickham); Green River (Hayward
and Savage); Buffalo, N. Y. (Reiche); St. J. (Smith);
Pine, (Bay); Detroit, Michigan (Hubbard and Schuyz);
Milwaukee, Wis. (Rauterberg); St. Louis, Mo. (Summers);
Topeka, Kans. (Popovich); Edc. (Ulker); Coolidge, St. Nxd.
Creek, Idaho; Yakima, Wash; Portland, Ore. (Wickham).
Europe and Siberia (Hamilton).

Carabus 4-maculatus Line, Syd. Nat. 1: 670. no. 41. 1787.


Lophia 4-maculata Staph. Kaut. 57. no. 438. 1809.

By Cottar. p. 17.
15. *Bembidium caryagnatum* Say.

- Above green, polished, beneath blackish; elytral striae not impressed, punctured.
- Body, all above green, polished, beneath blackish, polished; antennae and palpi rufous; thorax impressed, broadest in the middle, nearly equal to the base of the elytra, contracted behind, posterior angles rectangular; basal line nearly rectilinear, marginal groove interrupted at the posterior angles by an oblique carinate line, dorsal line slightly impressed, basal ones profoundly indented; elytra subcylindrical.
of impressed striae, punctures rounded, somewhat dilated, obsolete behind the middle, interstices line flattened; few asperous, others slightly depressed, on the sides. 


Length 6-7 mm.

Habitat Iowa City (Vickham), Ames (Colton).

*Vincetina*, Q. (Bury); St. Louis, Mo. (Summers); Nau. (Horn; Poponos); Illinois, Mwon, Columbus, Tex. (Vickham).


483. 1848.

Toxius Schaum.

Body ovate, slightly convex, thorax transverse, hind angles rounded; antennae with the second and fourth joints of equal length; elytra with the eighth stria interrupted, or less deep at middle, internal striae recurved at apex; anterior tibiae obliquely truncate at base.
Six species occur in Iowa.

I. Elytra immaculate.
   a. Size small, piceous.
   b. Size large, black.

II. Elytra mactulate.
   a. Body rufous.
      b. Elytra with humeral and discal spots of pale piceous.
      b. Elytra with vitta extending from humerus two thirds to apex, nebulosus, Odl.
      c. Elytra blackish, posterior half yellowish white.
         planicosta Say.
      cc. Elytra piceous with humeral vittae.
        incurvatus, Say.

66. Tachys laevus, Say.

Piceous, palpki whitish; elytra destitute of striae.
Body piceous, tinctured with rufous; head rather darker; antennae paler at base; palpki whitish, thorax
transversely subquadrate, broader than the middle,
hardest narrow behind, lateral edge not recurved be-

hind, posterior angle slightly obtuse, angular, basal
edge nearly rectilinear, dorsal line obsolete, base ob-

luxating, elytra impunctured, destitute of striae,

excepting an obsolete ventral one; fast testaceoul.

length 1.25 - 1.5mm.

Found under stones in late winter and early

spring.

Habitat. Iowa City (Wickham), Ames (Oeben).

Green Bay, Oak (Pettit); Buffalo, N.Y. (Reinecke), Ark.

Brumwick, N.J. (Smith); Florida (Schwarz); Detroit, Mich. (Hubbuck

and Schwarz); St. Louis, Mo. (Summers); Buffalo, N.Y.

(Kraus).


Black, polished; frontal impressions rather oblique; eyes less prominent than in usual in this tribe; thorax broader than long, basal impressions single, dorsal line deeply impressed; elytra with three obsolete, punctured striae near the suture, not reaching the apex; legs picemut.

Length 2 mm.

Habitat: Iowa City (Dickham), Ames (Osborn).
Sparrow Lake, Oak (Hamilton); Green Mtns. (Wayward and Savage); Buffalo, N. Y. (Rennie); Swark, I. J. (Smith); Florida (Schwarz); Cincinnati, O. (Dury); Detroit, Koch (Hubbard and Schwarz); Bayfield, Wis. (Dickham); Milwaukee, Wis. (Pantzer); St. Louis, Mo. (Summerer); Lawrence, Kan. (Popenoe); Red River, Colo. (Scowte); Williams, Oriz. (Dickham); Cal. (Noto); Europe (Reitter); Siberia, Algeria (Hamilton).

Rem. Redimus varians Fyll. II. 30. no. 16; IV. 413. no. 16.

[Other references not legible here]
Bembidium quadriradiatum Sturm VI. 150. no. 27 tab.
160. f. 2. A.D.
inornament Say Trans. Amer. Phil. Soc. II.
p. 87. 1833.

Elaphrus minimus Ruffinaux II. 205. no. 17.


Mann. Berlin. Moze. 1853. p. 60. no. 60.


Found under loose bark.

68. Tauchia flavicunda Say. (Fig. 101.)

Dorsum, elytra with obsolete, incised striae.

and pale at tip.

Head blackish; antennae, labrum, and palpi all.

elytral, thorax black, transverse quadrato.

broader in the middle, not contracted behind; posterior angles rectangular, basal edge rectilinear; elytra.

blackish, from near the middle to the tips yellowish.
white, striæ imperfectæ, wanting each side and
not tips; interspersial lines convex; feet pale rusets; vent-

Variety, entirely testaceus.

Length 3 mm.

Found under bark of decaying tree.

Habitat: Independence, Iowa City (Wickhame);
Jasper Lake, Oak (Hamilton); Grimesby, Oak (Petit);
Green Niles (Raynard and Savage); Buffalo, N.Y. (Pinta-
sche); 1. J. (Smith); Cincinnati, O. (Wrig); Detroit, Mich.
(Hubbard and Schwarz); Bayfield, Win. (Wickhame);
Milwaukee, Wis. (Ranterber); St. Louie, Mo. (Summers);
Topeka, Kan. (Pope).

II. 87. 1823.


69. Tachya vinea Say

Antere, polished; head small, frontal striæ
normal; antennæe rusets with pale lace; thorax quad-
vate, sides acute, hind angles acute, dorsal line obsolete, basal line distinct, dilated and interrupted before angles, by short transverse lines; elytra with two lighter spots, one at the humerus, and one near the base, without striae except an impressed natural one, infuscated; legs testaceous.

Length 3 mm.

Found under stones and chips in spring, later in the season in moist places by streams.

Habitat. Iowa City (Cookham).

Buffalo, N. Y. (Reiche); Detroit, Mich. (Hubbard and Schwanz); Milwaukee, Wis. (Rautenberg); Lawrence, Kan. (Popenoe), Utah.


70. Tachys incursus Say.

Pyriform; elytra with a honey-yellow vitta from the humerus, as little dilated at its terminations as the tips.
Body honey-yellow; head blackish-piceous; antennae honey-yellow; thorax a little contracted gradually to the base; dorsal line slender and slightly impressed; basal transverse line deeply impressed with numerous minute wrinkles; basal lines dilated, undulating the posterior edge; elytra polished, with a profoundly impressed, somewhat dilated, simple, nutricular stria; the second stria obsolete; an interrupted stria on the lateral margin, a dilated indentation each side a dilated vitta from the humerus to the scutellum, and a smaller one on the humerus, near its tip, curve a little towards the suture, and in that part a little more dilated; revolute black-piceous, jetty honey-yellow. "Say Franq. Am. Phil. Soc. 1840, 1834.

The species varies somewhat in the depth of coloring.

Length 2 mm.

The habits are the same as those of T. virginicus.

Habitat: Independence, Iowa City (Wickham),

Squaw, Oak (Petit); Ebroo, Notre (Hayward and Savage); Buffalo, M. Y. (Reese); Brigantine Beach,
Tachys (Hamilton); Florida (Schwarz); Cincinnati (G. Day); Marquette and Detroit, Mich. (Hubbard and Schwarz); Bayfield, Wis. (Nicholls); Milwaukee, Wis. (Pautzke); Indiana (Bay, Blatchley); St. Louis, Mo. (Sumner); Lawrence and Topeka, Kans. (Popienor); Greeley, Salida, Colo. (Nicholls); La Veta, Colo. (Leconte); Morgan City, La.; Houston and Columbus, Tex.; Albuquerque, N. Mex. (Nicholls).


71. Tachys nebulosus Codd.

Body uniform, polished; head with frontal striae normal, antennae piceous, a little longer than head and thorax, eyes prominent; thorax quadrate, sides rectate, posterior angles rectangular; dorsal line very faint or entirely wanting, basal line distinct; elytra with slightly dilated, profoundly impressed central striae, all other wanting, a distinct or vitta extending from the humerus.
along the margin two thirds to apex, then bending in toward the centre, which it nearly reaches; lepideous. Length 3 mm.

Found on banks of ponds, and streams.

Habitat. Horses (Osborn).

Pennsylvania (Peirce), Canton, City, Colo. (Wickham).

T. nebulous Ch. Ehr.

*incervum* f. (newly sp.) Lee, Horse, Hyp. N. Y. 1847.


Head sometimes constricted behind the eyes; two supra-orbital setae. Eye (sometimes absent) rarely prominent, distant from the mouth. Clypeus moderately prolonged, and with a setigerous structure each side. Labium short, truncate or broadly emarginate, plurisetose in front. Mandibles moderately prominent, finely serrate, acute at tips and with a setigerous structure on the outer side. Maxillae slender,
rascute at tip, ciliate with a few stiff hairs inside, the outer lobe biarticulate, palpi moderate or long, the terminal joint variable but not ciliate, the penultimate joint not pubescent. Antennae broad, its basal section often obsolete, deeply emarginate and toothed, the tooth bifid or simple, the epiphene often dentiform; tegula moderately prominent, usually broad, the tip free or aruncate, uni- or biarticulate (Pogonii) or even pleuronic (Frechi), the paraglossae slender, very little longer than the tegula and not ciliate within (Pogonii), or slender, long, and ciliate within (Frechi); the palpi slightly variable, the last joint not ciliate. Antennae slender, arising under a feeble frontal ridge; the third joint usually very little longer than the second, only the first two joints glabrous. Thorax with a setae at the sides and at the hind angles. Body not pedunculate, scutellum distinct. Clytra sometimes margined at base, sides narrowly inflected, margin posteriorly entire or with a very feeble sinuation and without internal glia, sides more or less striate,
idoral punctures distinct. Prosternalium not prolonged at tips. Metasternum declivous in front, moderately separating the coxae, the spinera narrow. Metacoxal variable in length, the spinera distinct, the posterior coxae contiguous. Legs moderate or slender, the tibiae not spinulose externally, the anterior deeply emarginate within the inner spurs remote from the apex. Tarsi slender, claws simple. (Pl. xx. Fig. 50.)

The anterior tarsi of the males have two joints dilated, and squamulose beneath.

The tribe is subdivided into two groups—Pogoni and Trechi— but representatives of the latter group are not found in Iowa and shall not take it into consideration.

Group Pogoni.

Terminal joint of palpi more or less cylindrical and obsolete at tips, that of the labial as long as the preceding. (Pl. xx. Fig. 52.)

Two genera make up the group, examples of only one occur here known.
Head more or less constricted behind the eye, or transversely impressed, elytra not margined at base.

Petrobues Dep.

Ovic of thorax convex, hind angles with a dark fossa, last two joints of maxillary palpi equal.

Longiconus Day.

72. Petrobues Longiconus Day. (Fig. n. Pl. XVI.)

Ovic, dark ficeous, breath paler; antennae rufous; foot testaceus.

Body glabrous, dark ficeous, breath ficeous, front longitudinally indented each side; antennae rufous, half as long as the body, the joints attenuated towards their base, labrum truncate, rufous; palpi rufous; thorax contracted behind, edge slightly excurved at the hind angles, anterior transversely indented. Line profound, dorsal line at base abruptly carunculated, basal lines dilated, subcubicular, profound, scabrous, extending from near the dorsal line to the angle; elytra, interstitial line of the disc convex, glabrous, striae obsolete, punctures approx.
vinate, transverse extending upon the sides of the striae, the sixth and seventh striae obsolete; feet testaceous.

Say Trans. Amer. Phil. Soc. 11. 40. 1828.

Length 12-15 mm.

Found under stones in moist places.

The form of the larvae of P. longicornis Say is elongate, broadest in front, narrowing posteriorly.

Color: Head and thorax yellow, pronotum, abdominal conter black; legs, antennae and underside pale.

Head large, longer than broad, as wide as prothorax, hexagonal, above convex; anterior angles rounded; posterior angle prominent. Dorsal hairy, submicrospicula near the eyes, and before the base.

Eyes large, six on each side, situated at a little distance from the base of the antennae, prominent at the middle of the anterior situation of the head.

Antennae four-jointed; first joint subcylindrical, as long as the slightly club-shaped second joint; third shorter, very much thickened at tip, supporting the slender fourth joint of equal length and color at the
outside a short process, the first joint has but one tooth, 
the second is glabrous, and the third, and fourth set 
with three bristles. Near the tip of the third joint it is 
short, then one longer process projecting outwards.

Mandibles long, arcuate, with one stout tooth behind 
the middle.

Maxillae very long, basal joint very short, second or 
cardinal piece long, subcylindrical, slightly thicker towards 
apex, thickly set with bristles, at the inside and sup-
porting a four-jointed palp, and a two-jointed lobe.
First joint of palp stout, short; second twice as long, 
but much thinner, third and fourth as long as the second, 
slender, the third a little stouter than the fourth. The 
first joint of the lobe longer than the first joint of 
palp, but slender; the second the same length, but 
more more slender.

Nectum transversely trapezoidal, broader than long.

Lipula narrow at base, broadening toward apex, densely 
set with bristles, with a terminal obtuse prolongation at 
middle; palp two jointed, the first longer and stouter.
than the second.

Both thorax longer than broad, angles obtuse, as broad as the head, sides subparallel.

Mesothorax subquadrate, slightly arcuate at tip.

Metathorax similar to mesothorax.

Abdomen, first segment shorter than the following which are nearly of equal length, gradually becoming narrower and more elongate, the ninth small and cylindrical with a tubular prolongation and the anal fork set with bristles.

The sides of the thoracic and the abdominal segments are set with branches of bristles, the former with two branches, the latter with one.

Spiracles nine at each side, the first above the middle feet. (Fig. 3, 3d. Pl. xiv.)

Habitat: Iowa City (Nicks), Muscatine (Shimer); Davenport (Putnam).

Grenada, Ont. (Petit); Ottawa, Can. (Earnington); Green, Minn. (Raynard and Savage); Buffalo, N. Y. (Reinche); New York City (Schaupp); Sturtevant, N. Y. (Smith).
Pine (Say); Cincinnati, O. (Dury); Saratoga (Hubbard and Schwartz); Bayfield, Wis. (Rickham); Milwaukee, Wis. (Rau), St. Louis, Mo. (Scully); Topeka and Lawrence, Kan. (Pope); Boulder, Colo. (Rickham); Greeley, Colo. (Rickham).

Feronia longicornis Say, Trav. Acad. Phil. Soc. 11. 10. 1833.

Patrobus longicornis Say, Trav. Acad. Phil. Soc. 11. 421. 1834.

Schizopoda Phil. Trans. Soc. 56. 1872.


Patrobus americanae Say, Sp. Gen. 11. 54. 1838.


10. Tribe Pterostichini.

Head more or less constricted behind the eyes, except in Agonara, and with two supra-orbital setigerous punctures, elytra prolonged beyond the base of the mandible, the latter without setigerous puncture externally. Maxillae ciliate, or spinulose within, hooked at tip; the palpi of moderate length and of variable structure. Mantle...
broad, of variable length, usually deeply emarginate and
foetid, varying to a simple diminution; ligula at
least moderate in size, often large, more or less free at
tip and bifidose (quadricostate in Mayci), the paraglossae
slender and usually longer than it, sometimes much
longer (Stonic, Loxandrea), the palpi variable in form,
the second joint sometimes longer than the terminal.
Antennae, arising under a distinct frontal ridge, the
three basal joints glabrous. Thorax with at least one
setigerous puncture at the side, one at the hind
angle. Body not pedunculate (sub-pedunculate in some
Genathrus), scutellum distinct. Clytra narrowly inflex-
ed, margin strongly interrupted posteriorly, and with a
well marked internal fovea, disc usually with dorsal
punctures. Postscutum not prolonged at tip, margined
or not. Mesosternum oblique or vertical in front, rather
widely separating the coxae; the epipodra narrow, often
wider internally than externally. Metasternum and
side piece variable in length, the epipodra always
distinct, posterior coxae contiguous. Middle and Post.
rior tibiae variably spinulose externally, the anterior slightly so near the tip, the latter broader at tip, deeply emarginate within, the inner spur situated at the summit of the emargination. (Fig. 2, Pl. 7).

The anterior tarsi of the male have three joints rather broadly dilated and squamulose within.

The genua are not clearly limited but they may be separated as follows:

1. Last joint of palpi cylindrical or slightly noded.
2. Anterior tarsi of male normally dilated.
3. Terminal joint of palpi as long or or longer than the penultimate, the latter bisetose in front.
4. terminal joint of palpi shorter than the penultimate, the latter plurisetose in front.
5. Elytra with one dorsal puncture. Eusarcoidea Lee.
7. Anterior tarsi of male obliquely dilated.
Pterostichus Dom. (Figs. 6, 45, 72 Plate III)

A very numerous genus with varied characters. Those occurring in Iowa may be separated as follows:

I. Dorsal punctures wanting.
   a. Prosternum margined at tips.
   b. Elytral striae fine, interstices flat, base of thorax not narrower than tips: californicus, Ky.
   c. Prosternum not margined at tips.

II. Dorsal punctures 1-3, last joint of palp cylindrical, truncate.
   a. Elytra with one dorsal punctuation.
      b. Thorax not narrowed behind, dorsal line reaching base, striae in punctures, scutellar stria long:
         stygiicus, Ky.
      b1. Thorax much narrowed behind, dorsal line not reaching base, striae punctured, no scutellar stria:
         constricticus, Ky.
   a1. Elytra with two dorsal punctures.
c. Black, thorax slightly narrowed behind, striae in punctured. coracinus Say
cc. Green, thorax not narrowed behind, striae punctured, black within. calceus Say
aaa! lytra with three dorsal punctures!

b. Thorax narrows in front than behind.

bb. Dorsal line not reaching the base.

bba. Striae finely punctured. breviventex Say.

bbb. Thorax narrow behind.

b1. Green, striae purple within, sometimes in punctured, sometimes finely punctured. breviventex Say.

b2. Black, striae finely punctured before the middle, interstices with dorsal punctures, hind angles of thorax carinate. consimilis Dej.

b3. Black, striae entirely punctured, striae with dorsal punctures.

bb3. ventator Lee.

b4. Black, dorsal foveae linear, hind
angles of thorax not carinate,
striae punctured, interstices with
dorsal punctures. 

New species.

Dorsal punctures 3, last joint of palpi elongate
ovate, scarcely truncate. Small species.

a. Sterellar stria wanting.

b. Thorax rounded, broadly margined.

erythropsis sp.

as. Sterellar stria long.

c. Oktoral striae punctured punctually.

d. Oktoral striae punctured before the middle.

flavoralis sp.

33. Leiostichus californicus Wy.

Optica nigra; thorax subcordato; postice nitidissima striato.

Optice oblongo-natato, subparallelis, striatissi.

Long. 3½, 6 ligne. Larg. 3, 4½ ligne.

Elle ressemble beaucoup à la Lepida, et sa couleur est
entièrement en dessous d’un noir assez brillant. La tête est
tissée, avec deux impressions longitudinales assez marquées.
entre les antennes. La ligne supérieure est d'une belle noir.
ète. Les palpètes et les antennes sont d'un brun un peu roux.
ète. Les yeux sont un peu plus petits et moins saillants.
Le cerclet est un peu plus étroit, plus allongé, plus large, un
peu plus courbe, un peu retiré postérieurement et très les-
sement courbé; la ligne longitudinale est un peu moins
marquée; il n'y a qu'une seule impression longitudinale
de chaque côté; le fond de cette impression est presque
lisse, et l'on n'aperçoit aucun point enfoncé sous la base, qui
est couplée presque carrément. Les élytres sont un peu plus
ovales et un peu plus courbes; leurs stries sont lisses, un
peu moins marquées; les intervalles sont presque blanches,
et l'on n'aperçoit aucun point enfoncé sur le troisième
de dessus du corps. Les cuisses et les jambes sont d'un
noir moyen sombre; les tarse sont d'un brun rondelet.


Black; polished; head impressed, frontal groove
double, the other one less impressed; mentum slightly
enlarged; antennae dark brown, the three basal joints
black; palpi very dark rufous, thorax quadrato, impunct.
ured, hind angles rectangular, median impression distinct, basal impression interrupted near the angles by an oblique line, margin entire; elytra slightly convex, margin at base, minute at apex, striae punctured, punctures long, marginal interval with a series of punctures; tip of abdomen ferruginous.

Length 11-16 mm.

Although Mr. Osborne has included this in the list of Iowa beetles I think it must be through mistake as I find it recorded only from the Pacific states.

Habitat. Amherst (Osborne).

Tehachapi and Kern, Cal. (Hickham); San Diego, San José, Santa Isabel and San Francisco, Cal. (Leconte).


74. Paropsis radouxi Say. (Fg. 1. Pl. XXXI.)

Afternoon, black, glabrous, incunibulated; stria incunibulated; basal thoracic line not dilated.

Body black, glabrous, incunibulated; antennae robust, the joints attenuated towards their bases, and with the palpae dark infuscated, labrum truncate, dark infuscate, thorax large, incunibulated, gradually contracted behind, edge excerted, saddle kind angles, dorsal line not attaining the base, basal line strongly impressed, cutting the base near the angles; prothoracic incunibulated; prothoracic incunibulated; elytra, stria incunibulated, interstitial lines convex; feet pedunculate, abdomen pedunculate. Say. F. Nat. Hist. 36. 46. 1830.

Length: 14-15 mm.

Habitat: Anee (Cobour).

St. Jerome, Que. (Hastings); Drumby, Ont. (Petit); Buffalo, N. Y. (Pincche); Peru, (Say); Palecades, A. J. (Schauff); Md., Va., D. C., Baltimore Valley, Md. (Secunda); Indiana (Blatchly); Detroit, Mich. (Hubbard & Schwarz); Bayfield, Wis. (Vickham).
Epistaxis adoxa Melik, Catal.


subanemia Lie. 236, 1853.

sustenue Lie. 236, 1853.

rejection Lie. 236, 1852.


75. Peristichus constictus Say.

Afternoon, black, thorax much contracted behind; elytra with punctured striae.

Body, afterno, black, antennae fuscine, picriene at base; labrum and palpi fuscine; mandibles striated obliquely; thorax convex, wider than long, rather abruptly contracted at the posterior margin, which is depressed; dorsal, basal, and anterior lines distinct, incipiently, the former attaining the base; basal lines double; lateral edge much

...
rounded, abruptly exciunt at the posterior margin, basal angle rectangular, acute, bare much narrower than the elytra; elytra with punctured striae, punctures small, interstitial lines slightly convex; beneath darkPicene or blackish."

**Day, Jour. Acad. Nat. Sci. III. 144. 1853.**

Scutellar stria nothing but a dot.

**Length 12.5 mm.**

**Habitat. Iowa City (Dickhuen).**

Kieferi (decore), Benedict, Raul; Warkane, River.

**Gobi. (Bay).**


*lec, Jour. Acad. III. 223. no. 24. 1852.*

76. *Pentathecus concinnus* Kiefer.

Body black, polished; head glabrous, frontal impressions deep, convergent, connected by an impressed transverse line between the base of the antennae; labrum large, toothed; eyes moderately prominent; antennae stout, about one

half...
as the head and thorax; piercing, basal joints dark brown; palpi infuscated; thorax transversely subquadrate, sides acute, anterior angle rounded, posterior angle rectangular, ventral, posterior and dorsal lines distinct, basal joint large, deep, roughened; elytra with acute, impressed, striate, punctate stria long, equally impressed, intervals convex; the third bifurcated, the marginal one with many collateral punctures, more distant in the middle; sides of abdomen with large impressed punctures, cariniform.

Length: 13-16 mm.

Habitat: Iowa City (Hickman).

St. Jerome, Ctn. (Saner); Grimsby, Oct. (Petit); Sparrow Lake, Oct. (Hamilton); Niagara (Leconte); Green Notch (Hayward and Savage); Arrow, No. 1 (Smith); V., Tonew (Leconte); Cincinnati, D. (Dury); Detroit, Mich. (Cubbard and Schuyler); Bayfield, Wis. (Hickham); Rock Island, Ill.; St. Louis, Mo. (Summers); Eastern Kansas (Pfeiffer).

P. concinna Fennel, Ent. Mag. 5: 386.


77. Perostichus stygicus Say.

Body black, shining, glabrous; antennae rather 

vulgaris the base of the thorax, brownish towards the 

towards, the joints attenuated towards their bases; palpi 

refuse; thorax, diameter subsequal, gradually a little 

contracted behind, edge not excurred at the hind angle, 

hind angle not prominent, rounded; basal line double, 

dilated, particular and scabrous, base wider than the pedicle; 

efita slightly tinged with brown; striae indented, in-

sion, interstitial line convex, third with a single 

sutures behind; wings none; feet black; tibiae and tarsi 


The head has a deep fovea immediately in front of 

the transverse line between the base of the antennae; thor
nic for double, the others were smaller and line deep.
the marginal interstitial line with a series of ocellate
creatures, distant in the middle, nine subline.

length 13.7 - 15 mm.

Found under stones.

Habitat: Darrington (Portucan).

St. Jerome, Ave (Kane); Irvine, Buf. (Pettit); Morrow
Lake, Ont. (Hamilton); Geneva, N.Y. (Hayward and Savage);

St. N., Buffalo, N.Y. (Reinecke); New York City (Schaefer);
Penn. (Bay); Camdeau and Gloucester, P.J. (Mugel); Doria
(Leconte); Detroit, Mich. (Hubbard and Schwart); Lake
Superior region (Leconte); Cincinnati, O. (Rey); Indiana
(Blatchley); Milwaukee, Wis. (Ranterg); Illinois (Leconte);

St. Louis, Mo. (Simms); Topeka, Kan. (Popenoe).


Pseustichus pernundus Say. (Fig. 10, Pl. xxi.)

Black, with a perlaceous reflection; third interstitial line three-junctured.

Body black; antennae ferrugineous, dull honey-yellow towards the tip, distinctly compressed; joints, in profile a little narrowed to the base; palpi ferrugineous, not at all auriform, terminal joint here, dilated, at tips than that of the preceding joint; thorax with a slight perlaceous reflexion, rather narrower at tips than at base; lateral margin depressed, punctured, gradually reflected to the edge, which is but little carinate; posterior angles rectangular; disc impunctured; dorsal line well indented, socalled line two on each side, punctured within, deeply impressed, the exterior one very short; elytra brownish-black, somewhat inescapably perlaceous; striae deeply indented, impunctured; punctacular stria short but definite; interstitial spaces convex, third three-junctured; first puncture on the third stria, second on the middle of the second stria, third toward the tip, also on the second stria; beneath ferrugineous, sides very distinctly and numerous.

Labrum not emarginate. Striae unperforated, but so finely so as to be indistinct without a strong lens.

Habitat: Iowa City (Johnson); Davenport (Scott); Eddyville (Shiawassee).

Cincinnati, O. (Way); Indiana (Ray); St. Louis, Mo. (Summers); Galena, Shaw. (Kansas); Nebraska (Conant).


73. Prenectrus cholleti Say,

Eum. Polished, breast black; feet black; head and thorax unperforated; margin of thorax not depressed.

Body glabrous, green, polished, breast black; head unperforated; antennae brown; mesonotum at base, third joint with a blackish carina; labrum black; palpi bicconcave; thorax unperforated, not contracted behind; dorsal line distinct, base as broad as the elytra, basal line two each side, margin not depressed, basal angles
rectangular, acute; ventral green, or cupreous; elytra polished, green, slightly tinged with cupreous, margin opaque, interstitial line congy, impressed, striae within black, and with indented lines each side; first black, white and two deep picrens. Say, Trans. Ams. Phil. Soc. 1833.

Third interstitial line with two dorsal punctures, one a little behind the middle and one near the apex.

Length 9-12.5 mm.

Habitat: Iowa City (Wickham); Davenport (Oebor); Oklahoma (Shinet).

Iowa, Seta (Jones); Iowa Mts. (Hayward and Savage);
New York City (Schaffer); Allegheny, Pa. (Hamilton); Steward N. (Smith); Cincinnati, O. (Bury); Detroit, Mich. (Hubbard and Schwartz); Milwaukee, Wis. (Pauterburg); Missouri (Say);
Eastern Kansas (Popcorn); Lincoln, Neb. (Shinet).

Eorinia chalcites Say, Trans. Ams. Phil. Soc. 15. 56. 1833.


Ceratops chalcites Weyl, Catal.

Pervia sayi Brulle Selb. Rev. 1. 3. 277.


I have used the name chalicer, although sayi is more commonly given, because I find that chalicer Say was first published in 1833 while Lemarié Poriculus chalice (an entirely different insect) was not until 1824 that made. Bulli proposed name sayi unnecessary.

80. Poriculus lewistlundie Say.

Green or reddish-purple, polished, all beneath black; head and thorax impression, margin of thorax depressed.

Body glabrous, green, polished, beneath black; head impression; antennae and palpi brown, rufous at base, three basal joints of the former with a dusky carinula, thorax impression, widest in the middle, as very little narrowed behind, by a regularly curved edge, base nearly as broad as the elytra, basal angles rectangular; obtuse, lateral margin very distinct, and abruptly defined, dorsal line acute, lateral one convex each side, indicated; elytra green or reddish-purple, margin purplish opaque.
interstitial lines, convex, punctured, in third with two or three remote punctures, striae purplish within, incurvenctured, feet blackish, picaceous or reflex.

Day France, Phil. Soc. 25, 35. 1836.

The species varies greatly not only in color (coppery, brassy, greenish, purple, blue, and black) but even in shape, being sometimes decidedly elliptical, basal impressions of the thorax vary from smooth to decussated, punctulate. The striae of the elytra are sometimes smooth, sometimes finely punctured, the feet vary from red to black.

Length, 9–12 mm.

The larva of *P. hemipterus* day is 12 mm. long, and of inconsistent form, about 10 mm. and elongate.

Color: above brown, breast light, dirty, gray, head and thorax shining, mouthparts red, and legs pale yellow.

Head subquadrate, slightly narrowed at apex, more at base, sides almost parallel, angles rounded.

Eyes small, suboval, six on each side, arranged in two rows, situated behind the insertion of the antennae, radiating.
two long bristles, one before the eye, the other behind.

Antennae four-jointed, longer than the head, or the maxillae, basal joint longest, with a tooth near the apex at the inner side; second joint half as long rather stouter at apex; third nearly as long as the first, near the apex row the outside furnished with a small bud-like process, with short, stout bristle at the tip; the fourth about one long as the second, but much more slender.

Mandible slightly arcuate, with a tooth near the middle.

Maxillae, the long cardinal spine, thicker at apex than the base, the false four-jointed, first joint very short, stout; second twice as long but more slender, third one-third longer than the second, fourth one-half the length of the third, very slender; lobes two-jointed, joints nearly equal in length, but basal much stouter.

Mentum bilobed, broadest before the apex, angular rounded, supporting the ligula with the lobes, the first joint of which is long and stout, the second short and slender, the median terminal prolongation between
the lobe with some bristles.

Prothorax subquadrate, somewhat broader than the head, broader than long, sides nearly parallel, with ante-
basal and anterapical transverse lines; median longitudinal line distinct.

Metathorax transverse, shorter but just as broad as the prothorax, with a faint anterapical emargination, an
impressed punctuation on both sides of the scutellum and a
median longitudinal line.

Metathorax similar, but the anterapical emargination
is obliterated.

Abdominal segments furnished with three bristles at the
sides, transverse oval gradually decreasing in width; the
eighth is rather suddenly narrowed; the ninth forms a
short tubular narrowly annulate appendage, best with stiff
bristle; above two long slender lateral appendages
also best with bristle.

Spiracles as in *Dicelus*, also the scutellum
large. The anterior leg has beneath the tarsus claws, two
small teeth. Besides this they are similar to all carabidene
larvae. (Fig. 4-45. Pl. XIII.)

Length of pupa, 10 mm.

Time of development from pupa to perfect insect eleven days. They require two days more to attain full color.

The larvae are often found under cow-droppings evidently feeding on the pupae of Aphodius.

Habitat. Iowa City, Independence, Masonville, (Ia.)
St. Jerome, Ia. (Hauser); Sioux City, (i.e., Sioux), Iowa; Fall River, (Hamlin), Iowa; New Haven, (Raymond and Savage), Iowa;
Buffalo, N. Y. (Benecke); New York City, (Schauff); Pue, (Bay);
Auburn, N. Y. (Diedk); Georgia, (Lecote); Swine, (Lecott); O. (Wm.
Marquette, Mich. (Hubbard and Schwanz); Bayfield, Mich. (Hickham); Milwaukee, Wis. (Pepper); St. Louis, Mo. (Sum-
mere); Topeka, Kan. (Pepper); Colo. (N.); Porto, Utah, (Hick-
ham); Newfoundland (Lecote).


Desp. 84, 212, 1828.


Desp. 84, 212, 1828.

Lee. Am. Linn. Soc. 11, 14, 231, 1848.

7,p. 22. 1871. (Tarva)

11, iv. 4, p. 330. (Groux)

manhattaniae Casey Contr. Coleopt. A. d. A. 19, 12, 1884

Pedolis fraternus Say, Longe, Oxid. 2, 270.


enatiae See. Fann. Bon. Ame. 1, 5, 1837


81. Pterostichus convexus See.

Alata, nigra; thorace subcordato, punctato, striato, fuscato, parum punctato, bistrato; elytra oblonga, subparallelia, convexa, punctata, striata, punctata, fuscata impressa.

Long. 52, 6 long. Larg. 3, 25 long.

Elle est plus petite que la Melanaria, proportionnellement un peu moins large et comme elle d'un noir assez
brillant. Le corps est un peu plus étroit, un peu plus court, plus arrondi sur les côtés, l'impression de chaque côté de la base est moins large, et les pointes inférieures sont plus distinctes et plus éloignées les unes des autres; les deux impressions longitudinales sont un peu moins marquées, les côtés sont moins largement rebordées et ne sont nettement relevées; ils se redressent au moment de toucher la base et forment avec elle un angle droit; la base est complètement carrément. Les élytres sont plus étroits et plus courbes, leurs stries paraissent lisses et sont assez fortement marquées, les intervalles sont peu relevées, et l'on voit sur le troisième troisième pointe enfoncée distincte: le premier près de la base, près de la troisième stria; le second près de la seconde, à peu près au milieu, et la troisième sur la même ligne, aux trois quarts des élytres. Il y a de très rares sous les élytres le dessous du corps et les pattes sont noir. "Op. I. III. 641 no. 74 1828.

Black, polished; head smooth, with two deep frontal grooves extending to the vertex; mandibles without teeth; antennae pale; the three basal joints reddish black; palpi subfluous; under surface of neck rugose; thorax longer than broad,
warroned, blind, s'dies lanceate, posterior angles retangular, anterior, dorsal and basal lines distinct, face especially near angles finely punctured; elytra with rows in punctured or with traces of very fine punctures, before the middle, scutellae stria moderate, interstitial lines wide, scarcely convex, the three with three small, faintly impressed punctures; proctode and postproctode punctured at sides, last ventral segment of epimere, t'pe soft, brown, femora black.

Length: 13.5 mm.

Habitat: Iowa City (Bickham).

St. Jerome, Miss. (Kane); Spearro Lake, But. (Hamilton), Lovishy Och. (Pettit); Green River (Hayward and Savage); Detroit Mi. (Hubbard and Schuy); Lake Superior region (Leconte); Pahssee, A. (Schaup); Allegheny, Pa. (Hamilton); W. Va. Georgia (Leconte); St. Louis, Mo. (Sumner); Nebraska (Leconte).


_Let. Jour. Acad. Nat. Sci. II. 244. 1853._
Feronia subpunctata Harris, Eng. Trav. 128, p. 126.


82. Parvicicina punctator Lea.

Pernittens; depressus; elytra triplumcati; striae externae subobsolutes, interstitia subconciala; sectum fasciamentula.


Black, polished; head smooth, shining, somewhat wrinkled before; frontal groove deep; antennae black, somewhat lighter at tips; palpi black with ferruginous tips; labrum deeply emarginate; thorax broadest before the middle, sides arcuate, narrowed behind; posterior angles rectangular; anterior, dorsal, and basal line distinct; elytra with square humeri, striae with fine punctures which become fainter at apex; punctellate stria long, the seventh sometimes almost obliterated; intervals subconcial; middle the third with three dorsal punctures, the first on the third stria before the middle, the second and third on the second striae, one at the middle, the others behind it; undersurface smooth, tip of abdomen with four setigerous punctures, legs black, the sub-
apical tooth on the inner surface of the middle tibia of the male long and sharp.

Length 15-16 mm.

Habitat: Iowa City (Hickman).
Ottumwa, O. (Decatur); Ottawa, Can. (Harrington).


83. Pitcroithine ventrice Say.

"Black, thorax punctured each side at base; elytra with sh.
solidly punctured striae.

Body glabrous, black; antennae ferruginous towards tip, joint, attenuated towards their base; palpi fuscescent, thorax in the middle as broad as the elytra, gradually a little contract
to the base, where it is very slightly excurrved; base some-
what depressed, and distinctly punctured each side, dorsal
line distinctly carried to base; elytra, striae obliquely punctured,
intrintestinal line convex, third with a puncture at the base,
one in the middle, and one near the tips; feet black, tibiae
and thus pierced; post-pectus punctured each side.


Frontal grooves feeble; posterior tibiae of male strongly
subcrested internally.

Length 10-13 mm.

The larva of Pomus Say is very similar in general
appearance to P. lucellus but differs from it as
follows:—Head longer than broad; the mandible
slender, and acute; the cardinal piece of the maxillae
with a distinct tooth with two short bristles below
the insertion of the lobe; the second and third joints of the
halpæ nearly equal; the ligula longer than broad; the joints
of the labial halpæ nearly equal in length and thickness;
basal joint of antennae lacking the outer tooth (Fig. 5 & P18).

The larvae are found with those of lucellus under
the same circumstances. The time of development from the
pupa to imago varies days. Thorax, tibiae, and tarsi are
thin brown, while to coxae and abdomen remain white.
In a little past a day the full color is attained (Fig. P11).

Habitat: Nova York (Wicklaine); Bruce (Coburn).
St. Jerome and St. Rose, Irv. (Chase); French, Ont. (Hoff); Buffalo, N.Y. (Peckham); New York City (Schauff); Penn. (J. S.); Caldwell, N.J. (Craw); Marquette, and Detroit (Kirk); Buffalo, N.Y. (Peckham); Bayfield, Wis. (Nicolson); Milwaukee, Wis. (Kleinsorge); Kau., Wis. (Craw); Red Cliff, Colo. (Hickham).

Teronia minutia Day Trans. Am. Phil. Soc. III. 44. 1823.


Teronia morrea Day Sp. Gen. III. 283. no. 75. 1828.


Omasena bicornsous k. Faun. Bor. Acad. IV. 33. 1837.

84. Tetrosticha erythrocephala Day.

Alata, nigra; thorax quadratus, postice utriculato, angulis postice subrotundatis; elytris elongato-ovatis, striatis, punctis utrinque impressi; antennis picibus; pedibus nup. tr. n.
Elle est plus grande que la Vernalis, et sa couleur est de
même entièrement en-dessus, d’un noir assez brillant. La tête est
proportionnellement un peu plus étroite, et les impressions
longitudinales entre les antennes sont un peu plus marquées.
Les palpes sont d’un brun plus ou moins roussâtre. Les an-
tennes sont, comme celles de la Vernalis, d’un brun obscurs,
avec le premier article d’un rouge ferrugineux. Les yeux sont
un peu plus saillants. Le corps est un peu retrain antér-
ieurement, sa base est très lisse et ne présente aucune
apparence de ponctuation; l’impression longitudinale de cha-
que côté est plus fortement marquée; le côté droit un peu
déprimé vers les angles postérieurs, qui sont assez arrondis,
et le milieu de la base est légèrement échancré. Les élytres
sont un peu plus ovales et un peu moins terne; la
stricte sont lisses et un peu plus fortement marquées; la
septième est beaucoup moins marquée que les autres; comme
dans la Vernalis, il n’y a pas de commencement de strie
à la base près de l’écusson, et l’on voit de même sur le troi-
sièmne intervalle trois points enfoncés, placés à peu près de la
mêmes manière. Le dessous du corps est d'un brun noir.
âtre. Les pattes sont d'un rouge ferrugineux.  

Ray. S. T. New. 1924. no. 68. 1328.

