The Terrestrial Adephaga

of Iowa.

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

by

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"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 roelli 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. Patnaude, Herb. DeBane, M. H. Vickame and Hug and Bantenmiller. The authorities for all being given in the body of the work.
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 eyes is narrowed into a neck, or gradually narrowed and much prolonged so as to articulate with the thorax by a semicircular constrictive, 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 coriaceous plate, which 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 such square or quadrangular facets (Packard) fitted against each other perfectly. Each facet is the cornea of a distinct eye. The number of facets varies from 50 to 30,000 (Comstock). Rarely 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 surface, and are known as ocelli.

The undersurface of the head is widely excavated, forming the mouth, the parts between the eye and behind the mandibles are the genae, behind the mouth or immediately below the occiput is the throat or gula, the gular suture 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 inserted in front of, or more rarely between the eyes, usually under the side margin of the front. 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 denser consistence than the outer ones and less pubescent. The forms of the antennae may be reduced to the following types:

Vediform, having joints of uniform thickness, or nearly so.

Setiform, having joints more and more slender to the base.

Serrate, having joints triangular, arranged like saw teeth.

Clavate, having the apical joints much more elongate than the others.

Capitata, 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.

Pinnate, having processes on both sides, feather like.
Lamellate, 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 this is the labrum, or upper lip, articulating with the chytrium. Immediately below the labrum are the jaws 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 palpues, and two lobes. The basal joint is the carina, or hinge; the second is the stigmen, or footstalk to which are attached the appendages. On the outer side of each palpue, 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 bears
a terminal joint, the digitales.

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 quadrated, 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. There 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 some filaments and not divided.

The labium is placed usually in front of the
ventrally or in the emargination between the lobe, rarely it is almost entirely hidden. It consists of three parts: a central piece, the ligula, and two each side the paraglossae. The ligula is either cone-like or membranous, its size and form varies 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 underside surface of the prothorax. The inflected portion is often called the prothoracic epipleura. The under surface of the prothorax consists of a central member 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 coxa1 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 no 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, ascutum, acetellum, and postacetellum.

The ventral surface consists of the same pieces as the prothorax, i.e., metacetum, with its episternum and epimeres, and metacetum 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 to form a single piece, and sometimes, but rarely, they are wanting.

The metathoracic or posterior wings are membranous, but with few nerves, so arranged as to allow of the complete folding of the wings under the elytra. Frequently the wings are cadent.

Legs.

The first joint, that by which they are attached
The body is called the cera, 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 having two claws; these claws are sometimes wanting. Between the claws is seen, in some species, a small appendage, more or less retractile, called the maxillon; this often bears at the tip one or more brittle-like appendages, the tarsomelia.

The form of the legs varies greatly in the different families, being fitted for walking, ambulatorial, digging, foreoral, for 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 beneath.

The spiracles are situated in the connecting membrane, 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 Dow, which is as follows:—

I. Coloptera (genma) having the mouth parts normal, atrophied 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. Prosternum not cut off behind by the epimeras (except in some Polydidae and in Cossyphidae); prosternal sutures distinct.

II. Rhynchoptera having the head more or less prolonged into a beak; the palpi rigid (except in Phaenacidae and Anthribidae), without distinct palpi um; maxillary four-jointed, labial three-jointed; labrum absent, except in Phaenacidae and Anthribidae. Sular sutures confluent on the median line. Prosternum cut off behind by the epimeras; prosternal sutures wanting. Epipleurae of the elytra wanting, except in Phaenacidae and Anthribidae.
Coleoptera (genera).

1. Hind tarsi with the same number of joints as the others (except in a few Clavicorne, e.g.).
   - Euserrera.

2. Front and middle tarsi 5-jointed, hind tarsi 4-jointed.
   - Hartromera.
   - Euserrera.

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

First mutual segment visible for its entire breadth (except in Physoconidae);
Antennae clavate or capitate, very rarely serrate.
   - Clavicorne.

Antennae serrate, very rarely clavate or capitate.
   - Epecially.

Antennae with a lamellate club, the opposing surfaces with a very delicate sensitive structure;
Sclerosomeals

B. Fourth and fifth tarsal joints, ankylosed; the former very small; antennae filiform, rarely serrate, not finely thickened externally.

Hydrophagae

This series contains several families, with but two of which we have to deal. The species are usually active, and their habits predacious. They are separated in the following manner:

Macrosternum with an antecoxal piece, separated by well-marked sutures, reaching from one side to the other, and extending in a triangular process between the hind coxae.

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

Antennae inserted on the front above the base of the mandibles.

Eurycetidae.

Antennae arising at the side of the head between the base of the mandibles, and the eyes.

Carabidae.
Scindelidae.

Head large, broader than the thorax, exerted, inclined, suboval; vertex usually rugose, elevated each side upon the eyes, concave on the sides. Eyes usually large, ovate, prominent. Mandibles very large, acute, dentate within; a large compound tooth at the base and about three others nearer the tips. Maxillae recurved, two lobed, the interior armed with spines, or rigid bristles on the inner margins and usually terminated by an articulated hook. Palpi six, usually not longer than mandibles. Filiform, 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 incurved 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 palp is 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 corneous; 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 in the inner margin to admit of the free motion of the labial palp, rounded near the outer margin. Mentum inserted upon the front, above the mandibles, nearly in contact with the eyes; always eleven-jointed, the four inferior joints, glabrous and shining, the other 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 globate appearance. Procoxae narrow, not produced behind. Episternum, and epimeron distinctly defined by sutures; coxae globular; coxal cavities entire. Metasternum truncate, the widest part extending forward, deeply emarginate behind. Metacoxal, spinera, and episternal sometimes connate, without sutures, sometimes distinct. Metasternaum pointed, both in front and behind, the spinera are large in unriged 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 included by the metathorax and first ventral segment.
They are contiguous or separate.

The elytra come the upper surface of the trunk and dorsal segments; rounded, bluish; 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 subcircular or subtriangular, composed of six visible segments in the female and seven in the male. Inクラブに白く 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, convex above, truncate beneath.

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 colour ranges from white with brownish markings, through reds and greys to black, exhibiting brilliant metallic tints. The markings consist of abbreviated bands, lunules, and spots of white or yellow.

The food is insects, worms, etc.

The Bicordelidae generally frequent hot sandy districts, where they may be observed flying in the sunshine with great velocity. Their flight is, however, 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 sparkle bugs, 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:

3. Third joint of maxillary palpi longer than the fourth.

- *Tetracha* Hope.

4. 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 virginica* Linne. Fig. 2. Pl. iii.

*Cicindela nitida*, or "antarctic pedibeque testaceus."


Head large, broader than the thorax; eyes circular; large; labial palpi longer than maxillary palpi, with the first joint elongated; labium without a tooth; labrum
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 ferruginous; broad lateral margins of thorax and elytra green; the middle black.

Length 20-24 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; tip of each elytron rounded; sutural angle obliterated.

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

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

* Habitat: Southwestern Iowa (Oeben). 

- New Jersey (Nugel), Ohio (Hamilton), Washington, Pa. (Liebke), Indiana, Kentucky (Hamilton), Salina, Kansas (Jones), Nebraska, Texas (Schaep), St. Louis, Mo. (Summers), Morgan City, La. (Nicholls), Enterprise, and Cedar Key, Fl. (Schwarz).


* Tab. Ed. I. p. 33. 1891.


* - - - - - - VI. p. 77. 1883.

* Schaep. Poul. Thule, Ent. Soc. p. 234. 1876 (sexual

* Liew & Benti, Jour. Ent. Soc. II. p. 53. 1874.
**Gicindela Linnaeus.**

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 normal or complete when they are of the following type: a lunular narrow curved spot, called lunule; a middle band, more or less broad, 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 sunny banks or roadsides. They are generally diurnal but some appear at night as well. Many of these are seen only during the hottest sunshine, disappearing if there comes but a cloud. The hiding places are under stones, in bank, or in holes in the sand.

The larvae are somewhat elongate, whitish grubs.
with broad metallic coloured head and prothorax, and a large lump having 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 colour 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
1. Purplish cupreous with same dots, sometimes confluent at maring.

2. Unicoloured, green or blue, unicolor Del.

3. Green or blue with small rounded marginal, apical, anteapical and sometimes discal spots, situllata Fab.

4. Sperma with distinct median band.

5. Reddish cupreous with one oblique scarcely sinuate band not reaching outer margin, and rare apical dot.

6. Cupreous with humeral, post humeral and apical dots; median band more blunt.

7. Thorax green or blue, elytra cupreous with a short median band, ante.

8. Thorax convex, subquadrate, palpi of unusually
1. Markings complete, very broad.
   
2. Markings complete, narrow, humeral linea C-shaped. npanda Duj.
   
   
4. Thorax subgirdrical, front bold.

5. Dark brown or black, with humeral and posthumeral dots; middle band broken, apical linea complete. punctulata Oli.

Als. Trochanters reduced.

6. Humeral angles wanting. cellipes loc.

7. Humeral angles distinct.

8. Anne green.

9. Suprasc. elytra coarsely and densely punctured. cupreae loc!

Punctured, sutura spinosa; maculae costae tumacaeae.

1. Elytra broad and flat; white with a few brownish, dark lines; antennae, palpi, and natural margins pale, laetae.

2. E. elateriae (Fig. 1, Pl. III.), fusco aenea, obscura, sericea, capite thoraceque granulato nigricato, illo striaque fornicato striato, oculis maximis, hunc cylindrico latitu- dine, seque longiores, posticus subangustato, laternibus rectis parce pilosis, elytris fortiter punctatis, anter- sem, angustatis, humeri nullos, ad apicem late rotundatis, tectis serratis, apinis naturae magnae guttis striisque, diecoidibus (ad tridentem, a fusi et apicem posticem) posteriori interiori, linea marginali ad medium, lunulisque apicali tenui albici; scutis viridi aenea, lateribus albo pilosis, tro- chantieribus angoque tectaeis; labro albo antice rotundato, medio hieminato et unidentato, palpis sex et striisque ad basin pallide.
Max. sutura integra; femina sutura retracta.


Brownish bronze, head granulate, rugose, eyes very large, labrum one 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 line.

They vary considerably. Sometimes the discoidal spot is wanting, and only the apical line, and marginal line remain white, sometimes even the latter disappears.

Length 7.5 - 8.5 mm.

Habitat. Iowa City (Thickham). Rare.

Ill., Ill. R. Soc., Ill. (Schaum). 1848.


3. Cicindela unicolor — "viridi-cyanae, nitida, thorace sub-globoso."

Long 5 ½ lignes. Larg. 2 ½ lignes.

Elle ressemble beaucoup aux deux espèces précédentes (C. modesta Dej.). Elle est entièrement doré avec un beau vert bleuté. La tête supérieure a trois dentes bien marquées à sa partie antérieure; dans la mâle, elle est bien marquée 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 palpes sont d’un vert brunâtre. Les antennes sont courtes; leurs quatrê premières articles sont d’un vert bleuté, les autres sont ocreux. La tête est un peu moins large que celle de la P. gigantea; elle est striée de la même manière entre les yeux. Le concis est un peu plus globuleux et un peu plus arrondi sur les côtes; les elytres sont un peu moins larges, un peu plus convexes; la ligne de petite pointe enfoncée est moins distincte,

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

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

Length 13mm.

Habitat. Anses, Va. (Osborn).

Georgia, Alabama (Leconte); St. Joseph Bluff, Fla. (Kami), Texas (Schuyler); Maclay (Ray); Long Island (Johnson); Northwest Territory (Tyrrell). This last is probably an immaculate variety of sexguttata Fab.


4. *Cicindela ragiferina* Dej. (Figes. 3, 4, Pl. III.)

"Dividie nitida, elytra masculins desuus, margine ligulaque rapier albius.

Long. 5½ lignae. Larg. 2½ lignae.

"Elle est à peu près de la grandeur de la *C. fuscata*, mais elle est plus courte, la tête et le corselet sont proportionnellement plus larges, et le dernier est plus arrondi. Elle est, tout en rondeur, aussi belle que la *C. fuscata*, de couleur verte brillante. Dans la juvénile, le seul sexe que je connaissais, la tain supérieure est jaunâtre, et elle a trois petites dents à sa partie antérieure. Ses mandibules marquent dans l'individu que je possède, les maxillipède 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-saillants; le corselet est..."
Brilliant green, polished; head bluish green, longitudinally corrugated, with long white hairs between the eyes; the four basal joints of the antennae brassy green, the remaining ones greenish; labrum tridentate, with six marginal punctures; of the 8 white edged with blackish brown; of the 7 entirely greenish black; mandibles very long, slightly acuminate, slender, greenish black, labrum with a linear basal, white spot; palpi brassy green in 3, greenish black in 7; eye brown; elytra brilliant aurigrine
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 suture; 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 oblong spot, quite reaching the margin and confluent bluish with the terminal lineule. Venter and postpectus as well as thorax 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 lamella.

2. Two anterior spots obsolete.

3. All spots wanting except the terminal lamella, which
is merely an abbreviated transverse line.

3. Elapsa immaculate.

Another variety might be added which the
anterior spots are continuous and but slightly
separated from the posterior one and terminal lamella.

Ref. Fig. 4, Pl. III.

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

Rugifons Dej. differs from punctatus Ohiv. in the
form of the intermediate band which is not sinuate,
and in wanting the coppery crimson edge of the
elytra; from splendidula Reutz in having the head and sides of the thorax crimson and the humerus more red, angular.

Length. 11-12 mm.

Habitat. Iowa City (Rickham).

Cambridge Mass. (Carrie), Rhode Island (Schauf), Long Island (Johnson), Brooklyn, N. Y., Lakewood, N. J. (Leup and Beutenschaufler), Curtis Bay, N. Y. (Johnson), Southwestern Virginia (Bon), Lawrence, Kan. (Peck).


Leup and Beutenschaufler Jour. N. Y. Ent. Soc. II. p. 90, 1894.


tab. 2. f. 1. 1830.

Carrie New Eng. Tax. 7, 90, 1825.

Secura II Soy. Trans. Am. Phil. Soc. I. p. 418, 1818. (see Tab.) (black var.)

G. triumvira lecontei (FIG. 5. PL. III.) supra cuprea purpurea.
hand nitida, fronte fortiter striata parce punctata et pilosa, thorace corso, raro at distincte rugose, elytris
bronibus convexis obtusis punctatis versus extremini
seriatis raro foveatis, maculis marginalibus roseo
coharentibus albis, subtus obscura cyanea ad latera
pilosa; labro sexus utrinque albo tridentato.


Brown with a reddish or coppery tinge. Head SOME
what hairy, scarcely rugose, labrum three toothed; thorax
convex, sparingly but distinctly rugose, slightly hairy;
elytra with humeral humule elongate, sometimes broken
into dots; middle spot triangular, apical humule well
developed.

Length 12 mm.

Habitat. Iowa City (Nichols); Ft. Madison (Abeona)
Illinois (Schauter); Wisconsin, Racine (Lay and Baum);
Ontario, and Quebec.

Locutiae Bald. is closely allied 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.), "viscidiae, metiidae, elytræae punctae, tibiae marginalibus albii. " Tab. Oct. sept. 1776.

6. sexguttata, d'un nutuminâtre brilliant; elytrae avec trois points blanchâtres, sur le bord externe."

Ober Oct. 33. tab. 2. fig. 21.

"6. sexguttata, elle brille du plus beau brun verd, bleu de patte au bout, les yeux blancs. Herbst. April. 1759. pl. 27.

Head green, sometimes glossed with blue, bald, rugose behind; antennæ with four basal joints green, the remainder brownish black; labium white, edged with brown, three toothed, and with six marginal blackish punctures; each bearing a hair; mandibles white, latus, tip black; palpi green; eyes brown; thorax slightly rugose; elytra strongly punctured, hind
margin rounded, each elytron with a marginal, antepical, apical and sometimes a declal spot.

The markings vary considerably, sometimes they are entirely wanting and again there are but two, the marginal and apical spots, 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 colour of the first brood is a 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, (Hickman); Cincinnati.
Cambridge, Mass. (Barrie); Malpe, Mass. (Good); Staten Isl. (McG); Buffalo, N.Y. (Reiche); Green Nature.
Bayard & Savage); Philadelphia, P.a. (Lebreck); New
(Smithe); Maryland, Georgia (Schaupp); Mississippi (Mert); Texas (Schaupp); Cincinnati (N.) (Dury); Terre Haute, Ind. (Blatchley); Detroit, Mich. (Hubbard & Church); Milwaukee, Wis. (Ruttenberg); Dakota (Schaupp); Rock Bluff, Ia. (Elliott); Eastern Kansas (Peachum.); St. Louis, Mo. (Summerv); Louisiana (Locusta); Newfoundland (Locusta); St. Jerome, Que. (Gauvain); Grand Bay, Ori. (Petit).}

C. versiculata: Fab. Ent. Syst. 1. 176. 29. 1770.

Fab. Syst. Cl. I. p. 241, no. 45. 1801.

Gmelin, Ent. 33, tab. 2. fig. 21. 1790.

Herbst, Arch. p. 189, tab. 27. fig. 17.


Loricella purpurea (Fig. 9, p. III.), purplish vivid brown.

Lors nul bleuâtre en-dessous; elytres ane vin tâche courte, et deux points blanches.” Olivier, deel. 3d.

Reddish or greenish cupreous; margins brilliant green; head hairy, suprcere with two distinct green lines between the eye, 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 are scarcely sinuate, band not extending to the margins and an antepalpal 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 (Nicolai); Ames, Ia. (Osborn);
Cambridge, Mass. (Carrié); Kaldem, Mass. (Lord);
S Sterling, N.H. (Hayward & Savage); Buffalo, N.Y. (Priche);
Staten Isl. (Ling); Pearlings (Dey); R. Costa, A. J. "Hendrick"
Cincinnati, O. (Dury); Detroit, Mich. (Kublardi);
Bayfield, Wis. (Nicolai); Bismarck, N.D. (Nicolai);
Lundy Point, N.Y. (Snow); Salina, Kansas (Jones); Ab. (Lee);
Milwaukee, Wis. (Rauterberg); Platte Canon, Colo. (Snow);
St. Louis, Mo. (Sumner); Ave, Minn. A. Noss. (Nelker).
Thunder Bay to Lake of the Woods, Sault. (Kublardi and
Schwarz); Sault Ste. Marie Ist. Barrington); St. Jerome;
Gew. (Rausen); Gwudok, Ont. (Petit); Hamilton, Ont.
(Moffat).

"C. purpurea" Ohio, l.c. 33, tab. 3, fig. 34. 1790.

Say, Travels, Phil. Soc. 21, p. 417, tab. 13.

Aug. 8, 1818.

Lect. Ohio l.c., tab. 3, lect. 18. 1796.

tab. 13, fig. 1. 1848.

Schauf., Bull. Phil. Soc. VI. p. 87. 1884.


S. silvaticus, Klug. (fig. 8. pl. vii).

A variety of the preceding.

Superficial, margins and under surface green, humeral lunule, middle band and apical lunule complete, sometimes a post humeral dot present. Median band more blue than in purpureus. Ohio.

Length 13-15.5 mm.