Black, shining, glabrous; head smooth, frontal impres-
sions short, rather faint; antennæ piceous, three basal
joints rufous; palpi rufous; thorax subquadrate, widest in
the middle, not narrowed behind, posterior angles rounded.
Stipes, anterior ones also obtuse, anterior and dorsal line
obtuse, basal line distinct; elytra with rounded humeri,
infuscated striae, the seventh almost obsolete; scutellar
stria wanting, indistinct, line antehumeral, the third with
three small punctures; undersurface and legs ferruginous; tip
of abdomen piceous.

Length 7.5 - 8.5 mm.

Habitat: Iowa City (Nickham), Muscatine (Skirnik),
Ames (Osborne).

Sparrow Lake, Ont. (Hamilton); Erin, Ont. (Petit); Green
Notch (Hayward and Savage); Buffalo, N. Y. (Reineche); New
York City (Schaff); Award, Mo. (Smith); Sauble Ste Marie,
Detroit, Mich. (Hubbard and Schway); Milwaukee, Wis.


Pteryxia erythrocephala de l'Emp. L. Sup. 206. 1850.

de l'Emp. L. Sup. III. 241. 1850.


Pteryxia patincola Dej.

L'épiderme, migré, thorax subcordato, postice obsolete punctato, striato striato; elytre oblongue, striate, punctique tribu in pressie; pedibus rufo-piceo.

Long. 3/4 ligne. Larg. 1/4 ligne.

Elle ressemble beaucoup à la Pella, mais elle est à peu près de la grandeur de l'Ondita. La tête est à peu près comme dans la Pella. Les antennes sont d'une noir obscur, avec la base des troisième et quatrième articulées un peu renflées. Le sommet est aussi à peu près comme dans la Pella. Les élytres sont à peu près la même forme, et sont striées et dotées à peu près de la même manière, mais les stries ne.
Paraissent faveurites. Le dessous du corps et la face sont a peu pres comme dans la photo.


Euphrone; black, glabrous, shining, head polished, frontal grooves almost obsolete, can impressed, oblique line extending from the posterior edge of frontal ridge on to vertex, antennae and palpi black, thorax longer than broad, widest before the middle, sides carinate, slightly excurred at base. Posterior angles rectangular, prominent, dorsal line continuous to base, anterior and basal lines distinct; elytra with impressed striae, longscutellar stria, interstitial lines hardly conn. Third trigonate; legs femurous.

Length 6.25 - 7.5 mm.

Habitat: Iowa City (Whitman).

Spring (Pettit), New York City (Schauff), Toronto, Camden, N. (Vie), Alleghany, Pa. (Hamilton), Detroit, Mich. (Hubbard and Schwartz), Bayfield, Wi. (Whitman), Milwaukee, Wis. (Bartling), Eastern Ave. (Pettit), Helena, Mon. (Whitman).

16. *Parosteuchus femoralis* L. By

"This species approaches very near to the preceding one and its place is between that and *femoralis* of which it is the American representative. It differs from *femoralis* (Patrucci's *My.*) chiefly in having only the esca of the antennae and the tibiae and tarsi of a different color from the rest of the body, and in having the anterior half of the femurs of the elytra slightly punctured, and from the latter in having the prothorax narrower at the base, with only a single unpunctured impression on each side."

*By, Tamm, Bor. Am. 30, 1837.*

Sternal, dorsal line of thorax not continuous to base; elytral humeri rounded, striae often strongly punctured before the middle, three dorsal punctures.

Length, 7-7.5 mm.
Habitat. Iowa City (Nicholas); Carrolton (Putnam); Anson (Deane).

Sunny, Okt. (Pettit); Boston, Mass. (Widby); New York (Lecointe), Allegheny, Pa. (Hamilton); Detroit, Mich. (Haldeman and Schwarz); Milwaukee, Wis. (Rutland); Illinois (Staunton); Topeka, Kans. (Popenoe).

**Euphractus funeris** Say. Taen. Bor. Am. IV. 30. 1837.


**Euphractus lec.**

Posterior tarsi not grooved on outer side; thorax variable; elytra with raised humeri and some dorsal punctures; scutellar stria usually short and punctiform, rarely long; metathoracic spiritcula short; first ventral segment margined at base; prosternum not margined behind. (Fig. 84, Pl. 13).

The four species found in Iowa are distinguished from each other as follows:—

1. Prosternum deeply sulcate, emarginate at tips; thorax quadrate, feebly narrowed behind; basal fovea large and
deep, biseriate with a supplementary series fora, hind angle carinate; face finely margined each side.

a. Dorsal striae strongly punctured, thorax widely margined especially toward base, wider than long; eyes dull. *spegneri* Lecl.

aa. Dorsal striae finely punctured, thorax as long as wide, zentellar stria long; eyes dull. *robaticus* Sturm

B. Posternum feebly or absolutely sulcate; thorax strongly narrowed behind, sides suddenly strongly sulcate, hind rectangular. Pronotum carinate, facial forae deep, bi-striate, face margined each side.

b. Dorsum feebly carinate at tip, striae distinct; zentellar, striae short, transparent.

c. Hind angles of thorax very prominent.

c. Hind angles shorter and less prominent; sides of thorax much rounded.

87. *E. spegneri* Lecl.

"Thorax subtransverse, postice laterice reflexo margine,"
elytral strie profunde punctatis interstitiis planis.

Lec. from. Read. 5. 22d. 1862.

Elytrum: black, dull, labrum large, head shining, frontal groove deep, elytrum with large impressed puncture each side near outer margin, labrum large, scarcely emarginate, antennae Rufous, four basal joints black, halpae rufous, neck under mouth with a large median rufous patch, thorax broader than long, sides rounded, posterior angles rectangular, widely margined, particularly so near the base, basal joints double, posterior transverse impression so deep on each side as to appear like a third basal impression, anterior and dorsal lines deeply impressed, the latter continues to base, elytral strie entire but not deep, strongly but not closely punctured, the eighth and ninth closely approximated, scarcely one fourth apart as the diameter of the ocellate punctures between them, scutellar strie punctiform, interstitial lines wide, scarcely convex, third with a slight impressed puncture behind the middle, last four neutral segments with two setigerous punctures, one each side of the median line; legs black, tarsi rufous.
Length 13-16 mm.

Habitat. Iowa City (Nickham); Louisa Co. (Elliott),

Cincinnati, O. (Dury); Enterprise, and Cedar Keye, Fla.

(Schwarz); Indiana (Blatchley); Illinois (Strongbow); St. Louis,

Mo. (Sumner); Eastern Kansas (Popenoe); Little Rock, Ark.

(Nickham); Louisiana (Bolten, Leconte); Texas (Leconte).


18. Evarthne orbata Newm.

I have seen no specimen of this species.

Length 16-17 mm.

Habitat. Iowa (Becker).

Georgia, Alabama, Missouri, Nebraska (Leconte).

Feronia orbata Newm. Ent. Mag. 5: 886.


conviva lec.


"Thorace transverso, lataribus valde rotundatis, posticis
sinitae, angularis, posticae valde trunciulie, linea transversa, anteriora tenui, basi insigne rugosa punctata, elytris tumide striato-punctatis, interstitialis subconchis.


Black, glabrous, shining, underside black, tip of abdomen rufous; head smooth, frontal groove deep but not long, elytra with a setigerous puncture, on each side near the outer margin, labium large, not emarginate, with a least four setigerous punctures, antennae fumose, base black, palpı rufous; thorax broader than long, widest before the middle, narrowed behind, slightly dilated at base, hind angles acute, basal impressions large, deep, bistratia; anterior transverse line interrupted, median line continuous to base, margins narrow, not reflexed; scutellum rounded, roughened, elytral striae with profound punctures, eighth and ninth striae approximate; interstitial line subconch, the third with a small puncture, legs rufous, femora black.

Length 16-20 mm.

Habitat. Americas (Oikone).
Missouri, Kansas, Nebraska, Louisiana (Leconte);
Dallas, Tex. (Hickham).

IV., 342. 1849.


90. Gynarchus podalicus LeC. (Fig. 12 Pl. xxi.).

Black, glabrous, shining; head smooth with deeply impressed, double frontal groove; elytra with four impressed punctures, two close together near the median line on the posterior edge, and one on each side of the outer margin; labrum large, slightly emarginate with six setigerous punctures on outer margin; mandibles finely striate near tip, deeply concave on outside near the base; palpae reflexed; antennae black; thorax broader than long, smooth, rounded laterally, narrowed behind, hind angles nearly rectangular, obtuse, anterior angles rounded, basal forere large, deep, anterior line interrupted, feebly impressed, dorsal line continuous to base, especially deep near the base; elytra with distinct but not deep striae, finely
Junctured, punctures obsolete near apex, sight and ninth striae approximate, scutellar stria punctiform, interstitial lines plain, the third wider than the others and bearing the dorsal puncture; undersurface black, tip of abdomen yellow, sides with a few large punctures; legs black, tarsi rufous.

Length 15-17 mm.

Habitat: Iowa City (Vickham), Va. (Leconte).
Pennsylvania, Ohio (Leconte); Indiana (Blatchley);
Illinois, Missouri, Tennessee, Kansas (Leconte); Colorado, Ariz. (Vickham); Lincoln, Neb. (Shirck); Texas (Leconte).


Corax LeC., 1837, 349, 1848.


Exanthine Latr. LeC., 225, 1852.

*Amara* Dow. (Fig. Pl. 12, Fig. Pl. 13)

This group is represented in Iowa by many moderate or small sized species, all very much alike in appearance. They are usually found under stone, etc.
I. Thorax wider in front of base
   a. Posterior tibiae simple in both sexes
   b. Thorax considerably narrowed behind, thorax and elytra punctured, sculptural striae not fine.

II. Thorax not widened in front of base!
   a. Posterior tibiae of male densely pilose within.
   b. Terminal spur of anterior tibiae trifid in both sexes. Sculptural striae terminating in a scutellate puncture.

   c. Hind angles of thorax obtuse, no distinct oblique impressions near them, tarsi entirely pale, fourth joint of antennae in greater part pale.

   d. Hind angles of thorax sharply rectangular, distinct oblique impressions near angles, tarsi semi-pilose, fourth joint of antennae almost entirely pilose!

   e. Terminal spur of posterior tibiae simple!

   d. Antennae not carinate, base of thorax sand
clytra infumatured. imprunctatile Say.

d. Antennae with second and third joints

carinate above.

e. Scutellar stria with aux scutellate punctures

f. Scutellar stria without scutellate punctures

al. Posterior tibiae not pilose within, or scarcely so.

i. Antennae and legs picose black.

interstitialis Rej.

ii. Antennae and legs rugose-tectaceus. Protomen

hirsute at tip. remotestriata Rej.

91. Lomara randa Say.

Black; flat nuche, base of thorax and striae of clytra

infumatured.

Body deep black; labrum deep picose; antennae and

galpi nufous; thorax shorter than wide, with a few punctures

above, and numerous ones on the posterior depressed margin:

dorsal line very distinct; clytra infumatured; interstitial line
depressed, a little convex beneath black; maxillary deep purple.


Length: 7.75 - 9.5 mm.

Habitat: Iowa City, Maconville (Niche), Davenport, Monticello (Putnam), Ames (Cedar).

Primary: Oak (Petit), London: Oak (Sanborn), Manitoba (Barrington); Green (Busk, and Savage); Buffalo, N.Y. (Brechtz); Coney Island (Schroepf); Camden, N.J. (Avery), Cincinnati, O. (Bury); Indiana (Blatchley), St. Louis, Mo. (Summers).

Idaho Springs, Colo. (Packard).


92. Amara, angustata Day.

"Oval, blackish epigyne, beneath black, feet yellow, thorax impunctured, as broad as the elytra; palpi yellow."
Body oval, abdomen blackish copper, beneath black; antennae and palpi pale fuscous; thorax from the middle to the base as broad as the elytra, impressed; posterior angles acute, margin not depressed, dorsal and basal lines distinct; elytra striate, impressed, marginal interstitial line serrate on the inner edge; feet fuscous.


Very few fine punctures may be seen on the elytra before the middle. Some states that the hind angles are quite obtuse instead of acute as Say gives in the description. The tarsi are entirely fuscous.

Length, 6.28-7.26 mm.

Habitat: Times, (Onondaga); Monticello (Putnam).

St. Jerome, Que. (Kane); Eindley Orchard (Pettib); Fort Canal, Stone; Buffalo, N. Y. (Binecke); Coney Island (Schaffner), Palace, N. (Schaffner); Cincinnati, O. (Davy); Marquette and Detroit, M. (Hubbard and Schwarz); Milwaukee, Wis. (Rantzer); St. Louis, Mo. (Summers), Lawrence, Kan. (Phenoc); Nebraska. (Locate).


Amara angustata Cor, Trans. Ent. Soc. X. 18. 1892.


Amara indistincta, Lee.


23. Amara pallipes, Hyl.

Body glossy; underside mandible, coxae, and tarsi fire-red; upper side bronzed. Three first joints of the antennae rust-colored, frontal impressions very slight, connecting line very distinct; dorsal channel of the prothorax nearly entire; basal impressions rather trinodiform, punctured; elytra not subacuminate, legs yellowish. Hyl. Trans. Roy. Soc. III. 88. 1857.

The basal impressions of the thorax are hystriate, carinate, hind angles sharply rectangular, the sides of the thorax parallel for a short distance in front of these; elytra not punctured; legs often suffused.

It differs from the preceding by the thorax being less gradually narrowed in front, the elytra slightly dilated.
wider than the thorax and more obtusely rounded at the tip, with the striae not deeper behind; the antennae darker and with but three joints fully.

Length 6.25 - 7.25 mm.

Habitat. Iowa City (Nicklau).

Sparrow Lake, Oshkosh (Hamilton); St. Clairsville (Fair);

Green River (Cooper and Savage); South River, New York

(Le Conte); Camden, Gloucester and Atlantic Co., N.J. (Myrl);

Sault Ste. Marie, Michigan (Hubbard and Schwarz); Lake Superior

region (Le Conte); Colorado (Corn).


94. Anana inquinaticollis Say.

Oral, blackish bronzed, beneath black; thorax inquinacrid

and very broad as the elytra; palpi blackish.

Body oval, slightly attenuated behind, blackish-bronzed or

purpleish black; antennae brown, three basal joints in four,
Palpi black; thorax from the middle to the base as broad as the base of the elytra; face impresnctured; hind angles acute, dorsal and basal lines distinct, margins not depressed; elytra somewhat narrowed behind, with impressed striae, lateral intersticial line serrate on the inner edge; feet piceous black. Say, Trans Am. Phil. Soc. vol. xx.

p. 36. 1823.

Closely resembles X. fallax but the third joint of the antennae is not at all carinaced.

Length 7 - 8.75 mm.

Habitat. Monticello (Putnam).

St. Jerome, Ill. (Hauen); Grimesby, Ind. (Pettis); Bestvitt, J. C. del. (Fletcher); Buffalo, N. Y. (Heineck); Ozone del., Palisades, N. J. (Schaefer); Irasvark, N. J. (Smith); Allegheny Co., Pa. (Glass); Cincinnati, O. (Vaux); Marquette and Detroit, Mich. (Hubbard and Schwarm); Milwaukee, Wis.

(Panterburg); St. Louis, Mo. (Scribner); Kansas (Popescu); Red Cliff, Colo. (Pitcher); Montana (Torr).


p. 36. 1823.


trivialis & Say Sup. II. 464. 1828.


95. Amara fallax, ovalis, supera aeneae, thoraces lateritiae fune
deplo brunneo, antennaeae mediae augmentato, lateribus
rotundatis, angulis anticus lateris promiscuus, basi utrinque
vis bipennis, elytris striae postice vis profundioribus, pedibus
rugiosis, elytris superae basim piemateribus, antennae articulis
basci utrinque rugiosis, ad basim caricatis.


Oval, slightly attenuated behind, blackish bronze, suffu-
plish black, breast black, antennae brown, with three basal
joints pale yellow, the base of the third carinate; palp black;
thorax broader than long, from the middle to the base as
wide at the base of the elytra, emarginate in front, hind angles rectangular, not prominent, anterior angles acute, depressed, surface rugose, transversely so on disc, longitudinally so on base; base bifurcate, the external fora the larger, dorsal line distinct, scutellum moderately rounded, smooth; elytra with sides parallel, infuscate striae very slightly impressed, scutellar striae with an ocellate punctuation; interstices lines plain; feet black with a yellowinge.

Length: 7.20 - 7 mm.

Habitat: Pampi (Putnam).

St. Jerome, N. E. (Chase); Hiatus, Ont. (Ratke); Buffalo, N. Y. (Reinecke); Cincinnati, O. (Doug); Alabama (Leconte); Margrave, N. C. (Hubbard and Schuy); Lake Superior region (Leconte); Milwaukee, Wis. (Bundring); St. Louis, Mo.

Sumner); Lawrence, N. W. (Bundring); Colorado Springs, Colo.

Snow); Green Ridge, N. Y., Pena, S. (Hickham); Hulmes Creek, S. Mex. (Snow).


96. Amara confusa Lec.

"Ovalis aenea vel nigra aenea, thoracis latitudine fus.
 dublo bruneus, antennaeae medii, angustato, lateribus rotundatis, angulis anterius haud prominulis, basi etrigue
 vix obsolete bifrons, elytris stricte fossatis, haud Profundiori-
buse, pedibus radicuque nigri, haec articulis duoque fossis

Broadly oval, rounded behind, black with a myriapod
periph. tinge, beneath black; antennae brown with two
basal joints suriis; the second and third carinate above;
belly black; thorax broader than long, from the middle to
the base as wide as the elytra, anterior naught much
depressed, front emarginate, Posterior angles rectangular;
dorsal line obsolete, base bifrons, surface impressed;
elytra with parallel sides; and rounded apices, striate im-
punctured, more deeply impressed than in Fallaxfer
leg black, less hairy.
97. Amara interstitialis Dyj.

"Oblongovata, supra obscura, arnea; thorax utricule angustato; postice utricule biforulato, foris, oblatiseius, punctulato, elliptico, subulato striato, punctulato, interstitio alternatim subulato; antennae basi rufa; pedibus nigris.

Larg. 0.5 ligne. Long. 1.5 ligne.

Elle ressemble beaucoup à la Trivialia par la forme et la grandeur; dans l’un des deux individus, que je possède, la couleur est en-dehors d’une bronze ou feu obscur, et presque noire dans l’autre. Les deux premières antennes sont d’un brin roussâtre. Le yeux sont au feu plus saillant. Le corset est un feu plus court et un feu
moins rétrécis antérieurement; les deux impressions que l'on
voit de chaque côté de la base sont assez distinctes et ne sont
presque pas sensiblement punctuees; le bord antérieur est un
peu moins échancré, et les angles antérieurs sont un peu
moins aigus. Les stries des élytres sont très fines, peu
marquées et très finement punctuees; les troisième, cinquième
et septième intervalles sont assez distinctement relevés, les
autres sont plates. Le dessous du corps et les cuisses sont
d'une noir un peu bronzé. Les jambes et les tarses sont

Oval, somewhat elongate, moderately convex, brownish-
brown, sometimes bright green, supraneae or nearly black;
basis black; antennae black, three basal joints greenish,
oppi black; thorax less than twice as wide as base as long,
narrowed somewhat in front, apex emarginate, hind angle
rectangular, disc convex, basal forae distinct, the outer
oblique, the inner short, linear; surface not punctured,
mesial line obsolete; elytra finely striate, very indistinctly
punctate, interstital line slightly convex, usually with
undulating surface, the alternate intervals often slightly
more elevated; surface very distinctly alutaceous, giving a silken lustre; underside smooth; legs spine c black.

Length 6.5-10 mm.

The scutellar stria is free at its posterior end in most specimens but it may be joined to the first at its apical end. The scutellate punctures of the eighth stria have a wide interval between the basal and apical set of punctures.

In the male the middle tibiae are slightly but rather than spine cuate, and the posterior tibiae are spine cuate on the inner edge.

The species is very variable in form and color. The typical form is the dark brown one which occurs from Pennsylvania and New York, westward to Colorado, while the more brilliantly colored forms are more abundant in the colder regions to the northward.

Habitat. Iowa City (Wickham); Maine (Orbom).

British Columbia, Manitoba (Harriett), Alaska (Coom); Brincky, Oak (Petit); St. Jerome, Que. (Coom);

Nova Scotia (Coom); Maine (Lecente); County Isl., Pulicari, S. J. (Schauf).; Awakish, St. J. (Rechfeld); Penn. (Coom); Gincin.
nativa (Wimp), Harquette and. Detroit, Mich. (Richard
and Schwarz), Illinois (Leconte), Red Bluff, Cal. (Richard).
Idaho Springs, Colo. (Richard), Peta, Poo., Cal. (Leconte), Montana.
Northern California, Europe, Kamtschatka (Born.


J. M. S. del F. Fasc. I. 3. 4.

Putzi, Mem. Liège p. 188. 1866.


Putzi, Mem. Liège p. 188. 1866.

inaequali. N. F. Fasc. Bor. Am. 15. 07. 1837.

ler. Mem. Liège Nat. Ent. 11. 360. 1848.


ler. Mem. Liège Nat. Ent. 11. 360. 1848.

91. Squara numistriata Dej.

Subovata, subra, obscure lineae; thorax antice subaugustate.

pectore utrinque bifurcato, foem. funiculi; eliptic. sanctiliter.
etrié, antenne, tibia tarsique ruf-fuscé. 


Elle est un peu plus grande que la建成, proportion
nellement un peu moins large, et ses couleurs est en-dessous
d'une teinte, de couleur un peu moins brun. La tete est un peu
plus allongé. Le corélet est moins court et moins connus
sans doute. Le tarse transversale ordiènée et la ligne
longitudinale du milieu sont plus marquée; l'impression
transversale postérieure est à peu distinguer, et le fond et la
forme des deux impressions de chaque côté de la face sont
courtes, de pointe enfoncée plus marquée et plus serrée; la
côte est un peu moins déprimée que les angles postérieurs.

Les élytres sont un peu moins larges; elles sont striées à peu
près de la même manière, et le bord inférieur est également
d'une bien connue. Le dessus du corps et le cuirous sont
d'une bien obscure; les jambes et le tarse sont d'une rouge

Oblong, oval, moderately convex, brownish, or very slightly
picose, the male shining with faint brown tinge, the female
dull, antennae ruf-fuscaccus, palpi black, head smooth.
with faint frontal impressions; thorax about one and a half times as wide as base, as long as middle, apex deeply excavate, angles somewhat prominent in front, sides excavate, slightly wider at middle than at base, hind angles rectangular, disc convex, feebly depressed at sides, base with two shallow forae each side, the outer one the larger, and somewhat triangular, the inner one linear, base sparsely punctate, often feebly so, dorsal line distinct: elytra finely striate, striae not much finer, and feebly punctate, sometimes smooth; interstices linear, flat, the marginal one irregularly punctate; abdomen smooth, shining, tip of prosternum distinctly margined and with two punctures, legs refractaceous.

Length 6.8 - 8.2 mm.

The scutellar stria is long and usually entire.

Habitat: Iowa City (Nickham).

Endorse Bay Territory (Horn); Donald, B.C. (Smith);
Eldora, B.C. (Nickham); Spokane Falls, Wash. (Nickham);
Northern California (Horn); Reno, Nev. (Nickham); Arizona (Comrie); Goodridge, Tillamook, Ore. (Nickham);
Orta Pace, Colo. (Leconte); Idaho Springs, Colo. (Packard); Ill. (Hunter, Kramer); Nebraska (Leconte); Minnesota (Horn); Wis. (Rinnecke); Illinois (Saunders); New York, New Jersey (Horn); Vermont.<br />

 Atariotitis Wey. Sp. Nov. iii. 470. 1828.<br />

 Kanne, Bull. Moos. 288. 1848.<br />


 Horneman, Am. Ent. Soc. xix. 27. 1892.<br />

 mausta Junce. Mon. ii. 27.<br />

 Rev. ubi. 216.<br />

 discors Afz. Faun. Bor. Nov. iv. 40. 1837<br />

 diasticta Kanne, Bull. Moos. iii. 46. 1853.<br />

 Deitz, Mem. Liège 175. 1866.<br />

 var. subulata Kanne, Bull. Moos. iii. 46. 1853.<br />


 Apachea Casey Contrib. Coleopt. i. 8. 1894.<br />

 Legenda hic.<br />

 Black species with iridescent reflections; mandible
not striate; median toothed, imbricate; ligula not carinate; anterior cars of male, obliquely dilated (Figs. 3, 6, Plate).

But one species has been found in Iowa. Small species, thorax wider than long, hind angles slightly obtuse, not at all rounded. 

99. Leucanema linicollis LeC.

Thorax latitudines usque brevior, antennisus oblongus
vato, lateribus lati rotundato, angulis posterior obtusis
minime rotundatis, basi utrique striato vis postero punct.
ato, elytris striis profundis vis obsolete punctulatis, pedibus
piceis, antennis, carinis fulvisque rostr. Piceis! 


Ovate, black, shining; head smooth, polished; frontal impressions distinctly, labrum, antennae, and palpi reflex.

Piceous; three basal joints of antennae glabrous; thorax about as long as broad; scarcely narrowed behind; sides unarmed, apex imbricate; posterior angle slightly rounded; basal impressions single, linear, straight; anterior and dorsal lines impressed; elytra with deeply im-
pressed, obsolete, punctured striae; the ninth stria is lost in the concavity of the margin and is distant from the orbicular punctures in the eighth interval; under surface smooth, black with a rufous tinge; last ventral segment with two setigerous punctures, trochanters, legs rufous.

Length: 7. 10.75 mm.
Habitat: Iowa City (Jewett). Pennsylvania, Georgia (Leconte), Florida, Louisiana (Kemp), Arkansas.

Argyrodes lineolatus LeC. Ann. Ly., Nat. Hist. II. IV. 331. 1847
Argyrodes lineolatus LeC. Jour. Acad. Sci. II. 231. 1851.


Scribini. Tribe 11.

Head short, moderately stout, with two supra-orbital setae, elytral short, not prolonged between the mandibles, emarginate, and exposing the basal membrane of the labium, with a setigerous puncture in each angle, labrum
usually short, emarginate, longitudinally impressed. Eye moderate in size, not very distant from the mouth, except in Diadema, where they are small and very distant.

Mandibles stout, more or less arcuate, like usually, obtuse, except in Diadema, where they are feebly arcuate and acute. Maxillae hooked at tip, ciliate within, the outer lobes slender, biarticulate, the palp moderate in length, the last joint variable in form. Mentum deeply emarginate, without teeth, the hypostoma and frangipan near variable in form, the former bisetose at tip, the palp moderate, the last joint variable in form, but equal in length to the preceding, which is bisetose in front. Antennae slender, moderately long, arising under a distinct frontal plate, the three basal joints glabrous (two in Radiasta). Thorax variable in form, with one (rarely two) lateral extensorine structures, and one near (rarely at) the hind angle.

Body not sedentary. Clypeus margined at base, sides at most moderately inflexed, the margin rarely (elusive) ovate, not interrupted, without internal plate, surface striate, and with one (Diplochila), two (Radiasta), or no
dorsal puncture (Diacrus). Posterior tibiae at tips.
Mesosternum cuneate in front, the sterna very narrow.
Metasternal sternum distinct. Posterior coxal contiguous.
Anterior tibiae, deeply emarginate within, the middle
and posterior tibiae, slightly emarginate, or ciliate externally.
Tarsi slender, claws simple.

The anterior tarsi of the males have three joints
rather broadly dilated, densely spongy, truncate, and
ciliate at the sides. In distance, however, there are but
two dilated joints.

The genera of our fauna are three in number.
Antennae with three basal joints, entire glabrous.

Eighth and ninth striae of elytra very closely approxi-

mated. The third interval with a dorsal puncture.

Apex very feebly sinuate. Diplochila Boulbi.

Eighth and ninth striae distant.

Elytra not sinuated at apex. Dorsal interval more or

less carinate at base. Diacrus Bow.

Antennae with two basal joints glabrous. Eighth and ninth

striae not approximated. Third interval with two dorsal
Diplochila has the terminal joint of the palpi more or less cylindrical, and acute at tips; Decasia has it more or less triangular and Badieteria somewhat oval and flattened.

**Diplochila Brullé.**

Black, smooth species of medium size living under stones or in wet places. (Figs. 14 & 15.)

The species found here are distinguished as follows:

- Kind angle of thorax distinct.
- Thorax broad, base broader than apex; outer striae of elytra feeble, smaller. *laticollis* lds. *van. major* lds.
- Thorax less transverse, broadest at middle. Face scar. ly wider than apex, outer striae distinct. *impressions* lds. *ry.*

Kind angle obtuse,

Outer striae of elytra feeble.
Diplodulus laticollis, Dc.

Black, smooth, polished; head short, smooth, very flat; front concave; antennae black; palpi fuscous black; last joint truncate; thorax broader than long, scarcely narrowed behind, broader in the middle; anterior angles depressed; posterior angles rectangular; facial impressions single linear, straight; anterior transverse line obsolete; dorsal line impressed; elytra with punctate lines; parallel margins, and slightly sinuate apex; striae irregular; third interval with one impressed puncture in the middle, marginal one with an interrupted series of ocellate punctures; abdomen with a few punctures at sides; legs black, tarsi slightly purple.

Some of the specimens of this species have a slight tendency toward a striped elytra - red and black alternating.

Length, 13-15 mm.

Habitat: Independence, Iowa City (Hicklin); Horsehead (Hicks).

St. Jerome, Ars. (Hansen); Tuesley, Qtd. (Pettitt); Buffalo,
N Y. (Reinecke); Hoboken, N J. (Schraup); Atlantic City, N J. (Suckeck); Escanaba, Detroit, Mich. (Hubbard and Schwarz); Indiana (Blatchley); Bayfield, Wis. (Richland); Milwaukee, Wis. (Rautenberg); Illinois (Hone); St. Louis, Mo. (Summers); Nebraska (Hone); New Orleans, La. (Townsend).


D. major Lee.

Similar to the preceding, but larger, entirely black, the third interstice with from one to three dorsal punctures; striae absolutely punctured.

Length 18 mm.

Habitat. Independence, Iowa City (Richland); Ames (Osborn).}

Kansas, Ous. (Petit); London, Ous. (Cambridge); Ottawa, Ok. (Harrington); Buffalo, N Y. (Reinecke); Painesville, O. (Smith); Florida (Schwarz); Detroit, Mich. (Hubbard and Schwarz); Milwaukee, Wis. (Rautenberg); Indiana (Blatchley); Louis.
Wiplocila impressicollis Hey.

Corps, thorax subquadrate, antice subangustatate, fasi
striatge profunde striato; elytre striatie, stria obsolete sine
striatitie, punctoge impresso.

Long. 6 lignae. Larg. 2½ lignae.

Il est plus petit que le Polite, proportionnellement plus
large, et il se rapproche un peu des Salathus par la
forme. La tête est presque ovale, à peine rétrécie postérieure-
ment, lisse, légèrement échancrée et assez fortement déprimée
sautèrement, et elle a entre les antennes deux impressions
longitudinales assez fortement marquées. La lèvre supérieure
est plus petite que dans le Polite. Les mandibules sont
presque droites et presque obliques. Les jambes sont d'un
four noirâtre, avec l'extrémité de chaque article un peu
roussâtre. Les antennes sont d'un four noirâtre et
quatre fois plus longues que la tête et le corps réunis. Les
yeux sont bornées et peu saillantes, le corps est plus
large que la tête, moins longue que large, presque carrée, un peu rétrécie et légèrement arrondie sur le côté antérieur et presque plane; les rides transversales ondulées sont à peine distinctes; la ligne longitudinale est fine, assez marquée et ne dépasse guère les deux impressions transversales, qui sont peu distinctes, et dont l'antérieure forme un angle sur la ligne du milieu; il a de chaque côté de la base une impression longitudinale assez large et très fortement marquée; le bord antérieur est assez échancré; les angles antérieurs sont arrondis; le côté est légèrement rebordé; les angles postérieurs sont presque coupés carrément; la base est légèrement échancrée dans son milieu, et coupée en deux obliquement sur les côtés. Les élytres sont plus larges que le coquil, en ovale assez allongé et légèrement convexe; les stries sont assez marquées; elles paraissent liées à la base simple, mais avec une forte bosse; on voit qu'elles sont très légèrement ponctuées; il n'y a pas de rudiment de strie à la base, près de l'épine; les intervalles sont presque planes, on voit sur le troisième, près de la seconde
strié, à peine plus ou moins, une joint suffusé assez dis- 
tinct, le dessous du corps est bleu non noir.


Black, less robust than the preceding; head less con- 
cav. elytra suffuse tinged with black; antennae black; 

tip of last joint truncate. Elytra, thorax, one 

and a half times as broad as long, sides rounded; hind 

angle rectangular. Prominent, basal impressions large 

and deep, linear; dorsal line impressed; surface not jun- 

ctured; elytra with impressed striae; third interval 

with a puncture behind the middle, the marginal one 

with an interrupted series of obsolete punctures; under 

surface and edge black.

Length 17 mm.

Habitat. Amee (Octone).

(Sinceby But (Pettit); Michigan (Corn); Milwaukee; 

Ohio (Pauterburg); Illinois (Corn); St. Louis, Mo. (Summer); 

Pomme, Utah (Nicholas); Washington (Corn).


Diplochila obtusa LeC.

Flat, black species; frontal markings of the head distinct; antennae black, basal joints brown; haltere yellow; thorax a little broader than long, with slightly rounded sides; hind angles obtuse, anterior angles depressed; basal impressions moderate, distinct; dorso-crest impressed; surface not punctured; elytra, striate, impunctate, first stria broken near the scutellum; marginal over feeble, sometimes absent; marginal interval with an interrupted series of oblate punctures, widely separated near the middle; edge black.

Length 13 mm.

Habitat. Iowa City (Richland).

Illinois (Kone); St. Louis, Mo. (Sumner); Topeka, Kans.

Popern (Kone), Lincoln, Nebr. (Shirer), Mississippi (Hed); Indian (Kone).

Large species, usually pure black, but sometimes a beautiful violet or bronzed purple; found under stones or pieces of wood.

Maxillae vestitute of an articulated nail at tip; terminal joint of palps oblong, truncate; labrum emarginate, with a longitudinal impressed line; hind thoracic angles covering the humeral angles; anterior tibiae emarginate; anterior tarsi of male with dilated joints, furnished beneath with dense granuliform papillae. (Figs. 3, 38, Pl. X).

The four species found in Iowa are separated in the following manner:

Thorax at middle of margin with one petiogenous puncture.

Olstra striate with equal intervals

Purple or brassy splendidus Day.

Bespuratus Borr.

Olstra striate, but intervals interrupted by ocellate punctures: sculptulis Day.

Thorax at middle of margin with two petiogenous puncture.
Form moderately elongate, intervals equal, striae sometimes finely punctured, carina moderate.

Thorax violaceous; elytra coppery brilliant.
Head black; thorax hardly perceptibly narrowed at base; the posterior part of the lateral edge is not in the slightest degree excurred, but proceeds rectilinearly to the posterior angle; lateral and posterior margin of pronotum, lateral edge reflected; color blackish violaceous on the disc, and more vivid violaceous on the lateral and posterior margin; elytra highly polished, brilliant red coppery, exhibiting in a particular light a green reflection; humeral carina extending two-thirds the length of the elytra; striae profoundly impressed; beneath black.


This is by far the most beautiful species of the genus in our fauna. When the light falls perpendicularly on the surface of the elytra, a highly brilliant
reddish coppery colour is seen, but when it is reflected at a considerable angle the tint changes to a polished green.

Length 18-25 mm.

Larva of *P. splendidus*.

Colour dark green, subopaque, space between ends of scutellae and the lateral margins of abdominal segments brownish yellow, head reddish yellow, ventral surface more blue than dorsal, the parts of the integument not covered by scutellae brownish yellow.

Form—rather elongate, fusiform, narrower anteriorly.

Head not deeply inserted in thorax, a little concave above, breadth convex, slightly flattened, somewhat narrower from the point of insertion of the antennae to the base. The under surface with a rather vague median groove.

The triangular impression on the under surface of the head is well defined and extends to the basal margin.

Eyes consist of six rosettes situated around a raised dark spot immediately behind the insertion of the antennae.

Antennae four-jointed, inserted immediately behind
the mandible: first joint shorter and stouter than the
others; glabrous; second more than twice as long, also
glabrous except for a few hairs near the tip; third a
little longer than the second; fourth a little more slen
der; also longer; the last two joints pubescent.

Mandible rather long, arcuate, with a strong tooth
at base and with minute serrations internally.

Maxillae with a stout basal piece and two terminal
appendages, the outer one the larger, with a basal joint
as broad as long bearing stout bristles; the second joint
more slender, about twice as long as broad, slightly
bristled; the third joint still more slender and tipped
with a tubercle, probably the fourth joint. Inner piece
two-jointed, the first stout while the second is quite
slender, both about the same length. Just Posterior to
this is a third appendage, very small, two-jointed (the
second joint being very minute), the first joint bearing
a stout bristle.

Antennae broader than long, bearing short two-joint
ed palpi, the joints nearly equal; the second oval.
Prothorax longer than broad, narrowed in front, angular behind the middle, and with a longitudinal well impressed median line for the entire length, on each side of which is a feeble oblique impression. Except for one or two long bristles near the posterior angles it is naked.

Meta thorax shorter and broader than the prothorax but with about the same sculpture. Metathorax still broader.

Abdomen. First segment shorter than the others, second to eighth subequal. The dorsal surface of each bears a scute similar to the thoracic pieces but a little narrower, each scute having a distinct median line and a large lateral font with a raised centre, as well as the oblique impression shown on the thorax. The ninth segment is narrower than the others and bears two long processes which apparently originate on the dorsal surface of the segment near its base. These processes, under a high power, are minutely rugose and sparsely armed with small
points. The lateral margins of each segment of the abdomen is armed with a conical, tooth-like plate, bearing bristles. In external aspect each of the segments from the first to the seventh have six conical plates, arranged as shown in the figure, the large anterior ones bearing setae which are directed backward. On the eighth segment all of the plates except the lateral ones are united, on the ninth, all are joined. Antennae longed, conical, round beneath.

spiracles nine on each side, the first pair situated under the anterior angles of the mesothorax, the remainder in the dorsal portion of the connecting membrane of segments one to eight of the abdomen.

Legs gradually longer from the first to the third pair, coxae conical, prominent; femora longer, longer towards the tips, and with well defined, oblique impression on the proximal half; tibiae, about half as long, slightly enlarged towards the tip; tarsal piece of the same length as the tibia, bearing two equal claws. (Fig. 12.)
The Tupa is remarkable chiefly for the large size of the head. The entire length is 16 mm, or excepting the protruding head tube, 15 mm. The palpi are very long, and the sides of the body, as well as the back, are armed with numerous short bristles. Though nearly white at first, the eyes and jaws soon darken.

The specimens were found under stones on a damp hillside. In captivity they were fed on a scale (Patula alternata) which they almost entirely devoured, pushing their bodies into the shell until only the tip of the long caudal process could be seen. After pupation the perfect insect appeared in ten or eleven days.

Habitat. Iowa City, Burlington (Hickham); Darw., Fort (Putnam); Ames (Ostrom).

Rock Island, Quincy, Ill. (Stromberg); St. Louis, Mo. (Smyth); Eastern Kansas (Purcell); Nebraska, Louisianna (Corn); Texa (Lecounte).


p. 195. 1892.

scolonis d. l. ur. l. ur. n. 18, 1848.

105. *Diceraeus punctatissimus* Rov.

"Thora. transversa. punctatae. simile. stigmata.


Blackish purple above, beneath black; head black

with a blackish cast particularly near the neck, slight

lymphs, frontal forae deep, connecting line distinct;

labrum deeply incise, and with a row of setigerous

fringes; antennae black, the hairs ferruginous

toward the tip; palpi black, tip of last joint picose.

thorax purple, similar in shape to that of *Helenidus*.

lymphs: anastomoses moderate, smooth, triangular, black;

eytra blackish purple, humeri strongly angled, sides

subparallel, apex rounded, stria profuse, incisur.

tusted, intervals very convex, humeral carina very long.

legs black."
Length 30-35 mm.

Habitat: Warrenport (Putnam).
New York (Caner); Pennsylvania (Caner); Cincinnati, Clev.,
Columbus, N. (Smith); Florida (Caner); Cincinnati, O. (Muy);
Indiana (Blatchley); Detroit, Mich. (Cubbard and scholar);
Milwaukee, Wis. (Ranterberg); Illinois (Caner); St. Louis,
St. Louis, Mo. (Simmers); Bayou La Fourche, La. (Tomezeki).


   incisivus Leu. " " IV. 626, 1848.
   cyanacea Daj. Sp. II. 686, 1831.

106. Riceline sculpitiis Day.
   Black; elytra with irregular perforative striae.
   Body entirely black, immaculate; thorax vary slightly
nicked at base; the lateral edge not at all excurred near
the basal angles, and the commencement of the anterior
curvature of this edge is at the middle of its length;
yes with their striae very irregularly serpentine; the
interstitial lines are irregular and unequal on their
sides, and exhibit a very few radiations in its nature
with raised center. "By Frank Am. Phil. Soc. 22. 68. 1828.
length 18-20 mm.

Habitat. Independence, Iowa City (Hickman), Boone
(Omaha); Golox.

Pennsylvania (Day); Cincinnati, D. (Dury); Maryland,
District of Columbia (Horn); Rome (Greg.); Rich (Coutard
and Schwab); Milwaukee N. (Panzerberg); Illinois (Horn);
St. Louis, N. (Summer); Belga, I. W. (Tremaine); Kansas
(Horn); Marianon, Colo. (Packard).

O. sculptus. "By Frank Am. Phil. Soc. 22. 68. 1828.
Horn Bull. Phil. Soc. 77. 57. 1896.

167. Nicelucæ elongatus Bow.

"Thorace subquadrate, riger; elytræ sulcatæ, cor.

From elongate, entirely black; antennae black with ferruginous tinge; palpi black with tip of last joint
becomes thorax subquadrate, slightly margined before,
margined depressed, lateral edge slightly reflected;
oral line continuous to base, basal impressions not
distinctly sinuate before, basal tines distinct, surface
rugose, particularly so at base; hind angles obtu-
sae; elytra with profound inciputured striae, hum-
oral carinae elongate, interstices convex.

Length 15–18 mm.
The larva resembles that of other Dacacia but


differ by its smaller size—17 mm — although it
sometimes reaches 25 mm in length, and by having
its head, legs and fork-like appendage of the last seg-
ment removed; the middle part of the first antennal
joint, and the tip of the others are transparent
whitish yellow, and the darker parts are furnished
with short hairs; the tip of the first maxillary joint is
furnished on the inner side with a small spine; the
black center of the dorsal abdominal segments are narrower than in some species, and the larger transverse plates of the ventral segments are somewhat different.

These larvae are very sluggish and seldom touch food during the daytime. They are often found under stones.

The larva undergoes its transformation during the daytime. The pupa is entirely white, 10 mm long, and presents very little worthy of special mention. The labrum is of an elongate triangular form, and extends to the tip of the mandibles. It is apparently composed of two parts, a transverse basal portion — the true labrum — and a triangular apex which disappears with the pupa skin. The palpi are very elongate and the ligula prolonged.

After six days, the eyes of the pupa become dark, then the mouthparts brown, and after ten days the ninage is fully developed. It remains white for two days longer, becoming black at the end of the twelfth
Habitat: Iowa City (Wickham); Akron (Decla).

Dubuque, Ont. (Pettk); Buffalo, N.F. (Reneche); Ithaca, N.Y. (Smith).  Maryland: District of Columbia (Decla); Enterprise, N.J. (Schwarz); Crystal Springs, Miss. (Webb); Cincinnati, O. (Dury); Illinois (Decla); Milwaukee, Wis. (Baerhinger); St. Louis, Mo. (Summers); Kansas (Popenoe); Bayou la Fourche, La. (Fonow); Texae (Decla).


Say, Travels Am. Phil. Soc. 17. 1839.


Sacramento, Am. Lyceum Soc. 17. 29. 1848.

S. Blume & Lea.


Brachioborus. 13. 56. 1867.

Antennae with two basal joints glabrous; terminal joint of palp somewhat oval and flattened, eighth and
The Iowa species are separated as follows:

Elytral striae deep, interspaces narrow, convex; antennae and legs rufo-testaceous; elytra rufo-ticinese, clouded behind.

Elytral striae fine, interspaces flat.

Elytra maculate. Fulcibellus Lea.
Elytra immaculate. Staphides Lea.

108. Radiata notata Zelc.

Antennae and legs rufo-testaceous; elytra rufo-ticinese, maculate; elytral striae deep, interspaces narrow, convex.

Length 4.5 mm.

Habitat: Iowa City (Niekhaus), Rare;
Rochester, N.Y. (Lieberk), Staten Isl. (Schauppe), Detroit, N.Y. (Lubbad and Schwarz), Milwaukee, Wis. (Rauterberg), Illinois (Leconte), St. Louis, Mo. (Summers), Tuscaloosa, Ala. (Pfeffer), Louisiana (Leconte).


I have seen no specimen of this species.

39. Radiatae Euchelus Lec. (Fig. 1. Pl. XVII.)

Tetacena with black markings, head black, smooth shining, antennae testaceae, the joints ringed with dark er bands; palpi testaceae with a dark terminal joint.

Thorax testaceae; broader than long, widest before the middle, feebly emarginate at apex, narrowed behind.

Sides arcuate, sinuate posteriorly, angles rounded, dorsal impression extending to base, basal impressions shallow but broad. Elonia with five incised curved striae, intervalvare flat. A broad median band of iridescent black interrupted at the vertex and an apical patch of black, the rest of the surface bright yellow; undersurface black; legs, trochanters and coxae testaceae.

Length 5.0 - 6.0 mm.

Habitat: Iowa City (Mickham); St. Louis (Deborn).

St. Jerome, Que. (Faucon); Brinley, Ont. (Petit). London.
Ont. (Saunders); Buffalo, N. Y. (Pfeiffer); Georgia (Hecote),
Indiana (Hecote); Maywood, Ill. (Hecote); Detroit, Mich.
(Chubbard and Schwan); Milwaukee, Wis. (Rauterburg);
Bayfield, Wis. (Hickham); St. Louis, Mo. (Summers); Sour
di Glene, Idaho (Hickham).


"Vign, thorace subovali, postice subangustato et
estrinque forato, angulis posticis valde rotundatis,
elytria micantibus, profunde striatis, fuscule, inter
stidiae convexae, antenaeis funice, pedibus flavo-fuscis."


The thorax is not wider than long, oval, scarcely trap-
goidal, emarginate at apex, sides arcuate, scarcely
reflected, posterior angles very much rounded, dorsal
line deep, abbreviated at apex, transverse impressions
fairly, basal impressions deep, but small; elytra with
Fluorescent green, tinged with brassy. Palpi dark testaceous. Legs yellow.

Length: 6.25 mm.

Habitat: Iowa (Oscorne).
Milwaukee, Wis. (Hauterberg); Orange, Texas (Everts);
Enterprise, Tampa, Fla. (Schwarz).

This species is included in the Iowa list by Mr. Oscorne but it is marked doubtful. I have been unable to obtain any specimens.


Head oval, rarely elongate, eyes not very distant from the mouth, and supra-orbital setae, front slightly narrowed before the eyes, elytrae moderately prolonged, and with a setaceous puncture each side. Labrum moderately prominent, usually truncate in front and sex setae rarely deeply emarginate. Mandible moder-
nately prominent, feebly arcuate, acute at tip, without external setae. Maxillae hooked at tip, ciliate or spinulose within, outer lobe biarticulate, palpi moderate in length, the terminal joint variable, rarely recurved. Mentum deeply emarginate, toothed or not, basal membrane more or less prominent, ligula very variable in form, bristle in front, the paraglossae variable in form and extent of union with the ligula; palpi moderate, the last joint somewhat variable in form, the penultimate bristle in front. Ovip. moderately prominent, close to the mouth breadth. Antennae slender, rarely (Perigona) slightly thickened, arising below a slight frontal ridge, the coxyle extended; three basal joints glabrous, first joint not long, second usually short, rarely as long as the third, in which case neither is elongate, third moderate in length, usually longer than the others, but rarely equal to or shorter than the fourth. Thorax variable, sides with a setigerous Furniture, a second at the hind angles, when the latter is distinct, or in front of the angle when it is
oblique or rounded. Clypeus margined at base, sides narrowly inflexed; margin entire, without internal liga; apex obliquely sinuate, sometimes deeply or even barely perceptibly, dorsal punctures usually present; surface striate, the eighth stria distant from the margin, except in species. Posterior not prolonged at tip. Mesosternal epimera narrow. Metasternal epimera distinct, posterior coxae contiguous. Legs slender, the femora sometimes thickened, tibiae slender, emarginate within, spinae moderate in length. Tarsi slender, the joints often sulcate on their outer side, the fourth entire, emarginate or bilobed. Claws simple, finely serrate or dentate.

The males have the antennae-tarsi with three jointed finely dilated, and squamulose beneath.

The genera are divisible primarily into two groups by the following characters:—

Eighth elytral stria distant from the margin and not deeply impressed; thorax truncate or emarginate at base.
Eighth elytral stria confluent with the margin in its basal half, deeply impressed, and attaining the sutures.

**Group Platynae.**

The following genera occur in Iowa:

*Hygna* more or less serrate, mentum toothed.

*Taxi* glabrous above.  *Galathine Biv.*

*Hygna* not serrate.

Mentum toothed.  *Platynae Biv.*

Mentum not toothed.  *Chloropae Dy.*

**Group Perigoneae.**

This group is represented by one genus Perigoneae.

The mentum has its epistome prolonged to rare acute spine, the incisuration is deep, toothless. The ligula is narrow and truncate at tip, the *Peraglossae* slender and a little longer than the ligula, and united with the latter by a thin almost transparent membrane, which extends from the base of the *Peraglossae* to the tip of the ligula. The *caudicinas* are rather stout beyond the third joint, the second joint is as long as
the third. (Fig. 7, p. 14.)

Galathus Bow. (Fig. 7, p. 14.)

Moderate sized, black or dark species.
Thorax not rounded behind, basal forae obsolete.
Body elongate, thorax as broad as long, sides moderately reflexed.

Greganites Say.
Thorax somewhat narrowed behind, rounded, basal forae larger.
Body stouter, thorax a little longer than broad.

impanctatus Say.

111. Galathus greganites Say.

Dark reddish brown; hind and margins of thorax paler, thorax at base equal to the base of the elytra.
Body dark chestnut, blackish each side beneath; head dark chestnut; eyes and mandibles at tip black; antennae and palpi reddish brown, the former half as long as the body; thorax rather longer than broad, im punctured, lateral margin distinct, and with the posterior margin paler,
the latter rather broader than at tip and equal to the face of the elytra, dorsal and posterior lines indistinct, angles rounded; elytra with impunctuated striae, margin paler and distinctly punctured, without margins near the tip, but regularly rounded in that part; epipleura distinctly canaliculate to near the tip; feet, color of the antennae, long, winter blackish.*


Length, 10 - 10.8 mm.

Habitat, Iowa City (Hickham), Ames (Dubuque), Davenport (Putnam).

St. Jerome, Que. (Hyman); Biggby, Ont. (Pettit); Spanish Lake, Ont. (Hamilton); Green Bay, (Hayward and Savage); Buffalo, N. Y. (Reineche); Pekich, A. (Schauffs); Pierre (Sav); Florida (decore); Cincinnati, O. (Cerry); Detroit, Mich. (Hubbard and Schuy); Bayfield, Wis. (Hickham); Milwaukee, Wis. (Penzel); St. Pierre, N.S. (Sinewere); Kennebec, Me. (Kenyon); Houston and El Paso, Tex. (Hickham).


113. Galathia inquinata Linn. Say.

Black, glabrous, inquinature; antennae and palpi
pale refuse; feet testaceae.

Body black, inquinature, glabrous; antennae slender,
extending beyond the humerus, and with the palpi pale
refuse; thorax broadest rather before the middle, contracted
behind, margin a little depressed behind; the edge some
what recurved; posterior angles obtusely rounded, face in-
quinature; elytra profoundly striate, striae inquinature;
interstitial lines coming the third one with two distinct

The shape of the thorax readily distinguishes this
species,
Length: 2.75 - 11 mm.

Habitat: Iowa City (Wickham).

Eumora, B. G. (Wickham); Primey, Dr. (Tittet); Atlantic City, N.J. (Liebik); Germantown, Pa. (Say); Marquette and Detroit, Mich. (Hubbard and Schwarz); Bayfield, Wis.

(Wickham); Milwaukee, Wis. (Pautinger); Denmark, J. Wahl. (Aldrich); St. Louis, Mo. (Demerec).


Galathias insignicatus Lee Bull. Mod. Ent. Soc. VII. 49. 1853.

Pristodaetyla americana Day, gen. loc. gen. VII. 83. 1828.

Platymia Dow. (Fig. 66. Pl. I).

Moderate sized or small species, quite difficult of separation. The following table will be of some help in determining them, however.

1. Thorax narrowed behind, hind angles rectangular or obtuse.

a. Front tarsi without grooves, middle and hind
tarsi with lateral grooves.

b. Hind angles of thorax rectangular, thorax strongly margined, elytra with three dorsal punctures, metathoracic episterna punctured.

as. Lateral grooves on all tarsi.

c. Green or blue, base of antennae, palpi, and legs ferrugineous, dorsal punctures four to seven.

d. Color above uniform bluish, elytra impunctured. extenuicolli Say.

dd. Color uniform green. var. viridi Say.

ddd. Head green, thorax yellow, elytra cuprea, finely punctured. decora Say.

aaa. Tarsi without lateral grooves.

u. Head and thorax black, elytra paler, hind angles of thorax rectangular, striae of elytra deep, punctured. nemurus oblongus Fab.

ii. Thorax with rounded hind angles, side margins wider toward the base, reflexed, tarsi with distinct lateral
as. Antennae, palpi, and legs black; dorsal punctures three.

1. Black, thorax with side margins wide and strongly reflected near the base, elytral striae deep, feebly punctured. melanarius Say.

3. Brown, thorax with side margins narrowly reflected at base, elytral striae deep, impunctured.

66. Black, side margins of thorax narrow, elytral striae obsolete or slightly impressed, impunctured.

bogusseus Say.

aa. Base of antennae and legs ferruginous.

5. Brownish black, or green, dorsal punctures of elytra three. pecstalis Lecl.

cc. Green elytral dorsal punctures five to six.

cc. Green elytral dorsal punctures five.

mutans Say.

ccc. Dull black, four outer joints of antennae white, dorsal punctures five.

picticornis Brun.

picticornis Brun.
aaa. Base of antennae and legs brown, dorsal punctures four to eight.

b. Green, elytra with cuprous vitta extending to fourth stria, dorsal punctures eight to large, forate.

3. punctatus Fab. 

dd. Black tinged with green or purple, dorsal punctures normal, four to seven, plateae Cary.

3. Thorax rounded-oval, margin narrow, dorsal impressions punctiform, dorsal punctures three.

aa. Black, tarsal grooves wanting, leg red, elytral striae strongly punctured. 

3. nigricrustatus Dej. 

bb. Bronze brown, tarsal grooves on first joint, elytral striae very fine, finely punctured.

3. aureogriseus Dej. 

4. Thorax oval, margin narrowly reflexed, dorsal punctures of elytra four to seven, small, tarsal grooves indistinct, pubescence of antennae begin on third joint.

aa. Thorax longer than wide, leg testaceous.

bb. Thorax narrowed behind, antennae darker, at base, 

ruficornis Lieb.
13. Plateaenu crinatus Dej.

Platyne, nigra, dorata, oblongo-ovata, lutea sub Langustato; 
elytra longo-elongata, profunde striata, punctuque tribus 
impessis.

Larg. 54 lignae. Larg. 2 lignae.

Il ressemble beaucoup au Pogata. C'est un peu plus 
petit. La concavité et à peu près de la même forme; seulement 
les fortes latéraux sont un peu moins largement, déprimée.

L'extrémité des élytres est un peu plus fortement ciniée; les 
striés sont un peu moins profondément marquées, et il

viv a que trois pointe enfoncées sur le troisième intervalle;

ces pointes sont à peu près dicotylée comme dans 
l'Augustallia, le premier seulement est un peu plus 

[Black, glabrous, shining, wings well developed:
mandible, base of antennae, and palpi minute; thorax...

[Read more...
little broader than long, widest before the middle, narrowed towards the hind, strongly margined, depressed, hind angles slightly rounded, rectangular, anterior and posterior as well as median line impressed; elytra with broadly rounded humeral angles and obliquely sinuate tip, deeply margined at base, striae profound, finely punctured, intervals convex, the third with three dorsal punctures, one at the middle and two behind that point, the marginal interval with numerous ocellate punctures; underside black, anterior and middle two chaetones red, posterior one and legs black.

Length, 10-11 mm.

Habitat: Iowa City (Nichkan); Varrup (Petruna).

Audubon Bay Territory (Scout), Greenly, But. Petrun;

Sparrow Lake, But. (Hamilton); Maconok, B. O. (Nichkan);

Victoria, Van. (Nichkan); Oregon (Scout); Cornerick, Idaho, Helena, Mosul (Nichkan); St. Louis, Mo. (Summers);

Bayfield, Wis. (Nichkan); Milwaukee, Wis. (Rautenberg) Detroit;

Marquette, Mich. (Wolffard and Schwan); Cincinnati, O. (Doug); Buffalo, N. Y. (Reiche); Saunders, Ft. Lee, S. J. (Smith);

Green Notch (Rayward and Savage).


Platyne depressae Lesc. Agassiz L. Syst. 1850.


114. Platyne extemicolle Say. (Fig. 2, Pl. XIII.)

Head and thorax greenish; elytra green or purplish, beneath picene black; feet testaceons.

Head dusky green; antennae and palpi yellow; labrum truncate; thorax narrower than the elytra, longitudinally, immarginated, blackish-purple or greenish, gradually contracted behind, slightly excurred at the hind angles, base somewhat sebrous, basal lines dilated, concave, dorsal line distinct; scutel blackish-purple.

Elytra green or purple, striae in punctured, interstitial lines convex, third one with four or five obsolete remote punctures; feet testaceons. Say. Trans. Am. Phil. Soc. 15, 8, 1828.
The basal impressions of the thorax moderate, some time deep, hind angles obtuse.

Length 8 - 9.75 mm.

Larva of P. extenuicollis Day.

Length 8 mm.

Form: elongate.

Color: Base of antennae, and anterior part of the head intense, mouth parts, legs, and the last three quarters of the anal appendage pale yellow; head and thorax black; the sexes of the abdominal segments brown above, lighter beneath.

Head: hexagonal, constricted upon the base, nearly as broad as long, slightly convex above, angles rounded.

Ocular small, suboval, six on each side, arranged in two rows, situated behind the insertion of the antennae with two long bristles, one before the eye, one behind.

Antennae: four-jointed, inserted on the anterior angle, shorter than the head, slightly longer than the maxillae, first joint stout, a little longer than the second, third and fourth which are of equal length, third thickened
the outside near the apex, fourth very slender; all set with a few long bristles.

Mandibles lacerate with one tooth near the base.

Maxillae free, below the long cardiac piece are the usual appendages, the exterior (palps) consisting of four joints, first short and stout, second somewhat longer, third and fourth shorter and more slender; the inner (lobe) has two joints, the first stout, the second conical, much more slender.

Maxillipedes transversely oval, without teeth, supporting the Byrsonomu ligula, narrowed at base, broadest at middle; palp two-jointed, the basal joint very long and thick, the terminal much more slender and shorter; between the palps is a triangular prolongation set with three bristles.

Prothorax platyform, longer than broad, wider than the head, narrowed at apex than at base, sides arcuate, front angles obliquely truncate, hind angles slightly distinct. At the sides and apex is a small margin, at the base a broad one with a longitudinal furrow.

Meso- and metathorax much shorter than prothorax.
with costal and line; all angles obtuse; glabrous.

Abdominal segments gradually narrow towards apex, the first the largest, second to seventh about equal, eighth much narrower, the ninth the narrowest, with a rather stout, and short tubular prolongation ending in a long hairy fork. The abdominal segments, coming the whole surface are divided by a longitudinal median impression and are covered with erect hairs. The several segments are arranged like those in Dicolea, so are the spiracles. (T区 335 68 

Length of pupa 7 mm.

Length of time between pupation and transformation into imago 5 days.

The larvae are found on the edge of brooks, or hidden in the ground. By pouring water on the spot they will come out and are thus easily captured. They will not eat meat during captivity but will such scarabaeids larvae greedily.

Habitat: Iowa City (McLaws).

Iowa Scotia (Jones); St. Jerome, Que. (Baerce); Brinsly, Ont.
Pittk.), Sparrow Lake, Ont. (Hamilton), Green Mt. (Hayward and Savage), Nace, (Harris), Buffalo, N. Y. (Binch,); prakt. Kunst, Pa. (Schampf), Allegeny, Pa. (Hamilton); Oswego, Madison, A. J. (Smith), Detroit, Mich. (Hubbard and Schwang), Lake Superior region (Leconte), Milwaukee, Wis. (Pant Erecting), St. lous, Mo. (Simmers), Kansas (Foote), Four o'Clock, Idaho (Nickle), Texas (Leconte), Clear Creek, Sanin, Arie, California (Leconte).


Anchomenum exotericollis Say, F. Am. 113. 1827.


Lee, Bull. Phy. Soc. 76. 46. 1872.

Schampf, " " III. 91. 1891.


Anchomenum elongatulus Say, F. Am. 113. 1828.


115. Platynus viridio Say

Similar in appearance to P. extensicolli Say, of which it is a variety, but uniform green above.

Habitat: Danvpsort, Monticello (Pith).n

116. Platynus decors Say

Head, deep green; thorax suffuse; elytra, deep cupreous.

Head, deep green, purplish at base; antennae and palpi, suffuse, dully, at tips; labrum and maxillae, purplish; thorax, pale suffuse, narrower than the elytra, broadest before the middle, a little contracted behind, hind angles obtuse, dorsal line slightly impressed, basal once distinct; elytra, disc, obscurely cupreous to the eighth stria,
marginocune, interstitial lines somewhat convex, striate, punctate, punctate-pale, pustulate black, slightly punctate, punctate, pustulate, feebly testaceous, abdomen black, picene behind. "Sawyer, Am. Phil. Soc. II. 53.

The limit is very finely punctured.

length 7.75 - 8.5 mm.

Habitat. Iowa City (Nicklau), Varnumport (Putnam), Amee (October).

Sauksby, Osh. (Pettit), Buffalo, N.Y. (Peirce), New York City (Schumpe), Stewart, A. J. (Smith), Tampa, Fla. (Schwep), New Orleans, La. (Foreman), St. Louis, Mo. (Sennema), Detroit, Mich. (Hubbard and Schwep), Milwaukee, Wis. (Sauterberg), Lake Superior region (de Costa), Kansas (Bryan), Elko, N. Mex. (de Costa), Albuquerque, N. Mex. Tucson, Ariz. (Nicklau).

Tersia decora, Saw. Phil. Soc. II. 53. 1823.  
Aechernius decora, de Costa, Blu. Phil. Soc. III. 115. 1823.

loc. August., Lyceum, VI. 225, 1848.

Platyne decora, de Costa, Blu. Phil. Soc. 235. 1850.


17. Platynus obsolete Leb.

No this was original described from the United States
under the name *P. obscurus* by Mr. Leconte Légaré, but I give the description that of Leconte not being obtainable.

*P. obscurus* nigro, ruitiduo, parte brunio obscure, capit.
parte punctato, thorace latitudine longior, convexo, cordato,
postice contracto, angulic Posticii recti, disco obsolete.
basi et apice distinctius punctatis, elytris thorace duplic.
lateralibus oblongis convexis, profunde striatis interstitialibus
conspicuis messoriatis punctulatis, pedibus lateribus late
reflexentibus, antennis pallidi, pedibus rugis.

see Pro. Acad. Nat. Sci. 1844.

Black; head sparsely punctate; antennae, and palpi
refuse, the former very slightly thickened externally, the
first three joints, and the base of the fourth smooth, but
furnished with a few scattered hairs, first joint longer
than third; thorax long, cordate, convex, narrowed behind,
subpedunculate, basal impressions elongate and very narrow, posterior angles rectangular, surface obsolescently punctured; elytra twice as wide as thorax, oblong convex, with rounded, scarcely sinuate apex, humeral angles rounded, striae deep, moderately punctured, intervals narrow, convex and each side marked with a row of very fine punctures from which proceed very short hairs; legs moderately long, reflex; anterior tibiae scarcely dilated at apex, with the incisionation extending nearly to the middle.

Length 4.25 mm.

Habitat: Iowa City (Nichols).

St. Jerome, Que. (Hanes); Vermont (Hamilton); Mass. (Barrie); Buffalo, N. Y. (Reinecke); Rens. (Hamilton); Detroit, Mich. (Hubbard and Schway); Illinois (Rilleux); St. Louis, Mo. (Summer); Kansas, Oregon, Central and Northern Europe, Siberia (Hamilton).


Carabus elongatus Fab. Syn. 6. tab. 140, 1792.

Carabus obscurus Fab. Syn. 6. tab. 186, no. 96, 1801.
118. Platynus melemarine Dej.

 Tigrame, thorax subsquameato, elytræo ovato, striato, strie obolute, punctato, punctatoque tribus impressae.

 Long. 3 1/2, 4 1/4 lignae. Larg. 1 1/2, 1 3/4 lignae.

 Il ressemble beaucoup aux Viticen. Il en diffère par sa couleur entièrement noire et sans aucune reflet bronzé; par son conulus plus étroit; par la strie des elytræ qu'est un peu moins marquée. Quelquefois les jambes, les tarses et le premier article des antennes sont d'une couleur plus
Il se rapproche un peu de l'Argeuticolli, mais il est
plus grand, proportionnellement plus court et plus large, et
ses couleurs sont de même d'une noir brillant en-dessous. La
tête est oblongue, presque triangulaire, un peu rétrécie posté-
rieurement, lisse, et elle a entre les antennes deux impres-
sions longitudinales assez fortement marquées. Le thorax sus-
térieur et les mandibules sont d'une brune moirée, les
palpes sont d'un brun roucâtre. Les antennes sont à peu
près de la longueur de la moitié du corps; leurs quatre
premiers articles sont noirs, avec l'extrémité un peu rouc-
âtre, les autres sont d'un brun roucâtre. Les yeux sont
assez grands et presque saillants. Le corps est un peu plus
large que la tête, aussi long que large, presque carré, très-
légerement arrondi antérieurement sur les côtés, à peine
rétrécie postérieurement et presque plane; il est couvert de
rider transversale modulée, à peine distincte; la ligne
longitudinale du milieu est assez marquée et ne dépasse
pas les deux impressions transversales, qui sont aussi
assez marquées, et dont l'antérieure est un arc de cercle; le
bord antérieur est assez fortement échancré; les angles anter-
ieurs sont arrondis; les côtés sont relevés et assez largement
déprimés; les angles postérieurs sont obtus; la base est coupée
obliquement sur les côtés, et presque carrément dans son
milieu. L'écuceon est lisse, triangulaire, et sa pointe dépasse
à peine la base des élytres. Belle - si c'est le double plus
larges que le corollet, assez courtes, parallèles, presque carré-
allongé, très légèrement convexes, triangulaires un peu oblique-
ment et un peu rainurée à l'extrémité; elles ont chacune
neuf astre liées et fortement marquées, et le commence-
ment d'une dixième à la base, près de l'écuceon; la troi-
sième et quatrième, cinquième et sixième se réunissent
deux à deux et ne vont pas tout à fait jusqu'à l'extrémité;
les intervalles sont relevés et légèrement arrondis, on voit
sur le troisième trois points enfoncés assez distincts; le
premier près la base, près de la troisième astre; le second
Black, smooth, shining; antennae and palpi black; the former lighter towards tip; thorax transversely oval; side margin wide, strongly reflexed at base; base truncate; hind angles obtusely rounded; dorsal line impressed; basal impressions large, somewhat rugose; surface smooth; elytra with deep, feebly punctured striae; third interval with three impressed punctures; face narrowly margined; apex feebly sinuate; legs black, tibiae and tarsi obscurely discoidal; tarsi with distinct lateral grooves but no median ones.

Length 8-10 mm.

Habitat: Iowa City (Johnson); Danbury (Putnam); Rock (Berrien).

British Columbia (Harrington); Sparrow Lake (Hamilton).
Acanthodiscus, 178. 1828.

Acanthodiscus, 178. 1828.

*Platyrhinus melanarius* L. 178. 1831.

Platyrhinus melanarius L. 178. 1831.

*Agonumina melanaria* L. 178. 1831.

Agonumina melanaria L. 178. 1831.

*Platyrhinus melanarius* Linn., 178. 1831.

Platyrhinus melanarius L. 178. 1831.

*Agonumina melanaria* L. 178. 1831.

Agonumina melanaria L. 178. 1831.

*Frisonia setellarie* Say, 178. 1831.

Frisonia setellarie Say, 178. 1831.


Platyrhinus cupreus Say, 178. 1831.

Green, polished; common; disc of elytra cupreous.

*פרייט.*

Prized green; antennae, labrum, and palpi black; thorax imbricated, green variegated with purple, rather narrower than the elytra, regularly curved each side to the
lateral, posterior angles none, dorsal and basal lines
distinct, the latter dilated; elytra cupreous, brilliant,
margins green, striae acute, punctured, interstitial
tines flat; fastes, and postfastes dark green; fest green,
tibiae, tarsi, and trochanters purple.

Dans a. Elytra brilliant green slightly tinged with cup-
reous; head and thorax tinged with purple.

Say Frane. Am. Phil. Soc. 11. 50. 1828.

Another variety from lake superior &c. has the head,
thorax, and margins of the elytra greenish blue, and the
side of the latter golden.

The upper surface of this species may be very dark
green, almost black, tinged with purple on head and
thorax. The hind angles of the thorax are much rounded,
the side margins very narrowly recurved at base, the
elytra has three dorsal punctures, and the tarsi have
lateral but no median grooves.

Length 7-10 mm.

Habitat. Iowa City (Richaham), Ames (Oeborn).

Manitoba (Harrington); Minn., But (Petit), St.
Jerome, Que. (Beauce); Nova Scotia (James); Buffalo, N.Y.
(Reinche); Caldwel, A.J. (Grane); Detroit, Marquette, Mich.
(Reudet, and Schwarz); Bayfield, Wis. (Richland); Mil.
waukee, Wis. (Pautenbrig); St. Louis, Mo. (Sumner); Iowa,
Colo. (Leconte); Newnan, Nw. (Laramie, Wyo.; Portland and
The Walla, Ore.; Victoria, B. C.; Elko, Nev.; Albuquerque,
C. Nv. (Richland); Texas (Leconte); California.


Platynoe cipriennia Lec. Agassiz's Sup. 265. 1850.


120. Platynoe Lea.

Genus, n. spec., thorace latus duce, non longiore
ovali convexulo, pontice subangustato, angulis ponticis
rotundatis, impressione buse basali due profundis parte
Penetulatia, tubiculo obscuro instructa, elytris thorace...
duplo laticiibus, oblongis, minus convexitis, striis modice profundis, integritatis paulo convexis, fio subtubito trinunculato, antennae nigres, articulo imo pedibusque rufis. **Lee. Proc. Acad. Nat. Sci. VII. 52. 1854.**

Blight black; first joint of antennae ferruginous, second and third refuse, the remainder brown; halpi ferruginous, with the last joint refuse; thorax longer than broad, very slightly narrowed behind, sides arcuate, margine narrow, reflexed at base, posterior angles much rounded; basal impressions small, not prolonged anteriorly, sparsely punctured; dorsal and basal lines distinct; elytra with moderately deep, irregularly punctured or very finely punctured strie; third interval with three small puncture, the second and third being placed on the second stria; base yellow.

Length 7. 75 mm.

Habitat. Iowa City (Rickham). Cow Creek.

Boboken, A. J. (died); Penn. Kansas, A. B. (Locoute).

**Agonum boreale Lee.** Ann. Lyc. N. Y. 227. 1848.

121. *Platynoe mutata* Say.

Sine, polished, base black, elytra coppery; feet tere.

taxonee at base.

Head green, breast black; antennae, labrum, and palpi black; thorax imbricated, green, rather narrower than the elytra, broadest in the middle, regularly arcuated each side to the base, posterior angles more, dorsal and basal lines distinct, the latter dilated, orbicular, base not wider than the petiole; elytra dark coppery, slightly tinged with greenish, striae imbricated, intersticial lines nearly flat; fuscous, and postfuscow black; feet picow, thighs testaceous at base; matrix black.


Length 7 - 8.75 mm.

Habitat: Iowa City (Vickham); Grove (Osborn).

Ontario, Quebec, Green Nature (Raynard and Savage); Buffalo, N.Y. (Reineche), Raleigh, N.C. (Schauph), Penn.
(Stevens), Columbian Co., O. (Bill and Bomburger); Indiana (Bleeker); Detroit, Mich. (Hibbard and Schwartz); Kalmar, Lee, Ill. (Pantzer); Kansas (Loomis); Nebraska, Florida (Lecante).

**Aromia mutana** Say, Trans. Amer. Phil. Soc. II, 52, 1823.

**Agrionum mutanum** Say. " " IV, 423, 1834.


**Agrionum fenestratum** Dufay, Mem. III, 145, 1828.

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122. **Platynus ficticornis** Say.

I have seen no specimens of this species.

Length 8 mm.

Habitat: Iowa (Eng. and Butenmuller).

Illinois, Florida (Lecante).

**P. ficticornis** Say, Zoologist II, 414, 1844.


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123. **Platynus ?punctatus** Fab.
"Carabius alatus viridi-annaeus, elytris luridis punctis
impressis." Tab. Syst. Ed. 7, 186, no. 89, 1801.

Head: head green, slightly tinged with cupreous; antennae and palpi black, the base of the former piceous;
pronotal thorax rounded, slightly truncate at base, very finely margined, posterior angles much rounded, facial
impresions small and deep, dorsal line distinct.
Color: green, disc somewhat cupreous; elytra sub-elliptical, emarginate at base, slightly sinuate at tip, finely
striae, intervals flat, the third with four distant, profound ly excavated, quadrangular suture; color opaque, green with a
common discus to the fourth stria of cupreous; feet reflex.
Proximal; the femora metallic green; undersurface of body
blackish green.

Sometimes five striae are found on each elytron
instead of four.

Length 7.5 mm.

Habitat: Iowa City (Wickham); Ames (Obourn).

Staats, Dict. (Pettit); Buffalo, N.Y. (Reiche); Anward,
N.J. (Smith); Philadelphia, Pa. (Dieck); Tampa, Fla. (Schwab).
Cincinnati, Q. (Dury'); Indiana, (Blatchley'); Detroit, Mich.
(Hubbard and Schwarz); Milwaukee, Wis. (Rauterburg);
St. Louis, Mo. (Summers); Eastern Kansas (Popescu).

Ceratius 8-punctatus Fab. Syr. Suppl. 55.


Lee Bull. Phil. Ent. Soc. 22. 49. 1879.

124 Platynere placidae Say.

"Blackish, glabrous, thorax transversely suborbicular;
marginated; elytra with acute incipiented striae.

Head, purple-black slightly tinged with green; antennae
as blackish; mufi on wide; palpi mufi on posterior thorax
a little narrower than the elytra, transversely suborbicular;
blackish slightly tinged with green; margin depressed,
sides a little recurved, particularly at the hind angles,
which are not recurved; dorsal line and anterior
transverse line impressed, basal lines almost obsolete.
in the concavity of the lateral face, which is a little
rugose; elytra blackish with an obsolete purplish tint;
striae not profound, acute, incisurated; interstitial
discs very slightly convex; prosternum and postprosternum black;
feet black; tibiae and tarsi ferric; abdomen black.


Ventral punctures of the elytra four to seven, usually
six, of which the two posterior ones are situated in the
second stria, the others in the third.

Varieties of this species occur having the body of a
uniform dull reddish color.
Length 7.5 - 7.25 mm.

Habitat. Iown City (Hickham).

Trinidad. Carl. (Pettit), London. Carl. (Saunder's), Maine
(Secret), New York City (Schauble), Penn. (Say), Georgia (Lee),
Cumberland Co. O. (Hil and Bonnager), Bayfield, Wis.
(Hickham), Illinois (Sectoe), Bismark, N. Dak. (Aldrich),
Eastern Kansas (Popenoe), Salida, Colo. (Hickham), Texas
(Sectoe), Santa Fe, N. Mex. (Sectoe),

Platynus placidus Linn. Proc. Ind. N. H. V. 1834


125. Platynus forsteri L. L. Y. L.

Black, glabrous, incised; antennae at base, deep fuscous; thorax narrower than the elytra, rounded, widest before the middle, hind angles slightly projecting, edge not excurred, base incised, basal impressions broad and shallow, very indistinct, dorsal line obsolete, basal line wanting; elytra deeply emarginate at base, obliquely sinuate at apex, striae obsolete or feebly impressed, incised, incised, third interval with three small dorsal punctures; feet black, fuscous, tibiae rather lighter; middle and anterior trochanters often as deep red.

Length 5.5 - 7 mm.

Habitat: Iowa City (Ricker); Ames (Ricker).

Alaska, British Columbia (Hamilton); London, Ont.
(Causidae); Grinnell, Rev. (Petit); St. Jerome, Ave. (Causidae); Buffalo, N. Y. (Peirce); New York City (Schaupe); Detroit; Rich. (Hubbard and Schwarz); Bayfield, Wis. (Hickham); Milwaukee, Wis. (Rauterberg); Maywood, Ill. (Prechot); Lawrance, Kan. (Piperon); Colo. (Browning); Prairie Poco, and Ft. Pocumt, Brn. (Leconte); Northern Europe, and Siberia (Hamilton).


Agonum, abalatum, Day. - L. 423. 1834.


Lee, Agassiz, Lep. 205. 1859.


torale, Nota.

Harpaline, longicornii Eyll. lew. Soc. III. 697. 1448.


126. Platyma aeruginosa Rej.

Témo. aéreum; thorax ovato; elytria oblongo-sutata, subélata
striato. Punctatio, punctique tribus inprecis; pedibus nubes
centinbus.

Long. 3 lign. Larg. 1/2 lign.

Il est à peu près de la grandeur du Plistimum, et sa
couleur est en-dessus d'un brun rouge; obère a un brunatre.
Le corollet est un peu plus court, plus large, plus courbe
et plus arrondi sur ses côtés; la ligne longitudinale, les
impressions transversales et celle de chaque côté de la
base sont très-peu marquées; le bord antérieur est un
peu moins échancré; les côtés sont moins rebordés, et le
angle postérieur sont beaucoup plus arrondies; les élytres
sont un peu plus étroites, proportionnellement un peu plus
larges à leur base et un peu plus courbes; les stries sont
fine, peu marquées et distinctement punctuées; les inter-
valles sont planes, et l'on voit sur le troisième trois points.
enfournie distincte: le premier file de la troisième strie, et les deux autres file de la seconde. Le dessus du corps est d'un brun noirâtre, les pattes sont d'un brun rouxâtre, avec la base des cuisses plus pâle et presque jaunâtre.

Brouzy, black: base of antennae fuscous-tortaceous, sometimes entirely brownish black; thorax rounded oval, margin very narrow, posterior angles very much rounded, basal impressions fuscous, dorsal line obsolete; elytra nearly twice as wide as thorax, fully sinuate at base, moderately convex, striae very fine, very finely punctured, intervals flat, the third trigonate; legs fuscous-tortaceous; tarsal grooves on the third joint.

Length 5.5 - 7 mm.

Habitat. Iowa City (Wickham); Davenport (Putnam).

Vermont (Lucy); Hoboken, N. J. (Scharrer); Peru.

Georgia (Lucy); Detroit, Mich. (Hubbard and Schaw); Lake Superior region (Lucy); Milwaukee, Wis. (Pantlby); Indiana (Blatchley); Illinois (Lucy); Lawrence, Kan. (Popenoe).
Platyneura seminatricia Lea.

Body, scutum, and scutellum,渥dargio, maring, laticine, latus, austral, ad basim intrinque foro serpens. Impresso, linea dorsal, tenui, elytra ovales, thorax laticine basi paulo inmarginato, striae profunde fortiter punctatae, interstitio svis trilunvitate, pedibus rufo-testaceis, antennae falcisque, piecie, basi rufo-testaceae.

Lea, Smithsonian. Nests Coll. II. 9, 1883-44.

Black, shining; antennae and palpi rufo-testaceae; thorax rounded oval, margin narrow, hind angles much rounded, basal forae small but profoundly impressed; dorsal line feeble; elytra oval, striae deep, strongly punctured, intervals convex, the third trifunvitate; legs rufo-testaceae.

Length 7.5 mm.

Habitat: Iowa City (Iowa).
Montreal, Que. (Canada); New York City (Schaupp);
Brigantine Beach, A. J. (Hamilton); Cincinnati, O. (Dury);
Detroit, Mich. (Cobbold and Schwarr); Milwaukee, Wis;
(Panterburg); Illinois (Deorge); St. Louis, Mo. (Demerec).


Canad. Ent. xxvii. 102. 1891.