Habitat. Iowa city (Hickham).

New York, Ohio (Leuz. & Bentenmuller), Kentucky (Schauf.), Bayfield, Wis. (Hickham); Kane, Colo. (Leuz. & Bentenmuller); Cheyene, Wy. (Hickham).
? Cicindela splendidula, bright green; disks 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 spot, some only a few spots at the middle of the margin, and some have the four marginal dots, and the middle band.

Length 14-16 mm.

Habitat. Near Port, La. (Putnam).

Can. East port, Me. (Carriel); New York (dey + Beutenmüller);
New Jersey (Le Conte); N. Can. (Schaufuss); Northern Illinois (dey + Beutenmüller); Missouri, St. Louis (Emerework); Salina, Kan.
(Cuane); Mo. (dey + Beutenmüller); Arkansas (Schaufuss); Idaho (Schaufuss).

South Park, Colo. (Dowditch); Tex. (dey + Beutenmüller).

(Fig. splendidula). (Fig. 7, Pl. III). Phil. Soc. 1830, 1833, 1836.

Schaufuss, Bull. R. H. Ont. 1827, 1830.
10. Cicindela geminata (Pl. III). - Upra obsoletus, arcus
elytri subviolaceo-nigris, margine laterali, humero
apicalis albis; integris, fasciisque media et
incumbente albis.

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

"Elle ressemble à l'Albohirta, 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
un peu plus ouvragés et moins violettés. La tête est à
peu près comme celle de l'Albohirta. Le bord supérieur
est moins transversale, un peu arrondie, et elle est, au
milieu du bord antérieur, trois petites dents bien dis-
tinctes, dans les deux sexes. Dans le mâle, les palpè
maxillaires, et le dernier article des labia 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 saillant. Le
corselet est monté, platon, légèrement convexe et courant 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 n'est point interrompu; les autres taches sont un peu plus larges; la partie inférieure de la tunique luminaire descend obliquement et ne se courbe 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 dessous du corps et les pattes sont à peu près comme dans l'Allochirus.

De Jean Spiller. 1831.

Brow, scutum opaque, undecride unicolorous.
Green, head and thorax granulate rugose, hairy; thorax broader than long, impressions very distinct; elytra punctured, markings complete, broad, luminal humule long, in some cases reaching the regulation of the median band, median band usually rectangular but, apical humule broad.

Length 16.5 - 18 mm.
11. *Cicindela mutigera* (Fig. 10. Pl. iv).— "Obscure, on each
elytron three whitish bands, two of which are
curved, and the intermediate one refracted."

Read blackish or obscure cipercous; spine at base
above, front with cipercous hair, antennae, first, sec.
...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; mandible white at the base, black within and at the tips; palpi robins green, breast purple, the second joint of the labiate white. Thorax quadrate, inconspicuously narrowed behind, obscure cupreous, with distinct hairs, submarginal impressed lines blue; feet green, thighs usually trans and robins; elytra cupreous brown or blackish obscure, with minute, irregular green punctures; texture and external edge cupreous, each elytron with an external humeral or curved line, originating on the humerus, sometimes interrupted on the margins, and curved inwards towards the tip of the elytron, intermediate band refracted, at the centre of the elytron, in an obtuse angle, curved downwards, and terminating...
near the anterior, posterior band, somewhat lunate, terminal. Abdomens, tergum greenish blue, segment brownish or patent tip; vertex blue with a purple shade; tail and 

sinus of the male "purple."


B. vulgaris Say, can be distinguished from the preceding, B. genovescens Say, by the long, oblique humeral lunule.

Length, 18-17 mm.

Occasionally found at Iowa City, along sandy roads.

Habitat: Iowa City (Hickham & Shinick).

Yale, R. C. (Hickham); St. Jerome, Jef (Hauvee);
Princeton, Out. (Pettit); Hamilton, Out (Moffat); Ottawa,
Out. (Harrison); Nova Scotia (Jouve); Cambridge, Mass.
Carrie); New Haven. (Cayward & Savage); Buffalo, N. Y.
(Reincke); Philadelphia, Pa. (Liebke); Sandieville M., (Liebke);
Gloucester, N. J. (Hugel); Maryland (Schauff); Nicks;
Bayfield, Wis. (Hickham); Milwaukee, Wis. (Rautenberg);
St. Louis, Mo. (Summer); Ken. (Schauff); Dolga, S. Dak.
(Frumin); Hat Creek, Ind. (Snow); Kau. (Schauff);
Caion City, Grand Junction, Colo. (Wickham); Salt Lake City, Provo, Utah, Albuquerque, St. Mex (Wickham); Cal. (Schaupp); The Valley, Ore. (Wickham), Georgia (sic)


*trianquetrina* Day, Bk. X, 178, pl. 171, f. 12 (wrong locality).


10. *Cicindela rotunda* (Fig. 12, Pl. III). "Sicra eufro, sub-venenae; strigae marginae laterali interrupte, humerali spiralique integra, strigaque media curvas incernbute albae."

Long. 5, 5½ ligne; Larg. 3, 3½ ligne.
Elle ressemble beaucoup à l'Hybrida pour la forme et les couleurs; mais elle est plus petite, et les taches des élytères sont à peu près disposées comme dans la Triagnata: la têche supérieure, les mandibules, les palpes, les antennes, la tête et le corps sont presque absolument ressemblants à ces mêmes parties dans l'Hybrida; les élytères sont, proportionnellement un peu plus courtes et un peu plus larges, et le bord extérieur est un peu dilaté aux dehors de la ligne humérale; elles sont un peu moins fortement granulées. Les taches sont disposées à peu près comme dans la Triagnata; mais la ligne humérale est un peu moins courbée; la première portion de la bande du milieu est un peu plus droite; la partie supérieure de la ligne de l'extrémité est courbée du côté de la suture comme dans l'Hybrida, et le bord latéral est interrompu, et il ne touche ni la ligne de la base ni celle de l'extrémité. Le bord postérieur est légèrement dentelé en arrière. Le dessous du corps et les pattes sont comme dans l'Hybrida.
Browish brown; undersurface green; head hairy granulate; labrum one toothed; eyes black; thorax quadrate granulate; elytra punctured; humeral lines C-shaped, median band rectangularly bent, connected with a marginal line, nearly but never quite reaching the humules; apical humules inflected anteriorly.

Length: 12-13 mm.

Found on sand banks and bare.

The larva of *E. p. nigri* is yellowish white, head pincers, 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, conic, conical above, a strongly elevated transverse ridge posterolaterally, and a feeble longitudinal impression on each side. Frontal margin with prominent middle lobe, with sides slightly convergent, on each side a very feeble tooth at base, lateral lobes feebly prominent.
limited within by a moderate tooth. Head at sides moderately, deeply sinuate. Beneath head very convex, more so in front and behind, forming an irregularly hexagonal posteriorly. Margins at middle, medially linear with a moderately deep impression at middle. Anterior margin bilobed, median lobe most prominent, with commarginal 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 dilucity 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 front, 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, narrowed at base, basal portion feebly connate, 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 sinuous, posteriour and lateral margins with moderately long whitish hairs. Metathorax less than half as wide as prothorax, sides feebly arcuate and gradually but feebly narrowed to the front. Metathorax as wide as mesothorax and a little shorter. Abdomen with
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 upwards and forwards; segments sixth to ninth gradually narrowed, anal segment moderately long, truncate, opening terminal. Legs—anterior and posterior pair of equal length, the middle pair somewhat shorter. The coxae conical, prominent, nearly equal to the rest of the leg! The second piece seems to be composed of a conical trochanter and tibia; the separation indicated by an oblique impression and a feeble emargination 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 pair 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. 3). Habitat. Iowa City (Richiham), Des Moines (Putnam).

Sinclair, Dec. (Petit); Ottawa, Dec. (Karrington); St. Jerome, Feb. (Bonner); Green Bay, Wis. (Hayward & Savage);

Buffalo, N. Y. (Peirce); Staten Isld. (Lenz); Penn (Schaufl);

Allegeny, Pa. (Hamilton); Cincinnati, O. (Dury); New Jersey (Smith); Md., Ky. (Schaufl); Ga., D. C. (Schaufl); Detroit;

Mich. (Hubbard & Schaufl); Bayfield, Wis. (Richiham);

Milwaukee, Wis. (Rautenberg); St. Louis, Mo. (Summerv);

Columbus, Tex. (Richiham).


13. Cicindela rufoguttata Dej. (Fig. 11, Pl. III).

"Écarlate, taches mornes; étriers lumina humerali apicali.
que interrupta; striaque media flexuosa abnormata interrumpita alba.

Long. 5/4, 6 lignes. Long. 2/3, 2/3 lignes.

"Elle ressemble un peu à l'Abiguata, mais elle est un peu plus petite, et proportionnellement un peu plus courte. Elle est endessus d'une couleur foncée,
qui est un peu clair. Dans la fouille, le seul sexe
que je connaisse, la huit supérieure est blanche, trans
versée, avec une petite dent à sa partie antérieure.
Les palpes sont d'un vert-brun. Les mandibules sont
d'un vert-brun et l'extrémité et les dents intérieu-
tres noircières, et une grande tache blanche à la base.
Les quatre premiers articles des antennes sont d'un
vert-brun avec des nuances claires, les autres..."
sont obscures. 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 marqués que dans l'Abliguata, et le fond des sillons est d'un vert un peu doré. L'œcusc est d'une couleur bronzeée un peu cuivrée. Les ailes sont plus larges et moins communes que celles de l'Hybrida, plus courtes et plus en nuage que celles de l'Abliguata ; elle sont légèrement granulées, mais pas aussi fortement que celles de l'Hybrida ; elles sont un point blanchie à l'angle de la base, un autre arrondi, un peu plus bas, qui remplace l'extrémité de la lunule lumineuse ; un milieu, une blanche étroite, traversée, courte, un peu atténuée, qui se recourbe pour se prolonger à un point rond, placé plus bas, près de la extrémité, mais dont la partie qui le point à ce point marqué presque entièrement, un
Another point, prise de l'extrémité qui remplace la partie supérieure de la capsule, 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 suivant le dessous de la capsule est d'une brune bleu-violet brillant. Les côtés du corselet et de la poitrine ont quelques reflets cuivrés. Les pattes sont d'un vert bleu. Ne bronze avec des reflets cuivrés, principalement sur les cuisses.


Black, brown, or bluish, beneath green, or blue with coppery pleuræ, head and thorax are in repanda. Dorsal elytra granulate, 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 granulate. When the colour is brown, olive, or coppery, the punctures are blue; and very distinct.

It occurs on wet and muddy spots on sand bars,
and one patch through marshes near Pointe aux Barres, near.

Common

Length, 12.6 - 15 mm.

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

British Columbia; Hudson Bay Terr. (Schaupp); James Lake, Ont. (Hamilton); Gypsum, Ont. (Pettit); St. Jerome, Que. (Bauer); Nova Scotia (Jones); Greenland (Raynard and Savage); Buffalo, N. Y. (Heiniche); Newark, N. J. (Smith); Detroit, Mich. (Outwood + Schwart); Bayfield, Wis. (NICK); Milwaukee, Wis. (Rautenberg); St. Louis, Mo (Dummer); Eastern N.Y. (Spence); Yellowstone Park (Putnam); Platte Canvas, Manti, Colo. (Snow); Bear Creek, Colo. (UBER); Utah Lake, Utah (Putnam); Cal. (Schaupp).


dec. Franzi. Am. Phil. Soc. II. p. 42. no. 34. 1854.

Schaupp. Phil. Rok. Ent. Soc. VII. p. 95. 1884.


spongoides dec.
C. punctulata, capite thoracique cupress, elytri punctatae obscuris; punctis lunulisque apiciis albis.

Magistrito C. marginalis; caput et thorax cupress, nitsida, labro niveo. Elytra obscura, cupronitidula; punctis indistinctis lunulisque apiciis maioris albis.


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

Occur 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 (Dickham), Harpersfield (Putnam),
Syracuse, Ont. (Petit), Cambridge, Mass. (Carrie);
Maine (Leconte); Green. Mass. (Raymond & Savage); Buffalo,
N.Y. (Reincke); Staten. Is. (Bry); Iowa. (Bay); Divinity
(Smith); Cincinnati, O. (Dury); Southwestern Virginia,
(Corn); Tallahassee, Fla. (Korbel); Texas (Coon); St. Louis,
Neb (Summers); Milwaukee, Wis. (Fairbank); Lake Superior
region (Hubbard & Schway); Eastern Kans. (Parker); Garden
of the Gods, Colo. (Packard); Cannon City, Colo. (Uhler); Camp
Bowie, Ariz. (Ulke); Albuquerque, N. Mex. (Dickham).

C. fenestata, Ohio, succ. 33, tab. 3, fig. 37, 1790.

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

Rev. O. I, p. 103, 1825.

15. Cicindela cerasoae (Fig. 14 Pr. III) modice elongata, cylindrica, cipria, vel olivaceo-atenuata, subulata, capite thoraceque albo-pubescente, hoc latitudine hand longior, lateribus rotundatis, elytris valde punctatis ad apicem seriulatis, macula basal. marginis lobato, vario subhumerali suboblique brunato, facies media fine tortuosa, fine striata, lunulaque apicali utrinque reflexa latis albis; subtus viridimaculata dense albo-pubescente, medio glabra, tecta antehastibus rufis, pedibus longissimis, labro brevi arcuato. Nae elytris ad apicem oblique subequiangular, nuture hand, retracta.

Feminae elytris ad apicem oblique subequiangular, angulo externo acuto pronunciato, sutura paulo retracta.

Greenish or coppery bronze, shining, under surface
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 lunules hooked at tips,
median band tortuous, and confused before the dilated
tip, apical lunules reflected at both ends, and a
white margin connecting all the markings.

6. Bright mandible not toothed, outer margin of the
elytra sinuate near tip, tip obtuse.

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

Length, 13-14 mm.

Cincinnati, O. (Dury); Illinois, Kentucky (Dury and
Bentenmüller); St. Louis, Mo. (Schaefer); Dakota (Schaefer);
Lawrence & Topeka, Kans. (Popescu); Nebraska (Schaefer);
Montana (Dury and Bentenmüller).
Hooda f. var. b. Loc. (see Wof.)

16. "Siccus de la macroc (Fig. 16. Pl. III.), valde elongata, cylindrica
fuco-rubra, capite thoracique alb. subexcentibus, hoc
latitudine fere longior lateribus vix rotundatis, elytris
confertim punctatis, ad apicem oblique angustatis
serrulatis, macula basali, margine lobato, vando sub.
humerali obliquus hamato, faccia media tortuosa
fimbriata, lunulaque apicali utrinque inflata alba;
subtius viridi-serena, denser albo rubraeque, medio
glabra, tiothauribus rufa, pedibus longissimis; pedis
base exitu utrinque pallide ad apicem serena, labro
bruni unidentato.

Mas. elytris subimmacatis oblique angustatis, antura
terminalis.

Feminae elytris margine sinuatum oblique angustatis.
anguis. utroque robusto latus rotundato, sutura hand
Brownish bronze, underside bronze or greenish
bronze, sides densely clothed with white hairs; head
and thorax pubescent, rugose; elytra finely and more
sparingly punctured than C. cupreascens Lc. 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 rinate elytra of the ♂ is
obtuse at most rectangular.
Length 12 - 14.2 mm.

Habitat. Iowa City (Hickham), Eastport, Me. (Shumek).

Minnesota (Leeote); Milwaukee, Wis. (Rauterberg);
Illinois (Schaupke); St. Louis, Mo. (Summers); caucus
(Schaupke).


Handa f. var. Lc. (see Def.) Ann. Lyc. IV, p. 120, 1848.
17. Cicindela lepadula Drj. (Fig. 16. Pl. xxi).

- Viridi. seea, vivo pilosa; elytris, glabras, albae, punctis, tenea, fasciisque, duabr. obliquis, abbreviatis.
- Abolitae fuerunt, alvei; antennae pedibusque pallide testaceae.

Long. 44, 4½ lignes, Larg. 1½, 1¼ lignes.

Elle se rapproche un peu de la Conopera par la forme, la grandeur et la couleur. La tête et le corps sont d'un vert borgné et entièrement couvert de poils blancs. Dans le mâle, le seul sexe que je possède, la ligne supérieure est blanche, assez courte, près de deux tiers, et elle est au milieu du bord antérieur une petite dent à peine distincte. Les mandibules sont d'un blanc un peu jaunâtre, avec l'extrémité et les dents internes d'un brun noirâtre. Les palpes sont d'un blanc rousseâtre, avec l'extrémité du dernier article un peu brunâtre. Les antennes sont entièrement d'un jaune taché assez pâle. Les yeux sont d'un brun noirâtre, assez gros et très saillants. Le corps est à peu près de la largeur de la tête, sans y
comprendre les yeux, aussi longs que large, presque carrés, très légèrement arrondis sur les côtes, un peu convexes et presque cylindriques; 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 corset, peu allongés et légèrement convexes; elles s'élargissent un peu vers l'extrémité, qui est un peu déprimée, et le bord postérieur est assez fortement circonvexe et munie d'une dentelure carène; les faces et les bords de la suture sont assez distinctement pointus; le reste des élytres paraît lisses; elles ont vers la base quelques pointes distinctes d'un vert-bruné très-obscure et deux bandes obliques un peu sinuées de la même couleur, qui se rapprochent beaucoup plus de la suture que des bord extérieurs; la première à 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-bruné, avec les côtes couvertes de poils blancs. Les pattes,
sont d'un jaune teinté assez pale; les élytres sont couronnés de poils blancs, et leur base est d'un vert bruné."


Head and thorax brownish blue or green, hairy; eyes, black, large, prominent; labrum white, unnotched; elytra white, glabrous, finely punctured with a few scattered brown, or brownish lines, anterior pale; same testaceum; underside greenish. Brown, or brownish, densely clothed with white hair; 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.

A. lepida. Dej. While at rest is not readily seen and it rarely moves till in danger of being trampled on, seeming aware of the protective color of the sand on which its is found. On dark ground it is extremely wary and difficult to capture.
Habitat: Iowa City (Trickham);
   New York; Corry Dal. (Lecuyte); Trenton, N.J. (Lecuyte);
   Jamestown, Kingston, A.J. (Smith); St. Louis, Mo. (Summers);
   Illinois (Schaepke); Douglas Co. Neb. (Snow);
   Texas, Colo. (Schaepke).


[1747.
   Lea Am. Soc. Nat. Hist. A. Y. IV. p. 191 tab. 12. Fig.
   Lea. Trans. Am. Phil. Soc. XI. p. 51 tab. 1. Fig. 41. 1856.


[1894.
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 eleven-jointed, usually feliforn 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, differently 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, tips usually acute, the left mandible overlapping the right. Sometimes the meet pinnae-like. The outside is usually concave, forming an elongate groove (serr) 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, joints of variable length; together equal at least to the inner lobe, usually curved, usually hooked at tips, hooked or with spine, unrearticulate. Median, deeply emarginate, simple, or furnished with a tooth, ligula more or less developed, generally square and with more or less distinct paraglossae. Postocular 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 ventral segment. Abdomen with the three anterior segments conuate, usually six, rarely seven or eight ventral segments, first lateraledge 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 consistency, thereby enabling them to creep about under
stones, and other hard substances, as well as pro-
tecting 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 bank of trees, etc., 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, however, exclusively carni-
vorous, young and tender herbs and grains form a  
portion of their food.