38. Platone rufigono observing

"Oreae niger nitidius, elongatus, thorae latitudine paulo
longior, ovale, postice paulo angustato, angulis postices
rotundatis, margine tenuiter reflexo postice paulo latior, in
pressionibus basaliae latius minus profunde, eliptice elonga-
tato, eliptice, thorace vix sequi laticiue, picce striis
tenuibus, interstitiis planissiumis, simil punctatione t-jimpressis,
"pedibus rufig, antennae picce extrorsae pallide rufige.


Black, elongated; base of antennae and palpi rufige, tip
of the former paler. Pubescence begins on the third joint;
thorax oval, longer than wide, narrowed behind, side mar.
gum moderately reflexed, basal impressions moderate, dorsal line distinct, posterior angles rounded; elytra elongate, elliptical, striae not punctured, third interval with few to sever small punctures; undersurface black, sutures fine, tarsal grooves indistinct.

Length 7.5 - 8.0 mm.

Habitat: Iowa City (Wichham), Ames (Osborn).

Blacks (Leconte); Green Bay, Wis. (Petit); Sylvania Lake, Wis. (Hamilton); Buffalo, N.Y. (Reiche); Pterostichus, K. lei., St. J. (Schultz); Cincinnati, O. (Dury); Detroit, Marguerite, Mich. (Hubbard and Schwarz); Bayfield, Wis. (Wichham), Milwaukee, Wis. (Walterberg), Lawrence, Kans. (Pope).

P. pseudomassicus Kirk. & L. Dep. 245. 1850.


gnathicus Reese Bull. Mose. iii. 142. 1858.

Piceoextaneae, nitidius elongatius, capite nigro, thorace ovali, latitudine longior, tenuissime margiinato, angulis posticis rotundatis, impressionibus tarsalibus parvis
venerum impressis, elytris thorace lato rive, elongato elipticis, striis tenuibus interstictis platis, disco funiculio marmoreo, umbellae impresso, antennis funicis, articulo III margo rufo.


Head black, antennae fuscous, basal joints and palpi rufous; thorax black, oval, shining, longer than broad, side margine narrow, hind angles rounded, basal impression small, not strongly marked; elytra black or brown, finely striate, third interval with more more than four junctions; undersurface black; legs rufous.

Length 5.5 mm.

Habitat. Iowa City (Nichkan).

Maine (Lucas); Buffalo, N.Y. (Reiche); Newark, N.J. (Smith);
Indiana; Marquette, Detroit, Mich (Hubbard and Schwanz); Ill.;
(Lucas); Milwaukee, Wis. (Rautenberg); St. Louis, Mo. (Summers).

Mullan, Mov (Nichkan).


The Terrestrial Aedephaga of Iowa.

Including descriptions of all species known to occur in the State, with notes on their habits, distributions, synonymy, &c.

by

Fanny Thompson Nickham, B.Sc.

Vol. II.

State University of Iowa.

1895.
"Happy is he who live to understand
Not human nature only, but explore
All nature to the end that he may find
The law that governs each;"
Olethropsis Aely. (Fig. 2, Pl. X, Fig. 1, Pl. III).

The two Iowa species are separated as follows:

Elytra scarcely iridescent, base feebly emarginate, ocellate
junctures at base of scutellar stria feebly emarginate. *Olethropsis Say.*

Elytra iridescent, rather deeply emarginate at base,
ocellate junctures well marked. *misceae Lee.*

130. Olethropsis *Ferruginae Say.*

"Black; thorax rounded; feet testaceous; elytra margined
with testaceous; postpectum truncate.

Body black; antennae and palpi rufous; thorax trans-
vanesly subhilar; scutellar striae of depressed margin or eleva-
ted ridge; feet pale rufous; petiole very distinct; elytra
striate, uninunctured; disc black. Brown to the sixth stria,
margin pale rufous, marginal interstitional line slightly
junctured on the inner edge; under black."

Say Trans. Am. Phil. Soc. II. 49. 1823.

The elytra is sometimes nearly uniform brownish
yellow, sometimes picaceous with the humeri and sides
indistinctly testaceous."
length. 7 - 7.5 mm.

Habitat. Iowa City (Nicklaus).

Erinnyis, Oak (Pettit); Atlantic City, N.J. (Liebeck); Longdel.
(Schauk); Philadelphia, Pa. (Liebeck); Georgia (Le Conte).

Cincinnati, O. (Dury); Indiana (Le Conte); Detroit, Marquette.

New (Hubbard and Schwanz); Rayfield, Wis. (Nicklaus).

Milwaukee, Wis. (Ranterburg); St. Paul, Minn. (Nicklaus).

St. Louis, Mo. (Summers).


131. Pelochorops micans Lep.

Nigro-piceus, nitidus, cyanos-micans, thoraces rotundis, transversis, margine luteo-testaceo. Postice subreflexis, basi utrique viri late trinata, elytris ovalibus, basi imbricatis, trigonatis, tricostatis, triangulis, striatis, margine luteo-testaceo, antennae luteo-pediculique flavis, illis extremo

Head and thorax fuscous, elytra testaceous marked with black; base of antennae testaceous, tips dark; thorax smooth, polished, transverse oval, sides carinate, hind angles much rounded, basal impressions small, dorsal line deeply impressed, margin testaceous, reflexed; elytra a little broader than the thorax, base emarginate, striae deep, intervals flat, disc fuscous, margin testaceous, leg testaceous.

The species is readily distinguished by its small size; the striae of the elytra are finer than those of *A. parvaticollis*, the intervals are perfectly flat; the margin of the thorax is a little reflexed and broader towards the base.

Length 4.45 mm.

Habitat: Iowa City (William).

Locale: Dubuque (Pettit); Green River (Hayward and Savage); Buffalo, N. Y. (Reneech); Atlantic City, N. J. (Living); Georgia, Louisiana (DeVoe); St. Louis, Mo. (Simmerman); Ann Arbor, Mich. (Hubbard and Schwartz).

*O. micans* Lea, Cane, loc. cit. Phil. Trans. IV. 230, 1844.

Peignona lutea

Small cutaneous sphere. The two zones were separated as follows:
Head alone present, elytra slightly oblong. *P. nigrior* Dej
Head and thorax present, elytra oval, more convex, pallid posteriorly.

132. Peignona nigrior Dej

Ref. cutaneous; capite elytronque, capite nigro-piceo; thorace subquadrato, angulis posticis obtusis; elytra oblonga, ovata, striis obsolete, marginali distincta, punctaque tribus impressis; antennis pedibusque pallide tinctis.

Lung. 14 lignes. Long. 2 lignes.

Il est un peu plus grand que la *Canthariade*, et sa coule
sur est en dessous d’un jaune-tertare une pointe rougâtre, with the title and extremity of the elytra d’un noir un peu
brasière. La tête est peu allongée, presque triangulaire, lisse, brown. The head is slightly elongated, nearly triangular, smooth,
and the two impressions between the antennae are more
et les deux impressions entre les antennes sont plus mar-
marked. La torma supeérieure, les mandibules et le palpé sont
sheer brown rouâtre. Les antennes sont d’un jaune-tertare
very pale. Les yeux sont minâtres, assez gros et assez
saillant, ce qui fait paraître la tête restreinte postérieurement. Le corps est plus long que la tête, moins long que large, presque carré, légèrement arrondi antérieurement sur les côtés, peu plus rétrécit postérieurement et très peu courbé; la ligne longitudinale du milieu et les deux impressions transversales sont peu marquées; à la base de chaque côté de la base une petite impression presque arrondie et à peine distincte; le bord antérieur est légèrement ébouclé; les angles antérieurs sont presque arrondis; la côte est légèrement rebordée; il touche un peu obliquement sur la base et formente, avec elle un angle obtus; la base est coupée un peu obliquement sur les côtés, et presque ébouclée dans son milieu. Les élytres sont plus longs que le corps, ont une taille allongée et peu courbes; les stries sont très peu marquées et presque entièrement effacées; la première n'est pas plus distincte que les autres et ne paraît pas se recourber à l'extrémité; la huitième stria seule est fortement marquée et se prolonge depuis l'angle de la base jusqu'à peu de la partie; on voit, sur la troisième stria deux points suffisamment distincts; la

Fetaceous, shining, head black; labrum square, flat; antennae and palpi pale, the former as long as the head and thorax, the second and third joints equal; thorax subtrapezoidal, narrowed behind, posterior angles obtuse; elytra faintly striate, the third stigmate with three impressed punctures, the eighth stria entire, sutura and apex subinflatae, tip broadly rounded; legs pale.

The males have four joints of the anterior tarsi slightly dilated.


Boriana nigripes Bull. Phil. Soc. X. 1872.


B. erimos_bbox; trans. Amer. Phil. Soc. XIX. 44, 1872.

Length, 2 - 3 mm.

Habitat, Iowa (Reinsch).
Georgia and Carolina (Secrute), Madagascar, Japan (Sorm), Enterprise, Fla. (Schim), District of Columbia (Ulle), Cape Verde, Madeira, Peru, Sylva, Sylva, Austrae, Borneo, New Caledonia, Ceylon (Hamilton).

133. *Perigona pallipennis* Del.

*Piceo* testaceus, nitidus, capite thoracique nigrie, elytris thoracique plus recue latioribus, pallide, striae vix distinctae, antea apicibus late rubrascante, pedibus, palpiis, antennisque pallide.*" Les Francais. Ann. Phil. Soc. x. 84. 1853.

The head and thorax are piercing black and shining, the elytra *piceo* testaceus variable in intensity. The elytra are more oval than in the preceding species, and more convex.

Length 2.35 mm.

Habitat: Iowa (Sorm).

Pennsylvania, District of Columbia (Sorm), South Carolina (Secrute).

Trecchius *pallipennis* del. Franca. Ann. Phil. Soc. x. 84. 1853.

Tribe 13. Sternopterygini

Head subquadrate, prolonged behind the eyes, and narrowed to a distinct neck, front with two supraorbital setae,elytra moderately prolonged, a setigerous puncture each side. Eyes large, moderately prominent, narrowly separated from the mouth beneath. Labrum transverse, feebly emarginate, margin notate. Mandibles acute, acute at tips, not prominent. Maxillae slender, elate or apiculate within, the outer lobe slender, and with two equal joints, the palp slender, the terminal joint elongate, oval, and acute. Mentum deeply emarginate, ligula moderately prominent, the tips bifid or narrowed and hisetous; paragynae slender, and acut, usually longer than the ligula. Palpi slender, last joint oval, acute, the penultimate hisetous in front. Antennae slender, face-free, three basal joint glabrous, first joint stout, as long as the next two, third to eleventh equal or nearly so.

Thorax elongate, narrower than the head, margin feeble, sides with a setigerous puncture near the middle and at the hind angle. Body subpedunculate,
external, not prolonged between the elytra. Elytra oblong-oval, not marbled at base, lateral marjar distinct and entire, without internal flecks, apices rounded without sinuation, disc striate, third interval with three indistinct dorsal punctures. Prosternum slightly prolonged at tip. Mesosternum oblique, the epima very narrow. Notosternum epima distinct, posterior coxae contiguous. Legs slender, middle and posterior tibiae slightly eiliate externally, the anterior emarginate, the tarsi very small. Tarsi slender, the first joint as long as the next two which are oval, the fourth broad, deeply bilobed, and papillate beneath, claw simple, clavate or pectinate. (Fig. 1, Pl. X; Fig. 2, Pl. XI.)

The tarsi are unlike in the sexes. The males have one seta on each side of the apex of the last ventral segment, the females two.

This tribe is represented in the United States by one genus, Leptotrichelus, but of one species and a variety.

184. Leptotrichelus conicus Fab. (Fig. 8, Pl. XIII.)

Odacantha nigra, elytric striate, testaceus; sutura late
mignus.


Olongata, head fuscous, antennae testaces, base of palpi rufous, last joint testaceous; thorax rufus, about three times as long as broad, cylindrical, more or less punctured, dorsal line not reaching the base, sutures indistinct, neck vitta on each side; elytra elongate oval, pale testaceous with as broad sutural rufous or fuscous stripe punctured, costa which varies in color with the thorax, third internal with three distinctly impressed dorsal punctures, the posterior half of the abdomen fuscous, the rest and the legs testaceus.

Length 8 mm.

Habitat. Iowa City (Hickham); Amee (Olson).

Long Island (Schampa); New Jersey (Smith); Florida (Leconte); New Orleans, La. (Toursend); Cincinnati, Ohio.
Milwaukee, Wis. (Pantarberg); St. Louis, Mo. (Sennear).
Eastern Kansas (Popescu).


Trib. 17. *Odocoileini.*

Head oval, more or less elongate, prolonged behind the eye and narrowed to a neck; two supra-orbital setae, elytra moderately prolonged, truncate, a setigerous puncture each side. Elytra large, moderately prominent, spinescence in front. Mandibles slender, ciliate and spineless within, the outer lobe articulate with equal joints. Palpi slender, the last two joints near equal, the terminal one slightly fireiform, acute at tip. Antennae exchanging sand-toothed, ligula usually truncate at tip, and base, the apex free for a short distance. The paraglossae small, rarely longer than it, the palpi slender, the last joint slightly fireiform, acute at tip, the penultimate not longer than it, and the rarely trisetae in front.
External slender, free at base, first joint as long as the rest, two, three bead joints, glabrous. Thorax narrow, the margins usually feeble, or very entirely obliterated, a seta near the middle of the side, a second at the hind angle which is often feeble. Body subpedunculate, scutellum not projecting between the elytra. Elytra, oblong oval, base not margined, sides narrowly inflexed, margin entire, without internal fleshy, the bases truncate, sometimes rather obliquely, Prosternum not prolonged. Metasternum oblique, the epimeres very narrow. Metaposteral epimera distinct, posterior coxae contiguous. Legs slender, the middle and posterior tibiae slightly dilated externally, the anterior emarginate within, the apex small. Tarsi usually slender, rarely flattened, the fourth joint at most feebly emarginate. Claws simple.

The posterior tarsi are similar in the sexes.

In all the genera of this tribe there are numerous punctures, having short erect hairs either in the second stria or the third interval. (Fig. 5, 6, Pl. XI).

The relationship between this tribe and the Scutodactylini is very close, and they are united by some authors.
the only difference of much importance being that the
elytra here are truncate, there entire.

The only genus which occurs in the United States
in Carabinae lat., represented by two species, only one of
which is found in Iowa.

135. *Carabinae*Pennsylvanica* line. (Fig. 7, Pl. XVI.)

*Attelabus niger*, elytra rufice; fascia media specieque
nigra.

Statura praecedentie omnino, sed aliae 15 minor.

Caput, depresse; nigrum, notum, elytra elongata, maxillae
rufae, antennae filiformes, oblatae, basi flavescente. Thorax
longue niger, glabri. Elytra nix, fascia in medio nigris,
elaeis ad speciem. Pedes rufi.


Oblonga; head and thorax black; elytra rufice, with black
spots; head very long, much contracted behind, polished;

antennae with four basal joints rufae, the next pubescens;

galea rufae; thorax very long, widest before the middle,
narrower in front than behind, with excavated juncture
Striae each side which may nearly disappear at the
longitudinal impressed line each side above, between
which is a smooth polished strip; elytra oblong-ovate,
striae coarsely punctured in front, smooth behind. The
reticulose punctures of the second elytra very indistinct
and rarely more than four in number; color orange with
black spots forming an interrupted transverse band. The
band is made up of a marginal spot and a common
longitudinal oblong-oval median one. It is connected
with the apex by a narrow black margin. Abdomen
black, glabrous, often with a slight testaceous shade
below; feet testaceous, knees dingy or black.

Length 7.5 mm.

Habitat. Iowa City (Nichols).

Syracuse, Ont. (Ritchie), Mass. (Leconte), Buffalo, N. Y.
(Muir), New York City (Shattuck), Berwick, Me. (Dwight),
Cincinnati, O. (Dury); Marquette, Detroit, Mich. (Hustard
and Schwab); Milwaukee, Wis. (Ranlet), St. Louis, Mo.
(Dunne), Kansas (Bown, Petronio), Nebraska, City, Neb.
(Skinner), Louisiana (Leconte), Texas (Chandon), Cal. (Leconte).
Found under chips and stones in the spring.


*Fabricius*, syst. 2. 285. no. 3.

*Fabricius*, Cod. 248, no. 9, 1861.


*Foster*, Mon. 205. no. 2, tab. 173, 12.

*Copra pennsylvanica* Edw. Burges

*Latreille*, Syst. nat. 1. 196. no. 3, 12.

*Crypta pennsylvanica* L. de Saussure

*Day*: Trans. 1, 1826.

*Ophiura pennsylvanica* 


*Gnomonia pennsylvanica* Day, Trans. 1, 171, 1826.


natura. Cland.

**Tribe 15. Ophiurini.**

Head constructed at a variable distance behind the eye to a neck which sometimes expands spherically, at its insertion in the thorax, front narrowed before the eye, two supracentral setae, elytrae moderately prolonged.
and, with a variable number of setigerous segments, some-
times (Dryopla) without any. Oesophageal moderately pro-
minent, usually not very close to the mouth breeth, labrum
transverse, moderately prominent, truncate or feebly exar-
minate, setose in front. The two lateral setae in
Dryopla somewhat longer and nearly vertical. Mandible
slightly prominent, feebly connate, acute at tip. Maxilla
dehked at tip, ciliate, or spinous within, outer lobe usu-
ally slender, biarticulate, with equal lobes, palp long,
more or less hirsute; the terminal joint more or less
triangular. Mentum variable in form, deeply margina-
ate, with or without tooth; labrum and paraglossae var-
iable in form; palp long; moderately long, the terminal joint
shorter than the preceding, more or less triangular in
form, the penultimate longer and plumose in front.
Mentumae setaceous, frustate, three basal joints some-
what less pubescent, the first usually elongate and
taller than the following. Thorax variable in form
often moderately long, the lateral margin acute (except in
Dryopla). The lateral setae often indistinct, that of the
Posterior angle usually entirely absent. Scutellum distinct. 
Elytra not margined at base, lateral margin acute, entire, 
apex truncate, dorsal punctures absent in our genera. 
Proternum not prolonged. Meta-tergal spinera very 
narrow. Meta-tergal spinera distinct, posterior coxa 
contiguous. Legs moderately long, the femora often slightly 
clavate, the middle and posterior tibiae clavate or slightly 
spinose externally, the anterior slender, deeply emargin- 
ate within, the tibial spine moderate in length, rarely 
(Salorta) long. Tarsi variable in form, the claw simplex or 
pectinate. 

The males have the anterior tarsi dilated, sometimes 
very slightly, and densely pubescent beneath. 

Of the four genera represented on this continent 
but one is found in Iowa.

which very narrow. Head prolonged behind the eyes, neck 
inverted in thorax by a semi-globular condyle. Clypeus 
with two petiolar punctures each side. Salorta Fab. 
(Caps. 4, 6 & Pl. 81).
Salenia Fab.

Brownish, opaque, phrenescent insects, with head and elytra black or bluish-black, and thorax ferruginous. Found under stones, or in decayed wood.

Legs, palpi, and antennae black. Anterior legs, palpi, and base of antennae ferruginous; pubescence of elytra uniform.

Salenia, atriceps, Lea. (Fig. 14. Pl. 20.)

Atriceps, capite punctato, postice oblique rotundato, thorace elongato, rugoso punctulato, metatibiae postice late arcuato, ad basis suturis impressis; elytris choriaticis oblongis ovalibus, confertissimo rugoso punctulatis, sequentia pubescentibus, atrius punctulatis.


Head elongate-oval, black with a small ferruginous spot between the eyes, strongly constructed behind, punctured, pubescent, particularly behind the eyes, and on the under surface, neck slender, sparingly rugose; eyes large, moderately prominent; four basal joints of antennae black, tip pubescent, under.
surface black with a median longitudinal rinose stripe; thorax rinose, longer than broad, sides arcuate, slightly excurred at base, hind angles obtuse, margin reflexed, surface strongly punctured, pubescent; elytra blue-black, elongate, obliquely truncate at apex, rugose, or finely punctured, with fine decumbent pubescence, finely striate; under-surface black, finely rugose, pubescent; front wing brown.

Length 14.75 - 20 mm.

Habitat: Iowa City (Ickham), St. Louis, Mo. (Summers), Kansas (Harris, Cook, Popenoe), Texas (DeSoto).


Lee Bull, Bk. Ent. xx. 61. 1879.

157. Salinita juncea Pat.

In nigra, thoraces ferrugineo, elytris cyanice.

Fam. Eey. Ent. 1914, no. 1. 1901.

Form dark, the same as that of the preceding; head black, punctured, pubescent, vittae with scar white.
spot, strongly constricted behind the eye, neck smooth, antennae a little longer than half the body, first joint elongate, ferruginous, second to fourth black, the rest paler, tip ferruginous, all joints pubescent, thorax narrow, subconical, ferruginous, sides carinate, excised at base, margin excised, hind angles acute, dorsal line distinct, surface punctured, pubescent; elytra blue black, opaque, with eight distinct, acute, incipiently striate, surface finely punctured, with uniform, obliquely decumbent pubescence, underside rugose, pubescent; head black, with the median longitudinal stripe rusty ferruginous, abdomen black, legs long, ferruginous, densely pubescent.

Length 17-22 mm.

Series of Galeota junea Fab.

Head of medium size, flat, semicircular, somewhat enlarged anteriorly, with a short, cylindrical basal neck, labrum, sparingly crowned, with short black hairs; depressed in the middle, sides and base rounded, convex, branches of the tentacle protruded interiorly in the middle, when
a small black dot is to be seen, extending inside of the
elated, somewhat cylindrical, anterior angles of the
head, where the antennae are inserted; above the anterior
border, a horny prolongation nearly as long as the head,
conical at the base, the apical half bifurcated, each
branch with two bristles on the under surface, one
nearly terminal, the other a short distance behind the
first, just behind the insertion of the antennae, six
ovoid wells arranged around a low, conical elevation, in
two transverse series, the middle pair more widely sep-
parated than the upper or lower ones; on the upper
surface of the head, within and behind the wells, on
each side, a longer bristle; head breadth flat; on each
side near the face, two bristles on short pointed tubercle.

Antennae twice as long as the head, of four cylindrical
jointed, the first nearly equal to the next two united, the sec-
ond half as long, and the third more than half as long
as the first, the fourth one small, lorgne-shaped; the first
and second straight, the first with three equidistant
interior bristles, and two internal, and two or three ex-
ternal five bristles near the apex, the second with one prominent and several finer bristles, the third and fourth joints but downward and outward, with more numerous, very long and fine hairs, in the fourth inserted upon two internal, one external and one terminal tubercle.

Labrum rudimentary, a small, transverse plate, turned back, with rounded angles and under surface densely covered with minute hooks; two acute teeth on each side on the head, beneath the bifurcated prolongation, one near the labrum, the other further off and nearer the border.

Mandible longer than the head, sickle-shaped, acute, with a stout inner tooth near the middle.

Maxillae cylindrical, about as thick and as long as the first joint of the antennae, slightly curved inwards, bearing midway a stout external bristle, and near the apex two or three internal and one external, bristles, the whole joint scattering with fine short hairs, the extremity with two appendages, the external (palps) of four joints increasing slightly in length, the first two bearing one or two bristles, the last two without hairs, the inter-
oral (maxillary lobes) of two joints, the terminal long, slender, and pointed, each with a bristle.

Labium with an elongated mentum and two, elon-
gated, cylindrical palpus-bearing pieces united near the base by a membrane prolonged by two
fleshy ligulae, terminating in a bristle. Palpi
of two joints, the first one and a half as long as the
second.

Thoracic segments abundant, flattened, corred with
short pincers.

Prothorax elongated, narrow in front, gradually enlarged
widest a little before the base, where it equals the head
in width; angles rounded, central scar-like depression
on each side of the median line.

Meta- and metathorax together as long as the pro-
thorax, somewhat broader, narrowed before, with rounded
angles; metathorax a little longer and narrower than
the metathorax, both with slight depressions on each side.

Abdomen as long as the head and thorax together,
flattened, in the middle as wide as the prothorax, grad

343
ally narrowed before and behind; segments with honey, transverse shields, sabre and below, finely rugose, and sparsely crenate with short, spiny hairs, more conspicuous at the borders; the ninth segment shorter and narrower than the others, with a tubular spine, and two very long filiform appendages of more than twenty five very minute, irregular articulations, each furnished with a bristle.

Stigmata nine pairs, the first, upon the mesothorax, very large, oblong, oblique, visible from below; the others on segments one to eight of the abdomen, the first oval, half as large as the mesothoracic, the rest small, circular.

Legs slender, half as long as the body, increasing in length posteriorly; femora about the anterior longest, flattened anteriorly; tibiae, cylindrical. about as long as the femora; tarsi cylindrical, longer than the tibiae, the two joints equal in length, the terminal slender, tapering uniformly, with two small apical hooks, legs, except the anterior femora, hairy, more densely so on the terminal joints.

Femora of the fore legs with four strong, straight
spines on the anterior border, united at their bases and tipped with a bristle, the three anterior subequal, the fourth smaller, the two anterior closer together. Tibiae of four legs absolutely serrate posteriorly, with four or five bristle having denticulations.

Length, exclusive of appendages, 17 mm.

Body very dark brown, opaque, having in life a thick reflection, the head and prothorax honey yellow, with a faint brown patch in front of the eyes, the first two joints of the antennæ more or less darkened, especially towards their apices, the prothorax with a dark brown transverse band, deeply trilobate posteriorly, divided by a median furrow not quite attaining the border on the sides, and coming the apical third. The four legs clear yellow like the head and prothorax, the terminal joint uniformly darkened, and the two preceding only toward their apices. The other legs dark brown, testaceous at the joints. The long first joint of the terminal appendage clear yellow, the succeeding joints dark brown except at their junction with each other. (Fig. 44a, Pl. 33.)
The larvae are found under the loose bark of damp and rotten logs.

Habitat: Iowa City (Richland), Davenport, and Monticello (Putnam).

Streator, Ill. (Petit); Sparrow Lake, Ont. (Hamilton); Green Nature (Raymond and Savage); Buffalo, N.Y. (Reincke); New York City (Schuurp); Brooklyn, N.Y. (Smith); N.Y. (Schuurp); Cincinnati, O. (Dury); Detroit, Mich. (Gudden and Schuurp); Milwaukee, Wis. (Panterberg); St. Louis, Mo. (Simeone); Eastern Kansas (Popenoe); Nebraska City, Neb. (Sheinick); New Orleans, La. (TouwSEND).

Carabus januus Fab. Ent. sert. I. 136. no. 51

Dec. 4: 107. 3. tab. 17. Fig. 21.
dec. 38. 21. Ent. Soc. II. 41. 1879

Carabus americanae Ent. sert. I. 136. no. 50.

Carabus americanae Fab. Ent. sert. I. 136. no. 50.

Oliv. 163. tab. 6. Fig. 72.


Edin. Queulo.
Lato, Gen. 1. 197.

Tribe 16. Debrinii

Head oval, constructed to a neck or not, with two supra-orbital sutures, front either parallel or with convergent sides, clypeus with a setigerous puncture each side. Eyes round or oval, moderately prominent, very narrowly separated from the mouth breath. Labium usually broader than long, sometimes prolonged coming the mandibles; either truncate or emarginate, and serrate in front. Maxillae slender, hooked at tip, rather obtuse in Tetragonodesmus, ciliate or spinulose within, rarely toothed behind the tip, the apex ciliate in many genera, outer lobe bicinate, but other wise variable; the palp variable in form, from slender to secundiform. Mentum more or less deeply emarginate; the epistome, always distinct, the bottom of the emargination either without
tooth, or with a tooth of variable form; ligula and para- 
glossae very variable; the palpi also variable, the terminal 
joint equal to the preceding or longer, the latter half-
tone in front (except in some Ephemerids). antennae 
slender, rarely slightly thickened, arising under a slight 
frontal ridge, the condyle usually exposed, usually with 
the basal joints glabrous, sometimes borne but two or 
four. Thorax variable in form, sides distinctly margined 
and with 12 setae at the side and at the basal angle. 
Oleura truncate at tip in a variable manner, the margin 
acute, entire and narrowly inflexed, without internal 
placa, the base margined. Prosternum usually obtuse 
at tip, rarely acute or prolonged (Cycloptera). Meta-stern 
al spinera narrow, sometimes entirely concealed by 
the sternum. Metasternal spinera distinct, the posterior 
coxae contiguous. Legs usually slender, not very long 
tibiae slender, the terminal spine moderate or short, 
simple, rarely finely serrulate along their margins. 
Tarsi variable in form, the fourth joint narrow, enargin 
ate or deeply bilobed, the claws usually pectinate or serru
rate, sometimes simple.

The sexual characters are variable. The anterior tarsi are often very nearly equal in the sexes, sometimes with three or four joints slightly dilated in the male, rarely the middle tarsi are dilated (Peracodora). The anal segment has usually more setae in the female than in the male.

The following is a table of our genera:

A. Mandibles with distinct scrobes

1. Antennae with at least three glabrous joints.
   1a. Head constricted behind the eyes.  
   1a. Head not constricted behind the eyes.

2. Antennae moderate, not large.

3. Tarsi slender, fourth joint entire.

   3a. Labial palp slender

   3b. Thorax truncate at base.

   3b. Thorax slightly lobed at base, 

   3c. Mandibles not toothed.

   3c. Mandibles not toothed.
Mantua with a small emarginate tooth

Mantua post. \textit{Sch.,} post.

1. Tarsi with fourth joint emarginate or bilobed.

2. Tarsi with fourth joint bilobed, remaining toothed, margins serrate. \textit{Gallista} \textit{Drj.}

3. Tarsi with fourth joint emarginate

4. Tarsi not hairy above. Terminal joint of both palpi similar, more or less cylindrical, truncate.

\textit{Penacorina} \textit{Schaum}

5. Tarsi hairy above. Penultimate joint of labial palpi usually with more than two setae. \textit{Emiunctis} \textit{Lat.}

\begin{itemize}
\item Debis \textit{Lat.} (Figs. 5, 6c, Pl. xvi).
\end{itemize}

This genus contains many pretty colored species mostly of small size, but of very predacious habits. They are found under stones, beneath dry leaves in spring and fall.
and in the summer, often upon herbs and bushes.

Our species are classified as follows:

I. Lateral lobe of mentum with epilobe.
   a. Fourth joint of hind tarsi deeply emarginate.
   b. Head and thorax rufous.
      c. Elytra deeply striate, antennae pale, 
         *grandis Rentz*.
      c. Elytra finely striate, only three basal joints 
         of antennae pale, 
         *atriomaculata Say*.
   b. Head black, thorax rufous.
      d. Elytra deeply striate, outer joints of antennae 
         darker, 
         *tricolor Say*.

II. Lateral lobe of mentum without epilobe.
   a. Mentum with a distinct tooth.
   b. Elytra with fine, or very shallow striae, head 
      smooth, or very finely punctured, tarsal claws 
      fuscate.
      c. Elytra unicolor, green or Olivaceous, 
         *Hedya unicolor*.
      d. Body above unicolor.
         e. Beemick or bluish, legs black, 
         *viridis Say*.
cc. Olive-green, legs fuscous, testaceo, or 

paler. 

peculiare Lej.

dd. Body above bicolor.

f. Head black, thorax rufus, abdomen 
pale. 

mediopunctata Lej.

cc. Elitra blackish, or fuscous, sometimes with 

a. Black spot.

p. Elitra one spot with pale spot, one in a.

aa. Mentum not toothed.

2. Head constricted behind the eyes

i. Thorax widely margined, head rugose ab 
sides, elytra shining, moderately striate. 

peculiare Lej.

ii. Head hardly constricted behind the eyes!

j. Thorax widely margined, head and thorax 
pale testaceo, elytra distinctly striate, 

with narrow black stripes, body beneath 
pale. 

vittata Fab.
Leia grandis Leutz.

Ferruginous, elytra purple, metope ferricena, thorax remark.
ably transverse, posterior angles sharp, nearly rectangular.
The remarkable size of this species will be sufficient to
distinguish it from E. satiniatriae Day, which it very much
resembles, but it is nearly twice as large, being almost
enormous for this genus. The head is darker than the
thorax, and the striae of the elytra are deeper than in E.
satiniatriae. I have seen two but two specimens, found
at night, attracted by the light.


Form robust; head and thorax ferruginous, or a more
head comparatively finely wrinkled between the eyes, and
with a few punctures; splayed on the front, and
warty; antennae slender, pale, outer joints darker than the
three basal ones; palpi ferruginous; thorax nearly twice
as wide as long, with the median line distinctly incur-
pressed, margin broad, recurved, surface finely, transverse-
ly striate; elytra with the striae deep but not punctured
the entire surface very finely punctured; body breast and
legs pale tawseous; abdomen black, the first segment
darker.

Length 9.5 - 11 mm.

Habitat: Iowa City (Dichela); Wapello (Putnam);
Ames (Gibson).

London (Ont.); Saugus (Anthony); Statevil.
League; Newark, Madison, A. J. (Smith); North Carolina (Hunt).
Columbiana Co. O. (Bell and Bownager); Illinois (Horn);
St. Louis (Mo.); Denver (Horn); Kansas, Nebraska (Horn); Texas
(Souite).


Horn, Bull. Rk. Ent. Soc. II. 86. 1879.

139. Lebia atrinacris Say.

Pteriginous; elytra deep purple; vertex black.

Body incrusted, naked, or with very few hairs; antennae
brown, first three joints pteriginous; palpi blackish; thorax,
disc convex; margin towards the hind angle depressed, hind
scales rounded; no longitudinal impressed line, retina deep blue, with acute, distant, not deeply impressed stripe, a series of punctures on the external margin from the funnus to the middle of the tip; punctures more distant on the middle of the margin; nodule punctuated; vertex black.

Jay Truje, Ame. Phil. Dec. 15, 1825.

Found under stones, &c.

Length 0.7 mm.

Habitat: Iowa City (Trickham).

Launcey, Ont. (Petit); New York City (Schauff); Newark, Madison, N.J. (Smith); Philadelphia, Pa. (Horn); Columbus, Co., O. (Bell and Bonniger); Bayfield, Wis. (Trickham); St. Crispin, Mo. (Summers); Dakota (Horn); Salina, N.Y. (Horn); Mississ., (Horn).

St. atrinotria, Jay Truje, Ame. Phil. Dec. 13, 1825.

Jay Truje, Dec. 25, 1826.


Kone Truje, Ame. Ont. Dec. 131, 1872.

Resembls the preceding species in miniature, but has the antennæ black, excepting the three basal joints. The elytra are also finely striate, and the intervals flat, but the striae are finely sinuate.

140. 

*Lebia tricolor* Say.

Head black, mouth, antennæ, thorax, and feet ferrugineous; elytra greenish-pallid.

Head black, polished; front minutely coriaceous; malar, genal, and labial areas ferrugineous; mouth, labrum, and antennæ ferrugineous; thorax ferrugineous, glabrous, very minutely rugose; a longitudinal impressed line, margin defined and somewhat ciliated; angles rounded; beneath ferrugineous; spot, color of the thorax; ventral color of the thorax; elytra profoundly striate, striae incrustured; interstitial lines conso; marginal line interrupted by incrustations; from the humerus to the apex; ventral blackish.


Closely resembles the preceding in general appearance but is less elongate and with a black head and dark
epithelium. The antennae are similar to those of atrinae. The head is sculptured as in granulae, black with labrum pale, elytra deeply striate, color decidedly green. Color in

reach as in granulae.

Length 7.85 mm.

Habitat. Kansas (Oberon).

Canada (Ottawa); Atlantic City, A. J. (Lentle), Pennsylvania.

Missouri (Day).


Rev. J. P. Ent. II. 403. 1826.


Corv. Bell. Phil. Ent. Soc. II. 76. 1879.

141. Lebia viridie Say.

Green, polished, immaculate; antennae, palpi and

foot black.

Body unpunctured, nearly destitute of hairs; head
green, with a few obsolete punctures; antennae black.

brown, labrum and palpi blackish; mandible euphove. 
trunk green, polished; breadth darker, thorax with an impressed line; elytra obsolete; striae distinct, acute; outer margin punctured; a single puncture near the inner tip; feet black; nails destitute, venter blackish green.

Var. a. Dark purple black; stria of elytra indistinct, breadth purple black; antennae black.


Dry commonly on flowers.

Length 46-5 mm.

Habitat. Iowa City (Hickham); Ames (Osborn).

St. James, Ind. (Hansen); Sparrow Lake, Ont. (Hamilton).

Buffalo, N. Y. (Reincke); Greensville, N. Y. (Schupp); Waterloo, N. J. (Smith); Florida (Schwarz); Cincinnati, O. (Dey); Vermont, Marguerite, Mo. (Kiefer and Schwarz); Bayfield, Wis. (Hickham); Milwaukee, Wis. (Ruter, Irry); Maywood, Ill. (Merritt).

St. Louis, Mo. (Summer); Kansas (Hone, Fruen); Colorado; New Orleans, La. (Toumend); Glendive, Mont.; Green, Mont.

Idaho, Soda Springs, Idaho; Victoria, B. C.; The Valley, B. C.; Duncan, Calif.; Pasco, Atlee, and Seguin, Wash.

Sanantsina, Calif.; Portland, Wash.; and Delano, Wash. (Hickham); Zacatulaca (Hone).


van saragdula " 387. 1831.

van moesta dec. Gagini l. Sup. 203. 1860.

Lamproia cyanella Motch. Køef. Revol. 42. nove.


43. Lébia femida Dej.

"Nigro acuta: elytra longioribus, obsolete striatis, fun- 
chasse duobus Impressis, antennis pedibusque nigro-
"pircis.

Long. 1/2 ligne. Larg. 7/8 ligne.

Elle est plus petite que la Saragdula, proportionnel- 
ment un peu plus allongée, et sa couleur est un desse 
 млн brun us, oblonge, presque noire, la tête est assez large.
allongé, presque triangulaire, étroite postérieurement, avec
que lisse et légèrement courbée. Le long supérieure et les
palpes sont noirâtres. Ses antennes sont d'une bonne noir-
âtre, avec le troisième article d'une jaune tachée au peu
noirâtre, ses yeux sont noirâtres et à peine soulignés. Le
conel est à peu près de la largeur de la tête, presque carré
et encon un peu moins largeur que celui de la Dhuraj-
dula. Ses élytres sont eux plus allongés que celle de
cest espèce; ses ailes sont peu marquées; les intervalles sont
un peu relevé. Et l'on voit sur le troisième deux pointes
enfoncées peu marquées, placées comme dans la Dhurajdula.
Le dessus du corps est d'une noir et un peu brunâtre. Ses
fattes sont d'une bonne noirâtre. "Daj. St. Su. x. 328, n°. 01, 1881.

Blisterous sauvage, nearly black beneath, strongly reticulate
viridius Day; antennae very dark, third joint pale testac-
eous; thorax much broader than long, sides subparallel,
incurate at base, hind angles very nearly rectangular;
elytra striate, legs brownish or testaceous.

This species can be distinguished from the small var-
ieties of viridius by its smaller thorax, pale legs, and pale
third joint of the antennae.
length 3-3 ½ mm.

Habitat. Iowa City (Hickham).

St. Jerome, Que. (Herman); Frankie, But. (Hetit); Green Notte.
(Sprague); Kewaunee, A.C. (Med); Maine (Cone); Buffalo, N.Y.
(Reincke); New York City (Southwick); Anvers, A.J. (Smith).

Passaic, N.J. (Schwalbe); Geneva (Cone); Cincinnati, O. (Wray).


Bayfield, Wis. (Hickham); St. Louis, Mo. (Cummia); Tepohu,
Hu. (Rogers).


floridula Harris St. Eng. Trans. 1928.

153. Lebri viridipennis Dej.

Capitule viride; thoraces infeo; elytris amoraphinis, nitidius,
tennis punctato striatis, interstitio subtilissime punctatis,
subtilius infeo; testudo pallidioribus, femorisibus libellulatis.
tarsique vigie.

Long. 57 lignes. Long. 57 lignes.

Elle ressemble beaucoup à la Gyanocephala. La tête est d'un métallique, moitié antérieurement, un peu plus étroite et plus allongée et très légèrement ponctuée. Les antennes sont d'une brune claire, avec le premier article d'un rouge ferrugineux, les yeux sont bruneâtre et moins saillante que ceux de la Gyanocephala. Le corselet est d'un rouge ferrugineux comme celui de la Gyanocephala, mais il est plus petit, plus court et plus étroit, les angles antérieurs sont plus arrondis; les bords latéraux sont plus dépouillés; le milieu est un peu plus courbe; il ne paraît pas ponctué, et il a des rides transversales irrégulières très peu marquées.

L'écorce est de la couleur du corselet. Les élytres sont d'une belle couleur verte brillante comme celles de la Chlorocephala, un peu plus larges et plus courtes que celles de la Gyanocephala, mais moins cependant que celles de la Chlorocephala; leurs extrémités sont couplées carrément et un peu ruminées comme dans la Gyanocephala; elles sont striées et ponctuées comme dans la Chlorocephala, et
elle est de même, deux points en forme d'étoile sur la troisième étai. Le derme de la concrète et l'abdomen sont de couleur rousse, ferreux, la poitrine est un peu plus claire. Des pattes sont d'une couleur presque jaune, la langue jaunâtre, l'extrémité des cuisses, celle des jambe et les tarses sont moisissus.

Habits, black with greenish lustre, nearly smooth, antennae dark, basal joints testaceous, fore legs black; thorax reflex narrow, broad, than long, sides accented, margin recurved particularly near the hind angles which are nearly rectangular, dorsal and basal lines distinct, surface very finely rugose; elytra green, finely striato-facettate, the third stria with two large impressed punctures, marginal interval with serial large punctures, underside reflex testaceous, legs pale testaceous with the tip of the femora and tibiae punctured.

Length: 5.6 mm.

Habitat: Iowa City (Nickham), rare.

Localities: Ont. (Petit); Mass. (Brown); Buffalo, N.Y. (Rose); Bristo, Brigantine Beach, N.J. (Havilstone); Shrewsbury, N.J. (Smith).
Florida (Schwarz); Cincinnati, O. (Sew.); Detroit, Mich. (Lindall, and Schwarz); St. Louis, Mo. (Muhlenberg); Lawrence, Kan. (R. P. Pease); Little Rock, Ark. (Nicholls); Texas (Cone).


**Grand.** Bull. Nov. II. 1776.


*Horn* Bull. Phil. Ent. Soc. III. 1877.


44. *debra cornata* Say. (Text 5, Pl. LXII.)

*Reversed*, head and elytra black, the latter with a yellowish edge and four spots.

Body incrassated, and almost destitute of hair; head black; three basal joints of antennae reversed; trunk reverse, gaster broad; thorax with rare obsolete, longitudinal impressed line; disc somewhat convex; margin depressed; feet pale; male pedicel; elytra striated; striae acute, distant; two large subtriangular or suboval spots near the base; two smaller ones near the tip, and outer edge.
edge yellow; outer pale yellow; or reddish brown.


Type: 1 flower.

Length 4.5 - 5 mm.

Habitat: Iowa City (Nechama); Ames (Cabinet).

Mass.; Rome; (Tay); Cincinnati, O.; (Dury); Milwaukee.

(R. Panbroz).


limnea Rald.


Cerabue 4, notatus Hulke, Catal.

143. Lebra scapularis Day, (Fig. 2, Pl. 82).

Rufa; elytra nigrescentes; margine exteriore vitta abbreviata pro.

Dehiscencia testacea.
Long. 2, 25 légers. Larg. 1, 1/6 léger.

Elle ressemble beaucoup à la Dittata mais elle est ordinairement moins grise, plus petite. La tête est une fois plus large, une fois plus courue, et elle a de chaque côté, entre les yeux, quelques stries longitudinales assez distinctes. Les trois premières articulations des antennes sont d’un jaune testacé, les autres sont d’une brune obscur. Le collet est à peu près couvrant celui de la Dittata. Les élytres sont noircis, elles ont une borne látérale très étroite, d’un jaune testacé, qui ne dépasse pas la première stère, mais qui s’élargit le long du bord postérieur jusqu’à la suture, et une bande longitudinale un peu oblique de la même couleur, qui part de l’angle de la base, et qui ne dépasse pas le milieu des élytres, de stère sont une fois plus marquées et très légèrement fourchues; les intervalles sont une fois moins planés, les pattes sont entièrement d’un jaune testacé.


Celle yellowish testaceous; head with rugose sides, nearly smooth vertex; antennæ testacæ, three basal joint testacæ; palpi rufus with testaceous tips; thorax broader than
long, sides incurved, margin wide, more or less recurved, sides angles obtuse, surface finely rugose, striae moderately striate, shining, testaceous, with three black stripes as follows: a lateral stripe or vitta from the humerus four-fifths to apex, becoming gradually broader and rounded at its apical end, not attaining the extreme lateral margin; a common median band, broad at base, somewhat narrowed at middle, gradually broader behind and rounded at tip, but not larger than the lateral vittae. Sometimes these vittae become confluent at their apices and the yellow intervening space reduced to a very narrow and short stripe. Legs testaceae.

Length: 4.5 - 6 mm.

Habitat: Iowa City (Nickham); Ames (Ochs).

Sycamore, Ont. (Petit); N.Y. City (Brat); New York City (Southwick), Long Island (Schaefer); Trenton, N. J. (Smith); St. Louis, Mo. (Summer); Dakota (Corn); Mo. Co., Ark. (Nickham); Kansas; Indiana Territory (Corn); Utah.

L. acapulcas Dej, Up., Dec. 5, 1877, i. 75, 1831.


146. D. aequalis var. Villa.

Cocarce rotaria, thorax orbiculato rufo, elytris atro.


Pars yellowish testaceus; antennae black, sometimes with the basal part pale; elytra with a natural black stripe, occupying the two inner intervals, not attaining the apex or base; a lateral stripe on the fifth, sixth, and seventh intervals, sometimes broader at the apical end, but not attaining the basal or apical margin; body beneath pale yellowish testaceous; legs variable, sometimes totally black, usually with the type of the femora and the entire tibiae and tarsi black.

Length 6 mm.

Habitat. Iowa City (Hickman).

Madison, A. J. (Smith), Essex (Corne); St. Louis, Mo.

Railroad. Terre Haute (Corne); Georgia (id.).
Coralsia vittata Fab. Ent. Syst. t. 161. 160.
   Olivier. 35. tab. 6. f. 49.

Lebia vittata Dej. Sk. Ent. t. 1. 257. 1825.


   flavovittata Chen. Ent. A.M. Ent. t. 1. no. 161.

Domine Bow.

Palpi and tarsi slender, the latter with the fourth joint neither bilobed nor excangulate, the siphunculi more or less serrate and the mentum without tooth (Fig. 6, pl. 98 C).

But one species has been found in Iowa.


Piceus Dej.
Domicia ferrugine.

"Oblique, fuscus; thorax quadrato, angulis posticis subrotundatis; elytris striatis, punctis minutis impressis, linea subaeque disposita; antennae pedicellatae ferrugineae, pallide.

Long. 3 lignae. Larg. 1/4 ligne.

Il est un peu plus grand que l’Aegilus, et sa couleur est entièrement redevue d’une brune moitié. La tête est moins arrondie antérieurement. Le carapace est plus large, plus court, plus carré, et les angles postérieurs sont un peu plus arrondis. Les elytres, le dessus du corps, les pattes, et les antennes sont à peu près comme dans l’Aegilus." Dej. t. 1, art. 353 no. 25. 1831.

Decore, moderately shining; head distinctly longitudinally wrinkled about the eyes; antennae and palpi subfour, thorax trapezoidal, broader than long, narrower at base, sides moderately arcuate and margined, margine moderately reflexed, hind angles obtuse, median line nearly entire, surface slightly transversely wrinkled; elytra oblong, parallel, surface striate, striae not punctate.
intervals slightly convex, dorsal punctures not evident.
body smooth, terebriform.
8. Anterior tarsi slightly dilated, the first three joints
heterogeneously lanceolate; tibiae; anal segment slightly
emarginate at middle, and 11. each side three setiga-
ments punctures.
9. Tarsi slender; anal segment plurisetose each side.

Length 7 mm.

Habitat: Iowa City (Hickham).

Trumle, Ont. (Petit); Tyuga, Mass.; Buffalo, N.Y.
(Reinecke); Camden, Gloucester, N.J. (Hughel); North Carolina
(Corn); Long Isl. (Schuyler); Detroit, Mich. (Hubbard and
Schoen); Bayfield, Wis. (Hickham); Milwaukee, Wis.
(Rantzen). Bugle Sound (Lenroot); California (Corn).

Blechna, Hortin.

The genus is composed of black, shining species; with the base of the thorax slightly colored, the ventral line not toothed. The ligula small, shorter at the paragonocar, wide and completely surrounding the ligula, claws serrate (Fig. 8, 9, Pl. XI).

Iowa has but one species.

Thorax very distinctly wider than long, broadest about one third from apex, elytra faintly sculptured at middle.

Blechna, Nigrinus, Manner.

Form moderately elongate, depressed, black, shining; head smooth, antennae and palpi black; thorax a little wider than long, sides moderately arcuate in front, slightly arcuate posteriorly; head angles obtuse, disc moderately convex, median line deeply impressed but not entire, surface very finely matted; elytra oblong, nearly parallel, one third longer than the head and thorax, apex truncate, disc absolutely striate near the suture, smooth
at sides, body breadth smooth, shining, legs black.

7. Anterior fossae with three points feebly dilated, indistinctly lamellate beneath, anal segment with one puncture each side.

7. Fossae slender, anal segment same as in 8.

Length 2.5 - 3.5 mm.

Habitat. Amere (Dakota).

New York (Cone); Hoboken, S. J. (Schauff); Bayfield, Wis. (Nickle); South Dakota; Laramie, Nyo. (Wyoming); California (Cone).


Cone Bull. 3d. Ent. Soc. vi. 53. 1871.


Dromius linaria. II dec. Amer. Lyc. N. Y. iv. 177.


This genus is represented in our fauna by a single species. The thorax is slightly lobed at base, the metathorax has a small emarginate tooth, the ligule is moderately
prominent, elongate oval, with fine short setae in front, and four at the tip. The intermediate two short, the outer two long, the paraglossae broad, a little longer than the ligula but closely united with it, obtuse at tip and not passing in front of the ligula; claws serrate. (Fig. 7, Pl. IX).

149. *Metallure americana* Dej.

*Oblong, nigro; elytris subauriculatis, striatis punctatis
subaequie minutis impressis.*

Long. 1½ ligne. long. 1¼ ligne.

Il ressemble beaucoup au *Punctatellus*, mais il est un peu plus petit, un peu plus allongé, et sa couleur est un dessein d'une noir assez brillant sur la tête et le corset et légèrement brouillé sur les élytres. Celles-ci sont un peu plus allongées, les stries sont un peu plus marquées, et les deux points enfoncés du troisième intervalle sont très petits et faiblement distincts. Dej. Sp. Eur. s. 361. no. 53. 1851.

Black, shining, with an extremely faint auricula ting; head smooth, shining; antennae and palpi black, tho' a little less than twice as wide as long, wider more at...
in front, slightly sinuate posteriorly, head angles distinct, not prominent, margins very narrow, disc slightly convex, median line rather deeply impressed, not entire, surface smooth, shining, slightly opaque along the base; elytra oval, scarcely wider posteriorly, apex distinctly truncate, disc vaguely subtriate, two dorsal structures very faint; body breadth black, smooth.

3. Anterior tarsi with three joints moderately dilated, and feebly bistrately lamellate, base; anal segment entire, with one seta each side.

4. Tarsi slender, anal segment same as in 3.

Length 26 - 44 mm.

Habitat: Iowa City, Turkey Creek (Richland).

British Columbia (Barrington); Sparrow Lake, Ont. (Cawston);

Birchley, Ont. (Petit); Vermount (Rowe); New Hampshire (Lee); Buffalo, N.Y. (Reinihe); New York City (Schnepp);

Camden, Hovecrest (Hendel); Detroit, Mich. (Hubbard and Schway); Lake Superior region (Leconte); Milwaukee, Wis.

(Reuterburg); Sandusky, Ohio (Leconte); Victoria Beach, Del., Tuscon, Ariz. (Richland).

Gallida Dej. (Fig. 2, 9, 18. Pl. XI).
Upper side of tarsi flattened, more or less distinctly sulcate or impressed.
Thorax red, elytra blue or green. decorus Fab.
Upper side of tarsi convex, not sulcate or impressed.
Thorax red, elytra blue or green. punctata Dej.

150. Gallida decorus Fab. (Fig. 5. Pl. XVII).
Carabiue sulcata, cyaneus, thorace pedibusque rufius.
Forma, slender, body broadly bicolor, above, head and elytra green or blue, thorax yellowish red; head smooth,
front variately impressed each side and slightly
argose, antennae fuscous, three or four basal joints testaceae; thorax as broad as a little broader than long, widest before the middle, sides aneuate in front, slightly sinuate behind, angles rectangular, slightly prominent, lateral margin narrow, equal from base to apex, narrowly reflexed, median line impressed, disc moderately convex, surface nearly smooth, a few punctures along the apical and lateral margin; elytra oblong, sides feebly aneuate, striae very fine and finely punctur ed, intervals flat and finely, sparsely punctate, dorsal punctures two, obsolete, body beneath smooth, head and abdomen fuscous, or greenish black, the remainder yellowish red; legs yellow, the tips of the femora and tarsi fuscous.

5. The first three joints of the anterior tarsi biseriately lamellate beneath, the fourth somewhat spongy, the middle tarsi with the first joint setose, second and third lamellate, fourth spongy; anal segment bifurcate each side.

6. Anterior and middle tarsi more slender than in 8,
Sulcuret breath, anal segment tris tone each side.

Length 7-8.5 mm.

Habitat: Iowa City (Nichkam), Ames (Osborne).
Illinois (Reiche), Missouri (Say); Bayou la Fourche, La.
(Truesdell), Morgan City, La., Columbus, Tex (Nichkam);
Enterprise, Fla. (Schwarz), Mexico (Corne).

Carabia decorata Fab. Synt. cl. i. 1811, no. 60. 1811.


Green. Col. ed. i. V. part II. pl. 2. fig. 1.


Trans. Ent. Soc. x. 141. 1832.


181. Callida punctata Lee.

Form slender, color as in decorata; head and antennae as in decorata; thorax not longer than the head; a
little longer than broad, widest a little before the middle, sides arcuate, slightly concave posteriorly, hind angles obtuse, not prominent, lateral margins extremely narrow, disc convex, median line distinctly impressed, surface nearly smooth, a few punctures near the apex, elytra oblong, gradually wider posteriorly, surface finely striate, striae punctate, intervals flat, obliquely, sparsely punctate, dorsal punctures on the third interval distinct; body breadth and legs as in spic.

8. Anterior tarsi dilated, first three joints biciliate, squamulose; breast, fourth nearly naked, middle tarsi less dilated, the first joint hairy; breast, the second and third squamulose, fourth, spongy; anal segment biciliate each side.

9. Tarsi less dilated, those in 8, with stiff hair; breast, spongy; anal segment, bipunctate each side.

Length, 7-8.5 mm.

Habitat. Iowa City (Wicklau).

Greensb. Out (Pettit); Buffalo, N Y (Reinecke); Baldwll.
N J (Grane); Cincinnati, O (Dury); Detroit, Mich. (Hubbard.
and Schwart}; Milwaukee, Wis. (Pautersberg); St. Louis, Mo.
(Schumich); Kansas (Forsen); Louisiana (Corv).


Pinnacodera Schumich.

“Cercal joints not hairy above, middle tarsi of male dilated, terminal joints of both palp similar, not recurved, but
more or less truncate as tip; wings very developed (Fig. 110, Pl. iii).

But one species has been found in Iowa.

55. Pinnacodera limbata Dej.

“Labrum, capiti thoracique subcordato obscure reflex.
elytra nigricantibus, striatia, striis interstitialibus obsolete
punctata, punctae duobus imprecias, marginis laterales,
macula humeralis margini coherente, antennis pedibusque
tectaceae.”

long. 4 ligne; long. 1½ ligne.
Elle se rapproche de la Complanata, mais elle est plus petite et proportionnellement plus étroite. La tête et le corselet sont d'une rouge-ferneux assez obscure. La tête est à peu près comme celle de la Complanata, le corselet est plus étroit, rétréci postérieurement et presque confondu; les borde latéraux sont de même largement déprimée et un peu relevée. Les élytres sont proportionnellement plus étroits; elles ont une bordure assez étroite, qui va depuis l'angle de la base jusqu'à la suture, et une tache luminaire qui se joint à cette bordure, d'une couleur tachée virile roux-grise; le suture sont assez marquées et très légèrement ponctuées; les intervalles sont plats et ponctués à peu près de la même manière; comme sur le troisième, frais de la troisième élytre, deux points en son somme assez distincts: le premier à peu près au tiers, et le second aux trois quarts des élytres. Le dessous du corps est d'une forme un peu roux-grise. Les jambes et le antennae sont d'une couleur tachées un peu roux-grise.


Piceous; leg, antennae, humeral spot and sides of elytra pale; head brown, slightly mufTed about the
eyes, thorax one third wider than long, sides moderately arcuate, somewhat narrowed to base, hind angle very obtuse or rounded, margin rather broad, moderately reflexed and translucent, disc moderately convex, median line impressed, surface nearly smooth; elytra oval, slightly oblong, with fine, moderately impressed, and absolutely punctured striae, intervals slightly convex, with a few fine punctures sparsely placed, dorsal punctures on third interval near the third stria; color fuscous, with testae one marginal spot which extends along the outer two marginal intervals to apex; body breadth twice its tera.

5. Anterior tarsi with four joints dilated and truncate, lamellate beneath, middle tarsi less dilated, similarly lamellate; anal segment bifid beyond each side.

6. Tarsi slender; anal segment as in 5.

Length 8–10 mm.

Habitat: Iowa City (Wickham).

Green Nature (Beyward and Savage); Buffalo, N. Y. (Rinnecke); Newark, N. J. (Smith); Detroit, Mich. (Hubbard
E. limbata  Duf.  Sp. Imm. i. 320.  1831.


var.  fasciata  Duf.  Sp.  Imm. i.  321.


toracicolis  298.  1844.

E. limbata  Duf.

More or less hairy above, wings sabertooth or about; tarsal joints always hairy above, the fourth slightly emarginate; claws falcate.  (Fig. 22  Pl. xii.)

As yet but one species has been reported from Iowa.

Thorax narrowly margined, not wider than long, elytra rather flat; intervals densely and comparatively finely punctured, without lustre.  Americana  Duf.

153.  E. americana  Duf.  (Fig. 9  Pl. xix.)
'Eccas, subpubescent, caput thoracique profunde punctatii; 
elytra confluentes punctate simi, margine laterali, macula 
humerali cum margine cohaerente pediceque distaece, orn 
autemique ferrugineo.

Long. 52 lignes. Larg. 2 lignes.

Elle est plus grande que l'Ammeria, et tout son corps 
est légèrement pubescent. La bouche, les palpes et les antennes 
sont d'un rouge ferrugineux. La tête est d'une brun-obscur, 
une peu ferrugineux et courbée, comme dans la Punetata, de 
Pointe enfoncée assez proé et assez aiguë. Le coquel est de la 
couleur de la tête, pointu de la même manière, assez convexe, 
légèrement en cour et peu rétréci postérieurement; la ligne 
longitudinale du milieu est assez marquée, et les angles 
postérieurs sont peu relevés et assez saillants. Les îbtrib 
sont proportionnellement un peu plus larges que celles de 
l'Ammeria, assez plates, d'une brun-obscur et légèrement 
pucescens; elles sont striées comme celles de l'Ackeria, 
et les intervalles sont entièrement courbée, de petite Pointe 
enfoncée un peu plus marquée et plus aiguë; on voit en 
contre quelques Pointe enfouée, distincte entre la seconde.
et la troisième strie, le bord extérieur, qui va jusqu'à la pointe, fait jusqu'à l'extrémité, est d'un jaune-ferrugeux, et elle, tout à leur base une grande tache de la même couleur, bien distincte, qui ne confond pas le bord extérieur, la desue du corps et d'un brun-ferrugeux, plus clair et presque rougeâtre sur l'abdomen. Les pattes sont d'un jaune-ferrugeux un peu plus clair que la tache et le bord des élytres."


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Pieous, feeby, shining, rather slender; antennae, legs, humeral spot and narrow side marqué mfo testaceae; head punctured, sparsely so on front; thorax a little longer than broad, narrowed at base, sides very narrowly prominent and reflected, irregularly carinate in front, carinate posteriorly, head angles obtuse, disc moderately convex, coarsely and equally punctured, median line rather, deeply impressed; scutellum suffused, smooth, shining; elytra oval, broader posteriorly, disc rather flat with moderately deep finely punctured striae, intervals rather flat, densely punctured, the punctures much coarser than those of the striae, surface sub-
opaque, purplish or nearly black with a large humeral spot and narrow side margin subfusiform, prothorax breadth rather coarsely punctured, metatergite set with sides less coarsely, abdomen sparsely so.

3. Anterior tarsi with three dilated joints, basally luminate breadth, anal segment unmarginate at middle with one seta each side.

7. Tarsi slender, anal segment entire, bisetose each side. Length, 11-16 mm.

Habitat. Iowa City (Wickham); Ames (Deben); Shrewsbury, Conn. (Petit); Buffalo, N.Y. (Kleche); Long Island (Schaupp); New Jersey (Huyg); Cincinnati, O. (Dury); Ann Arbor, Mich. (Budor and Schwarg); St. Louis, Mo. (Summner); Topeka, Kan. (Piperin).


Chand. Berl. Zeitsch. 102, 1873.


19 Trih. Bellonii

Head broadly oval, not narrowed in front of the eye, with a distinct neck more or less abruptly formed, elytra moderately prolonged, a sutural suture each side, front with two supra-orbital sutural sutures.

Eyes round, moderately prominent, close to the mouth, breadth. Labrum usually large and prominent, more or less concealing the mandibles, serrate on front. Mandible stout, lanceate, rarely prominent, acute at tip.

Mentum broad, deeply incurvate, usually toothed, ligula prominent, serrate at tip, the paraglossae adherent to the side, rarely (Polystichus) longer than it, and usually semicircular, the palpif of moderate length, the terminal joint elongate oval or fusiform and rotund, at tip, the penultimate biserate in front. Maxillae hooked at tip, ciliate or spinous within, the outer lobe rather stout, trichinate, the palpi stout, the terminal joint truncate at tip, more or less flattened. Antennae moderate in length, rather stout, usually compressed, raising under as distinct frontal plate, all the joints more or less pubescent.
two, or four, at the base less densely so, first joint about equal in length to the next two. Thorax more or less cordate, sides and hind angle with a distinct median suture. Clypeus oblong, truncate at apex, base not margined, sides narrowly inflexed, margin entire, discate or broadly incised, without dorsal suture.

Postmerus not elongated. Mesosternal spine narrow. Metasternal spine a distinct; posterior coxae contiguous. Legs moderate in length, the anterior femora more or less clavate. Tibiae sometimes (Bellusmorpha) compressed, and finely biconcave on the outer edge, the anterior rather stout, and broad, deeply incuneate within, spurs moderate in length. Tarsae moderate in length, usually ciliate above, the fourth joint either entire, incuneate or more bilobed. claw simple.

The anterior tarsi of the male are rarely broader than in the female.

One genus, Bellusmorpha Lep., is represented in Iowa.
**Heliomorpha bicolor**

Elongate, hairy, coarsely punctured, brown insects, found under stones and bark. (Fig. 446, Pl. xi.)

Outer joints of antennae are shorter, along the middle of the compressed face, joints 5-10 square or transverse, thorax as wide as long; elytra less strongly costate, interspaces with three confluent rows of punctures, elytra and abdomen darker.

**Heliomorpha bicolor**

Pubescent, reddish-brown; elytra and abdomen castaneous; thorax canaliculate, elytra sulcate, antennae compressed.

Length one eleventh of an inch; breadth of elytra between three and four twain; of an inch.

Body reddish-brown, with short decumbent ferruginous pubescence. Head punctured; a lateral longitudinal impression each side near the antennae; neck distinct, impressed; second and third joints of the antennae nearly equal in length, and with the first
obconic, terminal joint flattened, oblong, rounded at tip; intermediate joints transverse, gradually broader to the penultmate one, and laterally compressed. Palpi with obconic joints, the terminal one largest and truncate at tip. Thorax coriaceous, truncate before and behind, rather wider than long, anterior angles rounded, posterior ones slightly excised, subacute, disc deeply and distinctly punctured, and longitudinally carinate. Coleoptera parallelogramical, facial and external apical angles rounded, disc chestnut colored, paler at base, widely ground, the grooves punctured, suboblate at tip; external submargin with a few remote, larger, cellate punctures. Body broadly punctured, post-fascia, and feet reddish bay, ventral segments castaneous. Tarsi with entire joints, tarsis simple.


Length: 12–14.5 mm.

Habitat. Iowa City (Michie).

Salem, Mass. (Carrie); New York; Cumberland, B. J.

(Florida, Leconte); Indiana (Blatchley); Kansas
(scutum), sulcule, set., (scutellum).
Nymphula bicolor Harris & Eng. Trans. XV. no. 117. 1828.
Harris. Cor. 140. 1829.
Fuscipes Flug. Jahrb. i. 77.

Table 18. Brachynini.

Head gradually narrowed behind the eyes forming
a neck, front with one supra-orbital seta, clypeus moder-
ately prolonged. Labium broad, truncate. Eye, oval,
oblique, narrowly separated from the mouth beneath.
Mandibles stout, feebly truncate and with a setigerous
furrow externally. Maxillae hooked at tip, ciliate within
and at tip, the outer lobe slender, with equal joints,
the palpi moderate, the last two joints inren or less
sinuate. Mandible moderately broad, excisicate,
toothed or not; the ligula in great part membranous,
the oral centre conical and bifid at tip, the para-
glossae broad, adherent, and ciliate at tip, the palpi
moderate in length, the second joint longer than the last
cand shriveted in front. Antennae slender, the middle
of the basal joint expanded, two basal and a portion of
the third joint glabrous. Thorax with short marginal
setae, no special setae at the head angles. Ventritine
distinct. Elytra not margined at base, narrowly inflexed,
margins entire, no internal flaps, apices truncate and
with a membraneous border, disc not striae and
without dorsal punctures. Posterior not prolonged at
tip, Metasternal epimeron broad. Metasternal epimeron
distinct. Posterior coxae either contiguous or separated.
Middle and posterior tibiae freely ciliate or spinulose
eexternally, the anterior deeply emarginate within, the
inner spur at the summit of the emargination. Tarsi
slender, the fourth joint freely emarginate, the anterior
of the males with three joints freely dilated, and squam.
above breadth.

The only species occurring in the United States is
Brachycerus Int. The species are found under logs and
stones, usually in damp situations and often in clove-
ice. Those of our fauna have the head, thorax and legs yellowish and the elytra blue. In general appearance they resemble to a slight degree Coleita. When alarmed or irritated in any way they discharge from the anal glands a caustic fluid, the discharge being accompanied by a sharp report and a cloud of smoke. The evacuation of the anterior tubes seems to be for the purpose of clearing the antennae of any foreign matter. (Fig. s, s, Pl. 11.)

This group is one which is exceedingly difficult to separate. The accompanying table will distinguish the Iowa species as nearly as possible.

1. Clytra gradually widened behind.
   a. Clytra costate, size large or moderate.
     b. Clytra curved indistinct, abdomen dark.
       c. Head coarsely punctured, except vertex; thorax sparsely punctured; hind angles prominent. arrangement here.
       c. Head very sparsely punctured; thorax elongate, punctured; hind angles not.
prominent. Perplexus Dy.
60. Elytra humeri distinct, abdomen with-
pale median band, margin dark.
6. Head sparsely punctured, thorax
much narrowed behind, finely punct-
urated, hind angles prominent.

fine and Tab.
aa. Elytra not coxate, size small, humeri indistinct,
hind thoracic angles not prominent.
6. Side of thorax strongly rounded in front,
abdomen dark. conformis Dy.
B. Elytra hardly widened behind, humeri distinct, hind
thoracic angles prominent.
a. Elytra oblong, abdomen not infuscated.
junthimpraess Dy.
a. Elytra obscurely coxate, abdomen dark brown.
meine Carr.
a. Elytra plainly coxate, alternate intervals more
elevated than the intermediate ones, body beneath
dark. minuscule Carr.
185. *Brachyus americana* Say

Head, thorax, antennae, mandible, mouthparts, elytra, legs, black; underside of head and thorax smooth, abdomen green; head but very little constricted behind the eyes, punctate, more smooth; thorax as little longer than broad; sides arecate below, arecate posteriorly, marginal narrow, hind angles acute, prominent, disc somewhat convex, surface transversely rugose near the impressed median line, sparsely punctured, median line extending to base; elytra gradually broadening to apex which is more or less truncate, humeral angles indistinct, surface slightly convex, roughened and pubescent, costate, intervals quite deep in disc; underside and legs pubescent.

Length 11-11.5 mm.

Habitat: Iowa City (Iowa); Vancouvert (Iowa).

Linnely, Ont. (Pettit); Cincinnati, 8. (Dunning); Mississippi (Shed); Columbus, Tex. (Ickhahn); St. Louis, Mo. (Dunning); Salina, Kan. (Knaus).


*Brachyus americana* Say, 1862.
Brachyusa pachyderma (Dej.)

Insecte; ethnie brunâtre, cyanée.

Long. 3 lignes. Large. 1/4 ligne.

Il ressemble beaucoup au Brachyusa Crapitaux et aux espèces voisines, mais il me paraît appartenir à ce genre.

Sa tête, ses antennes, le corset, le dessous du corps et le hâle sont d'une couleur tachée plus jaune et un peu rouge que dans le Crapitaux. Sa tête est un peu moins allongée, plus lisse et plus courte. Le corset est un peu plus court, moins arrondi antérieurement sur les côtés, un peu plus vitré et postérieurement un peu plus lisse. La ligne longitudinale du milieu est très fortement marquée. Ses élytres sont plus courts, presque lisses, plus courtes que celles du Crapitaux. Plus larges postérieurement et trouées à l'extrémité, à peu près comme celles du Jaculaux.


I have seen no specimen of this species.

Length 7.25 mm.


Middle States (Le Conte).
Lamia of Brachymus praehensurui Müll.
Color of living larva, clear white, with a dark dorsal line caused by the internal organs showing through.
Mouthparts castaneous.
Frons short and thick, cylindrical, tapering at the sides.
Length 9 mm.
Head small, sides rounded.
Prothorax broader than the head, margin curved, seta arrayed from the disc by an interrupted line, surface very convex.
Meson and metathorax shorter and narrower than prothorax. Abdomen broader than prothorax, the segments bulging considerably, bristles at the sides beneath.
Deep in the form of elongate cones, the joints regularly decreasing in diameter from base to tip. There are no true claws, instead two diverging bristles near the tip of the tarsal joint.
The larvae shows to a remarkable degree, the profound modifications which a change of habit may bring about.
Belonging to a family, the larvae of which are mostly
active and strong, living by rapine and murder, the
trows of Brachyus is a parasite on other beatles and
is subject to many degradations of structure brought
about by this habit, living in the cells or "cocoon" of
Dinastes assimilis where it is perhaps brought an army
young larva clinging to its host, it has no need of the hard
chitinoue covering as a protection from enemies or the
strong legs necessary to carry it when searching for food.
Its covering is soft and yielding resembling rather a
Byrneopterous larve than a Carabid, the legs are mere
prop. The abdomen is entirely in rings and the long
caudal process so usual in this family is reduced to a
mere tubercle. The ambulatoriott pedestal are weak. The mouth
parts are very minute. Transformation to the pupal state
takes place in the cell of its host.

The pupa is white in color, 7 mm in length, the posterior
tarsi exceeding the tip of the abdomen. The antennae are
furred under the anterior and middle legs, the tips
meeting at the point of origin of the posterior tarsi. The
posterior legs are conical as far as this point by the
wing pad. (Fig. 5 a, Pl. xxx).

The larva has the curious habit when disturbed of lifting the foremost part of the body so that all the feet are in the air, and of maintaining this position for some minutes.

Length of time in pupal state ten days.


ii. no. 4. 430. 1873.

157. *Brachymeria minutissima* Cam.

Thorax dark ferruginous, costae cordate. Elytra blackish purple, antennae and ventral segments fuscosus.

Head, thorax, and feet dark ferruginous, almost castaneous. Antennae fuscosus, except the two basal joints which are ferruginous. Head with two longitudinal indentations between the eyes. Thorax oblong cordate, anterior angles subacute, disc very convex, middle longitudinally impressed. Elytra blackish purple, with a
158. Brachyynes perplexa, Dej. (Fig. 8 Pl. xvi.)

Verrucose, thorax oblongo, subcordato; elytra obsolete costata, epauroides, subpubescentibus; abdomen sublineum.

Long. 3/4, 4 3/4 lignes. Larg. 1/2, 2 lignes.

Il est plus étroit que le Tarneus et proportionnellement plus allongé. Le corps est plus allongé, moins large et moins arrondi sur les côtés, antérieurement, et les sauts postérieurs sont moins saillants et coupés presque carrément. Les élytres sont un peu moins larges, légèrement pubescentes, ce qui lui fait paraître d'un bleu plus
Four species, and the outer elytra are more coarsely and
at least distinct, the under part of the body and the palpi
are somewhat like those in the Vespa.


Head, thorax, base of antennae, and legs, rufous; elytra
blackish black, abdomen, greenish; head sparsely punctured,
abdomen, rufous and top of mandibles, black; ant-
ennae brown, three basal joints rufous; thorax elongate,
broadest before the middle, narrowed behind, side
vannate in front, slightly vannate posteriorly, margin
narrow, and feebly recurved, broad, angle, not prominent,
rectangular, disc convex, median line, deeply
impressed, surface sparsely punctured; elytra gradu-
ally widening behind, apex obliquely truncate or as
shorter at the suture than at the margin; humeral
angle, indistinct; disc convex, costate; under sur-
face subnecent, metasternum rufous, at tip
length 11.5 - 13.25 mm

Habitat: Iowa City (Nixham); Ames (Osborn).

Buffalo, N. Y. (Kernech); Cincinnati, O. (Dury); Phila.
ade, A. B. (Schaupp); Southern States (Leconte); St. Louis, Mo. (Summers).


Heur. Amer. Lyce. IV. 203. 1848.


cephalotes f (nee Dej.) Heur. Amer. Lyce. IV. 205. 1848.


viridie leci.


159. Brachypterus medius Bar.  

Testaceus, elytra dull reddish purple, absolutely and broadly striated, antennae fuscosus.

Body pale ferrugineus or testaceus with very short, decumbent, pale ochraceus hair. Head with rugged impression near the antennae. Two first joints and base of the third joint of the antennae testaceus, remaining ones fuscosus. Anterior angles of the thorax obtuse, rounded, dive very coming with deep medial and submarginal impressed lines. Elytra somewhat polished.


ed, reddish purple, with a few young cobaltic and shallow striae. Feet ferrugineous, body beneath dark.


Found under stones.

Length 4.5-1.25 mm.

Habitat. Iowa City (Hickham), Ft. Madison, la.

Paciens, A. F. (Smith); Detroit, Mich. (Hubbard and Dechay); Milwaukee, Wis. (Rantzenburg); St. Louis, Mo.

Sammone, Provo, Utah, and Portland, Eng. (Hickham).


Carrie Corr. 346, 1869


160. Brachynyx conformis Desj.

Ferrugineus; thorax oblongo, subovato, anguli postici acute, prominulis; elytris subcostatis, cupressis; antennam in articulo secundo, tenui suntque subcommissuris.

Long. 2.4, 3.5 lignes. Larg. 1.12 lignes.

Il ressemble par la forme au Pteroglyphe, mais il est
ordinairement beaucoup plus petit. Le second, le troisième et le quatrième articles des antennae sont presque entièrement d'une bonne moitié. Le corselet est à peu près de la même forme que celui de Perplexus, mais les angles postérieurs sont saillants et assez saillantes, comme dans le Tenebrio et le Cordicollis. Les elytres sont aussi à peu près la même forme, mais les côtés élevés sont plus saillants. De même du corps et les pattes, sont à peu près comme dans le Perplexus. Il différe du Cordicollis par les antennae, par le corselet moins cordiforme, moins large et moins saillant sur le côté antérieurement, et par les elytres, qui sont moins large antérieurement. "Dép. It. Eeu. V. 427, no. 67, 1831.

Head, thorax, base of antennae, and legs ferrugineous. Elytra, purplish, connected with short decumbent golden hairs. Head vinyors around the eyes, a few punctures behind the eyes, vinyors smooth, first two joints of the antennae, and base of the third ferrugineous, the rest darker, thorax a little broader than long, sides recuate in front, sinuate posteriorly, margin moderate, rounded, hind angle
acute, disc convex, median line entire, surface sparsely punctured, and finely pubescent; elytra hardly ridged, toward apex, tip obliquely truncate, terminal angles rounded; disc moderately convex, very feebly costate, under surface concave, pubescent.

Length 7.0-7.8 mm.

Habitat: Iowa City (Hickham).

Buffalo, N.Y. (Peneche); Palisades, N.J. (Schauhrb.); Indiana (Blatchley); Detroit, Mich. (Hubbard and Schwarz); Milwaukee, Wis. (Panterby); Texas, S. (Hues); Colorado (Ulke).

Abiquiu, N.M. (Hickham).

B. conformis, Dy, Sp. Icon. 427, no. 67, 1831.


Brachinus ferrugineus Fab.

"B. ferrugineus, elytra nigro-virideus."

Tab. 61, 214, no. 11, 1801.

Head and thorax ferrugineous, elytra bluish or purplish black, covered with fine decumbent pubescence; head
Suppose around the eyes, a few punctures behind them.

Waxy smooth, front longitudinally impressed each side near the base of the antennae, four basal joints of antennae ferruginous, the rest darker; thorax longer than broad, strongly carinate in front, carinate posteriorly, margin recurved, hind angles acute. Prominent, side slightly convex, surface finely punctured, anterior, posterior and dorsal lines distinct; elytra costate, irregularly but finely punctured, humeral angles distinct, tip not so, obliquely truncate; abdomen ferruginous with darker sides.

Length 11-13 mm.

Habitat: Iowa City (Hickham).

St. Jerome, Ill. (Carrere); Sherrard, Ill. (Feltit); Kansas City (Knox); Buffalo, N. Y. (Paine); St. Louis, Mo. (Schaeffer); Caldwell, N. J. (Grave); Cincinnati, O. (Dury); Detroit, Mich. (Hubbard and Schwarz); St. Louis, Mo. (Cummace); East Kansas (Popovit).
Tribe 18. Ophiocampinae.

Head not narrowed, behind the eyes to a neck, one supraorbital setigerous suture.clypeus more or less prolonged between the mandibles, often without the lateral seta. Eye oval, moderately prominent. Labrum transverse, truncate or emarginate, with three, four, or six setae in front. Mandibles fully arcuate, without setigerous suture externally. Maxillae slender, hooked at tip, ciliate, or spinose within, the outer lobe usually slender, uniciliate (except in Galleeria); the palp moderately long, the terminal joint variable in form. Mentum broad, usually emarginate, and toothed, sometimes
freely bisinuate in front (Euleius), or even almost truncate (Brachylophus), the basal suture usually distinct; legs moderately prominent, usually free at tip; and frons, the paraglucous membranous, more or less free at tip, longer or not than the legs, elongate and slender in Amoragloceus, and ciliate within; palpi moderate in length, the terminal joint variable, the penultimate bis or plurisetae, or even without setae. Protergum slender, rarely slightly compressed (Euleius), arising under a slight frontal ridge, three basal joints glabrous. Thorax variable in form, the setae of the margin either slender or entirely wanting. Body not pedunculate, scutellum distinct. Elytra margined at base, sides narrowly inflexed, margin interrupted posteriorly and with a distinct interval. Plica, surface striate, without dorsal punctures. Posttergum prominent at tip, but not prolonged. Proteroventral rather widely separating the coxae, ground in front, the epines narrow. Metaeternal epinesia distinct, posterior coxae contiguous. Legs moderate, middle and posterior tibiae
flely spinulose externally, the anterior moderately broad, a few short spines at the outer apical angle, within deeply emarginate, the inner spine at the angle of the emargination. Vesi slender, claws simple.

The males have three or four points of the anterior tarsi dilated, and deeply spongy beneath.

The tribe is divided into two groups:—

Eight stria of the elytra with its obscure punctures distinct from the margin, the ninth stria distinct. Eyes regular in outline, not truncate behind.

*Ehlaeonii.*

Eighth stria very close to the margin, the ninth indistinct. Eyes truncate behind.

*Podcer.*

Group *Ehlaenii.*

Mentum with distinct lateral lobes.

Toothed in the bottom of the emargination.

*Ehlaenii.*

Not toothed.

*Mentum truncate in front.*

*Gnathocerus.*

*Brachylophus.*
group. Podex.

All tarsi pubescent beneath, anterior tarsi of male with
four joints not widely dilated; elytra with a setigerous
one puncture each side; labrum retracted.

Schedroæpicus Waterhouse.

Obloniæns Dorn. Exg. 5 & Pl. 11.

A. Middle tibiae of 3 without pubescent space at tip.
Third joint of antennæ not longer than the fourth
(except in longistipes).

a. Abdomen unsculptured, and claviform.

b. Thorax as broad at base as the elytra, sides
not sinuate, basal impressions very feeble,
surface densely punctured. tormenticrus Say.
c. Abdomen sparsely punctured, and pubescent
over the entire surface.