Some of the species exhale a fetid odour, dis-
charging 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 prothorax, and with the eighth seg-
ment simple and resembling the remaining joints.
Numerous efforts have been made to indicate the rational distribution of the genera of this most numerous family, but that revised by Dr. Ewing dividing it into three sub-families seems the most satisfactory. It is as follows:

A. Middle coxal cavities not entirely enclosed by the sternum, the spineroe of the mesosternum reaching the coxa. Carabinae.

A2. Middle coxal cavities entirely enclosed by the sternum, the spineroe 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 feeble or wanting. Pseudoneophinae.
Subfamily Carabinae.

A. Anterior coxal cavities open behind.
   a. Posterior coxae separate. Labrum bifurcate.
      1. Tribe Cyclini.
      a1. Posterior coxae contiguous. Labrum not bifurcate.
   2. Mandibles without setigerous punctures externally.
      1. Tribe Carabini.
   3. Mandibles with setigerous punctures.
      1. Tribe Goniini.

   1. Proternum prolonged and dilated, entirely concealing the mesoternum.
      1. Tribe Oniophronini.
   e1. Proternum not concealing the mesoternum.
   2. Antennae free at base.
   f. Mandibles with setigerous punctures.
      1. Anterior tibiae feebly swelling, two supra-orbital setae.
      1. Tribe Elaphrini.
      e2. Antennae arising either under a distinct
frontal plate or a ridge which extends
back over the eye.

2. Posterior coxae contiguous. Anterior
tibiae emarginate within, the outer
angle prolonged. 6. Tribe Dictyotini.

1. Tribe Onofrionini.

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

Antennae slender, inserted under a slight frontal
margin, four basal joints glabrous. Eyes round, moder-
ately prominent, distant beneath from the buccal
opening. Head deeply inserted, with one supra-orbital
stare, broad, pointed in front, labrum short, emargin-
ate. Mandible not prominent, flattened above, acru-
rate, acute at tip, simple within or slightly toothed
near the base, outer side slightly concave with a setig-
erous puncture. Maxillae slender, inner lobe hooked
at tip, spinulose within, outer lobe slender, biartic-
ulate; palp slender, the last two joints equal. Ken-

turn deeply excoriuate, with rare acute tooth in the 
middle; ligula truncate, slightly broader at tips, bi-
setose, the paraglossae free at tips but not longer; the 
palpi slender, second joint longer than the terminal 
and plurisetose in front. Thorax applied directly 
against the base of the elytra, sides with a single 
setigerous puncture a little behind the middle. Scutell-
um invisible. Elytra convex, margined at base, sides 
narrowly inflected, 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. 
Tibiae finely spinulose externally, the anterior 
slightly broader at tips, within obliquely ground; 
sinner spur above the apex. (Fig. 1, Pl. II, Fig. 3, Pl. X.) 

The males have one or two joints of the anterior 
tarsi dilated and spiny-pubescent beneath.
The species are found in wet sand, near the margins of streams, and ponds.

_Omophron_ lat.

Lateral margin only of thorax pale. _americanum_ Hef.

Lateral, basal, and apical margins pale. _resilinus_ Say.

18. _Omophron americanum_ Hef. (Fig. 2, Pl. xxv).

_Tertareo_ ferrugineum; capite_ postice, thoracii, disci, elytronum_ sutura fasciaeque tribus latie undatia fuere accrescit.

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

Il ressemble aussi beaucoup au _limbatium_ par la forme et la grandeur, mais les taches de la tête, du cou- leit et des élytres sont d'un brun très obscurs et presque brunâtre. La tache de la tête est à peu près comme dans le _limbatium_. Celui du couleit 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 plissés. En dessous, 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
in exy ; markings of elytra more or less confluent, mar-
gin testacean ; thorax with lateral margin pale, very
narrow ; median line faint, dark, dark brownish, slightly
tinged with metallic green ; undersurface pitchy black,
tip of abdomen paler.

Length. 6-7 mm.

Habitat. Sora City (Whickham).

Ulmus, Nat. (Pettit) ; N. England States (Corn) ; Buffalo,
S. Y. (Reineche) ; Staten Isl. ; Atlantic C. ; Gloucester, Green-
vilie, S. J. (Smith) ; Cincinnati, O. (Dury) ; Detroit, Mich.
(Hubbard & Schwarz) ; Bayfield, Wis. (Whickham) ; Milwa-
aukee, Wis. (Pauterburg) ; St. Louis, Mo. (Summers) ; Kansas
(Corn, Pflumer) ; Va. Dept. Ed. (Leconte) ; Albuquerque, N. Mex.
Walnut Creek, N. Mex. (Snow).

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


19. *Omphrophor tusselosternis* Say. (Fig. 2. Pl. V.)

Paler, varied with green; elytra somewhat tessellated

with green.

Body rufous, punctured; head green behind, between
the eyes a longitudinal and oblique dilated line.

 Karachi white; thorax with
a green stripe and longitudinal impressed line.

Elytra with punctured stripe, green; margin, two un-
dilated bands and tip, pale rufous; pectus and post-
pectus, darker rufous; feet whitish."


The punctures of the elytra are more closely
placed on the side than at the apex; the thorax is
coarsely but sparingly punctured, the stigcal and basal
regions with but few; stigcal spot 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 margines; underside pale
ferrugineous; elytra with fifteen striae.

Length 6.5-7 mm.

Habitat. Iowa City (Nicklau); Ames, la.; Fairfield
(O'born).

Son. (Eorr); Buffalo, A. Y. (Reinecke); Soren del., Rock-
away Beach, A. Y. (Schaupp); Atlantic Co. N. J. (Hugel);
Cincinnati, O. (Kury); Bayfield, Wis. (Nicklau); Milwau-
kee, Wis., (Ranterberg); St. Louis, Mo. (Simms); Lincoln,
Neb., (Shimer); Easton, N. Y. (Popevov).


Leach & Reitter Jour. N. Y. Ent. Soc. II. p. 334, 1894.

2. Tribe Cychnini. (Pl. V. Fig. 1.)

Head elongate, more or less constricted behind the eyes, with one setigerous furrow above the eyes, neck often semi-globose. Antennae slender, erect, one, two or four basal joints glabrous, inserted under a feebly 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 two, with no setigerous furrows externally. Ligula acute, bisetose at tip. Labial palpi long. Maxillae with inner lobe slender, hooked at tip, ciliate or spicuous within, outer lobe stout with terminal joint longer; palpi long and slender. Mentum deeply emarginate, without tooth. Thorax variable, with lateral and antebasal setigerous furrows, 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 Publ.
The males have one or two joints of the antenial tarsi dilated, and a purplish pubescent heart (Figs. 2, Pl. xxx.).

Two genera from this tribe, both of which are found in India.
Antennae with four basal joints glabrous.

*Cyclona* Fab.
Antennae with two basal joints glabrous.

*Somarctina* Lec.

*Cyclona* 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 sternostome. Vari.

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

Thorax nearly as wide as elytra, much elevated at sides; violaceae or cupreous.

*elevatus* Fab.
2a. *Cyclus sternotomus* Nut. — Head black, glabrous, impunctured; antennae brownish towards the tips; 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 10-12 punctures; elytra dark cupreous, margin dark blue, striae numerous (fourteen to eighteen), punctures closely placed, interval entire on disc; sometimes interrupted in the apical region, humeral edge not dilated or reflexed.

Length, 12 - 15 mm.

Habitat. Iowa City (Richardson).

Mass., Pickering; Philadelphia, P. (Liebich); Gloucester, A. J. (Hugel); Newark, A. J. (Smith); Cincinnati, O. (Davy); North. Am., Milwaukee, Wis. (Rautenberg); A. Can. (Horn).

*Oplophorus sternotomus* Nut. Obs. Ent. p. 43, 1801.


Raj. Am. Ent. tab. 45.

21. Siphon obtusus Duj. (Fig. 3. Pl. II.)
Fig. : thoraee, antenneum laci pedis hœque fornicin. [Sic.]
Potens ibrivibus.
Long. 1/2, 1/4 lignes. Long. 2 1/2, 3 lignes.

Elle ressemble aussi beaucoup à l'Americana, mais elle est ordinairement plus petite, proportionnellement moindre allongée et, comme dans la Gymnophorus, le durt dont elle est couverte est moins serré, plus court et moindre rœcœatre. La tete est un peu plus large, moindre allongée, et elle sa dans son milieu une petite tache rœcœatre, peu apparente. Le premier article des antennes est de la couleur du corselet, avec une tache obscure à l'extrémité; les trois suivantes sont d'un brun noirâtre, avec la base et l'extrémité un peu rœcœatre; les autres sont d'un brun un peu rœcœatre, avec l'extrémité de chaque partie un peu plus obscure, les
yeux sont un peu plus saillants. Le corset est un peu plus large vers la base, et la râpare postérieure est un peu plus relevée. Les élytres sont moire et proportionnellement plus courtes que celles de l'Americana et de la Gyanipennia; les stries paraissent liées à la vue simple, mais avec une forte loupe on voit cependant qu'elles sont très légèremment ponctuées. L'essence du corps et les pattes sont à peu près comme dans la Gyanipennia.


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 atumostroma Dej., with which it intergrades岘

Length, 15-17 mm.

Habitat. Independence, Va. (Hickham).

Erin, Hot (Pettet), Staten Isl.; New York; Elmont, N. J. (Weigel); Newark, N. J. (Smith); Bakersham Co., Va. (Smith); Bayfield, Wis. (Hickham); Milwaukee, Wis. (Rauterberg);
St. Louis, Mo. (Summer).

Cerceris leucite, H. Sab. Ent. X. p. 244. 1851.
Cerceris leucite, H. Sab. Ent. X. p. 112. 1848.
Kora, Fr. Ent. Am. Ent. VII. p. 171. 1878.
Kora, Fr. Ent. Am. Ent. VII. p. 171. 1878.

22. Cerceris celeritas (Fig. 4 Pl. v. D. Boh. & Zehnstorfer, Ent. Xit. X. p. 102. 30. 1773.

Dunme moderately robust, colour variable from bluish
to bright coppery; head black; moderately elongated; eye
prominent; antennae black at base, brownish toward tip;
tergum black tinged with violaceous, the sides in front acu-
ate, posteriorly oblique, margin more or less reflexed.

Elytra broadly oval, moderately
curved, margin reflexed, gradually narrow toward
the tip, stria sixteen to eighteen, transversely punctured,
intervals, moderately coars, narrower than the striae, slightly enclosed at tips and sides; body, breast, and legs smooth, shining. (Fig. 7, p. 82,. same).

Length. 10-28 mm.

Habitat. Iowa City (Nicholau); Burlington, (Saffith); Ames, Fairfax (Oberon); Common.

Englemanni: Canon, Colo. (Snow); New (Peckau); Milwaukee, Wis. (Rautenberg); St. Louis, Mo. (Summers); Red River, La. (Leconte); Cincinnati, O. (Dury); Canons, Pa. (Malshimer); Cape May, N. J. (Durgel).

Casebus elevatus Fab. Ent. syet. I. p. 132. 1792.

Oliv. loc. III. p. 46, pl. 7, fig. 42.

Casebus elevatus Fab. Ol. I. p. 160, no. 4. 1801.


Day, Ann. Ent. I. p. 163. plate XCV.


Sycerus lea, n. gen.

Antennae with two basal joints grooved, elytra with eleven striae.

Found on woody hills and creek bottoms. Rare.

Discal of thorax not punctured.

Discal of thorax coarsely punctured.

Sycerus bilineatus Say, (Fig. 5. P1xi.)

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

Body, breadth black; thorax cupreous-violaceous, polished, broadest rather before the middle, much narrowed behind; lateral margins not dilated nor reflected; face depressed, and much punctured; basal lines obsolete,
lateral edge rectilinear, not wider than the pedicle of the propectus, disc somewhat bilobate, being convex each side and gradually indented in the middle by the dorsal line; anterior margin depressed, and recurved in the middle; elytra cupreous, violaceus, striae numerous, punctated: propectus brown, postpectus and abdomen each side punctured. Say Ann. Ent. I. p. 101.

Length 11.14 mm.

Habitat. Iowa City (Chickham); Council Bluffs (Chickham); Bayfield, Wis. (Chickham); Marquette, Mich. (Hubbard & Schwanz); Eastern Kansas (Pfeffer); N. S. (Say); Ohio (Chickham).


Gyphrus bilobus Say, Trans. Amer. Phil. Soc. II. p. 73. 1823.


24. *Hymenopterus canicollis*, sensu Purpurariae nitidior, thorace lobato, propectus valde angustato, sulco, dorsali profundo, antice, disparate punctato, postice latius concavo, profund
impressae et punctatae, aliae striae utrinque 13 fortiter

Length 11.25 - 13 mm.

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

Habitat. - Iowa. (Leng + Reutemüller).

Buffalo, N. Y. (Reiche); Missouri (Bolten); Tex. (Leng +

A. canicollis dix. Smithsonian Contributions to Knowledge,
p. 2, 1859.

Leng + Reutemüller, Jour. A. Y. Ent. Soc. II.
p. 138, 1894.

3. Tribe Carabini.

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

Body not pedunculate. scape small. Clypeus fully embracing the sides of the body, the lateral margins continuous. Metaepisternal epimera invisible, posterio 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 (Fig. 3 and Pl. XIII).

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

This tribe is composed of species of medium size.
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 linus.*

Third joint of antennae compressed. *Calosoma rufi.*

*Carabus linus.*

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

A. Elytra serrate.

Aa. Black with violet margin, thorax broadly margined. *zyllenius day.*

44. Elytra cuneate.

6. Margin serrate near humeri, black with blue
25. Carabus adiensis Say (Fig. 1, Pl. III).

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

Furnitures:

Body black, glabrous; antennae brownish towards the tips; palp terminal joint dilated; thorax margined, marginal violaceous, gradually more recurved to the posterior angle, very obtusely rounded, slightly extending backwards beyond the basal line, depressed and with the lateral margin scabrous, 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 rows." Say, Fraz., Am. Phil. Soc. II., 1823, p. 75.

Length, 33-20 mm.

Habitat. Iowa City (Hickham); Ames, la (Rothb.).

Harrow Lake, Ont. (Hamilton); Grimsby, Ont. (Petit);

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

(Smith); Milwaukee, Wis. (Rautenberg); Eastern N.Y. (Pettena);

Tex. (Rautenmuller). (de la Croix).


16. Carabus serratus Say. (Fig. 1 Pet.).

Optical, black, thorax and elytra margined with robicure violaceae, interstitial lines reticulated, three interrupted rows.

Body black, glabrous, head smooth, unpunctured; antennae funeris beyond the middle; thorax, exterior margin robicure violaceae, and with the base somewhat
acabone, disc unpunctured, 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. Pronotum and inner each side punctured."


Length, 15.25 mm.

Habitat (Iowa City, (Hickham), (i.e., Indiana), (i.e., Dakota).
British Columbia (Barrington), St. Jerome, Que. (Hance).
Buffalo, N.Y. (Reiche), (Sobokens, ou Pallisadas, A. I., (Schaupp),
Philadelphia, Pa. (Liebeck), (Awarak, Madison, A. I., (Smith),
Lake Superior region (Hubbard & Schwartz), Milwaukee, Wis.
Banting), (Topeka, Kans. (Pierson), (Carolina (Paiger), (Tours.
(Shelby, Idaho, (Hickham), (Borg. (Sorensen), (Deane, Colo. (Whe).


L. sericeus Say is nocturnal in habit. The single
food attains maturity in August, and the beetle 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. Carabus lineatus Say (Fig. 8. Pl. vii).

Latroous, black; margin of the elytra purplish;
fourth, eighth, and twelfth interstital lines interrupted.
Body black, glabrous; head absolutely corrugated above
the eyes; antennae fuscous at tips; thorax impunctured,
pronot at base; elytra margined with purple, striae with
transverse linear punctures; interstital lines elevated,
equal, distinct, marginal ones and apex slightly reticulated,
fourth, eighth and twelfth interrupted; punctae impunctat-
ed, each side at base absolutely punctured; feet black; under
each side, absolutely punctured. Say [sic] Trans Phil. Soc. I. 77. 1823.

Length 20-28 mm.
Habitat. Iowa City (Rickhams):

French, Out. (Pittel), Buffalo, N. Y. (Pirncke); New York City (Southwick); Philadelphia, Pa. (Liebch); Gloucester

Swark, Camden, Greenville, A. J. (Smith); Maryland (Say);

Magilton, Pa. (Wirt); Cincinnati, O. (Wirt).


Head black, oblong, inciunctured, separated from

the neck by a transverse, slender curving ridge forming

anteriorly a deep sinus; frontal impressions long, not

depth, anterior not much longer than the thorax, deep

pierced, fovea towards tip; thorax black, with greenish

ridge at borders, with numerous minute, indented

punctures, which are obsolete on the disc, dorsal and

torsal lines conspicuous, margin towards the posterior

angle slightly reflected; posterior angles rounded,

prominent behind the basal line; elytra brown or black.
browned, striate 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 picene or black, smooth, with a few minute punctures on the sides.

Length 25-30 mm.

Habitat. Iowa City (Tickham); Ames, la. (Oeborne).

Cam. (Bohacs); New York City, Staten Isl. (Schaafkop).

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

Philadelphia, Pa. (Lebrik); Cincinnati, O. (Dury); Detroit,

Mich. (Hubbard & Schuy). (sic)


carinatus Dej. Sp. Gen. II. p. 82. 1826.


Granulatus Koebele, Catal.

Galerconia Hub.

Large species with mentum toothed, and third joint of antennae strongly compressed instead of cylindrical. They live under stones, &c.

1. Elytra with three rows of golden impressed spots.
   calidum, Fab.

2. 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.
      c. Size small, middle tibiae of male not hairy.
         willcoxi, Lea.

Galerconia externum Say. (Fig. 9, Pl. 12).

Winged, black marginated with purple, 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 face; dorsal and basal lines distinct; basal angles obtusely rounded; elytra striate; striae well impressed, much narrower than the intersticial lines, and with conspicuous, definite, punctures; intersticial lines convex, equal, the fourth, eighth, and twelfth each with a series of obsolete sunken punctures, which do not interrupt them; exterior margin bluish purple.


Length. 29.50 mm.

Antennae with the fifth and following joints cylindrical and nearly equally punctured. The joints one to three of the anterior tarsi of the male are clothed beneath with a growth 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).
30. *Galosoma aceretator* (Fig. Pl. VII), *alatum, elytra striatis
tiridiibus, femoribus triplicibus, thorace cuneo; margine
reflexo curato.* Fab. Ent. syst. I. 148. 110. 1792.

Body large, rotund, metallic blue or green, with red margin,
breast green varied with golden cupreous; head incrusted,
black, somewhat tinged with violet; eyes above
golden; antennae dark with ferruginous tips; tooth of
labrum very short, hardly prominent; thorax short and
broad, incrustated, blackish violaceous with a wider
extended golden or green margin, dorsal line abbreviated,
obsolete, basal line wanting, lateral margin straight
with angles not extending backwards; elytra metallic
green, margin 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 tibiae 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 25-33 mm.