2. Prosternum not margined at tip, thorax
not sinuate.

d. Thorax with coarse punctures, very
irregularly disposed. legæ black.
fully cuneate.

i. Thorax equally punctured. 

 Epipleurae dark.

ii. Intervals finely muriate.

iii. 

iv. 

v. 

vi. 

vii. 

viii. 

ix. 

x. 

xi. 

xii. 

xiii. 

xiv. 

xv. 

xvi. 

xvii. 

xviii. 

xix. 

xx. 

xxi. 

xxii. 

tricolor Day.

B. Middle tibia of 3 with a glabrous space near the tip. Third joint of antennae longer than fourth.
a. Thoracic epipleura narrow, oblique, or nearly horizontal, thorax acutely margined.

b. Abdomen either smooth at middle or over its entire surface.

c. Abdomen punctured at sides only. Anterior funnels of 8 subangular at base.


dd. Abdomen sparsely punctured at middle and more densely at sides.

e. Metaxternal epipleura short, outer side shorter than anterior.

f. Thorax narrows at base than
ELYTRA
3. Male with anterior femora
4. Subangular, at base.
5. Thorax as long as

6. Wide, sides distinctly

7. Sinuate, rustic.
8. Thorax wider than


11. Male with posterior femora
12. Simple, sides of thorax
13. Scarcely sinuate.

15. Metasternal episternal long, outside
16. Longer than the scutellum.
17. Male with anterior femora
18. Toothed at base.
19. Stricollisoth.
20. Male with anterior femora sudden.
22. Thorax
23. Distinctly sinuate.
tarsi, femora. erythropus strum.

vi. Male with simple femora, legs tarses, thorax, densely punctate, distinctly broader at base than apex, moderately or not sinuate. Color green, or blue. Summit Fort.

162. Chlorus erythropus Linn. (Fig. 15, Pl. xxii).

Corpolo nigro, antennae pedibusque rufis, elytris punctato striatis, rufatis.

Elytra apicato duoque major. Caput cornucone, nitidum, notis punctato, antennis, palpis labroque rufis. Thorax latitudine paullo longior, cornucone, laticine, obtusa rotundatis, free rufis, termites marginationis punctata, carinulatis, linea longitudinali sinuque tenuissima impressa. Coleoptera, basi thorace duoque free latiora, et illo plus duoque longiora, 


Body breadth black, abdomen black with a faint tinge of
Blue or purple, legs pale, tarsi fuscous, head rugose at sides, punctured behind, middle smooth; antennae brown, three basal joints fuscous, palpi yellow; thorax as long as broad, base broader than apex, sides moderately arcuate in front, sinuate posteriorly, margin narrow, recurved. Surface densely and rather coarsely punctured, dorsal line impressed in the middle, basal impressions long, moderately deep; elytra with five, finely punctured striae, intervals flat, and rather densely punctured; prosternum not margined at tips, coarsely but sparingly punctured in front, episternum coarsely punctured, metasternal episternum long, moderately densely punctured; abdomen more densely punctured at sides than in the middle.

Length 21-35 mm.

Habitat: Independence, Masonville, Iowa City (Hickham); Denver (Osborn).

Atlantic City, N.J. (Huygel); Buffalo, N.Y. (Peirce); Ohio (Horn); Florida (Schwaz); Louisiana (Horn); Texas (Lecoute); Lawrence, Kan. (Popenoe); Nebraska (Horn); St. Louis, Mo. (Summers); Milwaukee, Wis. (Rauterberg); Grand Haven.
163. *Balteria sericea* Forst.

*Sericea, sericea, capitae, thorace, et elytris viridi-nitidulis, antennis pedibusque natis.*


Body green, beneath black, with numerous short hairs; head polished, coarsely punctured, smooth on vertex and in front; antennae and palpi palesque, frequently with the outer joints darker, labrum and mandible reddish; thorax varies greatly in form, being nearly quadrate at times or as broad as in laticollis, densely punctured, polished, posterior lateral edge rectilinear or very slightly cinereate, dorsal and basal lines very
distinct; elytra not wider behind the middle, striate finely and with rather fine, distant punctures, varying but little in size, from base to apex, intervals flat, densely and finely punctured; prothorax scarcely margined at tip, in front coarsely and densely punctured, epistome coarsely, but less densely punctured, metaepisternum coarsely and densely punctured; abdomen more densely punctured at sides than in the middle, legs pale.

The anterior femora of the male, although relatively narrowed, are hardly be called subangulate.

The color of the upper surface is subject to great variation. Specimens from the East of the Rocky Mts. and those from Oregon are bright green, as we go farther south they become darker.

length: 1.2-1.7 mm.

Habitat: Iowa City (Mitchum); Davenport, Monticello (Petrunkevitch). Common.

St. Jerome, Que. (Huston); Unna by, Out. (Petit); London, Ont. (Saunders); Sparrow Lake, Ont. (Carnelton); Maine
(Secte); Canons, A. R. (Nord); Green Notes (Hayward, and Savage); Buffalo, 39 (Blicher); Long Isl. (Schaup); Palisades, P. Lee, Drake Hill, Ridgwood, A. J. (Schaup); Penn. (Say); Cincinnati, O. (Dury); Marquette, Detroit. Mich. (Hodland and Schwarz); Milwaukee, Wis. (Bauer); Bayfield, Wis. (Vicklau); St. Louis, Mo. (Demere); Kansas (Peppeau); Denver, Colo. (Uhler); Alamosa, Colo. (Decate); Texas (de); State, Ariz. Ave, Idaho, The Dalles, Ore., North Yakima, Yakima Falls, Wash., Provo, Utah, Albuquerque, N. Mex. (Vicklau).


foetens. Furt. Sue. II. 461.


114. Calosoma laticollis Say.

Dark violaceous, elytra black, antennae and feet rufous; head punctured; thorax at base as broad as the elytra.

Body hairy, deep violaceous, glossed with green, head black, head punctured; antennae reddish brown, face and palpi rufous, labrum truncate, ferrugineous, thorax truncate, quadrate, narrowed before, base not contracted, as broad as the elytra, densely punctured, elytra with numerous, minute punctures, striae with small punctures, intersticial space perfectly flat; feet rufous; abdomen with small punctures.


Very much like difficis, but differs in having a broader thorax, very feebly eminate at the base, striae densely punctured, and more convex (fig. 6-6c. Pl. xv).

Length 12.5-16.5 mm.

Habitat: Iowa City (Ishakham), Davenport (Putnam).
Buffalo, A. Y. (Poiiciche); Long Sel. (Schaupe); Snake Bill, A. J. (Lycell); Florida (Schoeny); Milwaukee, Wis. (Rautenberg); St. Louis, Mo. (Dumortier); Carolina Kauan (Popescu); Nw Orleans, La. (Townsend); Tex. Mbg. (Stor).


refière Dep. Soc. Lus. II 331 1826.

loincollis Dep. Soc. Lus. IV 432 1842.


186. Chloriinae diffinie Chaud.

"Parfaitement distinct des Puijepe. Il diffère par sa
tête un peu plus longue, plus large entre les yeux, qui
sont presque aplatie dans les deux sexes, tandis qu'elles
sont assez fortement construites dans le Pujipe; les au-
ternees sont plus grêles, plus affilées vers l'extrémité, le
troisième article est encore plus allongé, le corset est.
Beneath black, tinge pale, sabour similar tinged with green, elytra reddish, head coarsely punctured, smooth at middle and in front; antennae brown, three basal joints paler; thorax nearly as long as wide, base a little wider than apex, sides in front moderately arcuate, behind, slightly converging, not sinuate, disc moderately convex, densely and coarsely punctured;
Elytra with fine striae, the punctures rather distant, intervals flat, moderately densely punctulate; proterum marginated at tip, sides fuscous, abdomen coarsely punctured.

Length. 12.0 - 15 mm.

Habitat. Iowa City, Waukesha, Milwaukee, Ill., (Pander, Ill.).


Korn, Bull. Phil. Soc. 1881.


166. Phalacrine platydeum, Chaud.

Cette espèce qui se rapproche de la précédente par ses yeux aplatis, semble en différer par plusieurs caractères essentiels. Sa tête est encombrée plus large, le cornet tout aussi allongé, mais la base est plus large, le bord antérieur plus échancré, la côte moins arrondie, les
angles postérieurs plus ronde, le dessus très peu convexe; les impressions basales sont très peu marquées, celles transversales à peine sensibles, l'apophyse comprise entre l'impression basale et l'angle postérieur est tout-à-fait plane. Les elytries sont plus larges, encore plus aplatie, surtout sur la base, le bord antérieur de chacune est plus profondément échancré; l'extrémité des rauchues est moins arrondie; la subrecreuse est plus dense et plus enroulée. Les costules sont à peu près les mêmes, mais on remarque un reflet métallique sur les elytries, et les huit articles extérieurs des rauchues sont museaux. Chaudo. Bull. Acad. III. 380. 1856.

Body beneath black, lage slate, a bron violet blue, elytra slightly darker; head coarcesily punctured posteriorly, and around the eyes; antennae dark, basal jointe more; thorax broader than long, base broader than apex, sides in front freely arcuate. Posteriorly slightly convergent but not arcuate, basal impressions feeble, surface coarse, and densely punctured; elytra finely striate, striae distinctly punctured near the base,
becoming fins toward apex, intervals flat, moderately densely and finely punctured, apically punctate; posterior vein marginated at tip; sides and abdomen coarsely punctured.

Length, 14.5 mm.

Habitat. Iowa City, Masonville (Ishkam), Avoo (Osborn).

Linn. Wis. (Ishkam); Milwaukee, Wis. (Rauterberg);
Illinois (Ishkam); Manhattan, Kans. (Ishkam); Lincoln,
Nebr. (Ishkam); Indian Territory, S. Mexico (Ishkam).


167. Chlorocles acetanea Day

Green, cupreous; elytra purple black, acetanine and jet miform; head punctured.

Body greenish cupreous; breast black, with many short numerous hairs; head polished, punctured; acetanine and palpi miform, shaded towards the tips; labrum fivel
regious; mandibles, blackish; thorax as long or rather longer than broad, dilated in the middle, posterior lateral edge rectilinear or slightly excavated, densely punctured, polished, dorsal line very distinct, base narrower than the elytra; elytra dark purple, opaque, perceptibly a little dilated behind the middle, with very minute, numerous punctures, striate, striae a little obsolete, punctured, interstitial lines depressed, a little convex; propectus and postpectus punctured, front & sides, abdomen minutely punctured." Say, Trans. Am. Phil. Soc. 11. 62, 1833.

The anterior femora of the male are rather strongly subangulate near the base. The thorax of the female is usually broader than that of the male.

The short meta-tergal episterna and subangulate male femora will readily distinguish this species from any with which it may be confounded.

Length, 16-17 mm.

Habitat: Iowa City (Wickham).

Green Nature (Hayward and Savage); Buffalo, N. Y.; (Reiche); New York City (Southwick); Long Del (Schauff).
Strawb., Madison, AT. J. (Smith); Penn. (Jay); Enterprise.
Pal. (Schwartz); Columbusians Co. O. (Bell and Bombazer).
St. Louis, Wis. (Summner); Eastern Indiana (Pokesh).


"Catalpae, caput thoracique cordato, subauquato,
functato, niviis subauritis; albiore sublunatis, viridibus;
striato, punctato, interstitiis aubilacens, granulatis;
cautum pedis caecum flavum, exo feregmine.

Long. 8 lignes. Larg. 3,5 lignes.

Il est plus grand que le Catalpae, et il est proportion
nellement plus allongé. La tête est en peu plus petite, mais
ont un peu tourné et légèrement inflexente; elle a quel-
ques rides peu marquées qui se confondent avec les pointes, une légère impression transversale derrière les yeux et deux enfoncements peu marqués entre les antennes. La bise supérieure, le palpe et la maternite sont d'une jaisée légèrement ferrugineux. Les yeux sont arrondies, brunâtres et trécaillants. Le corollet est de la couleur de la tête et couvert d'une soie durant assez serré, une jaisée; il est presque le double plus large que la tête, même long que large et un peu en cour; il est presque fortement pourvu, surtout vers les bords et dans son milieu; la ligne longitudinale du milieu est bien marquée, et il a deux impressions transversales peu distinctes, l'une près du bord antérieur, l'autre près de la base et une autre longitudinale bien marquée de chaque côté près de l'angle postérieur; le bord antérieur est un peu échancré; les bords latéraux sont un peu rebordés; la base est coupée carrément, et les angles postérieurs sont très légèrement arrondis et presque obsties. L'œil d'un quater, linéaire et triangulaire, les élytres sont vertes et couvertes d'une petite cour et serré.
leurs couleurs... elles sont plus larges que le corselet, plus allongées que dans presque toutes les autres espèces de ce genre, presque parallèles et très légèrement incurvées vers l'extrémité; elles ont des stries peu renforcées et assez fortement piquetées, et les intervalles sont légèrement granulés. Le dessus du corps est d'une broumoirée; le dernier anneaux de l'abdomen est d'une couleur ferrugineuse. Les pattes sont d'une jaune un peu ferrugineux. 

Dej. Sp. Leal II. 348. no. 46. 1826.

Bright green, body breach black, legs pale, last median and margined of the two preceding segments testaceous; head rather coarsely punctured behind the eyes, vertex nearly smooth; antennae and palpi pale, tip darker; thorax broader than long, widest at middle, sides arcuate, gradually narrowed to base, not sinuate posteriorly; hind angles obtuse, disc coarsely and sparsely punctured, more coarsely so at apex and base; lytra with rounded humeri, striae finely punctured, intervals moderately densely and finely punctured, sparsely pubescent; prosternum margined.
at tip, coarsely punctured in front. Episterna moderately densely and finely punctured; metaternal episterna long, margined, and moderately densely punctured; abdomen sparsely punctured and pubescent at sides, nearly smooth in the middle.

Length: 14.17 mm.

Habitat: Independence, Iowa City (Hickman), Davenport (Putnam).

Buffalo, N.Y. (Reiche); Caldwell, A.J. (Fiske); Enterprise, Fla. (Schmaltz); Cincinnati, O. (Roy); Miamis-kee, Wis. (Rantenberg); St. Louis, Mo. (Summerr); Colo. to Texas (Fiske).


169. *Heliogale californicus* Say:

"Green, polished, breadth three times; feel scale, head.
incipuctured; thorax at base narrower than the elytra, subcordate.

Body green, polished, breadth ferrigene-black; head incisculated; antennae brownish, paler at base; labrum truncate, pale ferrigenous; thorax dilated before the middle, contracted behind, dorsal lines and base punctured; disc each side incisculated; scutellum purplish; elytra green, polished, striae indented, obtuse, punctures distinct. Intervals not equal to their length and becoming obsolete towards the tip, intersticial lines convex, with very distinct punctures; feet pale, joints somewhat darker; tail pale.

Say Frane. Am. Phil. Soc. 11. 6. 1823.

Prosternum with a very feeble trace of marginal line at tip, in front sparsely punctured. Abdomen sparsely punctured; and pubescent at sides, smooth in the middle; last segment testaceous.

The anterior femora of male rare distinctly subangulate at basal third.

This is the only species in our fauna in which
the elytra, when deprived of pruinosity, are as shining as the thorax.

Length. 12-14 mm.

Habitat. Iowa City (Nick-ham); Kneearine (Shirick);

Ames (Oleary).

Sanibel (Petit); Buffalo. N. Y. (Reinecke); Cincinai (Buff); Milwaukee, Wis. (Reuterberg); Kansas

(Cay); Eastern Kansas (Popenor); Colorado, La., A. Mex. (Bore).


Brandt, Bull. Mus. 11, 57, 1856.

170. Chlamisus tricolor Dep.

Oxbooee; capite labei thoraceque rovo, antice postice.

que truncato, punctatissimo, nivei serius subrepriis;

dystic cyanu-violaceo, striato, punctatiss., interstitiis sub-

pelisine granulatis, antecie pedi busque rufe ferrugineis.
long 5\(\frac{1}{2}\) à 6 lignes. Larg. 2\(\frac{1}{4}\) à 2\(\frac{1}{2}\) lignes.

Il ressemble beaucoup au *Aemoralis*. Il est à peu près de la même grandeur, et quelquefois un peu plus grand. La tête est d’un vert bronzé brillant avec un léger reflet cuivré. Le coxyle est de la couleur de la tête. Un durt dont il est couvert est un peu moins serré que dans le *Aemoralis*; il est un peu plus large antérieurement, un peu arrondi sur les côtés et coupé carrément antérieurement et postérieurement; il est couvert de pointes enfouies très serrées, un peu plus grosses et plus distinctes que dans le *Aemoralis*, mais moins cependant que dans le *Cobaltium*. Les élytres, le dessous du corps et les pattes sont communs dans le *Aemoralis*. Dej. 5\(\frac{1}{2}\).Rev. ii. 334. no. 35. 1826.

Head and thorax green, varying to blue, shining, elytra black tinged with blue or purple; head green, slightly bronzed, shining, unpunctured; labrum truncate, rough, antennae and palpi testaceous, dark brown at tips, third joint of the former equal to fourth; thorax broader than long, narrower at apex than at
lace, sides incrassate, freely incrassate posteriorly, hind angles acute not prominent, basal impressions fine, moderately deep, surface rather coarsely and densely punctured, median line distinct; elytra with moderately deep, finely punctured striae, intervals flat, finely and moderately densely but very indistinctly punctured, pubescence very short; prothorax broad coarsely but sparsely punctured, proternum margined at tip; abdomen sparsely punctured and pubescent; legs ferruginous.

Length: 11.5-15 mm.

Habitat: Iowa City (Wickham); Colfax, Boone (Dwight); St. Jerome, Ida. (Hansen); Gunnison, Co. (Petit); London, Ont. (Saunders); Queen Anne (Baynard and Savage); Buffalo, N. Y. (Rinecke); Palisades, N. J. (Schaeffer); Florida (Schwarz); Cincinnati, O. (Dury); Detroit, Mich. (Huntard and Schwarz); Milwaukee, Wis. (Rauterberg); St. Louis, Mo. (Summner); Lawrence, Kan. (Popescu); Glendive, Mont. (Albuquerque, N. Mex. (Wickham); Texas, Tucson, Ariz.; San Diego, Cal. (Leconte); Mexico (Say).


quadricollis M'g. Trans. Ent. Soc. IV, 22. 1884.


Chlaenius brunilabris Dee.

Beneath black, legs pale, mouth head and thorax green; elytra fleecy black; head brilliant green, minutely punctulate, labrum feebly emarginate, palpi and antennae pale yellow; thorax very little wider than long, sides moderately arcuate, feebly emarginate posteriorly, hind angles acute not prominent, disc moderately convex, basal impressions linear, moderate, deep, median line finely impressed, surface corneous and moderately densely punctured and pubescent;
elytra with finely punctured striae, intervals flat, finely
and indistinctly punctured and punctate; proter-
num margined at tips, coarsely punctured in front,
episternum coarsely but rather indistinctly punctured,
abdomen as in bicolor Day

length: 10 - 13 mm

Anterior femora of male simple

Habitat: Iowa (June).

Richland, and Lawrence Coe, Ill. (June); Texas, New
Mexico and Colorado (June).


see Proc. Acad. Nat. Sci. 1856, 27


172. Schlaefferi pennsylvanicus Day.

"Green, polished, beneath picture; elytra blackish;
feet rufous; head incunctured; interstitial lines of elytra somewhat convex.

Body green, polished; elytra dark purple, with an obscure greenish margin; base dark brown, rufous at base; labrum ferrugineous, slightly incuneculated; thorax dilated in the middle, punctured, somewhat contracted behind, edge slightly excurred near the base; elytra with numerous, minute punctures, striae with approximate punctures which are obsolete towards the tip, interstitial lines convex; feet rufous.


Resembles Similabris in form and color but the intervals of the elytra are moderately densely minutely punctured, and the punctures of the striae are very distinct.

Found under stones in moist places.

Length: 10-11 mm.

Habitat: Iowa City (Blackham); Davenport (Putnam).

St. Jerome, Que. (Hareau); Sparrow Lake, Ont. (Hamilton).
Erinela, Ont. (Petit,); Buffalo, A. Y. (Rineck); Westville, A. (Siebeck); Penticton (Say); Enterprise, Tampa, Fla. (Shriver); Cincinnati, O. (Dury); Detroit, Escanaba, Mich. (Bufford and Schwarz); Bayfield, Wis. (Wicklame); Milwaukee, Wis. (Pausterburg); St. Louis, Mo. (Summer); Kansas City, Mo. (Pope); Alabama, Colo. (Sceony); Great Salt Lake, Utah (Wad), Portland, Ore., Tucson, Ariz. (Wicklame); California (Born).


subsp. Harris, A. Eng. Trans. II. 1038. 1838. 189. 1832.


173. Calamaria impressiomei Say.

Dark green; elytra black; antennae and feet rufescent; head punctured; thorax at base as broad as the
elytra.

Body dark green, beneath black; elytra black; head green, polished, infuscated; labrum emarginate, ferrugineous; thorax obscure green, transverse quadrate, punctured, punctures minute, base as broad as the elytra; elytra black, punctures numerous, minute, striae with distinct punctures; feet none.

Say, Trans. Am. Phil. Soc. II. 64, 1834.

Thorax narrower, at apex than at base, sides moderately arcuate with a narrow red margin, hind angle obtuse, surface subopaque, sparsely pubescent, median and basal lines finely impressed. The anterior femora of the male are simple.

Length: 13 - 15.5 mm.

Habitat. Darmsort (Putnam).

St. Jerome, Que. (Tanneau); Ottawa, Can. (Harrington); S. Benoit, Ont. (Pettit); Caldwell, N. J. (Grant); Cincinnati, O. (Dury); Grand Harbor, Escanaba, Mich (Hubbard and Schwartz); Milwaukee, Wis. (Pautenburg); St. Louis, Mo. (Summers); Tpeka, Kans. (Poterio); Texas (Dow).
174 *Calasineus niger* Rand.  
Black, rarely with a faint brown tinge; head smooth, with a faint vertical puncture; labium smooth. antennae black; palpi slender; thorax broader than long, apex narrower than base, sides regularly arcuate, margin with a thickened edge, base slightly narrowed, hind angles obtuse, surface with coarse punctures at the sides and base, along the median line and in the continuation of the basal impressions, interspaces smooth and moderately convex; elytra with finely punctured striae, intervals moderately convex and moderately densely punctured, sparsely clothed with short fuscous pubescence with a few yellowish hairs intermixed; prothorax breast, metasternal suture
ne and abdomen sparsely punctured; metacentral episterna margined and abdomen pubescent.

Anterior femora of male simple.

Length: 12.5 mm.

Habitat: Iowa City (Nickham), Rare!

Syracuse, N.Y. (Pettit); Palisades, A.J. (Schauff);
Marquette, Detroit, Mich. (Hubbard and Schwarz);
Milwaukee, Wis. (Rauterburg), St. Louis, Mo. (Sunnemer);
Louisiana, Florida (Corne).


175. Chlaenium purpuricollis Rand.

Color black beneath, dark violet blue above, legs black; form similar to common true fly, but much smaller; head nearly smooth, shining, a very few
Functureae around the eye; antennae and palpi black; basal joints of the former pale, the latter distinctly dilated and truncate at tip; thorax gradually broader from base to apex, hind angles nearly rectangular, surface coarsely punctured, punctures arranged at the sides, basal impressions and median line, intervening spaces more convex and smoother; elytra not broader at base than the thorax, basal line angular at humeri, surface with fine, finely and distinctly punctured strie, interstriae with moderately dense, rather coarse, simple punctures; prosternum sparsely punctured in front, episternum sparsely punctured; metasternal episternum elongate, surface eriulate and with a marginal impressed line; abdomen sparsely punctured and transparent.

Anterior femora of male simple.

Length. 1 mm.

Habitat. Iowa City (Hickham), Ames (Osborn). Rare. New York, New Jersey (Horn); Milwaukee, Wis. (Rauterberg); Bismarck, S. Dak. (Hickham), Lawrence, Kan.
Drasky cupreous, opaque; elytra and feet black.

Head unpunctured, dark cupreous; antennae black; two basal joints reunio; labrum fuscous; palpi black; thorax cupreous, with numerous, green confluent punctures, as broad as the elytra at base, and gradually contracting by a curved line to the head; elytra greenish black, striate, striate distinctly punctured; pectoral and postpectoral black, punctured; abdomen black. Say Race. Am. Phil. Soc. III. 60. 1833.

Proternum margined at tip and longitudinaly impressed in front in 8, prosternal and meta-

sternal episterna coarsely punctured, the latter
elongate, margined; abdomen almost entirely smooth, not pubescent.

Anterior femora of male simple.

Length: 13-15 mm.

Habitat: Iowa City (Nicolai), Ames (Osborn), Louisa Co. (Elliott).

St. Jerome, Wis. (Caneve); Eyrely, But. (Petit); Green Bay (Hayward and Savage); Buffalo, N. Y. (Peirce); New York City (Schauff); Newark, N. J. (Smith); Penn. (Day); Georgia (DeArte); Cincinnati; O. (Dury); Lansing, Mich. (Cook); Escanaba, Mich. (Hubbard and Schwanz); Bayfield, Wis. (Nicolai); Milwaukee, Wis. (Putnam); St. Louis, Mo. (Summers); Kansas (Kohn, Reichen).


Amoroglossa Brand.

This genus differs from Chlaenimia by the entire absence of an incisive tooth, the excavation being entirely filled with the basal membranous expansion of the legula. The mandibles are also more elongate and less arcuate. (Fig. 115, Pl. xii.).

In color the species all very nearly agree, head and thorax green, more or less bronzed, elytra black with brown pubescence, legs pale.

The two Iowa species are recognized in the following way:

Thorax broader at base than apex, sides not at all sinuate posteriorly, hind angles obtuse; labrum moderately emarginate, last joint of maxillary palpi glabrous.

Thorax narrower at base than apex, sides very distinctly sinuate, hind angles acute; labrum deeply
Emarginate, palpi slightly pubescent. Fusilloa day.

177. Brown-glossy emarginatus day. (Fig. 10, Pl. xxx.)

Body emarginate; elytra purple-black; antennae and feet rufous; head punctured; labium deeply emarginate.

Body, green tinged with emarginate, with very short numerous hairs; head polished, punctured; antennae and palpi rufous; labium profoundly and obtusely emarginate, ferruginous; thorax transverse quadrangle, dilated in the middle, polished, densely punctured, lateral edge curved regularly to the hind, angles, dorsal and basal lines very distinct, base nearly equal to the base of the elytra; elytra dark purple, opaque, with numerous very minute punctures, striate, punctured, interstitial line depressed; pectus and postpectus punctured; feet rufous; abdomen minutely punctured. Day Iowa City, Iowa, Phil. Dec. 21, 1828.

Length. 11-13 mm.

Habitat. Iowa City (Hickham), Warren (Putnam).
Agnes (Osborn).

St. Jerome, Que. (Hawen); Sparrow Lake, Ont.; Hamilton;
Simcoe, Ont. (Pettit); Narrows, N. B. (Fred); Long Del. (Schafer);
Tampa, Fla. (Schwarz); Kentucky (Know); Cincinnati, O.
(Sarge); Decatur, Ill. (G. M.); N. Y. (Hubbard and
Schwarz); Milwaukee, Wis. (Rautenberg); St. Louis, Mo.
(Schumers); Eastern Kansas (Popescu).

Lachneine emarginatus day. Trans. Am. Phil. Soc. II.
63. 1823.


VIII. 279, 1875.

York, Bull Ent. Soc. 1875.

178. Anomoglossus fuscellus Say.

"Green, polished; elytra purple; antennae and feet
violet; head punctured; labrum deeply emarginate.
Body with very short numerous hairs; head green,
Polished, punctured; antennae and tarsi reflexed, brownish towards the tips; labrum pierced, deeply emarginate; thorax with large punctures; a little contracted behind. Posterior lateral edge somewhat excised, dorsal line not deeply depressed, basal cone indented; elytra purple.

Interstital lines convex, with distinct punctures, strie with the punctures not larger than those of the interstitial lines, feet reflexed. Say, Trans. Am. Phil. Soc. II. 65, 1833.

Length: 7.5 - 8.5 mm.

Habitat: Iowa City (Nicolai); Warren (Indiana); Ames (Osborn).

Mass. (Horn); Buffalo, A. Y. (Reineche); Longdel (Schaffer); Cincinnati, O. (Dury); Indiana (Blatchley); Port Huron; Elgin; Michigan (E. Hubbard and Schuyler); Milwaukee; Ill. (Rautenberg); Illinois (Horn); St. Louis, Mo. (Summers); Eastern Kansas (Popenoe).


Chlaemius elegansculus Depr. Sen. 1827.


Brachylobus Leféb.

This genus differs from *Chlaemius* and *Anomo- 
glossus* in the shape of the mentum which is trans- 
murally transpyridal, much narrower anteriorly, scarcely 
at all emarginate in front, the sides very obliquely 
truncated. Mentum tooth entirely absent.

This mentum is so very peculiar that once seen 
it will be immediately recognized. (Figs. 179, Pl. XIII.)

The genus has but one species in Iowa.

179. *Brachylobus* lithophilus Say.

Green, breast black; head punctured, feet testaceous,

cuticles free; conus paler at base.

Body green, with very short numerous hairs, breast 
black; head punctured; front smooth; cuticles free-

cone; base and palpi testaceous, the latter dusky at 
tip; labrum and mandibles likewise black; thorax
wider somewhat behind the middle, transverse, quadrate, and lateral edge regularly equally curved, posterior angle slightly rounded, surface densely punctured. Juncature large, dorsal line acute, posterior ones dilated, elytra villous, minutely punctured, striae punctured, interstital lines flat, punctate, and post-punctate with dilated glabrous punctures; feet recurved, with minute villous punctures.” Say, Trans. Amer. Phil. Soc. 11, 1828.

Length: 7.5 - 9.5 mm.

Habitat: Iowa City (Dickham); Ames (Osburn).
St. Jerome, Ia. (Camber); Sparrow Lake, Ont. (Hamilton).
Paliades, A. J. Long Is. (Schaups); Milwaukee, Wis.
(Caustenberg); Bayfield, Wis. (Dickham); Dakota (Horn).
Brookline, Kan. (Knaus); Garland, Colo. (Leoutz); Salida, Colo. (Dickham); Texas (Horn); North Yakeina, Wash. (Dickham).

Chlorine lithophilus Say, Trans. Amer. Phil. Soc. 11, 1828.


Horn, Trans. Amer. Ent. Soc. 11, 278, 1876.

Cone Bull, Pfl. Ent. Soc. 11, 29, 1881.


Lachnoceris dec. (Figs. 9, 92, Pl. 52.)

Corpus elongato-ellipticum, planum; mandibulae acuta, pronunciulae; labrum subquadraatum, antice leviter emarginatum; mentum medio fortiter dentatum; ligula, apice dilatata, truncata; palpi tenuiss, longissimul, articulo ultimo leviter ovali, non longior; tarsi tenuissimae, tarsi anteces minus tenuissimae, subline, denser pubescens, posteriores articulo primo elongato. 3o et 40 tarsi extremitas aequabilis, 2ndo longitudine intermedio; tarsi anteces minus articulis 4 medius dilatatis, quadratis, latitudine longioribus. 40 post. parum angustior; antennae tenuiss, filiformes. "Loc. Trans. Ann. Phil. Soc. X. 391, 1853.


Differs from the preceding genera by having the eighth stria of the elytra very close to the margin, the ninth indistinct, and the eyes truncate behind.

The genus has but one species.
Euchromecia Parallela Say.

Black; thoracic angles rusene; feet picene.

Body black, very slightly tinged with picene; head with but a slightly impressed joint between the antennae; antennae reddish brown, three basal joints honey yellow; palpi honey yellow; mandibles picene; thorax narrowed before, smooth, dorsal line distinct, not extending to the margins; basal line distinct, oblique; region of the posterior angles a little, but widely depressed, rusene or saquine, and by transmitted light it appears reticulated; sinjunctured; posterior angles rounded, but not obtusely so; greatest width a little behind the middle; elytra with the striae continued parallel to the tip, well impressed, minutely reticulated; interstitial spaces depressed, third with a single slight juncture on the posterior fifth from the base; beneath black; posterior angle of the male, epipleura and feet picene; anterior tarsi with four not widely dilated subquadrate joints, the fourth joint being as large as the third.
and call brevith with dense foliatae hairs; intermedial tarsi also somewhat dilated.


length. 10 — 10.5 mm.

Habitat. Homes, (Osborn).

Buffalo, N. Y. (Peirce); Long del. (Schauff); West.
ville, A. J. (Lieberk); Pennsylvania, Georgia (Koene); Ft. Capra,
Havana, fla. (Schwarz); New Orleans, la. (Tomson);
Detroit, Oscara, Mich. (Hubbard and Schwarz);
Milwaukee, Mich. (Rautenberg); Missouri (Koene).


Head often large, usually moderate, not narrowed to a
neck, with some supra-orbital seta. Eyes usually moderate
in size, margins were very convex, not distant beneath from
the mouth, sometimes horns small and distant.
Omphane slightly prolonged between the mandibles, with one
or two setigerous funicules near the apical margin. Labrum moderately prominent, truncate or emarginate, plurisetose in front. Mandibles stout, rarely (Elysium) prominent, acute at tip, and without setigerous funicule externally. Maxillae hooked at tip (except in Ellysium), although rather feebly in some genera (Micrura), the inner margin ciliate, the outer lobe usually slender as long as the inner lobe, but shorter in Ellysium, biarticulate, the terminal joint often longer than the first; the palpi moderate, the terminal joint slightly oval or subcylindrical, sometimes slightly pilose. Mentum broad, emarginate, with or without a median tooth, which is sometimes as long as the lobe (Micrura), ligula prominent, variable in form, the tip free (usually bistrone), and in most cases dilated. The paraglossae variable in form, always as long as the ligula, frequently longer, and in some often ciliate at tip; the palpi moderate in length, the terminal joint very longer, and very rarely equal to the preceding, which is plurisetose, except in Ellysium, when there are no setae. Antennae usually
slender, arising under a slight frontal ridge, the two basal joints glabrous, sometimes also the greater part of the third. Thorax variable in form, with lateral setae, but none in the hind angles. Body sometimes subpedunculate, scutellum distinct. Elytra usually margined at base, sides narrowly inflexed, the margin variable, but never with an internal plica, surface striate, often densely punctured, either subincisive or glabrous, with or without dorsal punctures. Prosternum not prolonged. Mesosternum separating the coxae, the spinicera very narrow. Metasternal spinicera distinct, the posterior coxae contiguous. Legs variable, often stout, and forcipul. The middle and posterior tibiae, often spinulose or even verruculate externally, the anterior with the outer apical angle spinulose or prolonged obtusely. The tarsi variable.

Sexual characters variable.

The tribe may be divided into three groups:

1. Anterior tarsi of male pilose, or spinulose beneath, usually feebly, sometimes not at all dilated.
2. Anterior tarsi of male dilated and hirsutely squamous.

3. Anterior tarsi of male freely spongy, translucent beneath.

Group 1. Dapti.

A. Mandible prominent, decussating. Body subglobulate.


B. Mandibles not prominent, at most feebly decussating. Body not pedunculate.

1. Outer rapical angle of anterior tibiae not prolonged.


cc. Mentum not toothed.

e. Posterior tarsi with the first joint a little
longer than the second, outer edge of middle tibiae rather flat, and with a double row of spines closely placed.

1. Eyes relatively large, very narrowly separated from the mouth, elytra with one dorsal puncture.

Agonoderus Maj.

2. Posterior tarsi with the first joint nearly as long as the next three. Middle tibiae with the spines closely spaced, in male arcuate, and serrate on the inner side.

3. Elytra small, three series of elytral punctures.

Dioecerus leu.

The sexual characters are not very well marked. The males have four joints of the anterior tarsi feebly dilated. In Crotatica the right mandible of the male has the basal portion which borders the elytra more elevated, while the upper edge in front of this is more depressed.
Group II. Carpalii.

1. Antennae with two glabrous joints only.
   a. Labial palpi with the terminal joint shorter than the preceding, the latter phricetone in front.

2. Anterior tarsi dilated in male only.
   e. First joint of hind tarsi not longer than the two following, elytra with at most one dorsal puncture. *Carpalus lat.*

3. First joint of hind tarsi equal to the next three, elytra with three series of dorsal punctures. *Selenophorus Dej.*

4a. Labial palpi with the terminal joint equal to or even a little longer than the preceding, which is bicetone only.

b. Penultimate joint of anterior and middle tarsi of male bicolobed, middle tarsi dilated. *Stenophorus Dej.*

c. Penultimate joint simply enarginate, middle tarsi not or feebly dilated.

d. Penultimate joint not toothed. *Carpalus lat.*
w. Mentum toothed.  Bradycellia Er.
B. Mentum with three joints glabrous.

1. Thorax with setigerous funicule in hind angle.

Mentum toothed.  Tachycellia Norow.

Group 3. Anisodactyla.

This group contains the genus Anisodactyla, the essential character of which is, the dilated tarsal joints of the male are spongy pubescent beneath. The elytra has more than one setigerous funicule at each angle.

Leopiane, fire.

Drunt tectaceae species found in moist places! The genre has but one species. (Fig. 1. & Pl. XI).

Leopiane inracassate Dej. (Fig. 11, Pl. XIV).

Convexe, tectaceae, thorace subquadrate elytraque plus minuens inferracate.

Long. 7 lignes, larg. 3 lignes.

Il ressemble au Leopiane par la forme et le couleur;
mais il est beaucoup plus grand, plus épais et plus couvert. D'une des individus que je possède est entièrement d'une poire taché d'un peu plus rougeâtre et plus foncé sur la tête et le corselet, un peu plus pâle sur les élytres. Dans le second le bord antérieur du corselet est d'une brun noirci, et cette couleur se prolonge le long de la ligne du milieu jusqu'à la base; les élytres ont une grande tache noirci dont les bords sont indéterminés, et qui s'étend à peu près depuis la première strie jusqu'à la sixième sans toucher à la base ni à l'extrémité. quoique je n'aie vu que deux individus de cette espèce, je prôsèmo que ses couleurs sont assez variables que celles du Ditattis, la tête est grosse, presque triangulaire, point rétrécie et presque refletée postérieurement, presque liée, avec une impression longitudinale assez marquée de chaque côté, entre les antennes. Les mandibules sont fortes et obtuses; leur extrémité est noirci et couverte de rides longitudinales assez fortement marquées. Les yeux sont noirci, assez petite, arrondis et peu
vaillante. Le corect est plus large que la tête, revient long
que large, assez court, presque carré, un peu miné près
de la base et assez conque; il est courut de rives trans-
versales ondulée, peu marquée, mais distincte dans
le milieu et presque entièrement effacée sur les bords;
la ligne longitudinale du milieu est peu marquée; il
a deux impressions transversales, l'une peu distincte
et en arc de cercle près du bord antérieur, l'autre
plus marquée et un peu minée près de la base; le
bord antérieur est légèrement échaudé; les angles
antérieurs sont presque arrondis; le côté est légère-
ment rebordé et assez fortement déprimé, surtout
vers les angles postérieurs; ceux-ci sont coupés presque
carrément; la base est très légèrement minée et presque
échaudée dans son milieu. L'écarce est assez
grand, triangulaire, et sa pointe dépasse à peine la
base des elytres. Celle-ci sont plus larges que coréct,
peu allongée, presque parallèle, assez fortement minée
près de l'extrémité et très conque; elles ont chacune
neuf étaires, et le commencement d'une dixième à la
face, entre la première et la seconde; ces stries sont
fortement marquées, presque listées ou très légèremeńt
punctuées; les troisième et quatrième, cinquième et six-
ième se rapprochent deux à deux, et ne sont que tout-
à-fait jusqu'à l'extrémité; les intervalles sont presque
blanches, ou aperçoivent sur la troisième, près de la se-
conde strie, une peu au-delà du milieu, un point
enfoncé plus ou moins distinct, ou voit en outre le
long du bord extérieur, près de la huitième strie, une
rangée de pointes enfoncées peu marquées. Il y a des
railles sous les elytres. Le dessous du corps est d'un
jaune-téteau un peu roussâtre. Les antennes et les
pattes sont d'un jaune-téteau plus pâle. Les pattes
sont proportionnellement plus courtes et plus fortes
que celle du vittatae. Les cuisses, surtout les posté-
rieures, sont un peu ramifiées. Les quatre jambes anté-
rieures sont un peu moins larges, moins plates, et les
epinces qui passent ont leur côté externe sont moins
serrée et moins nombreuses; les antérieures sont
échancrée extérieurement près de l'extrémité, et sont
terminated by a species of lance, squarely cariné, bordered by small spines very serviceable as the teeth of a gage, which is prolonged toward the top of the torso. The trochanters are much larger and more slender.

Dej. Zool. 18, 21-22, 1829.

Testaceus, body stout, smooth, shining, head smooth, but slightly contracted behind the eyes, labrum very feebly emarginate, darker at edges, mandibles strong, rather obtuse at tips, black, testaceus at base; palpi slender, rufous-testaceus; antennae pale, short, not extending much beyond the middle of the thorax, joints attenuate at base, fourth to eleventh transverse; thorax broader than long, sides moderately arculate, sinuate. Posterior, margin slightly recurved, hind angles rectangular, median line entire, anterior and basal lines marked by a series of small rufous dots, disc convex, smooth; scutellum rufous; elytra margined at base, with angulate humeri and sinuate apex, striae with large, closely placed, shallow, rufous punctures, giving each the appearance of a dark
brownish stripe, scutellar stria united with the first and second; undersurface smooth; legs stout.

Length: 14-16 mm.

Habitat. Iowa, City (Inckham); Ames, Fairford (Collon). Skinney, Ont. (Pettit); Buffalo, N. Y. (Reiche); Scony del (Schaupe); Newark, N. J. (Smith); Pennsylvania (Say); Cincinnati, O. (Dury); Detroit, Marquette, Mich. (Kendall and Schwarz); Milwaukee, Wisc. (Pantserberg);

Bayfield, Wisc. (Inckham); St. Louie, Mo. (Sumner);

Cincinnati, Topeka, Kans. (Popenoe); Greeley, Colo. (Inckham).

*Eptienius inerascens* Dey. in Sch. Leis. IV. 24. 1829.


**Eptacanthina Dey.**

Moderate sized brown species, quite common with no resemblance in general appearance to the preceding. The genus has but one species. (Fig. 16, 10 of Pl. XIII.)

182. Eptacanthina denticina Beane.
Dark brownish black, smooth, shining, head polished, 
gnathal groove, margin of elytra and the rest of the head 
black; antennae and palpi rufous, the former paler at 
tips; first joint of the antennae longer than any of the 
others, subcylindrical, varying in width at apex, second 
joint short, third longer, both narrowed at base, the 
remainder compressed; thorax broader than long side 
scarce, feebly sinuate posteriorly, broadest a little be 
hind apex, margin slightly recurved, hind angles 
rectangular; disc convex, smooth, median line abbrevi 
ated, facial impressions shallow, apex and base 
refuse; elytra with a very narrow band of refuse at 
base and margin, striae feebly punctured, intervals 
convex; under surface and legs pale refuse.

Length 8-11 mm.

Habitat Iowa City (Vickham), Davenport (Putnam), 
Buffalo, N.Y. (Reiche), Conley del. (Schaupp), Anoka, 
New Brunswick, N.J. (Smith), Philadelphia, Pa., District 
of Columbia (Casey), Cincinnati, O. (Dury); Milwaukee, 
Wis. (Rauterberg); St. Louis, Mo. (Sumner); Kansas (Turn).
Dennis, Colo. (Richard); La Veta, Colo. (Leconte); Luling, Tex., Gallup, A. Mox. (Pickens).


Casey Cont. Coleopt. A. Am. x. 1884. 74.

lieserus Casey

brictus Casey

exaserus Casey

Pennsylvaniaeus Dej. Sp. Soc. 11. f. 41. 1829. (Pamphyl.)


Agonoderus Dej.

Moderately small sized testaceous species

more or less marked with black (Fig. 16. PL. XIII)

The Iowa forms may be separated as follows.

1. Body stouter and more convex; thorax transverse, quadrilateral, hind angles much rounded.

2. Pale yellow abov.; thorax with two discoidal spots; scutellar stria long; elytra with two dark stripes separated by the sutural interval, dorsal punctures distinct. luedei Fab.
3. Body more elongate, less convex; thorax scarcely wider than long, subtrapezoidal, more or less distinctly rounded behind; elytra with one dorsal puncture.

6. Larger species. Color pale, elytra with a wide black stripe, divided by extent, disc of thorax frequently with a large black spot; head always black.

7. Smaller species. Head black, scutellar stria distinct.

c. Thorax pale, body beneath dusky, Gaspary, 1832.

cr. Thorax with a large blackish spot on disc.

indistinctive Wej.

183. Aporonymex lincola Fab.

"Cerabrus, alutus, ferruginus, elytris lincola nigra."

Fab. Ent. Syet. I. 153. 156.

Pale yellowish testaceus marked with black; head testaceus, vertex with a transverse crescent-shaped black spot, sides from eye backward darker, tip of mandible black; antennae and palpi pale; thorax the
same color as head, transverse, quadrate, oval, a little narrower than the elytra, hind angles rounded, disc rounded, with two small black spots, one each side median line, base and apex with a few small punctures; elytra a little paler than thorax, with a black, abbreviated vitta, funicate before, separated from the suture by a single interval, striae acute, distant, very finely punctured, a small puncture on third interval; undersurface and legs pale testaceous, the anterior legs five spinous on the outer edge of the tibiae, two terminal spinice approximate.

The thorax may sometimes be immaculate.

Lengths: 7.5-8.5 mm.

Habitat: Darwin (Putnam).

St. Jerome; Aus. (Kane); Grand Bay, Ont. (Pettit); London, Ont. (Bannister); Buffalo, N.Y. (Reinacher); New York City (Schaupp); Ansonia, N.J. (Smith); Detroit, Mich. (Hubbard and Schwabe); Milwaukee, Wis. (Ruterburg); St. Louis, Mo. (Summers); Kane, (Popenos); Greeley, Colo. (Hickham); Albuquerque, N.M. (Hickham); Arvada, California.
(Acrobate).

Carabus lineola Tab. Ent. Syst. I. 155. 156. 1792.
Oliv. tab. 7. fig. 75. p. 78. 1795.
Tab. Syst. Ol. I. 177. no. 149. 1801.


Carabus lineolaris Tab. Ent. Syst. I. 164. 1792.
Tab. Syst. Ol. I. 206. 1801.


184. Agonodorus pallidus Tab. (Fig. of Pl. XCVI).


Testaceus, head, black, polished, antennae and palpi tenuiores, face paler; thorax pale testaceus with a large black spot occupying the centre of the disc, broader than long, widest a little behind apex, hind angles rounded, median line abbreviated, slender.
smooth, face finely punctured; elytra paler than thorax, deeply striate, impunctured, each with a broad black abbreviation vitre separated from the cuticle by the first elevated line; under surface of head and abdomen black, thorax testaceose, feet pale, the anterior some six spines on the outer edge of the tibiae, two terminal spines approximate.

The species may be pale testaceose beneath, the elytra may have a common black side formed by the union of the vitreae and the thorax may be immaculate.

Length. 0.5-7 mm.

Habitat. Iowa City, Masonville (Vickhahn); Dannebrog (Putnams). Common.

St. Jerome, Feb. (Havens); Sparrow Lake, Ont. (Cameron); Empire, Ont. (Pettit); London, Ont. (Saunders); Buffalo, N. Y. (Reinche); New York City (Saunders); Harrisburg and Madison, N. Y. (Smith); Pennsylvania (Say); Columbus Co., O. (Hill and Bombrys); Detroit, Mich. (Bufford and Schwarz); Milwaukee, Wis. (Panteberg); Bayfield, Wis. (Vickhahn); St. Louis, Mo. (Summner); Kansas (Cook).
La Veta, Colo. (Leconte); Clendenin, Mo.; Morgan City, La.; Columbus, Tex. (Hickham); Santa Fe, N.M. (Cockerell); California (Leconte).

Carabus pallipes Fab. Ent. Synt. 1. 159, 151, 1792.

Oliv. 35. p. 89. tab. 9. fig. 99. 1795.

Fab. Synt. Ed. 1. 207. no. 165. 1801.


Agonoderus pallipes Say. Synt. Ed. 1. 53. 1827.


commun Fab. Ent. Synt. 1. 165. 1792.

Fab. Synt. Ed. I. 207. 1801.

185. Agonoderus Pasteurianus Say.

Head black; thorax rusty, rounded behind; front mandible acute at base; elytra pale, disc rusty, feet testaceous.
Body glabrous, breast black; head black, antennae brown; base and palpi testaceus; maxae and labrum fuscous; thorax rugose, rounded behind, dorsal line distinct, continued to base, posterior line excavated, dilated and punctured, a few punctures below; elytra fuscous, testaceus, somewhat darker on disc, striae punctured; pectus rugose, sternum black; feet testaceus; post pectus and abdomen fuscous.


Length 3.5 - 4 mm.

Habitat: Amee (Oeconse).
Buffalo, N.Y. (Reineche); New York City (Schaupp);
Norwalk, A. (Smith); Cincinnati, O. (Dury); Detroit,
Marquette, Mich. (Hubbard and Schwart); Milwaukee,
Wis. (Rautenburg); Maywood, Ill. (Freccott); Topeka, Kan.
(Prout); Almaeae (Stromberg).


186. Egonoderus undistinctus (Dej.)

Elongatius, rug. testaceus, thorac. subquadrato, antennae posticeque punctato, postice rugosato, rugiculato, anguli postice obtusae, elytri tertiae, inter tertiae tertio punctato impresso, capit. thorac. disco elytrorumque manu magna, elonga nigro-piceae, antennaeque basi pedunculi pallide testaceae.

Long. 13 ligne. Larg. 8 ligne.

Il ressemble par la forme à l'Elongatulus, mais il est un peu plus petit. La tête est un peu plus grosse et d'une teinte noisette. Le corps est d'une couleur testacée un peu rougeâtre, et il a dans son milieu une grande tache d'une teinte noisette ; il est un peu moins arrondi sur le côté et un peu plus retenue postérieurement que celui de l'Elongatulus ; le bord antérieur et toute la face sont bien distinctement punctulée, et l'on aperçoit en outre quelques pointes enfoncées le long de la ligne longit. du milieu. Les elytres sont à peu près la même forme, et sont striées et punctulées à peu près de la même manière ; elles sont également d'une couleur
Testacea, a little brownish, with a large quadrate black spot on the disc, subquadrate, base narrowed, sides moderately annulate, the anterior margin and base distinctly punctured.

Hind angles obtuse; elytra blackish with sutures and margin testaceus, striae punctured, undecussate striate, third interval with a dorsal puncture, antennae and base of legs testaceus.

Length 3-4 mm.

Habitat. Arizona (Osborn).

New York City (Schwarz); Anglesea, P. (Engel); Cincinnati, Q. (Daly); Finney Co., Kansas (Kuane).

A. indistinctus Dej., 1831.


Acrobates humilis

**Die. IV. 1829. (art. Lee)**

**Difficult.**

D. lewii (Die. 11. 11. 2. Pl. XXX.)

Moderate sized black or brown species, all closely resembling one another and very difficult to separate.

But one species has been reported from Nova Scotia.

Thorax narrower at apex than at base, side margins narrowly depressed posteriorly, and with numerous minute punctures. Piccone, without metallic lustre, antennae falcate.

Parallelicus Hald.

187. D. parallelicus Hald.

Piccone, head and thorax smooth, antennae and palpi ferruginous; thorax broader than long, narrower at apex than at base, sides arcuate, margins depressed posteriorly, hind angle rounded, basal impressions shallow, median line entire, sides moderately convex, base longitudinally rugose; elytra margined at base, with distinct humeral angles, striae deepim-
punctured, intervals convex, the eighth with a few
ovulate punctures widely separated at middle; under
surface and edge reddish, the former smooth.
Length: 7-7.5 mm.

Habitat: Iowa City (Vickham).
Atlantic City, N.J. (Liebich); Pennsylvania, Georgia
(Sevère); St. Louis, Mo. (Cummere); Lawrence, Topeka, Kan.
(Popenoe); Colorado (Snow); Lake Point, Utah (Pachard);
New Mexico, Texas (Popenoe).

301. 1843.

Sec. Home, p. 1. 1. y. 18:11. 1848.


Harpalus lat. (Figs. 3, 45, 50, 42, 52, Pl. XIII, Fig. 4, 45)
large or moderate sized black or brown species found
under stiches and stones in moist places.
The several Iowsa species may be separated in the
following manner.

B. Apex of elytra feebly sinuate.

a. Size very large, 20-25 mm.  
   b. Body black, legs black except tarsi and anterior coxae. *Caligineus Fab.*

aa. Size moderate, 7.5-16.5 mm.

   c. Entirely testaceous. *Testaceus H.L.*

   cc. Body black, legs reddish.

   d. Elytra without dorsal punctures.

      e. Thorax nearly square, striae of elytra with very fine distant punctures. *Faminea Say.*

      ee. Thorax narrowed in front, striae of elytra not punctured, sides sparsely and finely punctured, hind angle rounded. *Pennsylvaniae H.L.*

      eee. Thorax slightly narrowed behind, hind angles less obtuse, elytra not punctured at sides, but with
a few ocellate punctures; 13.5-16.5 mm

Thorax as in comp, hind angle
nearly rectangular, sides of
elytra not punctured; 10-12 mm.

E. hirsuta Day.
dd. Elytra with one dorsal puncture.

herbivorus Day.

187. Carpahoe erinaceus Say (Fig. 10. Pl. XXII).

Reddish brown, beneath testaceous; elytra fuscous.

Thorax a little contracted at base.

Body glabrous, reddish-brown, beneath testaceous;
head not darker than the thorax; antennae fuscous;
towards the tips; thorax broad as the elytra, gradually
contracted behind; marginal groove somewhat
dilated, dorsal and basal lines distinct, continued
to base, anterior transverse line widely curved, base
not wider than the tip, each side absolutely punctured,
basal edge rectilinear, lateral angles obtuse, slightly
rounded; elytra darker than the thorax, striae im-
furrowed, interstitial lines concave, feet pale testace-

Head smooth, frontal impression shallow,
labrum large, serrate, tip of mandible black; basal
jowls of the thorax distinct and usually punctured;
elytra deeply and obliquely sinuate at apex, in the
outer angles acute and dentiform; the extreme
apex sometimes subiminate, having a natual spine,
striae moderately deep, no dorsal punctures; ab-
domen beneath finely punctured and pubescent
at base.

This beetle is readily distinguished by the deep
and peculiar sinuation of the apex of the elytra
and also by its immature color.

Found under stones and boards in sandy places
near running water.

Length: 12.5 - 19 mm.

Habitat: Independence, Iowa City (Vickman);
Osceola (Osborn).
Marineh, Out. (Pettit); Sparrow Lake, Out. (Hamilton); Port Hope, Out. (Bethune); Green Mount. (Hayward and Savage); Buffalo, N.Y. (Renecker); Greenville, N.C. (Schuster); Milwaukee, Wis. (Rauterberg); St. Louis, Mo. (Summer); Kansas (Peirce); Glendine, N.W. (Hickham).

To ematic or Say, Trans. Am. Phil. Soc. III. 455, 1829.

W. J. b. Lu. IV. 236, 1829.

Iprague, Can. Out. II. 55, 1870.

199. Harpalus caligineus Fab. (Fig. 12, Pl. xiv).
"Carabaeus apterus, arter obscurus, stythic striatus, antennae testacei."
Black, glabrous, shining; antennae, palpi, tarsi, and anterior coxae ferruginous-brown; head with moderately deep frontal impressions, labrum quinque, pinate, edged with ferruginous; labium with tooth; thorax broader than long, as wide as the base of the elytra, apex narrower than base, sides moderately excavate, hind angles prominent, nearly rectangular,
margin narrow in front, wider and depressed posteriorly, side moderately convex, finely punctured, base very densely punctured; elytra strongly striate, impunctured, margin opaque with numerous minute punctures, and seminal rosette cone; abdomen finely punctured at sides.

When irritated this species emits a very pungent vinegar-like odor.

Length 20-25 mm.

Habitat: Iowa City (Pickham), Davenport, and Frederic, Monroe Co. (Putnam).

St. Jerome, Ida. (Hausen); London, Ont. (Daudere); Lainisby, Ont. (Pettit); Greene Nature (Hayward and Savage); Buffalo, N. Y. (Reinche); New York City, Sharp; Annapolis, Md. (Smith); Pennsylvania (Say); Southern States (DeSoto); Cincinnati, O. (Dury); Detroit, Mich. (Hubbard and Schwarz); Milwaukee, Wis. (Panteley); St. Louis, Mo. (Summers); Volga, S. Dak. (Truman); San (Popescu); Tex. (DeSoto); Gallup, N. Mex. (Pickham).

Carabus caligineus Fab. Ent. Syst. suppl. 57:94.

Selenophore calignonae Day Trans. 15. 115. 1829.

197. Carpulus farrui Day.

Dark reddish-brown. Antennae, palpi and feet pale; thorax punctured behind.

Body reddish-brown obscure, breast rather pale; head, basal suture distinct; antennae and palpi pale testaccea; thorax quadrate, hardly narrowed before or rounded at the sides, hind angles rounded, dorsal line faintly impressed, basal lines dilated, and with the hind margin conspicuously punctured, lateral margin depressed, punctured; elytra striate, striae with distinct minute puncture, punctures on the marginal line not minute; feet pale testaceae. Day Trans. Am. Phil. Soc. II. 26. 1823.

Length: 10.5 - 13.75 mm.
Habitat: Danville (Putnam); Ames (Cobb of)

Timely, Ont. (Pettit); Green Bay, (Hayward and Savage); Buffalo, N.Y. (Reincke); New York City, New Jersey (Schauff); Pennsylvania (Day); Cincinnati, O. (Dury); Detroit, Mich. (Hubbard and Schwarz);

Milwaukee, Wis. (Pauterburg); St. Louis, Mo. (Summers); Lawrence, Kan. (Popenoe).

L. Janneae Day Freeman, Am. Phil. Soc. 18. 28. 1823.


Sprague Can. Ent. 125. 1870.


191. Harpaleria pennsylvanicae D.C.

Black, fire one breath, legs, antennae and palpi fuscous; head smooth, with a slight reddish tinge, mandibles black at tip, reddish near base; thorax reddish brown, broader than long, narrowed at apex, base nearly as wide as the base of the elytra; disc flat, margins depressed. reddish, margins and base densely punctured, kind
angles rounded, median line extending to base, basal im-
pressions straight, shallow, punctured, intervals cony-
marginal ones absolutely punctured, the eighth with
a few large subcellate punctures; abdomen finely punct-
ured near base.

Length. 11.25–16.25 mm.

Habitat. Iowa City (Michaels).

Manitoba (Harrington); Sparrow Lake, Ont. (Harrington);

Kinesby, Ont. (Petit); St. Jerome, Que. (Lecuyer); Green
Notus (Hayward and Savage); Buffalo, N. Y. (Reiche);

Swarz and Madison, Wis. (Smith); Pennsylvania
(Decker); Florida (Schwarz); Cincinnati, O. (Dury);

Indiana (Blatchley); Detroit, Mich. (Hubbard and

Schwarz); Bayfield, Wis. (Michaels); Milwaukee, Wis.
(Bauer); St. Louis, Mo. (Summers); Kansas (Spencer);

Denver and Manitou, Colo. (Packard); Spokane Falls,
Nash, Morgan City, La., Columbus, Tex. (Michaels).

Carabus Pennsylvanicus DeS. Sci. 4: 138, tab. 17, fig. 12, 1774.


Olav. 3. 55. p. 64. no. 67. tab. 11. fig. 92. b. 1795.


flavipes Day. Gen. 10.

famae Day. Gen. IV. 254. no. 51. 1829.

192. Carabaloe penicillatus var. compar Day.

Black, somewhat shining; legs, antennae and palpae reddish yellow; beak a little paler; head smooth, frontal impressions moderate; thorax one fourth broader than long, distinctly narrowed behind, sides narrowing and less strongly depressed, hind angles obtuse, scarcely rounded, median line extending to base, basal forae shallow, confluent, infuscated in centre, margins a little less densely punctured; elytra with impressed striae, intervals flattened, the outer ones with a few concave punctures.

Length, 13.5 - 16.5 mm.
Habitat. Iowa City (Hickham); Davenport (Putnam); Ames (Volmer).
Massachusetts (Sprague); Greene Nature (Hayward and Savage); Buffalo, N. Y. (Reincke), New York City (Schaupp); Caldwell, N. J. (Grave); Detroit, Mich. (Hubbard and Schwarz); Milwaukee, Wis. (Bentley); St. Louis, Mo. (Summers; Kansae (Popenoe); Salida, Colo. (Hickham); California (Sprague).


193. Carpalus jery travancriae var. angulophorus Dej.

Pongo ovatus; supra niger; thorace subquadrate.
Postice utrinque punctulato; subfumato, angulio.
Postice subtaster; elytris striate; postice oblique striate; antennae pedibusque rufo-taestae.

Long. 54, 5½ lignae. Larg. 1½, 2 lignae.

Il ressemble beaucoup au dernier; mais il est un peu plus petit. Il est à peu près de la même couleur.
Le corollet est un peu moins arrondi sur le côté; les bords latéraux ne paraissent pas déprimés, et l'impression de chaque côté de la base est moins marquée. Les élytres sont à peu près la même forme; les intervalles sont tout à fait planes, et l'on n'aperçoit aucun point surfeé sur les côtés, même avec une très forte loupe. Les palpes, les antennes et les pattes sont d'une rouge ferrugineux un peu jaunâtre. "Nouv. Sp. Gen. XX. 1887. no. 34. 1889.

Black, antenaeae, and feet reddish yellow; thorax nearly square; base rounded at sides and more distinctly narrowed behind; basal femae shal low, punctured; hind angles nearly rectangular; margins hardly depressed; elytra striate, intervals smooth, not punctured at sides.

This variety resembles common very closely, the smaller specimens of common being indistinguishable from any other."

Length 10.5-12 mm.

Habitat: Danupörf (Putnam).
Buffalo, N.Y. (Reinecke); Palisades, A. J. (Schauff); Pennsylvania (DeJeu); Columbniana Co., O. (Hill
and Bomberger); Detroit, Mich. (Husband and
Schwarz); Milwaukee, Wis. (Rautenberg); St. Louis, Mo.
(Simmers); Topeka, Kan. (Pepper); Lincoln, Neb. (Pettit).
C. erythroptera Dej; Sp. Lin. IV. 258. 1829.
Sprague Can. Ent. II. 124. 1870.

194. Harpalus herbusque Say.
"Dark black-brown, head fuscous-black, labrum
fuscous-black; thoracic angles rounded; feet reddish-
brown."

Head black; antennae and palpi testaceous;
thorax, impressed line obsolete, lateral basal line
very distinct, margin somewhat depressed, post-
erior lateral angles rounded, not depressed, or
punctured above; elytra, striae impunctured, tip
obtusely rounded, "marginal punctures continued,
edge femurine; feet reddish brown."

Head shining, rather large; antennae short, scarcely reaching the base of the thorax; thorax nearly as broad as long; elytra of male black, shining, of female semi-opaque and distinctly reticulate; striae not deep, intervals somewhat convex, with a dorsal puncture behind the middle near the second stria; apex of female elytra with a small but distinct central spine.

In this species the male is decidedly smaller than the female.

Length, 7.5 - 10.5 mm.

Habitat: Iowa City, Masonville (Hickham); Davenport (Putnam), Common.

Manitoba (Harrington); Bismarck, N.D. (Pettit); Green River (Hayward and Savage); Buffalo, N.Y. (Prinche); Madison, Wis. (Smith); Cincinnati, O. (Nung); Detroit; Marquette, Mich. (Hubbard and Schwarz); Milwaukee, Wis. (Rantler); St. Louis, Mo. (Summers); Kansas (Popenoe); St. Jerome, Que. (Hansen).

Sprague Can. Ent. XX. 96. 1870.

proximus nec. ... 398.


195. Paralichnus testacens nec.

"Paralichnus testacens, elongato, oblongus, nigro testacens, nitidus, thorace latitudine plus resqui brissae, later.
bue, anguste fortiter depressius, subpunctatius, anticus
rotundatius, angulis fortius rectius, prominulius, ad
bacic nitidius brevier impressus, elytris rapice vix
acuminatis, striis obsolete punctatius, interstitiis sub-
convexis, dio unipunctatius."


Oblong-oval, testaceous, shining, head smooth,
antennae and palpi testaceous, mandibles
darker at tip; thorax considerably broader than
long, widest a little before the middle, sides arcuata
in front, rectilinear posteriorly. anterior angles rounded, depressed; posterior angle rectangular, quite prominent, with the base of both sides slightly impressed; median line entire, fasciae, "precisio" very shallow, sparsely punctured, the more moderately convex, smooth, margin with a few punctures; elytra striae moderately deep, obsolete punctures, intervals convex, with or without dorsal punctures; abdomen with accessory ambulatory setae proceeding from distinct punctures.

Most of the specimens examined had no dorsal punctures, one had a single puncture on the right elytron. Leconte described the species from two specimens one of which had the punctures, the other not.

Length 9.75-10.5 mm.

Habitat: Iowa City (Bailey), l.a. (Leconte).

Illinois (Leconte, Hamilton); St. Louis, Mo. (Sumner).

Western Kansas (Poppeke).

Delenophorus Pediculinae Dej.

Body with a brouched surface texture, elytral intervals smooth, punctures very small.
longue 2/3 ligne, long. 1/3 ligne.
Il est plus petit que l'œncoprene, proportionnellement plus court, et sa couleur est entièrement en deçà d'un brun obscur à peu cuivré. La tête est bien arrondie, peu rétrécie postérieurement, liée, légèrement conique, et elle a quelques rides longitudinales assez distinctes à sa partie antérieure. La fem supérieure est d'un brun obscur, avec le bord un peu roucoute.
Les mandibules sont roucoutes à la base et minces vers l'extrémité. Les palpèes sont d'un jaune-testacé un peu roucoutes, avec une tache obscur à la base du dernier article. Le premier article de cette aile est d'un jaune testacé; les autres sont d'un brun obscur.
Les yeux sont peu saillants. Le conoïde est plus large que la tête, moins long que large, presque carré, légèrement arrondi sur les côtes et assez coupsé; il a quelques petites rides transversales modulées, à peine distinctes, la ligne longitudinale du milieu et les deux impressions transversales sont très peu marquées; il n'a de chaque côté de la base une petite impression longitudinale un peu
Oblique et très-jeu marquée, dans le fond et aux
bords de laquelle on aperçoit, avec une forte loupe, quel-
ques petites points enfoncés; il y en a aussi quelques-
unes vers les angles postérieurs, et quelques petites étres
longitudinales très-faiblement distinctes vers miel de la face;
le bord antérieur est légèrement échancré; les angles
antérieurs sont presque arrondis; les côtes sont légère-
ment relevées; les angles postérieurs sont arrondis; la
base est un peu ronflée et très-légèrement échancrée
dans son milieu. L'écu de la face triangulaire, les
eylètres sont proportionnellement plus longues que celles
de l'âge de larve, plus courtes, moins fortement sien-
rées à l'extrémité, et striées et pointées à peu près
de la même manière; le bord inférieur est d'un brun
rouxâtre. Le dessous du corps est d'un brun noir.
ître. Les pattes sont d'un jaune tendre.


Oblongoval, d'âme, brillant, surface bronzée, yeu
pale; antennes et palpe brun, base et man-
dible ronflée; thorax considérablement plus large que haut.
a little broader at base than apex, sides roundish, hind angles obtuse, disc moderately convex, basal impressions very shallow, almost obliterated; elytra scarcely wider than the thorax, finely striate, the second, fifth, and seventh suture very distinctly, and finely punctured, intervals nearly flat, smooth, the marginal one finely punctulate, apex feebly sinuate. Length: 5-6.5 mm.

Habitat. Monticello (Putnam).

New York City (Schaufuss); Atlantic City, N.J. (Castle);
Florida (Schaufuss); Milwaukee, Wis. (Rautenberg); Kansas (Kone); McCook, Neb.; Canon City, Colo. (Nichols); Piz Springs, Tex.; Coolidge, A. Mex. (Nichols); Arizona (Cace).


Pultz Stett. Geit. 18. 1878.


Pultz Stett. Geit. 18. 1878.

Sclerothrips Dej.

Antennae with two glabrous joints; labial palpi equal or even a little longer than the preceding which is here one only; mentum semicircularly emarginate, without median tooth; penultimate joint of anterior and middle tarsi of male bilobed, the middle tarsi dilated. (Fig. 2 & Pl. III.).

The species are separated as follows:—

Thorax scarcely narrower than elytra.

Larger. Elytra picaceous or testaceous; base of antennae and feet testaceous or brown; hind angles of thorax obtusely rounded, basal impressions linear, punctured; head of lateral margin pale.

fuliginosus Dej.

Smaller. Picaceous, sides of elytra, and sides of thorax frequently ferruginous; base of antennae and feet ferruginous; hind angles of thorax much
rounded, not apparent, basal impressions small, rounded, with or without punctures. Conjugate Say.

Thorax distinctly narrower than elytra.

Black, narrow margin pale; thorax scarcely wider than long, hind angles much rounded, hardly apparent, basal impressions finely punctured. Ochropseus Say.

197. Stereoleptus fuliginosus Say.

"Oblonge, supra nigro. Piceus; thorace subquadrato, postice utrinque subfonsulcato, angulis posterior rotundatis; elytris striatis, disco subquaseo-maculato, lineis interdumque basi obsolete rufis, interstitiis tarsio-functori impressis, thorace margine tenui, antennarum basi, tibiae tarsisque pallide testaceis.

Long. 3½ lignes. Long. 1¼ lignes.

Il est ordinairement une peu plus grande que le Nup prisoner, auquel il ressemble beaucoup par la forme et la couleur. La tête est mieux plus allongée. Les palpes sont une tache noisette, à la base de chaque article de.
Yeux sont moins saillants, le coquillet est un peu plus large et un peu plus arrondi sur les côtés; la bordure latérale d'une jaune testacée est très étroite et ne s'étend pas postérieurement; l'impression de chaque côté de la base est moins large, moins marquée, son fond paraît lisse, et ce n'est qu'avec une très forte loupe qu'on y aperçoit quelques petites points enfoncés à peine distincts; les angles postérieurs sont beaucoup plus arrondis et à peine marqués. Les œillets sont à peu près de la même forme et de la même couleur; mais la bordure latérale d'une braise rousseatre est ordinairement très étroite et ne dépasse qu'ici la huitième strie; ce n'est que rarement que la base est aussi un peu rousseatre, et cette couleur ne s'étend jamais autant que dans le Boeptium; elle est striée et ponctuée à peu près de la même manière. Les dents du corps sont d'une braise noisâtre, les ceusses sont d'une braise sombre assez clair et un peu jaunâtre, les jambes et les tarse sont d'une jaune testacée assez pâle.

Body rather stout, black, shining, antennae and palpi brown, the base of the former and the base and tip of the latter testaceous; thorax hardly narrower than the elytra, feebly narrowed behind, sides carinate in front, narrowly margined, not reflected, disc hardly convex, anterior and median lines distinct, basal foveae linear, shallow, with a few scattered punctures, bend of the lateral margin pale; elytra testaceous or testaceous, striae not punctured, intervals flat, the marginal one with a few large punctures, apex smooth; underside black, legs and trochanters testaceous. 

Length: 7 - 7.5 mm.

Habitat: Stony Creek (Dehorne); Monticello (Pitman). 
St. Jerome, Ida. (Kameen); Springly, Ont. (Petit), New Jersey (Angel); Detroit, Marquette, Mich. (Hubbard and Schwarz); Milwaukee, Wis. (Rauterburg); St. Louis, Mo. (Dummer); Wyoming (Hickham).

198. Stigmophorus conjunctus Say.

Head fuscous black; thorax fuscous, impunctured; elytra dusky; feet testaceous.
Body impunctured, glabrous; head black or deep fuscous; antennae brown; base and halves testaceous; labrum fuscous; mandibles fuscous at base; thorax fuscous, rounded behind, dorsal line not deeply impressed; basal line slightly excavated, base impunctured; elytra blackish, margin and sutures fuscous, obscure; stries impunctured, interstitial lines depressed; sutures fuscous; sternum black; postpectal fuscous; abdomen fuscous.

"The disc of the thorax is sometimes dusky or blackish."

Say. Trans. Amer. Phil. Soc. II. 90. 1833.

Length, 3.5-4.5 mm.

Common.

Habitat: Iowa City (Van Horn); Danville (Putnam).
British Columbia (Carrington); Victoria, Van. Isl. (Nichol.); Sparrrow Lake, Ont. (Hamilton); Prince, Ont. (Pettit); St. Jerome, Que. (Kanece); Cliftondale, Mass. (Rich); Buffalo, N.Y. (Reineche); Armack, A.J. (Smith); Philadelphia, Pa. (Casey); Columbiana Co., O. (Kell and Bourgeois); Detroit, Marquette, Mich. (Hubbard and Schwanz); Bayfield, Wis. (Nichol.); Milwaukee, Wis. (Pautier); St. Louis, Mo. (Seward); Kansas (Popenoe); Cairo d'Albe, Idaho, Coolidge, A. Mex. (Nichol.); Louisiana (Leconte).


Rotundulus desc. 377.


Scientulus Casey Soc. Cologne. II. 78, 1884.

Trechus immarginis Pig. Fam. Be. Amer. 1837, 114.

Bemphalea missiellae Pig. Be. Soc. 1847, 467, 1829.

192 Stepholepis ochracea Say. (Fig. 7. Pl. XV.)

"Blackish, thorax rounded behind; elytra with transluceneous reflections; feet testaceous.

Body, glabrous, blackish, beneath fuscous; antennae brown; base and palpi fuscous; thorax somewhat rounded. Posterior angles very obsolescently rounded, dorsal line obsolete, basal line excavated, base with numerous small punctures; edge dull fuscous; elytra dark brown or blackish, with obsolete transluceneous reflections, striae impressed, external edge and deflected margin reflexor fuscous; fuscous, and postfusccous imparied, feet testaceous.

Var. a. Elytra blackish testaceous, almost obsolete of transluceneous reflections."


Length: 5.5 - 5.75 mm.

Habitat: Independence, Iowa City (Weckham); Davenport (Putnam); Skokie (Debrec).
Grinnell, Ont.; Pettit); Buffalo, N. Y. (Reiche); Swarth, A. J. (Smith); Pennsylvania (Day); Cincinnati, O. (Dury); Detroit, Mich. (Hubbard and Schwanz); Milwaukee, Wis. (Rantemberg); Bayfield, Wisc. (Wickham); Kansas (Popper); Colorado (Hamilton); Mississippi (Ward); Bayou la Fourche, La. (Franscend); Albuquerque, N. Mex. (Wickham); Las Cruces, N. Mex. (Cochell); Arizona (Sevante, Casey); Hamilton (Hamilton).


Impatiens Manuel.

Stereolophus Lat.

Small species of elongate form with the base of the antennae and first tarsal the terminal joint of the labial palpi equal to or even longer than the preceding, antennae not toothed, third angular of thorax obtuse.
or subrectangular, elytra with a long cinctellus antea. But, one species is recorded from Iowa.

200. Eupalpbus varius dec.

"Rufo-piceus, sterniti de, capite piceo, thorace subquad.
rato, latitudine Paulo brevior. Postice angustato, angulus
postier obtius rotundatus, basi utrique late impressus et
obsolete, funicato, elytra piceo, micantibus, thorace lato in
hue, basi truncatus, apice oblique subimmaculatus, striis
mediocribus, ventellari bimii, inae Postice impiunctate,
epigynium pellite, antennae pedibusque tectarum."


Color: rufo-piceus; rather varia; head always
black, very distinctly narrower than the thorax, an-
tennae, and palpi tectae; darker setae, eyes
moderately large; and prominent; thorax subquad-
rata, head angles obtusely rounded, basal fontae feeble,
funicato; elytra grumiginea, iridescent, apex oblique.
by cincto, striis尊严, one, dorsal punctile;
edge tectarum.
Length, 2.5 - 3 mm.

Habitat: Iowa City (Rickham),

Hudson Bay Territory (Leconte), New York (Schauf.

Iowa (Schauf.), Illinois (Leconte).

Stenolepis carnes Wes. Smithsonian Misc. Coll. XV, 18


Bradyedrella Dr.

Species of small size with very short scutellar
teria, sometimes wanting, anterior tarsi of male
moderately dilated, middle tarsi not dilated nor
furnished with aquamiform papillae (Fig. 7.72, Pl. II).

The two species found in Iowa may be separated
in the following manner.

Head punctured near the eye posteriorly, head and
thorax blackish, elytra more or less testaceous.

cognatus Zyll.

Head smooth, usually testaceous, sometimes pice.

suprastriar Bay.
Bradyellina coquerelii Lyell.

Blackish, with first joint of antennae, feet, and elytra more or less testaceous; head finely and sparsely punctured near the eyes posteriorly; thorax a little wider than long, sides moderately arcuate, humeral angles slightly rounded; basal fascia well marked, punctured, apex and base sparsely punctured; elytra where jile marked with a darker cloud; sides dark with the sutures; sides paler, thinly clothed with short pubescence near sides and tips; striae distinct but not deep, absolutely punctured, third interval with a dorsal puncture.

Length, 4.5-5 mm.

Habitat: America (Ontario).

Nova Scotia, Canada (Harrington); New York City (Schauff); Mt. Washington, N. H. (Bretzie); Marquette, Mich. (Hubbard and Schwantz); Lake Superior region (Lecointe); Pomo, Utah, Bozeman, Idaho (Nickle); San Diego, Cal. (Lecointe); Sitka, Alaska (Kane); Arctic, Siberia, Arctic Europe, Britain, Germany (Hamilton).
Karpalus cognatus Syll. II. 455. nov. 70-71. 1818.
Dej. Icon. tab. 194 fig. 3.


Bradycellus cognatus Schodde. Mann. Bd II. 158.


niting Lee Prov. Acad. Nat. Sci. 1858. 60.


Trachelus inferius Sy. Faun. Nor. Am. IV. 47. 1837.


conflagratus Mann.


"Head black; thorax dark suffuse, punctured at base, posterior angles not rounded, beneath black; feet
Body glabrous, beneath black, head black; antennae brown, base, and palpæ testaceone; naeunc and labium deep piceone; thorax deep blackish purple, gradually a little narrowed from before the middle to the hind angles, which are slightly angularated, the edge very slightly recurved at the hind angles; elytra with punctuated striae, disc blackish, margin and suture dark purple, pectoral piceone-black; sternum black; feet testaceone, postpectus and abdomen black.


The color of the species varies considerably.

Length. 4.75 mm.

Habitat. Amess (Bowers).

Manitoba (Barrington); Shriney, Ont. (Petit); Seen.

Notre (Rayward and Savage); Buffalo, N. Y. (Reinche);

New York City (Schaupp); Newark, N. J. (Smith); Massachusetts (Say); Cincinnati, O. (Dury); Marquette, Mich. (Hubbard and Schwarg); Milwaukee, Wis. (Renterberg); Minnesota, St. Louis, Mo. (Summer); Lawrence, Kan. (Pastor).
Abomona, Col. (Secund), Samon City, Col. (Vickham);
Frese (Secund), Tucson, Ariq., Russ, Tex., Dumser, Dal.
(Vickham).


centralis sec.

parallela sec. Rev. and Mag. 1858, 17.


Stenophile cinctus Day, XIV. 434. 1834.


Tachyellus Moran.

Black or pale rufous species marked with black,
small in size, differing from Bradyellus in having
three joints of the antennae glabrous instead of two.
The Iowa species has the following distinguishing
characteristics:
Color more or less testaceous; thorax testaceous with a central black spot, not wider at base and long, hind angles rectangular; elytra with the entire number of striae; legs pale. atrimedian Say.

203. Tachyelleus atrimedian Say. (Fig. 16. Pl. xvi."
"Pale rufous; head, side of the thorax, and of the elytra black; feet testaceous; posterior thoracic angles acute.

Body beneath black; head black; antennae, base rufous; palpi rufous; thorax rufous with a black disc, edge slightly excised near the hind angles, hind angles acute; dorsal line distinct; basal lines indistinct, indented; base each side indicated; elytra with sinufractured striae, and depressed interstitial lines; pale rufous or testaceous with a common black disc, which is dilated behind the middle and attenuated before; feet testaceous.

Length 7 mm.

Habitat: Iowa City ( backers), Canada (Horn), New York (Schaupf), Missouri (day), Texas (Horn).


**Bradypterus satiricus** Leu. X, 385.


**Trachelus satiricus** by Trice, Proc. Am. IV, 48, 1837

**Oxania siericata** Day. (Fig. 8-12, 8a-12m).

1. Body puberulent, elytra punctured.
   a. Black
   b. General brown
   aa. Head and thorax pale suffused, elytra brownish

2. Body glabrous.
   b. Clypeus with one setigerous puncture each side
      c. Body and legs black
      d. Third angle of thorax suffused, thorax broadest at base, one wide at the elytra

Metaphyes Day.
dd. Base of thorax nearer middle than apex, thorax narrower than the elytra; entirely black.
        *Ligustina* Dej.

c. Body black, legs testaceous.

d. Thorax transverse, sides arcuate, apex truncate, posteriorly verticalis dec.