The larva is described in Chapuis et Conrado's Catalogue des Lames, 1872, p. 371. It is of a dirty yellow color; the concomitant setae are blackish brown, breathe lighter brown.

Habitat. Iowa City (Wickham).

Newfoundland (Becon); Prince Edward (Petit), Sarno Lake, Ont. (Hamilton); Port Hope, Ont. (Bethune), Buffalo, N.Y.; (Rennie); Grey del. (Scheuer); New York City (Clarkson), New Jersey (Smith); Peru (Say), Cincinnati, O. (Perty); Detroit, Mich. (Hubbard & Schwartz); Milwaukee, Wis.
31. **Baltsoma willcoxi** LeC. — Smaller and less stout than the preceding, metallic green, undersurface green, variegated with coppery; head coppery black, impressed, eyes moderately prominent; antennae dark with fine, greenish, tips, frontal ridge prominent; palpi dark, tiney broader than long, sides arcuate, hind angles obtuse, not extending backwards; tarsal and longitudinal impressions distinct, disc metallic blue, wrinkled, margins green or golden, not punctured; elytra green with golden red margin; striate as in **spectator** Fab. only.
finer, confused on margins, three rows of distant impressed punctures rather indistinct, tib. of elytra more prolonged than in the preceding; abdomen smooth, with a few punctures on the sides; legs violet; middle tibiae of male straight and not hairy.

Length, 17-18 mm.

Habitat.—Iowa City (Blackham).

Since by Ont. (Pettit); Okaw Lake, Ont. (Hamilton); Buffalo (Radcliffe); New York City (Schauffler); Cape May, Atlantic City, N. J. (Beith); Cincinnati, O. (Dury); Ind.; Milwaukee, Wis. (Dallinger); St. Louis, Mo. (Summers); Texas (Decont.).


32. Calosoma calidum (Fig. 2, Pl. xiv.), oenone nigrom, elytra crenato-striatæ; striae sequalibus punctatæ, aussi excavatæ, duriæ serie. Tab. Ent. syst. t. 47. 1792.

Body sluggish; 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, vittular, 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 grooves slightly greenish; perice repress; sternum unpunctured; post-pectus and each side of the abdomen with large punctures.

Length 17-26 mm.

The larva of *C. calamum* Fab. is entirely black, and shining. Head rounded, somewhat broader than long, anterior angles small rectangular; hind angles rounded; ophicorne sulcate at middle, carinate in front. Beelli six, placed as the margin behind the antennae, distant from each other. Antennae four-jointed, arising near the base of
mandibles, and joint as long as these, first joint stout, somewhat club-shaped, second joint twice as long, truncated 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 retracted, with a very large blunt tooth situated near the base, and a small straight brush. Maxilla with palpae as long as mandibulae, but much farther projecting; the last mandibular 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 anteriorly, and triangularly pointed posteriorly; ligula with lateral sides subparallel, terminating in a truncate triangle with a retinaculum middle of apex and supporting the two-jointed stout labial palpus; first joint clavate, second oblong ovate, both longer and stouter than the maxillary palpi. Prothorax transverse, narrower in front, broader than the head, sides margined. Meso- and meta-
 thorax shorter and broader than the prothorax, sides par-
allel with depressions near the anterior angles. Suture of abdominal segments one to seven of nearly equal breadth, with rounded angles, impressions, and suture near the anterior angles, the posterior margined 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. Leg set with interspersed spines. Spiracles nine, those of the thorax much larger than the seven abdominal ones. Form linear. Length 18 mm. Zophina,....
very narrowed toward apex, first five abdominal seg-
ments clothed above with a long brush of hairs last
segment with two sharp pointed teeth at posterior mar-
rigin. Imago appeared in nine days.

Habitat: Iowa City (Nickle); Waseca, Minn. (Putnam);
British Columbia (Garrington); Princep. (Putn.); Span-
nock, N.Y. (Green); Nova Scotia (Jones); New
York City (Schaup); Atlantic City, N.J. (Lindb.); Penn. (Say);
Cincinnati, O. (Dury); Detroit, Mich. (Husband & Schuy); Bay-
field, Wis. (Nickle); Milwaukee, Wis. (Rutterby);
St. Louis, Mo. (Sumner); Kansas (Cook, Pfeiffer); Ariz.
(Scott); Helena, Mont.; Coolidge, A. Mex. (Nickle).

Carabus calidus, Fab. Ent. esc. t. 147. fig. 22. 1772.

Oliv. Dau. 35. tab. 4. fig. 45.


Calosoma calidum, Fab. Sept. Ed. I. p. 211. no. 2. 1801.


4. Tribe Elaphrinii.

Antennae moderate in length, rather longer than head and thorax, three basal joints glabrous, the fourth and following pubescent. Eyes round, usually prominent, moderately distant from the buccal fisure. Front more or less deflected, with two supra-orbital setae. Labrum moderate, truncate. Mandibles stout, concave externally, with a setigerous truncate, carinate, acute at tip. Maxillae hooked at tip, ciliate or spiniculous externally, outer lobe slender, biarticulate; palpi moderate in length, terminal joint longer than the preceding. Masticatory emarginate with a bifid or emarginate tooth, ligula free at tip, bicristose, acute in Elaphrus, broad in the
other genus, paraglossae slender, longer than the ligula, the palpi moderate, the last two joints equal, the penultimate biserate in front, except in Drachila. Thorax variable in form, the setae in the posterior angle always present, the lateral absent in most Ephelinae. Body not pedunculate, sutellum distinct. Elytra not margined at base, except feebly near the humeri in Bletica, sides narrow, if inflexed, margin entire. Posteriorium obsolete at tip not prolonged behind the coxae, the coxal cavities closed.

Metaosternum not prominent. Metacentral spinulae not distinct, the posterior coxae contiguous. Legs moderate. Middle and posterior tibiae slightly spinulose externally, the anterior obliquely ground; the inner spur above the apex. Tarsi slender. (Fig. 9, 36, Pl. XIX.)

Three genera belong to this tribe, only one of which is found in Java.

Kentoma tooth large, nearly as long as the lateral lobes, emarginate. Thorax without lateral seta. Elytra with variclate forae, not striate. Ephelinae Fab.
Olaphtus F.

Brown, and metallic. Eyes large and prominent, the elytra with rows of large, shallow, round, focal. Anterior tarsi of male in larger species with four dilated joints, in the smaller with but three. Thorax sparsely punctured. (Fig. 5, t. Pl. XIX).

The species of this group resemble Cicindelinae, form and Parnassius 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 picaceous, force of elytra surrounded by a smooth ring.

O. clairvillei Kirby.
Front slightly corrugated between eyes, mandible greenish at base, force of elytra not surrounded by ring.

O. nevadus Say.

3. Olaphhtus clairvillei, — body glossy; underneath green-bronze; above black slightly bronzed, covered with minute, scattered, gilded punctured. Mandibles and
palpi white; antennae black, with the first three joints dark blue; frons with an elevation between the eyes, rather deeply impressed in the centres; pronotum long or than wide, uneven, with two large discoidal elevations separated by a dorsal channel, each with a central impression; a single fascial impression at the posterior angle tined with blue; elytra with four irregular rows, containing in all twenty one slight circular impressions, punctured and tined 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 ligated space; thorax glossy green, the posterior pair uneven at base, tibiae and tarsi white.

By Tame. Bor. Am. IV. p. 62.

Length, 7/16 mm.

Habitat. Iowa City (Nechlaw).

Ridgeway, Ont. (Kilman); Gainesby, Ont. (Petit); Toronto, Can. (Kirby); New York (Crotch); Bayfield, Wis. (Nechlaw); Milwaukee, Wis. (Ratterby); St. Louis, Mo. (Summers).

34. Ephaxius neumanni Say. (Fig. 5. Pl. xii.)

"Dark brownish-green, a little bronzed; elytra with dilated, orbicular, impressed apotes, and three elevated striae each side of the suture.

Body dark brownish-green, opaque, breadth rather
paler, polished, glabrous. Structures very numerous, crowded; head slightly corrugated between the eyes; antennae and labrum blackish, mandibles green.

each side at base, picene within near the tip; palpi salitor picene; breadth "paler", yula incuated;

thong broadest before the middle, narrower than the elytra, a transversely incised curved line before the middle, and a longitudinal abbreviated one, lateral edge hardly prominent, slightly excurred behind, posterior angular inconspicuous, base not wider than the petiole; elytra equally incuated, with about twenty
large, dilated, orbicular, impressed, purplish apotes,
and two, or three equidistant, elevated, elongate, sub-quadrate, punctured, bronzed spots each side near the centre, the anterior one largest, a few obsolete elevated lines, postpectoral green, tinged each side with cyprium, feet green; femora and tibiae picene at base, outer green, discs punctured, segments brassy at tips. Say Tr. Am. Phil. Soc. II. p. 80. 1828.

Length 6.7 mm.

Habitat. Iowa City (Wickham), Eddyville, Ia. (Shiner).

Kannapolis, Ia. (Putnam).

Erie, Ont. (Petit); Nova Scotia (Jones); Buffalo, N. Y.

(Rein cher); New York City (Schapp); Canandaigua, Ontario, N. Y.

(Brunel); Laramie, Natrona, W., (Lieber); Penn., (Bay); Cincinnati, O. (Dury); Detroit, Mich. (Barbour + Schwartz);

Rochester, N. Y. (Wickham), Milwaukee, Wis. (Rautersberg);

Eastern Kansas (Roper); St. Louis, Mo. (Summern), N. C;

Arkansas (Bay, Colo. (Snow).


5. Tribe Arctini.

Head horizontal (front deflected in Cryptarchini, and with two supra-orbital setae), and with one supra-orbital seta.

Mouth parts 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 eye in a supra-orbital ridge. Eyes round, moderately or prominently large. Thorax usually with a setigerous puncture at the side and hind angles; both are absent in Opiarchini, and the posterior one in Steint. Elytra margined at base except in Opiarchini, sides narrowly inflexed, margin entire.

Posteriors horizontal and prolonged behind the coxae, the cavities open behind. Lateral sutures of thorax bath normally distant from the margin except in Opiarchini. Metostrum carinate in front. Metaternal epimera indistinct. Posterior coxae contiguous. Legs slender, middle and posterior tibiae spinylose or ciliate externally. Tarsi slender, ciliate beneath.

In Cryptarchini the anterior tibiae are very roth.
evely 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 *A. torulosus* place their
antennae backward over the body in a noon, or less
curved position when in repose; while in *A. torulosus*
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, notae euncate.*  
*A. torulosus* Dum.

*Anterior tibiae scarcely obliquely truncate, spurs termini
al, mandible stout, not explanate, maxillae with-
out procercus, setose at base, anterior tarsi of male
feebly dilated.*  
*A. laticat.*

*A. torulosus* Dum.

Head triangular, as broad as the thorax; color brown.
(Fig. 6, 15, Plate.)
Live in damp, sunny places, under fallen leaves, etc.

Legs red, thorax much constricted behind. Female. 

Femora pale, femora metallic black, thorax but little constricted behind. Semiestriate, Day.

35. Orthophilus arenarius Hub.

(Fig. 7, Pl. viii.)

Body bronzy black, glabrous, breast black, head triangular, broader than the thorax, with antennae, at least six, longitudinal, elevated, frontal lines, ocelli more or less at tip, and with a transverse, interrupted line at the base, antennae and palpi fascicous; palpi at base, thorax wider than long, transversely quadrato, much narrowed behind, sides arcuate, excurred at base, hind angles rectangular, acute, anterior, basal and dorsal lines distinct, oblique; glabrous, impressed, margins finely punctured; scutellum areate, shining, elytra with striae coarsely punctured, interstitional lines wider than striae, a dilated glabrous, longitudinal, continued space between first and second striae; feet robust.

Length 5 mm.
Habitat. Iowa City (Nickleham). Rare.

Ontario and Quebec; Marguerite, Mich. (Hubbard & Schwarz); Detroit, Mich. (same authority); Bayfield, Wis. (Nickleham); Calgary, A. J. (Grave); New York City.


36. Austrophiulus seministratus 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 near the vertex; number with senal elevated lines at base, and a transverse, interrupted one at base; labrum, a single impressed, longitudinal line; antennae and palpi deep fuscous; paler at base; thorax as broad as elytra, transverse, quadrate, broadest before the middle, slightly contracted to the base, punctures numerous, approximated,
rodsolate each side of the disc, dorsal line impressed, punctured, basal line indented, lateral edge slightly curved, posterior angles rectangular; scutel rounded at tip, impressed; elytra, striae obsolete with large punctures, interstitial lines hardly wider than the striae, a dilated smooth, polished longitudinal, continued space separated from the striae by a series of impressed rounded punctures; pleura punctured, pock puncture with a few punctures each side; feet black.

Length 4.5 mm.

In comparison with aerius aebel, the thorax is much less contracted behind, labrum smaller, and striae more deeply impressed.

Found in woods under logs, or from June to Sept.
Habitat. Iowa City, Chickham.

Primisly, Ont. (Pettit); Detroit, Mich. (Hubbard and Schwarz); Milwaukee, Wis. (Panting); Cincinnati, O. (Wray); Penn. (Say); Lawrence, and Manhattan, Kan. (Dover); Little Rock, Ark. Houston, Tex. (Chickham); California (Schaeffer).
Glebrius semistriatula Kiehl, Catal.

Sbrina Lat.

Middle-sized species, having the maxillae armed beneath with bristles; antennae slender, jointed, all cylindrical, equal to two-thirds the length of the body; scutellar stria always distinct, anterior tarsi of a moderately or fully dilated. (Fig. 4, 6, Pl. VIII).

Lur under stones, etc., near brooks and rivers.

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

"A. pallipes" Say.

37. Sbrina pallipes Say. (Fig. 6, Pl. VII).
Black; thorax dilated, very short; feet testaceous.
Body black, glabrous, depressed; head with two obsolete, punctate spots on the vertex; mouth pieces;
Palpi paler at base; antennae rufous, paler at base.
labium elongated, nearly as long as labium, bisetous 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, interstitial lines convex; punctae and punctae with obsolete, dilated punctures; feet tritacarous; outer punctae towards the tips, impresptures.


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, (Richmond). One specimen.

Erinny, Ont. (Petit); Nova Scotia (Leconte); N.B.

Washington, D.C. (Duelig); Staten Del. (Schaukopf); Camden, Gloucester, N.J. (Hepzil); Allegheny, Pa. (Hamilton);

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

Detroit, Mich. (Hubbard & Schulz); Bayfield, Wis.
(Vickham), Minnesotta (Leconte), St. Louis, Mo. (Sumner).


6. Tribe Scaritini.

Head variable in form, with one (Scarites), or two
(Elimus) supra-orbital setae. Labrum short, margina-
rate, or sinuate. Mandible at least moderately prom-
inent, without setigerous punctures, simple or divaric-
tate. Maxillae with the inner lobe often obtuse at tip;
in some genera normallv hooked, ciliate or spinulose.
within; outer lobe biarticulate, the terminal joint
usually shorter. Palpi variable in form. Maxillae
emarginate, often deeply; the tooth variable in size,
epiobr narrow, (very rare in Podisogyniniae). Ligula
either broad and large (Scarites) or small and
prolonged (Eliminae), the tip narrow and bistratose,
except in Fascinachne in which it is but little pro-
minent at middle and with two setae very closely
paraglossae usually slender and longer than the ligula, spinose within in the Scarites. Palpi moderate, terminal joint variable in form, shorter than the penultimate (Scarites) equal or longer (Eliciinae), the penultimate bicristate in front (Eliciinae), plurisetose (Scarites). Elytra moderate in length, inserted under a frontal plate with a variable number of glabrous points. Eyes comparatively small, very finely granulate and distant from the buccal opening (Scarites), or normally convex and granulate, and not distant from the mouth (Eliciinae). Thorax variable in form, hind angles rarely prominent, side margins with a setigerous puncture in the hind angle (Scarites), or with two lateral punctures (Eliciinae). Body pedunculate, scutellum not visible between the elytra. Elytra rarely slightly margined at base, sides narrowly inflexed, margin entire, except in Ardistomius where there is a distinct interruption posteriorly, and an internal plia. Pro-
sternum not prolonged behind the coxae, the cavities
closed behind. Mesosternal vertical, not carinate in front. Metasternal spinulae not visible in P. longipe, more or less distinct in all the other genera. Posterior coxae contiguous, legs stout, more or less jessoinal, the anterior femora especially stout. Middle and posterior tibiae ciliate, or spined externally, but often very finely, anterior tibiae palmate, the outer basal angle prolonged. Inner side deeply emarginate with the inner spur above the emargination. Paral slender.

The tribe is subdivided into two groups as follows:

Basal joint of antennae long, not reaching the base of the maxillae. Head with one supra-orbital setigerous puncture. Thorax with one setigerous puncture at the hind angle.

Olivacei.

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. Cotinisae.
Group, Scarites.

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

**Scutum** angles of thorax distinct. **Pyrella** without humeral carina of variable length. Maxillae very robust at tip.

*Passimachus* Bow.

**Sculptur** angles of thorax wanting. **Pyrella** without humeral carina. Maxillae slightly hooked at tip. *Scutum* Fab.

*Passimachus* Bow.

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

In the *S* there will be observed on each side one antero-apical puncture, in the *P* two, but these are not constant in any respect (fig. 7, p. 7)."
Head, tibiae of 3, densely pubescent, one inner side near the tip, lunular carina long.

elongatus LeC. 38. Pacicachne elongatus LeC. (Fig. 3. Pl. vii.).

Black, glabrous; head quadrate with two impressed longitudinal lines near 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, setulate; mandible about as long as the head, very finely striate, strongly dentate 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, free incornicate, margin bright blue;
elytra, glabrous, slightly convex, humeral carina long, and curving outward in front. Traces of my fovea of punctures, approximate by space may sometimes be seen, margin bright blue; sternum striate at tips.

Length 3.2-2.6 mm.

Habitat: Iowa City (Vickhaus), Eddyville, Ia. (Shimer), Atlantic Co. N.J. (Hengel), Cincinnati, O. (Dury); Milwaukee, Wis. (Rauterberg); Illinois (Leconte); St. Louis, Mo. (Suckermere); Kan. (Peacock); Denver, Colo. (Whit); Colorado Spr. (Snow), Le Veta, Colo. (Leconte); Loma, Colorado; Mx. (Vickhaus), Santa Fe, N. Mx. (Cockerell).


Scaptus depresse, var. a. & Say, Iowa. Am. Phil. Soc. II.

p. 19. 1823.

Of the same form as the preceding genus, but narrower and with the posterior angles of the thorax.
wanting. The last, neutral segment has four marginal punctures, in the 8 the two inner ones are more distant from each other than from the outer, in the 6 they are equidistant. The four basal joints of the antennæ are glabrous, and in repose the scape is recev’d in a depression beneath the eye.

Commonly found under stones.

39. *Scarite* subterranoeus Fab. (Fig. 4. Pl. xii.).