1b. Elytra with two setigerous funiculi each side.

e. Body and legs black.

f. Opalescent, thorax, breast, and prothorax hairy.

h. shining, thorax, breast, and prothorax not hairy.

1g. *Rigina* nigerrima Dej.

1f. Body black, legs testaceous.

2. Margin of elytra, and thorax testaceous.

1e. *Terminatius* Say.

3f. Body bicolorated, aboral, legs pale.

4. Thorax margined with testaceous.

5. Thorax entirely black.

*Saltimbarcia* Say.
Memecloclytus rufipes Say.

- Deep black brown; face of antennae, mouth breas and palpi, and posterior thoracic angles reddish brown; labrum brown.
- Antennae brown, two basal joints reddish brown, labrum black; maxillae and palpi reddish brown; thorax glabrous, a dorsal impressed line, and two abbreviated ones at base; margin not depressed, but continuing the general curve to the edge, hind angles absolutely reddish brown; elytra, striae punctured; second, fourth, and sixth interstital lines punctured near the tip, marginal row with rosette punctures not interrupted in the middle; nearly and postanterior not hairy.

Say. Trans. Acad Phil. Soc 7. 32. 1823.

The elytra have but one setigerous puncture each side, the surface of the body is opaque, and very distinct slender one, more or less oval in form, thorax narrowed from base to apex, widest at base.

The male has the first four joints of the anteriorarsi dilated and pubescent; brown, the middle toesi
are nearly as widely dilated, the first joint very slightly pubescent at tip only. In the female the anterior tarsi are slightly broader than the middle ones, the first joint not shorter.

An unamed variety of this species has the elytra reddish-brown.

Length: 9-14 mm.

Habitat: Iowa City (Nicklin), Ames (Dobson), Emmet.

St. Jerome, Iny (Haneau); James's Oak (Petit); Buffalo, A.M. (Reinche); New York City (Schauf); Newark, N.J. (Smith); Pennsylvania (Jay); Kentucky (Oliver); Cincinnati, C.L. (Bury); Indiana (Reitz); Detroit, Mich (Gould and Schmied); Bayfield, Wis (Nicklin); Milwaukee, Wis (Pauterberg); St. Louis, Mo (Simpson); Kansas (Dorn); Lamar, Ar. (Nicklin).


See Am. Soc. A. Y. 284 1848.

Proc. tech. Soc. 1860. 117.

Bull. Phil. Soc. III. 53 1881.

triatic Dec. 150. 1829.


erasure Dec. 283.

gravidus Dec. 283.


205 Amicodactylus carbovariae Day.

"Black; palpi and the base of the antennae fuscous;
sternum and postfemur somewhat hairy.

Antennae blackish brown, basal joint fuscous; palpi fuscous at the tips of the joints; vertex with an obsolete fuscous spot visible in a particular light; thorax, dorsal line not deeply impressed; exterior and post-
rior lateral margin depressed and somewhat rugose;
basal lines not definite; face not narrowed; elytra;
striae not impressed, punctures on the marginal
interstitial line few and hardly ocellate, sixth inter-
stitial line punctured near the tip; sternum a little
hairy from the head to the tip, postpedicel somewhat hairy on the disc; winter, first segment hairy beneath.

Say in Trans. Amer. Phil. Soc. 2. 32. 1823.

The form is oblong, 3 freely shining, opaque, elytra with two petiolate punctures each side, thorax broader at base than at apex, sides freely acuminate, hind angles obtuse, base truncate, base externally and side margin punctulate, distinctly 5, absolutely 7; elytra oblong, sides nearly parallel 5, slightly acuminate 7, interval slightly convex, flat 7.

The male has the anterior tarsi dilated and translucent beneath, the first joints of the middle tibiae not more than half its surface. The female characters are the same as in 

Length, 13 mm.

Habitat. Kansas (Osborn).

Grinnell's Stall (Pettit); New York, Atlantic City, N.J. (Liebich); Pennsylvania (Say); Genesee, O. (Dury); Detroit, Mich. (Nuttall and Schwarz); Milwaukee, Wis. (Rauterberg); St. Louis, Mo. (Summer); Kansas (Dinwiddie);
286. Ancisodactylus nigerrimus Dej. (Fig. 14 Pl. xiv).

Oblong-ovatæ, niger; thorace, quadrato, postice utrique fonsolato; foria, oblonge punctata, angulæ, postice oblate subrotata, pedio striato, postice oblique striato, interstitio tanti fuso impresso; antennarius basi tarmique rufus.

Larg. 5 lignæs. Long. 3 lignæs.

Il ressemble beaucoup au précédent, mais il est un peu plus allongé et moins convexe. La tête et le palpe sont un peu plus comme dans cette espèce. Le premier article des antennes est d'un rouge-ferrugineux un peu jaunâtre; avec une tache noire en dessus. Le cornelet est plus saumâtre; sur la côté, l'impression que l'on voit de chaque côté de la base est un peu plus marquée, et son fond et
see bords sont plus distinctement punctuées, les côtés tournant un peu obliquement sur la base, et les angles postérieurs sont presque arrondis. L'extrémité des élytres est plus fortement et plus obliquement aiguës; les stricte sont un peu plus marquées, et l'on voit sur le troisième intervalle un point enfoncé placé à peu près de la même manière.

La desine du corps et les pattes sont à peu près comme dans le Sarrigou. De L. Duc. 1. 1841, no. 174. 1831.

Black, glabrous, shining; face of antennae and palpi ferruginous; elytral with two setigerous punctures each side; thorax broader than long, moderately convex, sides arcuate, widest at middle, hind angles obtuse, side margin very slightly depressed at middle, and not at all at the basal angles, basal impressions feeble, shallow and but little punctulate, median line distinct, but feebly impressed; elytral striae moderately deep, impunctured, intervals slightly convex, smooth, the eighth interval with ocellate punctures; under surface smooth.

The anterior tarsi of the male with the first four
joints dilated and pubescent beneath, the middle
tarsi nearly as wide but with the first joint pubescent
at the only the following three densely pubescent.
In the female the tarsi are without pubescence, the
anterior is a little broader than the middle.

Length: 71 mm.

Habitat: Iowa City (Young)
New England States (Horn), New York (Schaeffer).
Brigantine Beach, N.J. (Hamilton); Detroit, Mich.
(Lubbold and Schwarz); Bolza, S. Dak. (Truman).

Anisodactylus nigerrimus Dej. Sp. Mem. 1842. 1831

Anisodactylus nigerrimus Horn Proc. Am. Phil. Soc. 1880. 171
Horn Bull. Phil. Soc. III. 1881


II. 14. 1863-64


217 Anisodactylus discoides Dej.

Tarsus, thorax subquadrato, fossa sanctat, utrin-
que forolato, forae punctulatia, margine testaceo, elytric
Piceis, marginis lato, antecausam laci pedibusque tem-
tacete.

Long. 5/4 ligne. Larg. 4 lignes.

Il ressemble beaucoup au Baltimoreiensis, mais il est
plus grand et proportionellement un peu plus allongé.
La tête et les antennes sont à peu près comme dans
cette espèce, le corset est moins large et moins carré
sur les côtés antérieurement, ce qui le fait paraître
moins rétréci postérieurement, moins coudé et plus
carré, et il a une bordure latérale assez large, d'une
jaune-tachées un peu rousseâtre. Les élytres sont au peu
plus allongées, d'une brun noirâtre, avec une très large
bordure d'une jaune tachées un peu rousseâtre, qui s'amincit
presque jusqu'à la quatrième stria et qui se fond ins-
sensiblement avec la couleur du reste des élytres;
elles sont striées et enamellées à peu près de la même
manière, seulement le point enfoncé que l'on voit sur
le troisième intervalle est placé un peu plus haut, le
dernier du corps et les pattes sont à peu près comme
dans le Baltimoreiensis.
Four oblong, moderately elongate, fuscous, sides of thorax and elytra; and legs testaceous; head fuscous with a narrow transverse mottle band on the vertex, frontal ridge pale fuscous, elytra with two setigeroous punctures each side, anterior fuscous, base and femur testaceous; thorax a little broader than long, narrowed at base, widest a little before the middle, sides recurved in front, slightly sinuate posteriorly, hind angles sharply rectangular, side-margin narrowly depressed, disc moderately convex, smooth, punctured along the base, basal impressions short, linear, deep; elytra wider than the thorax, rather deeply striate, striae infuscated, intervals convex, smooth, minute punctures on the eighth interval not interrupted; body beneath smooth.

In the male the anterior tarsi are not broadly dilated, the first joint as very little pubescent at tip, the middle tarsi are rather slender, the first joint glabrous, the next three feelly pubescent.

In the female the anterior and middle tarsi are
scarcely broader than the posterior.
Length: 11-13 mm.

Habitat: Iowa City, Keokuk (Nicholls), Davenport (Putnam); Muscatine (Elliott); Ames (Osborn) Common.
St. Jerome, Iowa (Bauer); Eau Claire, Out. (Pettit); London, Out (Sanderson); Buffalo, N.Y. (Reineke); New York City (Schauz); Gloucester, N.J. (Neugel); Allegheny Pk. (Hamilton); Cincinnati, Ohio (Duny); Detroit, Mich. (Bullard and Schuy); Bayfield, Wis. (Hickham); Milwaukee, Wis.
(Plattberg); Maywood, Ill. (Mechot); St. Louis, Mo. (Summerson); Lawrence, Kansas (Peelen).


208. Baeckya cupreocaulis Day.
Black, elytra reddish brown, blackish on disc.

Feet pale testaceum.

Stems with about three hairy punctures each side at tip; antennae black brown, bare, labrum, palpi
and base of the mandibles pale reddish brown; thorax black, somewhat narrower behind, posterior angles acute, dorsal line distinct, basal lines dilated, and with the posterior margin conspicuously punctured; scutel blackish; elytra, base, exterior and posterior margin reddish brown, common disc blackish; feet testaceous. Say, Trans. Am. Phil. Soc. II. 33, 1823.

This species has the form and general character of dicoides, but it is more depressed and less shining, and the thorax is entirely black.

The anterior and middle tarsi of the male are more broadly dilated; otherwise the sexual characters are the same as in dicoides.

Length: 9-10 mm.

Habitat: Iowa City (Hickman); Davenport, Monticello (Putnam); Common.

St. Jerome, June (Hawkes); Erie by Oak (Pettit),
Buffalo, N. Y. (Reincke); New York City (Schaepke);
Annapolis, Md. (Smith); Allegheny, Pa. (Hamilton), Cincin-
nati, O. (Duny); Detroit, Oregonia, Mich. (Buffard
and February); Bayfield, Wis. (Kirkham); Milwaukee, Wis. (Kautzberg); St. Louis, Mo. (Summers); Kansas (Popov); Oklahoma, Colo., Texas (Levere).

*Carabius alticorne* Say Trans. Am. Phil. Soc. 18, 1843.

*Brachydactylus alticorne* Obi, Dec. 11, 1822.


*Carabius sancta e.* Tab. Ent. Syst. suppl. 58.

209. *Brachydactylus verticalis* LeS.

Black, legs, antennae, and palpi pale; shining, glabrous; head finely punctured, with a transverse reflexion spot between the eyes; base of mandibles and palpi reflexion, antennae fuscous, face testaceous, thorax considerably broader than long, widest in the middle, sides regularly arcuate, face as wide as apex, margin narrowly recurved, disc moderately convex, smooth, median line distinct, basal foveae large and shallow, face, apex, and margin finely and densely punctured;
elytra moderately deeply striate, intervals convex, finely and moderately densely punctured, viellate punctures not interrupted; undersurface picose, finely but sparsely punctured; legs and trochanters testaceous.

Length. 13 mm.

Habitat. Iowa City (Hickman), New York City (Schaupp); Anglesea, N.J. (Smith); St. Louis, Mo. (Summers); Kansas (Peck).

Spongefiga reticulata lec. junior. Ly. S. V. 379, 1848.

210. Anisodactylus terminatus Say.

Deep reddish brown; elytra darker; antennae and feel testaceous; thorax not contracted behind.

Body dark reddish brown; eyes blackish; antennae and palpi testaceous, somewhat darker at base; thorax transverse, with a distinct depressed margin each side, not narrowed behind; posterior angles obtuse, attaining the humeral ones, dorsal line indistinct; elytra somewhat opaque, darker than the thorax, striate inc.
Fuscated, venter and edge fusc, marginals punctate distinct, one distinct spine near the tip; feel testaceous, vertex and postpectus fuscish each side.


Third angle and end of thorax usually testaceous.

Length, 8.5-11 mm.

Habitat: Iowa (Osborn); Western Iowa (Shumk).

Indiana, Ill. (Pettit); Green Notice (Rayward and Savage); New York City (Schauf); Brigantine Beach, N. J. (Hamilton); Pescapilica (Say); Rayfield, Mo. (Hickman); St. Louis, Mo. (Santa); Kansas (Kansas); Lincoln, Neb. (Shumk).


*Calathus terminatus* Say. "..." IV. 482. 1834


211. *Monochaeta laevigata* Dej.

Abdomen, ovate, subdepressa, niger; thorace quadrato, subtruncato, postice utrinque obsoletus, fuscus.
absolue punctulatia, angula postica rotundatia; albae striatia, puncto postico impressa; antennae foci ferruginei.

Larg. 43 lignae. Larg. 2 lignae.

Il est à peu près de la grandeur de l’orange. Généralement un peu plus large, moins convexe, et sa couleur est entièrement devenu d’une noir assez brillant. La tête est assez grande, presque arrondie, peu rétrécie postérieurement, lisse, très peu convexe, et elle a de chaque côté, entre les antennes, une légère impression peu marquée. La tete supérieure est d’un brun noircière. Les mandibules sont moins. Les palpae sont d’un brun noirâtre, avec l’extrémité du dernier article d’un rouge ferrugineux. Le premier article des antennes est d’un rouge ferrugineux; le second est d’un brun clair, les yeux sont peu saillants. Le corset est plus large que la tête, moins long que large, assez court, presque transversal, presque carré, légèrement arrondi sur les côtes et presque plane; il a quelquesrides transversales ou dites peu distinctes; la ligne longitudinale du milieu est fine.
et assez marquée, l'impression transversale antérieure est
en arc de cercle et peu distincte, la postérieure est à
peine sensible, il y a de chaque côté de la base une im-
pression oblongue, assez large et peu marquée, dont le
fond et le bord sont courtes de petite pointe enfoncée
assez serrée, il y en a aussi quelques-unes dans le
milieu de la base, et même sans une forte loupe on
aperçoit quelque pointe enfoncée très petite et à peine
distincte, éparpillée et là sur tout le corset; le bord
antérieur est fortement échancré; les angles antérieurs
sont presque arrondis; les côtés sont légèrement rebordés;
les angles postérieurs sont arrondis et ne sont presque
jamais marqués; la base est légèrement raminée et coupée
presque carrément. L'écusson est lui et triangulaire, les
eîtres sont plus larges que le corset, peu allongées,
très légèrement raminées, presque parallèles, très peu courbes
et raminées à l'extrémité, les stries sont fines, liées et
assez marquées; les intervalles sont plissés, ou voir sur
le troisième prix de la seconde strie, à peu près aux
trois quarts des élytres, une pointe enfoncée assez marquée.
ou voit en outre une rangée de pointes enfoncées plus
proéminentes marquée le long du bord extérieur, entre
la huitième et la neuvième stria, vers la base et vers
l'extrémité; il n'y a en sa face dans le milieu. Il y a dé
jailes sous les elytres, le dessus du corps, les veisses
et les jambes sont noires; les tarsees et les épine des
jambes sont d'une brun un peu roussâtre.

Dij. Sp. Linn. 118. 1829.

Black, glabrous, shining; head smooth, slightly
with some setigerous puncture each side, antennae
piceous, face and palpi rufous; thorax broader than
long, broadest a very little before the middle, not nar-
rown behind, sides regularly arcuate, margin de-
pressed anteriorly, hind angles rounded, median
line distinct, basal forae linear and shallow, die
moderately convex, smooth, base and narrow margin
finely and moderately densely punctured; elytra
smooth, striate, intervals slightly convex, eighth with
interrupted cellate punctures; under surface
smooth, black; legs black, tarsi piceous.
length: 10 mm
Habitat: Iowa City (Wickham); Davenport (Putnam); Green Bay (Hayward and Savage); Staten Isl. (Casey); Gloucester, Mass. (Hitchcock); Columbiana Co., O. (Hill and Boulenger); Milwaukee, Wis. (Paulson); St. Louis, Mo. (Summer); Topeka, Kan. (Popenoe);


Ruspolius manhattanensis Casey Comb. Coleopt. 5. 1874.

2.12. Anisodactylus sericeus Hbr.
Black, punctured, pubescent above; antennae annulated with reddish brown and fuscous, thoracic angles rounded; tibiae and tarsi reddish brown.
Body depressed, brownish black, opaque, with distinct large punctures; and short decumbent, fumiginous pubescence above. Mandibles castaneous, palpi and three basal joints of the antennae red.
Dish bay, each of the remaining ones of the same color at the tip, and fuscous at base. Thorax distinct. 

ly margined, angles rounded, the posterior ones.
my obtusely, disc not much elevated, dorsal and basal lines obsolete, and in place of the latter a broad, shallow, confluent, punctured depression, uniting with the dilated lateral margin. Elytral striae inconspicuous, submarginal series of punctures indistinct; apex of the elytra inciseate. Body beneath and thighs black, polished; tibiae and tarsi reddish brown or gray.

Barrie New England Farmer \( \text{W.J.} \) no. \( 57 \), 117, 1828.

The thorax is broader than long, the apex and base equal, sides regularly arcuated, disc feebly convex, surface sparsely punctate, more densely so at base and near the margin; elytral intervals slightly convex, densely punctulate, each puncture with a short hair, alternate intervals with coarser obsolete punctures.

The anterior and middle tarsi of the male are dilated, the first four joints fuscous, the first joint over nearly its entire surface. In the female the tarsi are slender.
length, 10 mm.
Habitat. Iowa City (Wickham); Down Fork (Putnam).

Carapis, O. (Petit), Massachusetts (Harris), Buffalo, N.Y. (Reneche), New York City (Schupke), Newark, N.J. (Smith), Cincinnati, O. (Wing), Detroit, Mich. (Hubbard and Schway), Bayfield, Wis. (Wickham), Milwaukee, Wis., Pantageny, St. Louis, Mo. (Summers), Maywood, Ill. (Taylor), Kansas (Roper), Nebraska (Horne).

Carpalus rivicinctus Harris in Eng. Fam. VII. 117. 1829.


Carpalus fenestratus Dej. Sp. Lem. IV. 244. 1829.

212. Amicodactylus intermedius Day. (Fig. 15. Pl. xxxvii.)

Rufous, elytra brownish, punctured, with iridescent reflections; posterior thoracic angles rounded.

Head rufous, black at tip; thorax rufous, transverse, quadrate, widest in the middle, edge curving equally, base depressed each side and with numerous punctures; anterior margin punctured, and a few
remote punctures on the disc, dorsal line impressed, posterior angles obtusely rounded; elytra blackish-brown with iridescent reflections, striae profused, interstitial lines convex, conspicuously and densely punctured, edge reflex; front tarsus reflex; feet not visible; post-femur black; mantle reflex.

Length: 8.5 - 11 mm.

Habitat: Independence, Iowa City (Richdale); Ames (Ontario).

Sparrow Lake, Ont. (Hamilton); Erinsby, Ont. (Petit); New York City (Schaupp); Swarth, Madison, N.J. (Smith); Pennsylvania (Say); Columbiana Co., O. (Wright and Bombenger); St. Louis, Mo. (Swammerdam); Kansas (Pfeffer).


Lophocera julicollis Frome Ent Mag. II, 388, 1838.

Appendix.

Since writing the preceding, another Greindela has been added to the state list and is hereewith described.

Greindela unipunctata Fab.

L subpurpureeae, fabo elytronque junctorum.

Fab. Cut. sept. 1774. 23.

Brown, opaque, sericeous, breadth unicoloured, dark blue, legs green; head entirely suprpose, neck labrum granulate, bald; elytra emarginate in front, labrum large, sharply three toothed, the intermediate one the largest, margins with four setigerous punctures, two at the lateral angles and the others at the base of the lateral teeth, mandible lighter at base than at tip, black, palpi green, thorax flattened, trapezoidal, as broad as long, surface granulate, anterior and dorsal lines distinct, sides scarcely hairy; elytra flattened, humeral angles distinct, each elytron with distinct green forae and irregular green punctures, and a mac

---
original white spot near the middle.

Length: 16-18 mm.

Habitat: Cedar Co. IN. (Fitchan).

New York (Schaupee); Maryland (Say); Allegheny, Pa. (Kluger); Wa. Co., Ind. (Smith); North Carolina, Kentucky, (Long and Reutermüller), Huntsville, Ala. (Shinek); Georgia, Missouri (Schaupee).


Tab. ent. pl. I. 208. 1861.


Day. Syr. Soc. I. 60. no. 33. 1825.


Long and Reutermüller Jour. Ent. Soc.

II. 90. 1874.

G. unipunctata comes after celanigera dec. and is readily distinguished from all the others by the characters given in the description.
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Derivations of generic and specific names.

Cephalus - From a, needle, and ἄπλως, antennae.
    The last joint of the antennae is pointed at the tip.

Lygarensis - From a, private, ὀνοῦς, angle, and ὑπό, beneath.
    no angle to the neck (thorax).

Amara - From a, private, and μαῖρα, a little shining bile.

Aneurisctus - From an, unlike or unequal, and δαντές, fingers. = the first unlike in the race.

Anomoglosus - Abnormal tongue.

Bacteria - From βακτής, jet, or runner.

Bromidium - From βρόμος, the Greek name of some Lymneopter.

Blechnum - From βλεχήν, dull or red.

Brachylobe - From βραχύς, short, and λοβός, lobe; having short lobe.

Brachynoe - From βραχύς, to shorten, and εἶχος, plainly truncate.

Bradyellus - From βραδύς, slow, and ἐλέει, to move, = slow in their movements.
Callida - From *naxos*, beautiful, sand *eidos*, form.
Callidus - From *naxos*, hand *leket*.
Callisma - From *naxos*, beautiful, sand *eidos*, life = brilliantly colored.
Callirhoe - From *naxos*, bush, sand *naxus*, root.
Callirhina - Not known.
Cladina - From chiarina, cloaks the elk *tra* is covered with soft, silky pubescence.
Cladina - Uncertain.
Clavina - From clivia, stiff, bold. = living on the margin of ponds.
Clavina - From *naxos*, stout, robust, sand *naxos*, spine.
Clusianus - After *clusius*, *clusius*, now of Pfeioiter and Calamis.
Clusianus - From *clusius*, spines, *clusius*, spines.
Clusianus - Not known.
Daphniphila - Double lip.
Dacoderus - Dick necked, the thorax is disk-shaped.
Dormica - From dormic *eidos*, runner.
Dormica - From dormic *eidos*, runner.
Dormica - From dormic, without *eidos*, sand. The anterior tibiae are armed with finger-like teeth.
Satyrus — From ἵππος, quick, lively = a quick runner.
Exarete — Not known.
Elettra — Not known.
Leproine — Not known.
Harpalus — From ἀρπαῖς, snares, greedy.
Boliosorphos — Not known. Like Bolis, a genus of sponges.
Hachnumepet — Woody, soda feet, Tiberian.
Leberia — From λέβης, leek, 100 from λῆβες to take.
Epithetesulus — Not known.
Heandaric — Not known.
Metalopoeus — From μετὰ βιβλίον, variable. Metallic brownish black.
Arbria — From αρβρός, fawn.
Briaranthe — Not known.
Notrophile — From νότος, moist, wet, and φιλός, friend = living in damp places.
Alepopoeus — From ἀλές ὄψις, polished, and ὀψίς, foot.
Omphereus — From ὀμφαί, cruel, fierce.
Panagraeus — From πάνω, whole, and ἁγιος, holy = with cruci.
from pattern on the elytra.
Peimachus — Not known.
Pterobius — not known.
Perigona — not known.
Dinacoderus — not known.
Patjume — from πάτρια, paternal; broader behind.
Proctophora — from πρός, to, and φόρος,负载.
Stanites — from σταίνει, a sea fish.
Schizogeneus — split cheek.
Delorphomes — (from σέληνος, moon; and οποίος, supported.
 discourse) with moon-shaped impression at the hind corner. Small-footed.
Stenophus — from στενός, narrow; small, and λόφος, mouth.
neck narrowed behind.
Tachycellus — from ταχύς, quick, and κέλινος, tomson.
Tachys — from ταχύς, swift-footed.
Tetracha — quadriped.
Apterus — not known.
Archerius — i.e. armored, like bronze.
Archer — Ictys.
Arterrigenous — covered with woodgine, raengos to drawover.
sectins - summer-like.
saffir - fall, near relations.
sammacinaea - a, revolver. American.
sanguinata - angular.
sacculata - bacable, resembling or similar.
satymedius - black at middle.
strips - with black feet.
satricularia - black.
sulcata - not known.
sulcimatia - named for Baltimore.
sicolor - two colored.
siboloe - two broad.
siquenula - with two sequinulaor spots.
sexamani - probably named for a. W. Beeman.
coniculi - short neck.
silicabria - short life.
sailbum - sky, cunning, crafty.
sulcimenaia - found in California.
sulcimene - dark, gloomy.
sulcimene - coal black.
caries — not known.
calypsis — quick-footed.
calceus — bracer.
calcutae — copper colored.
calmilla — named for Mr. Clairville.
callioclinia — club-nicked. calicoclinia — club-shaped antennae.
cognatus — akin, allied, related.
colonus — very large.
compar — not known.
conformic — uniform.
confusa — mixed, confused.
conjunctive — associated, joined.
contractus — contracted, narrowed.
coracine — raven black, raven black.
convexus — raven black.
copper — not known.
crenistratia — crenate, notched, striated.
cupressina — copper.
cuprispinus — with copper colored elytra.
decorum, as — decorated.
dentifer - dente, dentia - a tooth, press foot.
diffuse - determined.
discoidens - disciform, discoidal.
dorsale, is - across the back, dorsum - to mark across.
dubius - doubtful.
undecimquinta - with twelve, droze or spots.
elvatus - elevated, raised.
elongatus - stretched out, elongate.
unmarginatus - margin notched or broken.
erraticus - erratic.
erythrople - erythros, red, and πόδα, foot.
extremicollis - lengthened neck.
terraeus - outside of, the exterior margin.
fallax - deceptive, trichich.
faciatius - banded.
farmic - not known.
flumine - marked across the thigh, flumen, femoric to mark.
ferrea - rust colored.
flavicaudis - flavus, yellow, and cauda, tail.
flavipes - yellow footed.
flavopictum - marked with yellow.
fuliginous - smudged.
fulvous - smoky, or smoking.
generose - generous, plentiful.
globulose - like a little ball.
grandie - very fine, grand.
gregarious - wandering in the herbage.
herbivorous - living in numbers or bands.
impressions - neck with impressions.
impressicollie - collic, neck not punctured.
impressitic - no puncture on the vertex of the head.
inseparable - unequal, roughened.
invasive - thickened.
incurved - curving inwardly.
indecisive - not distinct.
indefinite - with intervals.
impressicollie - not punctured.
junctiflorous - lavedos, violet, and fenna, althea.
james - after James the two faced god.
leugature - polished.
lacticolle — broad-necked, short-necked.
deconce — after John Deconce.
lepsida — scaly.
lithobiic — margined or bordered.
lithobatic, a — margined or bordered.
lincle — with lines.
lincobatic — marked with little lines.
lithophilic — in the stone, sand, and epidos.
lagonomic — with very long antennae.
lincisblandic — pretty and shining.
lucid, a — morning, ducky, gloomy.
lutulentic — yellowish.
macra — large.
major — larger.
medius — middle.
melanaric — black, gloomy.
micace — glistening, brilliant.
iminitic — very small.
mutes — quiet, silent, mute.
name - dwarf.

mellitum - dark, cloudy.

niger - black.

nigerine - very black.

nigriceps - black head.

nigromine - black.

notative - marked.

notace - nodding, fluttering, shaking.

obolitic - wore out, common.

oblique - blunt, shortened.

ochropeque - yellow footed.

octopunctate - with eight punctures.

obtuse - deflected, robbed.

ornata - adorned.

tallop - pale footed.
	paleopus - living in the march.

parallelus - parallel.

parastic - not known.

partiarius - not known.

patruelis - is related.
pediculace - loose like.
Pennsylvanica - found in Pennsylvania.
Perennate - very pretty or tidy.
Perplexus - confused, indistinct.
Pieze - pitch colored, pie, picie, pitch.
Picpex - pitch colored feet.
Pictonian - painted antennae.
Placidus - soft, still.
Platyporus - short necked.
Podetia - to catch or take from behind, the backside.
Portentum - not known.
Praxine - ράξινος, lick green.
Quelchellus - the beautiful.
Quimla - dwarf fish.
Quintata - punctured.
Purpureo - purple.
Purpureitis - purple.
Purpurea - purple.
Purpurgallus - purple necked.
Purpurgallus - very small.
Quadrimaculatum - with four spots.
remote striata — with remote striate.
repanda — curved upward.
rufoconia — red antennae.
rufofrons — red vertex to the head.
rupestria — living on rocks.
ruvaram — not known.
rusticae — living in the country.
sayii — named for Thos. Say.
scapulariae — marked across the shoulders, scapula.
sceratator — thorough investigator, inquirer.
sculptile — carved.
semistriata — half striate.
sericeus — silken luster.
serrius — remote, saw-toothed.
sexguttata — with six spots.
seximpressa — with six impressions.
simpatrise — way, animate.
sodalie — social.
solitaria — alone.
sphaericollis — globular necked.
splendid - splendid, striped, collie with striped neck.
stenostomus - narrow-mouthed.
atigine - black.
subterranean - underground, subterranean.
sylvan - living in the forest.
terminative - marked at the tip.
terrestrial - upon the earth.
tessellatum - square.
testaceus - dull brick or brownish yellow.
tomentosus - downy.
tricolor - three colored.
unicolor - of one color.
multicolor - many colored.
multicalix - marked across the vertex.
unicus - not known.
virginica - found in Virginia.
iridipennis - with green elytra.
iride - green.
vittata - with stripes.
virax - hairy.
vulgaris - common.
wilcoxii - named for Mr. Wilcox.
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Tetracha Coppe 9

Virginia Linea 9
Plate I.

Ventral surface of ia Cicindela.

m. mandible.

m.p. maxillary palpue.

l. outer lobe of maxilla.

i.l. inner lobe of maxilla.

m.t. mentum.

l.p. labial palpue.

g. gula.

l.s. prosternum.

m.s. mesosternum.

m. metasternum.

t. trochanters.

c. coxae.

f. femor.

l. tibia.

t. tarsus.

e. elytra.

a. abdominal segments.
Plate II.

Eucinella gemmata Duf.

m. mandible.

l.b. palpi.

t. labrum.

t. vertex of head.

c. occiput.

t. thorax.

r.c. scutellum.

t. elytra.

t. a.s. anal abdominal segment.

f. femur.

t. tibia.

t. tarsus.

t. humerus or shoulder of elytra.
Plate III.

Fig. 1. Cicindela cereriipes Lec.
Fig. 2. Tetracha virginica Linne.
Fig. 3. Cicindela rugifrons Dej.
Fig. 4. Cicindela rugifrons var.
Fig. 5. Cicindela levantii Hald.
Fig. 6. Cicindela sexguttata Fab.
Fig. 7. Cicindela splendida Kuntz.
Fig. 8. Cicindela limbalis Blug.
Fig. 9. Cicindela purpurea Lin.
Fig. 10. Cicindela vulgaris Say.
Fig. 11. Cicindela 12 guttata Dej.
Fig. 12. Cicindela repanda Dej.
Fig. 13. Cicindela punctulata Lin.
Fig. 14. Cicindela supraciliosa Lec.
Fig. 15. Cicindela macra Lec.
Fig. 16. Cicindela lata Dej.
Plate xx.

Bicinnelsa.

Fig. 1. Dorsal view of the head.

m. mandibles. a. antennae. t. thorax.
p. palpi. c. compound eye.
l. lobe of maxilla. f. front.
l. labium. v. vertex.
c.clypeus. o. occiput.

Fig. 2. Mentum, labium and palpi.

Fig. 3. Maxilla.

a. f. first, and second joint. c. inner lob.
d. digitus. v. outer lob. f. maxillary palpus.

Fig. 4. Maxilla of Tetraocha virginica Linne.

Fig. 5. Mentum of the same.

Fig. 6. Mandible of Cyphus elevatus Fab.
Plate V.

Central surface of thorax and abdomen.

Fig. 1. Epipleura.    Fig. 3. Omophrum.
Fig. 2. Mesostichum.    Fig. 4. Hapalum.

m.s. mesostichum.
ep. 1. episternum of mesosternum.
ep. 2. epimeron of mesosternum.
c. 1. middle coxa.    c. 2. posterior coxa.
mt. s. metasternum.
ep. s. 1. episternum of metasternum.
ep. s. 2. epimeron of metasternum.

a. abdominal segment.
ep. e. epipleura of elytra.
Plate xi.

Fig. 1. Omophron americanum Dej.
Fig. 2. Omophron tessellatum Say.
Fig. 3. Ecydrus lacunae Dej.
Fig. 4. Ecydrus elevatus Fab.
Fig. 5. Hystantes bilobus Say.
Fig. 6. Carabus angulatus Say.
Fig. 7. Carabus serraticus Say.
Fig. 8. Carabus hieraticus Say.
Fig. 9. Calosoma exterius Say.
Plate VII

Fig. 1. Callusoma circumflator Fab.
Fig. 2. Callusoma calidum Fab.
Fig. 3. Pachimine elongatus Lew.
Fig. 4. Scarites multipesuens Fab.
Fig. 5. Ephithra aurea Say.
Fig. 6. Abra fallax Say.
Fig. 7. Osphichilus securis Const.
Fig. 8. Dyctheina spheeroides Say.
Fig. 9. Clunia americana Dej.
Fig. 10. Clunia dentipes Dej.
Fig. 11. Clunia dactylulata Fab.
Fig. 12. Clunia punctica Lee.
Fig. 13. Panagames fasciatus Say.
Fig. 14. Remshidum littorale Olivier.
Plate viii.

Meutelle and maxilla.

Figs. 1, 1a. Ovophorus.

Figs. 2, 2b. Cytherea.

Figs. 3, 3c. Carabus.

Figs. 4, 4a. Asbria.

Figs. 5, 5b. Elaphrus.

Figs. 6, 6b. Isottaephilus.

Figs. 7, 7b. Psamachus.

Figs. 8, 8b. Pezochirius.

Figs. 9, 9b. Scavitus.

Figs. 10, 10b. Chirina.
Plate IX.

Mentum and maxilla.

Figs. 1., 1a. Schizocephalinae.
Figs. 2., 2b. *Panagaeus*.
Figs. 3., 3a. *Bembidiniurn*.
Figs. 4., 4d. *Bembidiniurn*.
Figs. 5., 5c. *Petrobux*.
Figs. 6., 6a. *Petrostichinae*.
Figs. 7., 7a. *Oonthine*.
Figs. 7., 7b. *Petrostichinae*.
Figs. 8.  Aonar.
Plate X

Mentum, and maxilla.

Fig. 1. Membrane, mental.
Fig. 2. 2a. Loxandrite.
Fig. 3, 3b. Dicalcium.
Fig. 4. 4a. Diplochila.
Fig. 5. 5d. Radiater.
Fig. 6. 6b. Platymere.
Fig. 7. 7c. Calathure.
Fig. 8. 8d. Paigonas.
Fig. 9. Maxilla, of Platymere.
Fig. 10. Scolopochile.
Plate XI.

Mentum and maxilla.

Fig. 1. Ophthopus.
Fig. 2. Leptotrichium.
Figs. 3, 3a. Canonea.
Figs. 4, 4b. Valerita.
Fig. 5, 5a. Labia.
Figs. 6, 6a. Dromius.
Figs. 7, 7a. Notablistus.
Figs. 8, 8f. Oblㄧcheus.
Figs. 9, 9a. Callida.
Fig. 10. Callida.
Plate xii.

Nasal and maxilla.

Figs. 1. 1a. Pinaroceras.
Figs. 2. 2b. Synineidae.
Figs. 3. 3c. Brachiopoda.
Figs. 4. 4d. Heteromorpha.
Figs. 5. 5e. Bithynia.
Figs. 6. 6f. Stromatopora.
Figs. 7. 7g. Brachylobe.
Figs. 8. 8h. Europidea.
Figs. 9. 9i. Rhopoceras.
Figs. 10. 10j. Gratacanthus.
Figs. 11. 11k. Discoceras.
Plate xiii.

Meurinus sandvicensis.

Figs. 1, 1a. Antennae.
Figs. 2, 2a. Stenodiphos.
Figs. 3, 4, 5; 3c, 4d, 5c. Mandibles.
Figs. 6, 6f. Sclerophrons.
Figs. 7, 7g. Bradyellus.
Figs. 8, 9, 10, 11, 12, 8h, 9i, 10j, 11k, 12m. Rhinodactylus.
Plate xiv.

Fig. 1. Gisindela nipanda (Hof) larva.
1a. Head, prothorax, mesothorax.
1b. Underside of head. 1c. Antenna.
1d. Dorsal view of the 5th abdominal segment.
1f. Fig. Pupa, ventral and dorsal surfaces.

Fig. 2. Scarites subterraneus Fab. larva.
2a. Pupa of the same.

Fig. 3. Pseudobunus longicornis Say, larva.
3a. Upper surface of head. 3b. Antenna.
3c. Maxilla. 3d. Mentum.

Fig. 4. Pterostichus humilisculus Say, larva.
4a. Head, above. 4b. Head, beneath.
4c. Antenna. 4d. Mentum.
4e. Maxilla. 4f. Pupa.

Fig. 5. Pterostichus rusticus Say, head, above.
5a. Head, beneath. 5b. Antenna.
5c. Maxilla. 5d. Mentum.
5e. Pupa.
Plate xx.

Fig. 1. *Perenticlea mutus* Say, dorsal view of pupa.

Fig. 2. *Dicaelus splendidus* Say, larva.
  1a. Pupa, front view  1b. Side view of the same.
  2a. Maxilla of larva  2b. Mandible
  2c. Surface of ventral segment showing arrangement of the plates.

Fig. 3. *Platynus extenuicollis* Say, larva.
  3a. Head, above  3b. Head, beneath.

Fig. 4. *Telenita janus* Fab., pupa.
  4a. Lateral appendage.

Fig. 5. *Brachypneus grandis* Dej., larva.
  5a. Pupa of the same.

Fig. 6. *Schnemis laticollis* Say, pupa.
  6a. Antenna of larva  6b. Mentum
  6c. Mandible  6d. Foot  6e. Maxilla.

Fig. 7. *Erychne elevatus* Fab., mandible of larva.
  7a. Mentum.
Plate XVI

Fig. 1. Rembidium dorsale Say.
Fig. 2. Rembidium floricolor Say.
Fig. 3. Rembidium maculatum Linne.
Fig. 4. Rembidium flavipictum Hnt.
Fig. 5. Rembidium flavicaudata Say.
Fig. 6. Camponotus flavopictus Say.
Fig. 7. Leptotrichus dorsalis Fab.
Fig. 8. Tergotrichus adoxus Say.
Fig. 9. Tergotrichus femmendus Say.
Fig. 10. Tergotrichus longicornis Say.
Fig. 11. Tergotrichus sodalis Lee.
Fig. 12. Dicelthus dilatatus Say.
Fig. 13. Terebrantsia atriceps Lee.
Fig. 14. Chlaenius erythropus Linne.
Fig. 1. Badiestr. pulchella L. dec.
Fig. 2. Platymn. extensicollis Say.
Fig. 3. Callida decora Fab.
Fig. 4. Agromene pallipes Fab.
Fig. 5. Lebia ornata Say.
Fig. 6. Lebia scapularis Dej.
Fig. 7. Stenolophus ochrotaenia Say.
Fig. 8. Brachymn. perplexus Dej.
Fig. 9. Gymnodi. americanae Dej.
Fig. 10. Anomoplaea exarargiatia Say.
Fig. 11. Leopinus incassaticeps Dej.
Fig. 12. Carpalus caligineus Fab.
Fig. 13. Carpalus errantius Say.
Fig. 14. Anisodactylus nigerrimus Dej.
Fig. 15. Anisodactylus interstitialis Say.
Fig. 16. Tachyella atrimediata Say.