"S. rater, pedíb. antenníae digitátia, capité antenníae súlcató, elytrí striáti: striás laevis." 


Body black, immaculate; head spinulose below; mandibles strongly striate; antennae short, attaining the base of the anterior feet; femurínous; darker at base; labrum 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 sinuarginate; elytra distinct, tym and rather strongly striate, striae impressed.
margin scabrous, humerus carinated below, carina terminating abruptly in an angle; second pair of legs armed with prominent spines, the inferior one being the largest.

Length 15-27 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, bristle front al margin tridentate.

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

Antennae four jointed, inserted on a tubercle, 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, blunt in the full 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 bristly setae on the outer side. The other appendage is four-jointed, the first joint stout, about half the length of the second and some what 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.

Mentum 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 setae of the trochanter distinctly marked.

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

Habitat: Iowa City, Pickham, Davenport (Putnam).  
Sparrow Lake, Ont. (Hamilton), Green Mtn. (Hayward & Savage), Buffalo, N.Y. (Reinche), New York City, N.Y. (Schaeffer); St. J. (Smith); Fla. (Schwarz); Cincinnati, C. (Dury); Detroit, Mich. (Hubbard & Schwarz); St. Louis, Mo. (Summers); Kau, (Korn); Ark. (Shewell); New Orleans (Toomey), Morgan City, La., Harwood, Tex., Coolidge, Ariz. (Cress), Bridge, Ariz., Yuma, Cal. (Pick- 
ham); San Diego, Cal. (Le Conte).  

San Francisco, Bum. Phil. Soc. II. 17. 1825.  
Dey. 1824. i. 364. 1825.  
Oliv. 1826. 36. tab. 1. f. 16.  

Indue. Oliv. 1826. 36. tab. 1. f. 2.  
Canabae interjecti, Kirsch. Arch. 6133, tab. 24, f. 4.

p. 332. 1871.

Groupe: Californicae.

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 2, excavated beneath. Thorax globose or globular oval. Dyachinaceae Bou.
   aa. Palpi similar in the sexes, not dilated nor excavated in 2. Thorax more or less quadrate. Echinaceae Lat.

B. Anterior tarsi more or less dilated in both sexes. Mentum deeply emarginate. Head with numerous, one longitudinal groove. Sclerogeneae Putz.

In all four genera the tegula is small and usually
hidden by the setae on the labial palpi. It is slender, the tip more or less acute, free, and bisetigerous. The paraglossae slender and acute, not longer than it. Clivinae and Dyachininae are best separated by the form of the palpi, as other characters fail with large series of specimens.

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

**Dyachininae Bow.**

Species small, shining, often bronzed. They live in holes which they dig in moist places on the banks of streams, etc. (Fig. 8, 8b, Pl. XIII).

Elytra with third stria or interstice tripruncate.

Elytral striae feeble; antennae, and legs black.

seneclus Lea.

Elytral striae strong; antennae and legs Rufous.

globulowri Say.

Elytra with third interstice tripruncate.

Pharicollis Say.
40. Dycheirus aeneolus Lea.

Brown, black above and beneath; head moderate, smooth, eye prominent; thorax purplish or brownish black, glabrous, glabrous, wider in front than behind, hind angles wanting, dorsal line impressed; elytra wider than thorax, striae punctured, third trunctate, punctures obsolete at apex; feel and antennæ black.

Length 3.5 mm.

Habitat: Iowa City (Hickman).

Bau: British Columbia (Leconte); A. J., Pa., Fla., La. (Hamilton); Marquette, Mich., Detroit, Mich. (Elbard & Schwarz); Bayfield, Wis. (Hickman); Garwood, Alabama, Colo. (Leconte); Dunedin, Cal. (Hickman).

Europe, Siberia, Japan, Wuraria (Hamilton).

D. aeneolus Lea, Agassiz, Lake Superior, p. 204, 1850.


Dycheinura globulosa, Say.

"Black; mouth, antennae and feet rufous; elytra with punctured, obscure, striae. Head black, longitudinally indented on each side; mouth, and antennae rufous, neck beneath rufous; trunk beneath black, tinged each side with rufous; thorax purplish black, globular, rounded before and behind; lateral edge obtuse near the base, recurved distinctly before, and destitute of projecting, angular, behind; an impressed, dorsal line; elytra black, striae punctured; punctures equal in length to the intermediate spaces and nearly equal in breadth to the interstitional lines; feet rufous; under black."

Length 2.25 - 3 mm.

Habitat. Iowa City (Wickerham).

Lincoln, Nebr. (Petit); Buffalo, N. Y. (Reiche); New York City (Schaufuss); Penn. (Say); Camden, N. J.; Newark, N. J.; Gloucester, N. J. (Smith); Tampa, Fla. (Schwarz).


Dyschirius Pusioe dec Agassiz, Lake Superior 1850.

42. Dyschirius aphelenolius Day. (Fig. 9, Pl. VIII.)

"Thorax globose, with one impressed line, elytra with punctured, distant striae.

Body unpunctured, with a few scattered hairs, breath black; head black, longitudinally incised on each side; mouth and antennae reflex; thorax purple black, rounded before and behind; lateral margin obsolete near the base, more distinct before, and destitute of any angles behind; one impressed dorsal line, elytra reddish brown or bronzed, with punctured striae, stria distant; femur reflex, ventral black."

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

Length 5.5 mm.

Habitat: Iowa, City (Wickhaus).

Ontario and Quebec, Buffalo, N.Y. (Reichenb.), New York City (Schaupp), Gloucester, N.J. (Sibb.), Cincinnati, O. (Wing), Marquette, Mich. (Hubbard & Schwarz), Milwaukee, Wis. (Rantoren), Illinois (Leconte), St. Louis, Mo. (Simms), Topeka, Kans. (Perey), San Bernardino, Cal. (Pilye), Abiquiuque, N.Mex. (Wickhaus).

Leptophosoma dejevani, carellii, Nov. Phil. Soc. II. 20. 1823.

Chlorina Lat. (Fig. 10, of Pl. VIII).

Middle tibia with a spine near the outer tip.

Black, anterior femora dentate near tip, vertex of head not foveate.

Fallen, anterior femora not dentate, chiekened, vertex sulcate, head punctured behind, vertical grooves.
...deep and long. in punctiforme lat.

Middle tibiae without a spur on the outer side.

 Clytra black, legs rufa; piccens, antennae rufou; antere-femora sinuate  near the tip.

americanus Dej.

Rufous, anterior femora thickened; not sinuate.

breath.

ferrae lix.

Black, with apical patch piccens, anterior femora thickened.

bipectinata Tal.

43. Clivina dentipes Dej. (Fig. 18, Pl. XII).

Sigra; thorac scad nato; elytra elongatia; parall;eles, profunda creato-striatia; punctigques quincque impressed; femoribus, anterius apice incipientis.

Long. 3-4 lignes. Larg. 1 ligne.

Elle ressemble beaucoup à l'Armata, mais elle est un peu plus grande, et sa forme est un peu plus cylindrique. Elle est entièrement en-dehors d'un moineacy brillant. Sa tête est proportionnellement un peu plus grande; elle est un peu moins retrécie derrière le.
nous, et elle a deux lignes transversales enfoncées; l'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'Aormaria; il est seulement proportionnellement un peu plus large et un peu plus court. Les élytres 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 crénelées. On voit, outre, sur le bord de la troisième strie, du côté de la suture, cinq points enfoncés distinctes, un peu moins marquées que dans l'Aormaria, et placées à peu près au même distance les unes des autres. Les membres du corps et les pattes antérieures sont à peu près de la couleur des élytres. Les quatre pattes postérieures marquent dans l'individu que je possède. Les coudes antérieurs sont un peu marqués, et elles sont une dent assez forte et assez raigie à leur extrémité du côté extérieur. Les jambes antérieures ont trois dents, une peu plus longue.

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 reflexed, 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, margins distinct; no scutellum evident, elytra wider than the thorax, humeral angles prominent, rectangular, margins continuous, striae faintly punctured; legs reflexed; anterior femora dentate near tip, middle tibiae with a spur near the outer tip, claws terminal; undersurface smooth.

Length 7.6 - 8.5 mm.

Habitat. Iowa City (Wickliffe).

Topeka & Lawrence, Kans. (Owen); La. (Steuart).
Girina americana. Dej. (Fig. 9. Pl. vii).

Tégument pâle; capite postice transversum impressum; thorace quadrato; elytris elongatis, parallelis, profunde striatis, striis punctatissimis, punctis quatuor impressis, antennas pedibusque rufis.

Long. 2½ ligne. Larg. ½ ligne.

Elle est une espèce petite que l’Hymenia, et sa couleur est en dehors d’un noircier peu bronze. La tête est une fois plus allongée et moins convexe, l’impression longitudinale que l’on voit de chaque côté est un peu plus marquée, et elle rentre plus les yeux une impression transversale peu apparente, dont le fond...
est un peu rugueux. Les lèvres supérieure, les mandi-
bulas, les palpètes et les antennes sont d'un rouge
ferrugineux. Les yeux sont un peu plus gros et plus
saillants que ceux de l'Anecaria. Le corps est à
peu près comme dans cette espèce, mais l'impression
transversale près du bord antérieur est plus forte-
méant marquée. Les élytres sont un peu plus parallèles;
les stries sont plus fortement marquées et bien dis-
tinuées et foncées; les intervalles sont plus relevés,
et l'on voit sur la troisième quatrième pointe soufflée
assez gros et bien marquée, qui en occupe presque
toute la largeur. Le dessous du corps est d'un brun
noisatère. Les pattes sont d'un rouge ferrugineux. Les
trois dents des jambes antérieures sont un peu
plutôt grandes que celles de l'Anecaria; les jambes
intermédiaires n'ont pas d'épine distincte sur

Black, glabrous; head small, formidable, front,
elytra with lateral lobes, antennae and palpè-
thes; thorax quadrato-ovate, sides subparallel, rounded,
blind, very feebly and sparsely punctured, dorsal line impressed, elytra with striae entire, finely punctured, apex with an impressuous patch extending nearly to the elytra, middle black, legs of piceous, middle tibiae with a spine on the outer tip, anterior femora deeply cuneate, break near the tips.

Length 6 mm.

Habitat. Iowa City (Hickham).

London, Ont. (Van Deusen); Lake Superior (Leconte), Detroit, Mich. (Hubbard, + Schwarz); Haywood, Ill. (Herrick); New York City (Schaup); Cobaken, N.J. (Smith), Fla. (Schwarz).


Redlue, glabrius; head smooth, front longitudinally
subcylindrical; apices rounded; sides sides; under-surface punctured; thorax elongate, side subparallel, rounded behind, smooth or very slightly wrinkled, dorsal, frontal, and lateral lines impressed; elytra with entire punctate striae, anterior funiculus thickened but not sinuate beneath; pronotum shorter or wanting.

Length 5.25 mm.

Habitat. Iowa City (Vicklame)

Cattie, N.Y. (Alke), Gloucester, A.J. (Hugel), Indiana

Baltimore, Illinois (Lecointe), Milwaukee, Wis. (Bauters)

Dr. Moore, N.C. (Summers), Kansas, Texas (Lecointe), Tuscon, Ariz. (Vicklame)


46. Clivina imbricifrons Lea

Bifrons, quadricornis; head shining, finely punctured, vertex sulcate, grooves long and deep; elytra with small, lateral lobes, eyes not prominent, under-surface 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 fin equally distant impressed punctures, inner smooth, anterior funaculae thickened but not dentate near the tips, paramyelium elongate, middle tibia with a spur near the outer tip.

Length 6.5 mm.

Habitat: Iowa City (Illinois).

Douglas Co. N.J. (N.J.); New York, Kentucky (Kentucky).


Lea. 81. 1857.

47. Elavina bifasciata Fab. (Fig. 11. Pl. V., VII.)

"3. niter, elytrar striatis; macula postica ferruginea."

Fab. Quat. suppl. 44. 8. 1798.

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

Length 5.8-7.5 mm.

Habitat: Iowa City (Hickman).

Detroit, Mich. (Hubbard & Schurz); New York (Lecote).

Penn. (Day); Camden, Gloucester, N.J. (Higby); Cincinnati; O. (Dury); District of Columbia, Fla. (Lecote); St. Louis,

Mo. (Summers); Kansas (Van, Copson); Louisiana

(Lecote), Dallas, T.X. (Hickham).

Isanthe bipunctulata Fab. Ent. suppl. 44. 3. 1798.

Fab. Ed. 1. 125. no. 14. 1801.

Malhe, Catal.


15. f. 6.
Say. " " XXXI. 1824.
Say. " " IV. 415. 1824.
Say. " " IV. 417. no. 3, 1825.

Schizogynes Ratz. (Fig. 6 to 9. Pl. 19).
Small species resembling Sabina very much in appearance, but with the anterior tarsi more or less dilated in both sexes, the middle deeply emarginate, and the head with numerous longitudinal grooves. Found in moist places under stones.

48. Schizogynes bicordalis Say.
" Blackish, head with several elevated lines; thorax with three impressed rows; elytra striate.
Head with several elevated lines, of which the two interior ones are the largest, forming a groove between them, and continued until corner upon the labrum, behind the elevated lines punctured; thorax with impressed longitudinal lines; intermediate one
attaining the anterior transverse angulated ones, lateral ones abbreviated near the anterior margin, lateral edge continued and projecting into a slight angle behind the middle; elytra black, brown or greenish, striae punctured, prominent, and equal to the intermediate lines; first sterna one. Trans. Am. Phil. Soc.

II, 1833. p. 22.

Length 4.8 mm.

Habitat. Iowa City (Hickham).

Spotted. N.Y. (Pettit), Buffalo, N.Y. (Reinecke); Sandusky, Gloucestcr, N.J. (Mygl); Eacincatci, O. (Dury); Milwaukee, Wis. (Hautersberg); Topeka, Kans. (Dexter), Texas (Seoute). 


Subgenus Pyrrlicone 

Subfamily Harpalinae.

Middle coxal cavities entirely enclosed by the central piece of the meso- and metasternum, the spines not attaining the coxal, head with vestigial impressions over the eyes. Thorax with vestigial sutures...
at the side, and posterior angles, very rarely without the latter, and still more rarely without either.

Anterior tibiae always either obliquely sinuate or deeply sinuarginate 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:
Karpaliinae biotocar.

Head with one supra-orbital setigerous puncture:
Karpaliinae unicarcar.

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.

Karpaliinae biotocar.

A. Mandibles with a setigerous puncture in the
groove (scroba) on the outer side.

2. Antennae slender with at most two basal joints, glabrous. The abdominal segments entirely concave.


8b. Last joint of palpi slender—elongate or subglobose. Metacoxal spinae narrow. Pagoniini.

AA. Mandibles without retigrous structure in the scrobe.

2. Posterior coxae continuous.

6. Margin of elytra interrupted at posterior third and with a distinct internal plica.

c. Third basal joint of tibia of antennae glabrous.

d. Head more or less constricted behind the eye, and dilated to a semi-globose neck. Terminal joint of the
maxillary palpæ arising obliquely from the preceding joint.

Panagaeini.

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

Peroctichini.

6b. Margin of elytra not interrupted posteriorly, without internal fles.

c. Front short, labrum impressed.

Liciini.

dc. Front normal.

f. Penultimate joint of labial palpæ bisetose.

g. Head elongate, prolonged behind the eye, neck constricted and dilated behind in a semicircle.

far condyle.

l. Oella truncata.

Odacauthini.
Eyed not prolonged. Behind the neck not hemispherical.
1. Scutum obliquely sinuate. Antennae simple, or feebly fuscate.
   Platynini.
   11. Scutum truncate at apex.
   1. Anterior tibiae slender.
      Paraglomerinae membranous.
      Libini.
   11. Anterior tibiae stout;
      gradually broader.
      Paraglomerinae cornovus.
      Cellucorini.
   11. Penultimate joint of labial palp shorter than the terminal joint. First
      antennal joint elongate.
      Dryptini.
Carapalinae unisetoseae.

1. Pleoventral spineae usually wide, sometimes nearly as wide as the episterna. Clytra truncate. Mandible with setigerous punctures. Posterior coxae often separated, the first ventral segment visible between them. Brachypini.

2. Pleoventral spineae very narrow and indistinct. Clytra always entire.

3. Mandible without setigerous punctures.

4. Posterior coxae contiguous.

5. Clytral margin more or less interrupted, and with an internal plica. Antennae with three glabrous joints.

6. Anterior tarsi of male with three, rarely four; joints strongly pubescent beneath. Clytral plica feeble. Chlaeniini.

71 Tribe Panagoriini.

Antennae slender, arising under a distinct frontal ridge, three basal joints glabrous, without fine punctation and shirecence, but ciliated. Head usual ly 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, bi-articulate; palpi elongate, the last joint triangularly dilated and inserted obliquely on the preceding, these two hairy. Mentum emarginate, toothed at bottom, the basal cuneus distinct. Ligula moderately prominent, birose at tip; the paraglossae adherent and rarely longer than it; palpi moderate in length, the terminal joint triangular. Thorax variable in form. Body not pedunculate, scutellum distinct. Elytra not margined at base, sides narrowly inflex ed, margin interrupted posteriorly and with saw.
internal pleura. Posteriorum not prolonged. Meso-
sternum oblique, the spinera very narrow. Metacte- 
ral spinera distinct, posterior coxae contiguous. These 
ciliata externally, the anterior submarginate within, the 
spure distinct. Tarsi slender. (Fig. 2, 4, Pl. 78).

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 Lat.

Oligone prolonged beyond the base of the mandibles. 
the latter decussating, scissor like.
The genus is represented by one species in Iowa.

49. Panagaeus fasciatus Say (Fig. 13, Pl. 7).

"Ferruginous, hispate, punctured; elytra fulvous, 
with a black band, and tips.

Head punctured; mariae in punctured, glabrous;
scutellae fuscous; palpi black; thorax widest behind 
the middle, convex, punctures numeros, 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 suture and margin, deflected base and tip black; striae obtuse, punctures large, distinct, transverse; epipleura with a distinct, impressed, punctured stria; fovea and postfovea with dilated punctures, feet black; ventrites punctured, punctured each side of base.

Length 8.5-9 mm.

Habitat. Iowa City. (Hickham).

Caldwell, J. S. (Clarke); Newport News, Va. (Barley); Cincinnati, O. (Dury); Milwaukee, Wis. (Ruttenberg); St. Louis, Mo. (Summers); Lawrence, Topeka, Kansas (Topecon); Nebraska City, Neb. (Shinick); Columbus, Tex. (Hickham).


By Spa. Lea. II. 287. 1826.
Limb rarely narrowed behind, the eye to a neck, with two superorbital setae. Eye round, prominent, very narrowly separated from the mouth. Opisthosoma usually moderately prolonged and with an erect seta on each side. Labium transverse, sepia in front, rarely quite small. Mandibles freely incurved, acute at tip and with a subapical tooth externally. Mandibles slender, hooked at tip, ciliate or slightly spinulose within. The outer lobe slender and biarticulate. The palpi moderate in length, the last joint usually small, subulate, sometimes conical. The penultimate club-shaped and subrecept. Mentum with dense, excisic runs distinct, variously emarginate, toothed; the tooth simple or notched; the ligula broader in front, fine and truncate at tip and biarticulate. The setae usually very closely approximated; the paraglossae slender, longer than the ligula and not ciliate within. The palpi moderate in length, the terminal joint small, subulate, the penultimate more or less club-shaped and biarticulate in front. Mentumae slender, arising under a slight frontal
margins, 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 margins interrupted post
terminally and with a distinct internal fold, disc
with dorsal punctures or forae, usually two, rarely three, and in a few instances numerous. Proter-
murn not prolonged. Mesosternum moderately separ-
ating the coxae, the epimera moderately broad and
wider externally. Metasternal epimera 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, claws simple, rarely serrulate.
Surface usually glabrous.

The males have usually two joints of the anterior
tarsi dilated and squamulose or filose 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.

_Pseudidius_ Lat.

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

Elytra with eighth stria interrupted or the deep at middle.

_Tachys_ Schimm.

_Pseudidius_ Lat. (Fig. 3, 3a, 4, 4a, Pl. II).

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

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


B. Mentum with large, entire tooth, striae entire.
6. Elytra with quadrate forae.
5. Tegmina, forae rather indistinct.
4. Tegmina, forae very distinct.
3. Elytra, forae very indistinct.
2. Elytra not forae.
1. Elytra with rounded humerus, third stria bifurcated.

A. Eighth stria moderately approximating the margin.
   a. Elytra with subangulate humerus, fifth stria reaching apex.

B. Elytra with rounded humerus, eighth stria very close margin.
   a1. Thorax convex, subcordate.
68. *Oxytria maculata*.
   c. Yellowish at tip, postcervically dark.
   cc. Each elytron with two yellow spots.

III. *Oxytria* with rounded humerus, third instar.

A. Frontal striae normal, elytral striae entire.
   a. Large, elytra testaceous with two dark medullating bands.
      dorso: Dark.
   aa. Large, elytra testaceous with three dark medullating bands.
      laterale: Dark.
   aaa. Small, testaceous with three black bands.
      flavopictura Keto.
   aaaa. Small, black with testaceous markings.
      niveolar Lc.

B. Frontal striae double, outer interrupted, convex, elytral striae all dorsal and abbreviated, thorax cordate.
   b. Posterior angles of thorax corniculated.

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

4. maculatum Line.

50. Bembidium littorale Oliv. (Fig. 16, Pl. 332.)

Brown, or brassy brown, beneath blackish green.
Head and thorax smooth, shining; base of antennae
and halteres fuscous; thorax quadrate with a dorsal
impressed line, and two impressed funicules near
the hind angles, which are small, acute; elytra striat-
ate, striae finely punctured, third and fourth cross-
ing near the humeri, fifth and sixth more or less
irregular, interstital lines wider than striae, some-
what irregular, the third and fifth wider than the
ninth, third with two large quadrate impressed
funicules, sometimes golden; legs greenish black,
base suffused.

Length 6-8 mm.

Habitat: Iowa City (Wickham).
Buffalo, N.Y. (Reinach); Allegheny R. (Camillus);
Ohio (Orey); Lake Superior region; Milwaukee, Wis.
(Rautenberg); St. Louis, Mo. (Stummere); Kam. (Stummere); Oregon (Stummere); Humboldt, B. C. (Stummere); Europe, Western Siberia, (Stummere).

Saphirus littoralis. Olin. II. 37 p. 6. no. 4 tab. 1 f. 7 a b.


Paludomius hel.


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

Body bronzed above; beneath blackish green; face of the antennæ, and of the palpi; pale yellow; thorax, dorsal impressed line, and anterior and posterior lines very distinct; elytra, surface smooth, with two very obvious dilated impressed spots on the third
interstrial line, striae widely and profoundly punctured. The fourth stria undulated; feet blackish green, resolve rat base.


Very closely allied to littorello Obs., but is somewhat smaller, the thoracic impressed lines more distinct, particularly the transverse lateral ones, and the striae of the elytra are more dilated and the punctures more obvious.

Length: 6 mm.

Habitat. Iowa City (Vickham).

St. Jerome, Queb. (Cassene); Syracuse, Ont. (Pettit); Green Mts. (Raymer & Savage); Camden, Gloucester, A. J. (Threl); Cincinnati, Q. (Dury); Milwaukee, Wis. (Bancherz); St. Louis, Mo. (Summers); Eastern Kansas (Parker).


Jay. Trans. Phil. Soc. IV. 484. 1834.

Sec. Am. Ent. Soc. Phil. 452. 1848.

Aemarius, Dej. Gr. Inv. 80. 1832.

"greenish brown, breadth green; tibia and anterior tarsal joints testaceous; thorax, basal line oblique each side.

Body greenish brown, polished; labrum green; antennæ dull green, covered with light brownish hair; basal joint testaceous below and greenish above; halpi greenish, hairy, testaceous on the inferior face; thorax with a green exterior margin; exterior edge excurred 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. *Jour. Acad. III. 151. 1823.

Antennæ with the three basal joints and the base of the fourth pale yellow; face with an impressed line each side; vertex longitudinally wrinkled; elytra with anterior and posterior obscurely testaceous markings; third interstitial line bifurcate.
Length 6 - 6½ mm.

Habitat: Burlington, Ia.

Lake Superior region (Lieuthe); Milwaukee, Wis. (Pawlet burg), St. Louis, Mo. (St. Louis), Hauen (O#). 


B. mitidium Lej. Jour. Soc. L. p. 84. no. 44. 1831.

59. *Bembidium americanum* Lej.

"Supra rennum, thorax transverso, subquadrate, petice subimmacato, utrince striato, angulis posticis rectius; elytris oblongovatis, utrince striato-punctatis, foralesque subaeus impression, antennarum, funiculis librarumque basi testacea.

Long. 2½ ligne. Long. 1 ligne.

Il est à peu près de la grandeur du *Foraminocereum*, mais il est un peu plus allongé, et sa couleur est un assez d'une brune moins claire et plus brillante. Sa tête est à peu près comme celle du *Foraminocereum*. Le
Premier article des antennes, et la base du second et du troisième en dessous sont d'un jaune teinté d'un peu rougâtre. Le corset est plus court, plus trans-verse, plus arrondi antérieurement sur les côtés et moins cimé près de la base; le bord antérieur est légèrement échaudé; les angles antérieurs sont moins avancés et presque obtus; les postérieurs sont à peine saillantes. Les élytres sont moins ovales et un peu plus allongés; elles sont striées à peu près de la même manière, mais les stries sont un peu moins marquées; on voit sur la troisième de gros points enfoncés, arrondis, très-forcément 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 vert brunâtre assez brillant. Les pattes sont d'un vert brunâtre, avec la base des cuisses et des jambes d'un jaune teinté. "Déj. Sp. T. 87, no. 47, 1881.

Browned base of antennae, surpassing corselet transverse, more rounded anteriorly and sides, slightly blunted. The angles anteriorly are less prominent and nearly obtuse; the posterior angles are slightly raised. The elytra are less ovate and a little more elongated; they are striped in the same manner, but the striations are a little less marked; one can see on the third large points sunk, rounded, very strongly marked: the first a little before the middle, and the second a little before three-quarters of the elytra. The surface of the body is a greenish brownish color with a slight gloss. The legs are greenish brown, with the base of the femora and tibiae of a yellowish tinge."
side, arenate, basal forae shallow, dorsal line distinct, elytra with finely punctured striae, intervals plane; the third with two large punctures, legs unarmed.

Length 5.55 mm.

Habitat: Iowa City (Hickham).

Cumberland, Gloucestcr, N. J., N.Y. (Huyghe), Cincinnati, O. (Hoy), Detroit, Mich. (Hubbard & Schuy), Milwaukee, Wis. (Pabaney), St. Louis, Mo. (Secemers), Cananea, (Sonora), Florida Lake, nat. of Deveaux, Colo. (White).

P. americanus Dep. Sp. Cons. 87 no. 47. 1831.

54. Brachidium chalcicum Dep.

*Supra obscure annulata, thorax sub angustato, quadrate, postice contracto, utrinque striato, angulis posticis obtusis; elytris oblongo-ovatis, profunditer striato-punctatis, punctis duobus impressis, antennis fuso, thorace lobis testaceis.

Long. 5.2 lign. Larg. 1 lign.

Il ressemble beaucoup à l'Americanus, mais sa...
Couleur est enduite d'une longue fée, obscurs et quelquefois presque noire. La tête est un peu plus allongée, les antennes sont à peu près comme celles de l'antigene. Les yeux sont un peu moins gras et moins saillants. Sa conque est plus étroit, un peu moins arrondi antérieurement sur les côtés et plus connex, l'impression transversale antérieure est à peu près celle de la postérieure est fortement marquée et forme un angle très-obtus sur la ligne de 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 bouclées; les intervalles sont moins plates et paraissent un peu relevés; ou voit sur le troisième, presque sur la troisième strie, deux pointes renforcées placées à peu près
comme dans l'Antiquité. Le dessous du corps est d'un vert brougi assez brillant. Les pattes sont à peu près comme celles de l'Antiquité; je possède un individu dans lequel les cuisses et les jambes sont presque entièrement d'un jaune testace.

Rev. Ent. v. 29. no. 49. 1831

Bronger, head smooth, shining, an impressed line at the base of the antennae, labrum black, antennae with two basal joints alabrous, testaceous, thorax quadrate, feebly rugose, dilated posteriorly but embracing the body anteriorly, hind angles nearly rectangular; dorsal line distinct, anterior sands posterior ones obsolete, basal impressions distinct; elytra with eight entire striae and a very short central one; interstitial lines nearly equal, wide. the third stria with two impressed punctures near the middle; under surface greenish-black, smooth; legs and trochanters testaceus.

Length 8 mm.

Habitat. Iowa City (Chicago).
65. *Dixidae* Jucubea, sub de pressura, nigrum, obscurum
virescens, thorace latitutine, paulo brunio, latissime
rotundatis, postice oblique anguatu, marginato,
ad basina truncato, angulus postice subretie basid.
rotundatis, forae striisque, locali profunda lancea
junetata, elytris striis parum impressis antice
junetatis, postice obliterata, dia bifunetata, sua
lancea conspicua, ad apicem obsolete piccis, multa
nigrum, antennarum baxi, palpis pedibusque


455. 1848.

Black, greenish color, nearly flat, head smooth, shining; front with two longitudinal impressed striae, labrum, base of antennae and palpi reflex; thorax broader than long, sides carinate, base truncate, pro- 

terior angles rectangular, basal fascia large, dorsal 
tine fascia, elytra with eight coarsely punctured striae, 
some nearlly obliterated at apex, the seventh almost 
sometimes entirely obliterated, the third bifurcated, 
intervals a little wider than the striae; legs and 
tip of abdomen reflex.

Length 7 mm.

Habitat. Iowa City, (Rickham).

Elochboro, Ill. (Stromberg); Chapman, Creek, Haw 
(Kane), Kansas City, Colo. (Rickham), Texas (Lecoulte).


56. Debridium leucippe Kribl.

Body black, glossy, abdomen scarcely at all browned.

First joint of the antennae rufo-fuscous, sculpture
of the head and thorax and elytra precisely that of the preceding species of the genus [arachnae] Nf., elytra unspotted, with two humeral impressions situated as in Pecopterus (Pseudidium Jostrevm Day).


length 4.5-5 mm.

Habitat. Iowa City (Rickham).

Gained by Okt. (Pettit), Bruce Nature (Skrause); Long Island (Casey); Cincinnati, O. (Wurg); Lake Superior region (Comte); Thunder Bay to Lake of the Woods; (Harrington); Milwaukee, Wis. (Kautzberg); Indiana (Blatchley), Lawrence, Kan. (Popenoe).


militar. Casey Cont. Col. 65. 1874.

57. Psphidium donaldi. Day. (Fig. Pl. XI).

'Greenish polished, beneath blackish; elytra testacous, with two obsolete undulated bands.
Body lateral view: black, polished; head green; somewhat bursa; frons longitudinally convex in the middle; antennae brown, tectaceous towards the base; palpi tectaceous, darker towards the tip; thorax green; slightly tinged with cuprous, marginal groove interrupted at the posterior angles by an oblique carinulated line, dorsal line obsolete; basal once dilated, basal edge oblique each side; elytra whitish tectaceous, stria punctured, profound, not obsolete near the tip; interstital lines hardly convex, third with a transverse linear impression before and one behind the middle; area of the second greenish, two fuscos, obsolete undulated bands behind the middle, the first near some line definite; face whitish tectaceous.

Day Frans, Am. Phil. Soc. II. 84. 1829.

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 over the middle of
the thoracic base. The thorax is more or less marked with undulating lines which are sometimes almost imperceptible.

**Habitat.** Iowa City (Nickel)

- Princeton, Ore. (Pettit)
- Gloucester Co., N.J. (Huegel)
- Cincinnati, O. (Nott)
- Milwaukee, Wis. (Ruttenburg)
- Illinois, St. Louis, Mo. (Simmons)
- Lawrence, Kansas (Pope)
- Glenview, N. of (Nickel)

**B. dorcas** Say, Trans. Am. Phil. Soc. xii. 94, 1831.

**Dorcas** Say, x. 437, 1834

Say, Sci. Set. v. 71, no. 34. 1831.

58. *Pemphixum* Hostrennum Say.

"Blackish; elytra brownish, obscure yellowish at base.
Head greenish black, face with an indented line each side, between which and the eye is a large oval circular puncture; antennae fuscous; piceous at base, halpi dark brown, yellow; mandible at base fuscous; thorax bronze black, very obscurely piceous on the middle of the anterior margin, contracted behind; posterior
angle, obtuse, angular; dorsal line impressed; anterior transverse very obvious, sinuate; basal line dilated, suborbicular; basal margin with slight irregularities or punctures between the basal lines; a slightly elevated line on the lateral margin, forming a groove with the slightly elevated edge, more obvious near the angle, and becoming obsolete before; elytra very dark honey yellow or brownish, much paler at apex; striae somewhat dilated, and with dilated, quadrate, infixed punctures; striae more slightly impressed towards the apex, and the punctures obsolete; third interstital space a little broader than the others, with a puncture before the middle and another equidistant behind the middle, both near the third stria; wings perfect; beneath black; abdomen tinged with picene; feet pale yellowish.

Length, 5 mm.

Habitat: Iowa (Pinecha).

Nassari (Blanchard); Proctor (Bay Colter); Illinois (Strongbog); Dakota, Col. (Bowditch); Jita Pass; and
59. *Bemisia patens* Dej. (Fig. 2, Pl. 107.)

"Insecte striqué bistriato, angule; portée recte; elytres oblongo-ovales, striato-fuscato, fasciis undato-vittato, macularius tribus spicis pallide testaceis obsoletis, punctis tuberosis impressis, antennam basi pedibulique testaceis.

L. 14 lignes. L. 15 lignes.

Il ressemble beaucoup à l' *Obligatella* 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 testacée un peu rougeâtre. Les elytres sont à peu près la même forme, mais les..."

Head and thorax greenish with a slight copper- bronze tinge; head incipience with two moder- sely deep frontal grooves extending behind the eyes; the space between (longitudinally convex; eye moderately prominent, antennæ and halpi testaceae; thorax smooth, quadrate, sides concave in front, subparallel behind, posterior angles rectangular; dorsal line obsolete, basal line dilated, somewhat interrupted near the hind angles by an oblique line; scutellum very small, green; elytra whitish testaceae, striae finely punctured, 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 lunae testaceo, undersurface smooth, shining, black; legs testaceo.

Length: 4 mm.

Habitat: Iowa City (Hickman); Ames (Octone).
British Columbia (Harrington); Sparrow Lake, Ont. (Hamilton); Greenville, Ont. (Petit); Ottawa, Ont. (Harrington); London, Ont. (Saunders); Buffalo, N.Y. (Reiche); Passaic River, N.J. (Schaupp); Cincinnati, O. (Durk); Marquette and Detroit, Mich. (Hubbard + Schwarz); Loudonville, Vincennes; Milwaukee, Wis. (Rautenberg).


60. Benoidius virgicolor. Lee. Fig. 3. (2 XIV)

Black; antennae, pinnæ, basal joints suffusc; palpi black; thorax a little broader than long, narrowed behind; sides carinate, hind angles rectangular, basal joints deep, dorsal and posterior lines distinct; elytra with
strongly punctured, striate, and picose markings; under-
surface black; feet and picose.

Length: 3.5 mm.

Habitat. Iowa City (Nichols).

British Columbia; Carlington; St. Jerome, Que. (Kane);
Spanna Lake, B.C. (Hamilton); Brimley, Ont. (Petit); N.B.
Washington, 1864 (Austen); Charlemont, Mass. (Clark);
Buffalo, N.Y. (Reiche); Poole Hill, N.Y. (Clark); Camden
Gloucester Co., N.J. (Wingel); Cincinnati, O. (Dury); Lake
Superior region (Scovt); Detroit, Mich. (Hubbard and
Schwarz); Milwaukee, Wis. (Rauterburg); Oklahoma and
Tulsa, Okla. (Scovt); Tampa, Fla. (Schwarz).


1. 1848.


61. Bembidium flavofasciculatum Hb. lat. (Fig. 4, Pl. XXI).

Red, but tawny greenish, smooth and shining,
 antennae dark brown, not much longer than the
head and thorax; eyes very large; thorax quadrate, subcuneate before, subparallel behind; posterior angular, nearly obsolete; scutellum piecous; elytra paler piecous, 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. Legs subfusc piecous, as is the under surface.

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

Habitat: Iowa City (Hickham); Amount (Reborn).

Camden, R.J. (Hickam); Cincinnati, O. (Ohio); Milwaukee, Wis. (Hawthorn); Illinois; St. Louis, Mo. (Summers);
Kaneohe, A. (Hickham); Barkland, La Verda, Cal. (Schwarz);
Dallas, Big Spring, Tex.; Tucson; Riverside, Cal.; San Gregorio, Ariz. (Hickham); San Diego, Cal. (Le Conte); Salt Lake City, Utah; Boise, Id.; Elko, Nev. (Hickham); Green River City, Wyo. (Browne); The Wall; Ontario, Victoria, B.C.,
N. Vancouver, B.C.; Kamloops, B.C. (Hickham).

3. Jacobiteus Nota.


6. Rembiadum affine Say.

Black, elytra, 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 acute; acutel, 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, strie impressed, wanting at tip, sutures distinct; first testaceous. Say, Trans. Am. Phil. Soc. II. 26. 1823. Length, 3 - 3.25 mm.

Habitat: Iowa City (Dickhain); Oddyville (Shumck). Buffalo, N. Y. (Reiche); Camden, N. J. (Liebhr); Cincinnati, 0. (Dury); Florida (Schwarz); Lake Superior region (Love); St. Louis, Mo. (Schuster); Great Boro. Nevada, Ariz. (Dickhain).


foliis Say, Sp. Gen. V. 159. no. 132. 1831.

decipens Say, Sp. Gen. V. 159. no. 169. 1831.

63. Penebius aureus Stebb. 

Head small, smooth, black; frontal striae double; outer ones interrupted; antennæ dark with pale testaceous base; thorax broader than long, margined.
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 purplish tinge; striae on the disc not extending to the apex, marginal rows shorter, punctured, interstrial 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 2½ - 3 mm.

Habitat. Ontario (Osborn).

Ontario; Quebec; Rhode Island; Lake Superior region (Secore); Detroit, Mich. (Hubbard & Schwarz); Allegheny Pa. (Hamilton); Milwaukee, Wis. (Rutzenberg); N.Y.; N.C., N. Mex., E. Eng.; Western Siberia (Hamilton).

B. assimilis L. f. II. 26. no. 12; IV. 410. no. 12.


B. assimilis L. f. IV. Rediv. Ent. rev. Fennica 211. no. 21.

B. assimilis L. f. Cat. p. 17.


64. Bruchidius quadrimaculatus Lin. (Fig. 5, Pl. xxxi)
   Fasc. sec. 1 n. 532. Carabae nigri, thoraces ferrugineos, elytronque manubri 4 lividios.

Linnaeus, Syst. Nat. I. 473, n. 41.

Black; head smooth, frontal striae double, outer one interrupted; antennae brown, lighter at base, long; palpi testaceo-violacei; thorax reddish black, smooth, widest before the middle, sides strongly carinate before, narrowed behind; posterior angles salient, acute, basal edge oblique each side, and, excluding angles, hardly wider than the peduncle, slightly punctured, dorsal line obsolete; elytra blackish, each with two large, white spots, the anterior, smaller, attaining the humerus, and external margin, distant from the suture, the posterior much smaller, rounded, placed.
on the sides behind the middle, not reaching the external margin, striae punctured, not attaining the apex, third interstitial line, one puncture before the middle, and sometimes one behind; underside black, smooth, just destemmed.

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

Length: 4 mm.

Habitat: Iowa City (Hickham), Ames (Osborn).

Hudson Bay country (Harrington), St. Jerome, Que. (Camer); Yale, B. C. (Hickham); Green River (Rayward and Savage); Buffalo, N. Y. (Reiche), N. J. (Smith); Penn. (Bay); Detroit, Mich. (Hubbard and Schwanz); Milwaukee, Wis. (Rautenberg); St. Louis, Mo. (Summers); Topeka, Kan. (Pepper); Lolo (Ulke); Coolidge, I. N. (Streeter); d'Sene, Idaho; Yakima, Wash, Portland, Ore. (Hickham).

Europe and Siberia (Hamilton).

Carabus 4-maculatus Linn. Synt. nat. 1. 672. no. 44. 1767.

E. A. Paris. 152. no. 44.

Lopha 4-maculata Steph. Kwan 97. no. 438. 1859.

15. *Bembidium navigatum* Say.

Abdomen green, polished, beneath blackish; elytra striate not impressed, punctured.

Body all above green, polished, beneath blackish, polished; antennae and palpi rufous; thorax unsegmented, broadest in the middle, nearly equal to the base of the elytra, contracted behind, posterior angles rectangular, basal line nearly rectilinear, marginal suture interrupted at the posterior angles by an oblique carinate line; dorsal line slightly impressed, basal ones profoundly indented; elytra suberect.
of impressed striae, punctures rounded, somewhat dilated; obsolete behind the middle, interstitial line flattened; first metatarsus, outer slightly truncate on the side, "Boy Traverser, Am. Phil. Sec. II. 84. 1823.

Length 6-7 mm.

Habitat Iowa City (Sticham), Ames (Cobourg), Cincinnati (Ohio, Vincennes), New Bern (Columbus), Tex (Sticham).

B. levigatum Boy Traverser, Am. Phil. Sec. II. 84. 1823.

St. Louis, Sec. X 150. no. 105. 1831.


483. 1848.

Dochy. Schem.

Body oval, 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, natural striae recurved at apex; anterior tibiae obliquely truncate at base.
Six species occur in Iowa.

1. Elytra immaculata.
   a. Size small, piceous.
   b. Size large, black.

2. Elytra maculata.
   a. Body suffused.
   b. Elytra with humeral and discal spots of pale piceous.
   c. Elytra with vitta extending from humeral to two-thirds to apex.

aa. Body piceous.
   a. Elytra blackish, posterior half yellowish white.
   b. Planirostra Say.
   c. Elytra piceous with humeral vittae.

66. Fracipennis Say.
   "Piceous; halter whitish; elytra destitute of striae.
   Body piceous, tinctured with suffusion; head rather darker; antennae paler at base; halter whitish, thorax
travertinely subquadrate, broadest before the middle, hardly narrowed behind, lateral edge not incurred behind, posterior angles slightly obtuse, angular, basal edge nearly rectilinear, dorsal line obsolete, basal one wanting; elytra impunctured, destitute of striae, excepting one obsolete central one; fast testaceous.

Length 1.25 - 1.5 mm.

Found under stones in late winter and early spring.

Habitat: Iowa City (Weckhauser), Ames (Oeben).

Kewaunee, Wis. (Pattus); Buffalo, N.Y. (Reiche); St. Albans, Vt. (Smith); Florida (Schwarz); Detroit, Mich. (Hubbard and Schwarz); St. Louis, Mo. (Summers); Buffalo, N.Y. (Krauss).

Bembidium lacunae Say Trans. Acad. Phil. Soc. II. 38. 1823.


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

Length 2 mm.

Habitat: Iowa City (Nickham), Ames (Osborn).

Sparrow Lake, Oak (Hamilton); Green Nature (Beyward and Savage); Buffalo, N.Y. (Peach): Inverness, I. J. (Smith); Florida (Schwarz); Cincinnati, O. (Dury); Detroit, Kisch (Hubbard and Schwarz); Bayfield, Wis. (Nickham); Milwaukee, Wis. (Rautenbury); St. Louis, Mo. (Simsreel); Lanneuse, Paul (Pepin); Dakota, Cde. (Leconte); Williams, Ariz. (Nickham); Cal. (Mote).

Europe (Reitter); Siberia, Algeria (Hamilton).

Rev. bidens varipes, Syll. II. 30. no. 16; IV. 413. no. 16.

Rev. Syr. Búa, V. 51. no. 15. 1851.

Brandt, Nueva 513. no. 322. 1846.
Bembidium quadrivittatum. Sturm VI. 150. no. 29 tab.
160. f. a.d.

inominae. Say, Trans. Amer. Phil. Soc. II.
p. 81. 1853.

Elaphrus minimum. Sturkhuid II. 205. no. 17.

Tachys piceiceps Say, Trans. Amer. Phil. IV. 56. 1837.


Note. Col. nourse Cat. p. 123. no. 2.

Manus, Phil. Moze. 1853. p. 60. no. 60.


Found under loose bark.

68. Tachys flavicauda Say, (fig. VIII).

Proneus, elytra with obsolete, incipient striae.

and pale at tip.

Head blackish, antennae, labrum, and palpi pale.

Pronotum, thorax, piceous black, transverse quadratus,
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 imbricated, wanting each side, and
rat tips, interstitial lines convex; feet pale yellow, vent-
erior cuneus at tips. Say, Trans. Am. Phil. Soc. II. 87. 1823

Variety, entirely testaceous.

Length 3 mm.

Found under bark of decaying tree.

Habitat. Independence, Iowa City (Hickham);

Sparrow Lake, Ont. (Hamilton); Kinsey, Conn. (Pettib);

Green Hope, (Bayard and Savage); Buffalo, N. Y. (Rein-

esche); C. J. (Smith); Cincinnati, O. (Wery); Detroit, Mich.

(Hubard and Schwarz); Bayfield, Wis. (Hickham);

Milwaukee, Wis. (Kautenberg); St. Louis, Mo. (Sumner).

Topeka, Kans. (Popescu).


II. 87. 1823.

Say, 3d, Ser. I. 63. no. 17. 1831.

69. Tachys vespa Lec.

Bifore, polished; head small, frontal striæ

normal; antennæae fuscous with pale bases, thorax quad.
sate, sides arcuate, hind angles acute, dorsal line obsolete, basal line distinct, dilated and interrupted by four angles, by short transverse lines; elytra with two lighter spots, one at the humerus, and one on the disc near the apex, margined at base, without striae except an impressed natural one, impunctured; legs testaceous.

Length 3 mm.

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

Habitat. Iowa City (Hickham).

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


70. Tachys incisurus Say.

Piceous; elytra with a honey-yellow vitta from the humerus, a little dilated at its terminations before the tips.
Body, picene; head, blackish picene; 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 line dilated, undulating the posterior edge; elytra polished, with a profoundly impressed, somewhat dilated, simple, sutural stria; the second stria obsolete; an interrupted stria on the lateral margin; a dilated indentation each side a dilated vitta from the humerus the scutell; and a smaller one on the humerus near its tip, curve a little towards the suture; and is in that part a little more dilated; ventral black picene; feet honey yellow.

"Say, Frank, Amy Phil. Soc. III, 40, 1834"

The species varies somewhat in the depth of coloring.

Length 2 mm.

Habitat. Independence, Iowa City (Richman).

Savoy, Oak (Petit); Green Notch (Hayward and Savage); Buffalo, N.Y. (Reesche); Brigantine Beach,
71. *Tachys* nebulosus C. & G.

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

Found on banks of ponds and streams.

Habitat: Homes (Osborn).

Pennsylvania (Rissoch), Canon City, Colo. (Wicklau).

T. nebulosa Ehd.

 incurvata f. (see}


Head sometimes constricted behind the eyes, two supra-orbital setae. Eye (sometimes absent) rarely prominent, distant breath 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,
acuta, at tip, ciliate with a few stiff hair inside, the outer lobe biarticulate, palpi moderate or long, the terminal joint variable but not ciliate, the terminal joint not pubescent. Antennae broad, its basal cuticle often obsolete, deeply emarginate and toothed, the tooth bifid or simple, the epipodite often dentiform, ligula moderately prominent, usually broad, the tip free or incurved, uni- or triloculate (Degenii) or even planisectose (Trechi), the paraglossae slender, very little longer than the ligula and not ciliate within (Degenii), or slender, long, and ciliate within (Trechi); 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 jointe glabrous. Thorax with a seta at the sides and at the third angle. Body not pedunculate, scutellum distinct. Glytra sometimes margined at base, sides narrowly inflexed, margins posteriorly entire or with a very feeble sinuature and without internal glia, sides more or less striate.
odorant punctures distinct. Prosternum not prolonged at tip. Meta
terum declivous in front, moderately separating the coxae, the spinera narrow. Metasternum 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 spur remote from the apex. Tarsi slender, claws simple. (Pl. XX, Fig. 56).

The anterior tarsi of the male bear two joints dilated, and squamulose beneath.

The tribe is subdivided into two groups – Prozoni and Trezoni – but representatives of the latter group are not found in Iowa so shall not take it into consideration.

Group Prozoni.

Terminal joint of palpi more or less cylindrical
and obtuse at tip, that of the labial as long as the
preceding. (Pl. XX, Fig. 56).

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

Petrobus Dy.

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

longicorne Dy.

72. Petrobus longicorne Dy. (Fig. XII.

Elytra, dark fuscous, breadth paler, antennae, rufous; feel testaceous.

Body glabrous, dark fuscous, breadth fuscous; 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 explaned at the hind angles. anterior transversely indented. Line transverse, dorsal line at base abruptly carunculated, basal lines dilated, subocular; profound, scarce, extending from near the dorsal line to the angle. Elytra, interstitial lines of the disc convex, glabrous, striae obtuse, punctures approx.
cinate, transverse extending upon the sides of the striae, the sixth and seventh striae obsolete; feet testaceous.

Day Trane, A. M. Phil. Soc. iv. 48. 1820.

Length 12-15 mm.

Found under stones in moist places.

The form of the larva of P. longicornis Day is elongate, broadest in front, narrowing posteriorly.

Color: Head, and thorax brown, pronotum, abdominal vertex black, legs, antennae and underside, pale.

Head large, longer than broad, as wide as prothorax, hexagonal, above convex; anterior angles rounded, posterior angles prominent. Dorsal hair, subscapulata 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 bristle, the second is glabrous and the third and fourth set with three bristles. Near the tip of the third joint it is stout there and a longer process projecting outward.

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 supporting a four-jointed palpae and a two-jointed lobe. First joint of palpae 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 palpae but slender; the second the same length, but even more slender.

Metum transverse trapezoidal, broader than long. Ligula narrow at base, broadening toward apex, densely set with bristles, with a terminal obtuse prolongation at middle; palpae two-jointed, the first longer and stouter.
than the second.

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

Heterothorax subquadrate, slightly concave at tip.

Meta-thorax 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 bunches of bristles, the former with two bunches, the latter with one.

Spiracles nine on each side, the first above the middle feet. (Fig 5. ed. Pl. xv).

Habitat. Iowa City (Hickham); Muscatine (Shirck); Davenport (Petersen).

Erinace, Ont. (Rottke); Ottawa, Can. (Carriecke); Green Miners (Hayward and Savage); Buffalo, N. Y. (Reinecke); New York City (Schreipp); Stewart, Jr. (Smith).
Feronia longicornis Say, Trans. Amer. Phil. Soc. III. 46, 1833

Petrobus longicornis Say, Trans. Amer. Phil. Soc. III. 42, 1834

Schenizopa Phil. Trans. Soc. X. 56, 1832


Petrobus americanae Say, Sp. Gen. III. 34, 1838

Say, Trans. Nor. A. M. IX. 57, 1837

10. Tribe Petrochini.

Head more or less constricted behind the eyes, except in Agonara, and with two supra-ocular 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. Maxillae...
broad, of variable length, usually deeply emarginate and
footed, varying to a simple declination; ligula at
least moderate in size, often large, more or less free at
tip and bisetose (quadrisetose in Mayac), the paraglossae
slender and usually longer than it, sometimes much
longer (Stomiis, Coenanchus), 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 and one at the hind
angle. Body not pedunculate (subpedunculate in some
Gnorthis), scutellum distinct. Elytra narrowly inflex-
ed, margin strongly interrupted posteriorly and with a
well marked internal plica, disc usually with dorsal
punctures. Poststernum not prolonged at tip, margined
or not. Metasternum oblique or vertical in front, rather
widely separating the coxae, the epimera narrow, often
wider internally than externally. Metasternum and
side piece variable in length; the epimera 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. Pl. 1).

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:

a. Last joint of palp cylindrical or slightly oval.

b. Anterior tarsi of male normally dilated.

c. Terminal joint of palp as long as or longer than the penultimate, the latter broader in front.

Pterostichus Bous.

d. Terminal joint of palp shorter than the penultimate, the latter plurisetose in front.

Erotyla with one dorsal junction. Erethusa Lee.

e. Elytra without dorsal junction. Amara Bous.

f. Anterior tarsi of male obliquely dilated.

Euparius Lee.
Pentatoma (Figs. 1, 4, 7, 9, Pl. XX)

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.
      1. Elytral striae fine, interstices flat, base of thorax not narrowed than tips; californicae. Ry.
      2. Prosternum not margined at tips.

   b. Elytral striae deep, interstices convex, thorax narrowed behind; adoxus, Say.

II. Dorsal punctures 1-3, last joint of palpi cylindrical.

   a. Elytra with one dorsal puncture.
      b. Thorax not narrowed behind, dorsal line reaching base, striae impunctured, scutellar stria long; stygicola, Say.
      c. Thorax much narrowed behind, dorsal line not reaching base, striae punctured, no scutellar stria; constricteria, Say.

   aa. Elytra with two dorsal punctures.
c. Black, thorax slightly narrowed behind, stria in punctured. coroninus krom.
c. Green, thorax not narrowed behind, stria in punctured, black within. chalcites say.

arsenivia with three dorsal punctures.
d. Thorax narrower in front than behind.
e. Dorsal line not reaching the base, striae finely punctured. harmintia say.
dd. Thorax narrow behind.

f. Green, striae purple within, sometimes in punctured, sometimes finely punctured. hennichius say.

f'. Black, striae finely punctured before the middle, intersects with dorsal punctures, hind angles of thorax carinate. coninae dej.

f". Black, striae entirely punctured, striae with dorsal punctures.

ventator lec.

f". Black, basal forae linear, hind
angles of thorax not carinate,
striae punctured, interstices with
dorsal punctures. — new spec.

III. Dorsal punctures 3, last joint of palpi elongate.

oval, scarcely truncate. Small species.

a. Scutellar stria wanting.

b. Thorax rounded, broadly margined.

cyathurae. "

b. Scutellar stria long.

c. Clystral striae impunctured punctually.

c. Clystral striae punctured before the middle.

flumeralis. "

13. Streptocerus californicus. "

Striae, nigra; thoraces subcordato, postice striisque striato;

abaxial oblongo, ovato, subparallele, striatissi.

long. 3½, 6 lignes. Long. 3, 2½ lignes.

Elle ressemble beaucoup à la lepida, et sa couleur est
totalement en-dessous d'un noir assez brillant. La tête est
tissée, avec deux imprimées longitudinales assez marquées,
entre les antennes, la ligne supérieure est d’une bonne largeur. Les palpes et les antennes sont d’un beau brun roux.

Leur nez est un peu plus petit et moins saillant.

Le corps est un peu plus étroit, plus allongé, plus lisse, un peu plus courbe, un peu retiré postérieurement et très légèrement conique. 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 surfeé vers 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 plane, et l’on n’aperçoit aucun point surfeé sur la troisième.

Le dessus du corps, les cuisses et les jambes sont d’un noir un peu sombre, les taches sont d’un brun rouxâtre.

Le CONNECTIVE-Z. 125. no 14, 1858.

Black, polished; head imunctured, frontal groove double, the outer one less impressed; mentum slightly emarginate; antennae dark brown, the three basal points black; palpi very dark rufous, thorax quadrate, imunct.
ured, hind angles rectangular, median impression distinct, basal impression interrupted near the angle by an oblique line, margin entire; elytra slightly convex, margined at base, sinuate at apex, striae in punctured, punctellae striae long, marginal interval with a series of punctate punc-
tured; tars of abdomen foveolate.

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. Mojave (Osborne).

Tabachite and Keene, Cal. (Fitcham); San Diego, San José, Otay, Isabel, and San Francisco, Cal. (Scolete).


Brachystaphylinus californicus Strand. Bull. 1887.


74. Paroreus radex Say. (Fig. 9. Pl. xvi.)

"Apterous, black, glabrous, incipiently; striae incipiently; basal thoracic line not dilated.

Body black, glabrous, incipiently; antennae robust; the joints attenuated towards their bases, and with the 2rd.
dark reflexes; labrum truncate, dark reflexes, thorax large,
incipiently, gradually contracted behind, edge excurred.
Labial hind angles; dorsal line not attaining the base;
basal line strongly impressed, cutting the base near the
angles; precox incipiently; postcox incipiently; elytra,
striae incipiently, interstitial lines convex; feet picose,
abdomen picose.)" Say. Trans. Amer. Phil. Soc. 46. 1833.

Length. 14-15 mm.

Habitat. Arizona (Coburn).

St. Jerome, Ave. (Hauser); Grandby, Ont. (Pitt.), Buffalo,
A. Y. (Rieche); Peru, Say, Palicades, A. (Schaep); Md.,
Va., D.C., Appaloosa Valley, Eo. (Scudder); Indiana (Blatchly);
Detroit, Mich. (Hubbard & Schwarz), Wayfield, Me. (Nichols).


lec. Odessa J. Ent. 207. 1850.


suberecte dice. 238. 1852.

sustenece dice. 236. 1852.

resecte dice. 236. 1852.


75. Ferostichne constrictue Say.

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

Body, anterone, black, anterone fuscous, fuscous at base; labrum and palpi fuscous; mandibles striated obliquely; thorax convex, wider than long, rather abruptly contracted at the posterior margin, which is depressed; dorsal, basal, and anterior lines distinct, impressed, the former attaining the base; basal lines double; lateral edge much
rounded, abruptly excised at the posterior margin; basal angle rectangular, acute; face much narrower than the elytra.

ELYTRA WITH "PUNCTURED STRIÉ, "PUNCTURES SMALL, INTERSTITIAL LINES SLIGHTLY CONVEX; BREADTH DARK PICEOUS, OR BLACKISH."


Speculara strià, nothing but a dot.

Length 18.5 mm.

Habitat, Iowa City (Vicknair).

Nicenei (spec.); Benedict, Iowa; Wickham, Xiva.

Celo. (Day).


Day, Iowa, Iowa, Phil. Soc. 1837.

Fremia constricta, see Ann. Iowa, Acad. Sci. II, 344, 1844.

Lee, Jour. Acad. Ill. 268, no. 24, 1862.

76. Pterostichus consciens Ann.

Body black, polished; head glabrous; fronsal 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 long.
as the head and thorax, pictures, basal joints dark brown; 
scalpe refinse; thorax transversely subquadrate, sides acute; 
angles rounded, posterior angle rectangular; 
anteior, posterior and dorsal lines distinct, basal joints 
large, deep, roughened; elytra with acute, punctured 
striate, pentarcal stria long, equally impressed, intervals 
coury, the third bifurcated, the marginal one with many 
sculptured puncture, more distant in the middle; side of 
abdomen with large impressed punctures, acuid-refine.

Length, 15-16 mm.

Habitat. Iowa City (Nicholson).

St. James, Ken. (Canseco); Chicago, Ill. (Pettit); Sparrow 
Lake, Ont. (Carleton); Niagara (Leconte); Green Point (Hayward 
and Savage); Anark, 3d. (Smith); 3d., 3d. (Leconte); Cin-
cinnati, 3d. (Drury); Detroit, Mich. (Hubbard and Schmaltz); 
Bayfield, Wis. (Nicholson); Rock Island, Ill.; St. Louis, Mo. 
(Sumner); Eastern Kansas (Peach). 

P. cariniceps, Penn. Ent. Mag. 5: 378.


Pterostichus stygicus Day.

Body black, punctured, glabrous; antennae rather surpassing the base of the thorax, brownish towards the tip, the joints attenuated towards their bases; palpi refuse; thorax, diameters subequal, gradually a little contracted behind, edge not excrusted at the hind angle, hind angles not prominent, rounded, basal line double, dilated, posterolateral and carinal more than the profile; elytra slightly tinged with brown; striae indented, punctured, interstitial lines convex, third with a single puncture behind; wings none; feet black; tibiae and tarsi deep picaceous.
acina four, double, the outer one smaller, and lie deep; the marginal intestinal line with a series of oval-like structures, distinct in the middle, some ridged.

length, 13.7 - 15 mm.

Found under stones, etc.

Habitat: Darrell Port (Montana).

St. Jerome, Que. (Hansen); brains, Oak (Ritchie); International Lake, Oak (Hamilton); Green Nature (Hayward and Savage); A.A.; Buffalo, N.Y. (Rennie); New York City (Schaappe); Penn (Say); Candide and Gloucester, N. Y. (Kugel); Gorga (Leconte); Detroit, Mich. (Hubbard and Schmarg); Lake Superior region (Leconte); Cincinnati, O. (Nerst); Indiana (Blatchley); Milwaukee, Wis. (Pawling); Illinois (Leconte); St. Louis, Mo. (Mimms); Topeka, Kans. (Poppen).

Caraboe stigmina Meeki, Catal.

Veronica stigmina Say, Trans. Am. Phil. Soc. II. 47. 1829.


S. gigillatae Harris & Eng., Termer, VII. p. 123. 1829.
78. *Parastichius perrumbeus* Say. (Fig. 10. Pl. xxxii.)

Black, with a perlacous reflexion; third interstitial line three-junctured.

Body black; antennae fuscous, dull honey-yellow towards the tip, distinctly compressed; joints, in profile a little narrowed to the base; palpi fuscous, not at all uniform; terminal joint here, dilated, at tips than that of the preceding joint; thorax with a slight perlacous reflexion, rather narrower at tips than at base; lateral margin depressed, punctured, gradually reflected to the edge, which is but little arcuate; posterior angles rectangular; disc imjunctured; dorsal line well indented; fascial lines two on each side, punctured within, deeply impressed, the exterior one very short; elytra brownish-black, somewhat indistinctly perlacous; striae deeply indented, imjunctured; punctular 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; breathe fuscous, sides very distinctly and numer.

Labrum not emarginate. Anterior and punctured but so finely as to be indistinct without a strong lens.

Length, 15 mm.

Habitat. Iowa City (Cochran); Davenport (Putnam); Eddyville (Shimek).

Cincinnatus, O. (Vory); Indiana (Say); St. Louis, Nbo. (Simpson); Palux, Raw. (Krauss); Nebraska (Isconte).


79. Pterostichus cheilinus Say.

Brown, polished, breast black; feet black, head and thorax punctured; margin of thorax not depressed.

Body glabrous, green, polished, breast black; head punctured; antennae brown, reposed at base, third joint with a blackish carina; labrum black; palpi bicuneate; thorax punctured, not contracted behind; dorsal line distinct, base as broad as the elytra, basal lobe two each side, margin not depressed, basal angles
rectangular, acute; ventral green or cupreous; elytra polished, green, slightly tinged with cupreous; margins opaque, interstitial lines convex, incrusted, striae within black, and with indented lines each side; first black, white and two deep, purplish.


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 (Rockhaan), Dubuque (Olson).
Oklahoma (Shinek).

Iowa, Scottia (Jones), Iowa, Missouri, (Hayward and Savage).
New York City (Schauff), Allegheny, Pa. (Hamilton), Howard.
St. Louis (Smith), Cincinnati, O. (Ratze), Detroit, Mich. (Hubbard and Schwanz), Milwaukee, Wis. (Pantlerz), Missouri (Say), Eastern Kansas (Popenoe), Lincoln, Neb. (Shinek).


Say, J. P. Linn. Soc. III, 211, 1838.

Carabides chalcites, Hentz, Catal.

Pteronia sayi Buelle Silk, Rev. Ent., 3, 277.


I have used the name chalitea, although sayi is more commonly given, because I find that chalitea Say was first published in 1838 while German Poricid chalitea (an entirely different insect) was not until 1834 which makes Callie proposed name sayi unnecessary.

80. Poricidus laevis laevis Say.

Green or reddish-purple, polished, all beneath black; head and thorax immaculate, margin of thorax defused. Body glabrous, green, polished, beneath black; head immaculate; antennae, andHalpi brown, rustone at base, three basal joints of the former with a dusky carina, thorax immaculate, widest in the middle, a very little narrowed behind by a regularly curved edge, base nearly as broad as the elytra, basal angles rectangular; notum, lateral margin very distinctly and abruptly defined, dorsal line acute, lateral one two or each side, indented; elytra green or reddish-purple, margin purplish opaque.
interstitial lines, convex, infuscated; the third with two or three remote punctures, striae purple lateral, in- punctured; feet blackish, picaceous or reflex.

Day Francis, Nov. Phil. Soc. 17, 55, 1828.

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 dense, 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. hirtus* lanceolatus is 12 mm. long, and in form is stout and elongate.

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

Head subquadrate, slightly narrower at apex than at base, sides almost parallel, angle rounded.

Eyes small, suboval, six on each side, arranged in two rows, situated behind the insertion of the antennae; worm.
two long bristles, one before the eye, the other behind.
Antennae four-jointed, longer than the head; in the maxillae, basal joint longest, with a tooth near the apex at the inner side; second joint half as long rather stout, 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!
Mandibles slightly arcuate, with a tooth near the middle.
Maxillae, the long cardinal spine thicker at apex than the base; the palpae 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; both two-jointed, joints nearly equal in length, but basal much stouter.
Mentum bilobed, broadest before the apex, angled 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 anterobasal and antennal transverse lines; median longitudinal line distinct.

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

Metathorax similar, but the anterobasal 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; sabre two long slender lateral appendages, also best with bristle.

Spiracles as in Dicerca, also the sternum beneath.

Legs. The anterior leg has beneath the tarsus, two small teeth. Besides this they are similar to all carabidone.
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, (H.)

St. Jerome, Jue. (Houston); Grimesby, Okt. (Petit); Sharrow Lake, Okt. (Hamilton); Sioux Mtns. (Hayward and Savage); Buffalo, N. Y. (Poison); New York City (Schauffe); Pine (Ray);

Lewish. T. J. (Biddle); Georgia (Lecente); Colombia, O. (Nursy);

Marquette, Mich. (Hubbard and Schwag); Bayfield, Wis. (NICHOLAS); Milwaukee, Wis. (Rauterberg); St. Louis, Mo. (Summerville); Topeka, Kan. (Pepper); Colo. (Hickey); Provo, Utah (NICHOLAS); Newfoundland (Lecente).


St. Jol, Ill. 212. 1828.


Loc. Iowa, Lyric Nat. Soc. 18. 251. 1844.


p. 38. 1831. (Larva)


Manhättane Casey Contr. Coloff. N. Amer. II. 72. 1834

Proc. fraternus Day Longe 1870.


Cnestàgus Myr. Farm. Bor. Amer. IV. 37. 1837


Lec. Amer. Lyc. F. Y. 232. 1848

Similis Myr. Captal. p. 11.

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Perovatichus convexus Myr.

Hâta, nigra; thorax subcordato, punctu et quadrato, punctato, striato, stricato; elytræ prolongato, subparallelis, coxae inculis, striatis, punctatis, transversis impressis.

Long. 52, 6 lignis. Larg. 4, 25 lignis.

Elle est plus petite que le Melanaria, proportionnellement moins un peu moins large et comme elle, d'un noir assez
brillant. The coriellae are a little more narrow, a little more stoutly arched and a little more rounded on the sides; the impressions of each side of the base are more large, and the points are more distinct and more elongated. In other cases, the two longitudinal impressions are a little less marked; the sides are more large, and are bent and do not slightly relieve; they extend at a certain moment to touch the base and form a rather acute angle; the base is consequently carried out. The elytra are a little more narrow and are more convex, their striae appear less and are not as strongly marked; the intervals are not very relieved, and can be seen on the third of the three points of the upper edge distinct: the first near the base, the second near the third; the third near the second, a little near the middle, and the third near the same line, on the third quarter of the elytra. It is said that the elytra are sewn down to the body, and that the pustule is broad. Dr. G. 1817. 1821. 74. 1825.

Black, polished, head smooth, with two deep frontal grooves extending to the vertex, mandibles without teeth; antennae pale, the three basal joints reddish, black; palps obscure; under surface of neck rigores; thorax longer than broad,
wurred, blind, sides arcuate, posterior angle retangular; anterior, dorsal, and basal lines distinct, base especially near angle finely punctured; elytra with a large incised puncture, with traces of many fine punctures before the middle, punctures stria moderate, interstitial lines wide, scarcely convex, the third with three small, faintly impressed punctures; prothorax and propectus punctured at sides, last ventral segment of proepigale, legs rust-brown, femora black.

Length 12.13.8 mm.

Habitat: Iowa City (Wickham).

St. Jerome, Jre. (Kane); Sparrow Lake, Oak. (Hamilton);
Sioux City (Pettit); Green River (Howard and Savage);
Detroit, Mich. (Hubbard and Schmty); Lake Superior region
(Leconte); Palisades, N. J. (Schaupp); Allegheny, Pa. (Hamilton);
N. E. Georgia (Leconte); St. Louis, Mls. (Summer); Nebraska
(Leconte).

**Feronia cornua Aaj. in Lea Ill. 281 no. 74. 1828.**

**Perestichus cornutus Lea. Insect. II. 267. 1859.**

**Lep. Iowa Acad. Nat. Sci. II. 244. 1853.**


52. Paraeulichne zeuctator Lea.

Peruicune, depressed, elytra triquintate, striae externe
subobsoletae, interstitiae subconvexae, postter fasciunctulata.


Black, polished; head smooth behind, somewhat wrinkled
before; frontal groove deep; antennae black, somewhat lighter at
the apical black with ferrugineous tinge; labrum deeply
emarginate; thorax broadest before the middle, sides arcuate,
narrowed behind, posterior angles rectangular, anterior,
dorsal and basal line distinct; elytra with square
turned, striae with fine punctures which become fainter at
apex, punctellar stria long, the seventh sometimes almost
obliterated; interstriae subconve, wide, the third with three
dorsal punctures, the first on the third stria before the
middle, the second and third on the second stria, one at
the middle, the other behind it; underside 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 (N. Hickman).

Specimens: 8. (Lyon); Ottawa, Ill. (Barrett).


83. Pterostichus ventricosis Say.

Black; thorax punctured each side at base; elytra with 16
solitary punctured striae.
Body glabrous, black; antennae ferrugineous towards tip,
joint  attenuated towards their bases; palpi ferrugineous; thorax in
the middle as broad as the elytra, gradually a little contracted
towards the base, where it is very slightly curved, base some
what depressed, and distinctly punctured each side; dorsal
line distinctly carried to base; elytra, striae absolutely punctured,
intercubital lines convex, third with a puncture at the base,
one in the middle, and one near the tip; feet black; tibia
and two pierced,pectorally punctured each side.


Frontal grooves feeble; posterior tibie of male strongly
subexcisit internally.

Length 10-13 mm.

The larva of P. minutus Say is very similar in general
appearance to P. lucensblaudiae but differs from it as
follows: - Head longer than broad, the mandibles more
slender, and acute, the cardinal piece of the maxillae
with a distinct tooth with two stout bristles below the
insertion of the lobe, the second and third joints of the
palpi nearly equal, the ligula longer than broad, the joints
of the labial palpi nearly equal in length and thickness;
basal joint of antennae bearing the inner tooth (Fig. 5 pl. III)
The larvae are found with those of lucensblaudiae under
the same circumstances. The time of development from the
pupa to imago seven days. Thorax, tibiae, and tarsi are
thin brown, while the coxae and abdomen remain white.
In a little over a day the full color is attained (Fig. pl. III).

Habitat: Nova Scotia (Wicklow); Angle (Ibison).
St. Jerome, and St. Rose, Pue. (Canon); Fairly, Ont. (Petit); Buffalo, N.Y. (Reichke); New York City (Schaupf); Penn. (Say); Caldwell, N.J. (Cramer); Marquette, and Detroit; Mich. (Hubbard, and Schwanz); Bayfield, Wis. (Hickham); Milwaukee, Wis. (Harterberg); Kne. (Horn); Red Cliff, Colo. (Hickham).

Teronia minutia Say. Trans. Am. Phil. Soc. II. 44. 1823.


Teronia morosa Say. Sup. Sci. Ill. 283. no. 75. 1828.


Pirostichus erythrocepha Say.

Lata, nigra; thorace subquadrate; postice utrinque striato; angulus postice subrotundat. elytrae oblongo-ovat, striate; punctis utrinque impressis; antennae simplex; pedebus rugos.
Long. 40 à 50 l. Lang. 15 à 20 l.

Elle est plus grande que le Verulam, 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 rouxâtre. Les antennes sont, comme celles de la Verulam, d'un brun obscurs, avec le premier article d'un rouge ferrugineux. Les yeux sont un peu plus saillants. Le corset est un peu retiré antérieurement, sa base est très large et ne présente aucune apparence de punctation; l'impression longitudinale de chaque côté est plus fortement marquée. Le côté droit est d'un rouge plus sombre et ses angles postérieurs, qui sont assez arrondis, et le milieu de la base est un peu plus étiré et échancré. Les élytres sont un peu plus ronds et un peu moins tachés; les stries sont fines et un peu plus fortement marquées. La septième est beaucoup moins marquée que les autres; comme dans la Verulam, il n'y a pas de commencement de stria à la base près de l'écusson, et l'on voit de même sur le troisième intervalle trois points enfoncés, placés à peu près de la
Black, shining, glabrous; head smooth, frontal impressions short, rather faint; antennae fuscous, three basal joints rufous, palpi rufous, thorax subquadrate, widest in the middle, not narrowed behind, posterior angle rounded, stipes, anterior ones also obtuse, anterior and dorsal line obsolete, basal line distinct, elytra with rounded humeri, in punctured striae, the seventh almost obsolete, prosternal stria wanting, indistinct, lines subconverging, the third with three small punctures, underside and legs fuscous; tip of abdomen fuscous.

Length 7.5 - 8.3 mm

Habitat: Iowa City (Nichols), Muscatine (Shirck), Ames (Osborn).

Sparrow Lake, Ont. (Camilto), Lincnsh, Ont. (Petit), Green Nue. (Hayward and Savage), Buffalo, N.Y. (Riimche), New York City (Schaupp), Newark, N.J. (Smith), Sault Ste. Marie, Detroit, Mich. (Hubbard and Schway); Milwaukee, Wis.
Paraissent par souciées. Le dessous du corps et la tête sont à peu près comme dans la Pella.

*Foterone*, 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, side sinuate, slightly excurred at base; posterior angles rectangular, prominent, dorsal line continuous to base, anterior and basal lines distinct; elytra with impressed striae, long scutellar stria, interstitial lines hardly conspic., third trifidulate; legs femurous.

Length 6.25 - 7.5 mm.

Habitat. Iowa City (Dickham).

Elmby, Ont. (Pöttker); New York City (Schaefer), Rochester; Camden, N. J. (Huyg), Allegheny, Pa. (Hamilton), Detroit, Mich. (Hubbard and Schwartz), Bayfield, Wis. (Dickham), Milwaukee, Wis. (Cramrill), Eau Claire, Wis. (Pottenger), Helena, Mont. (Dickham).

Argyrotrichus leucostictus, Lyc. sub Gm., J. N. Y. IV. 57. 1848.


16. Perostechnus femoralis, H. F.

This species approaches very near to the preceding one and its place is between that and the varudi of which it is the American representative. It differs from the bicolor (Patruelis) chiefly in having only the scape 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 femora of the elytra slightly punctured, and from the latter in having the prothorax narrower at the base, with only a single punctured impression on each side.


Pterome, dorsal line of thorax not continuous to base.

Elytral humeri rounded, striae often strongly punctured before middle, three dorsal punctured.

Length, 7-7.5 mm.
Habitat. Iowa City (Hickham); Davenport (Putnam); Hann (Oebme).

Erneby, Okt. (Petit); Boston, Mass. (Abby); New York (Carvin); Allegheny, Pa. (Hamilton); Detroit, Mich. (Kohut, and Schwartz); Milwaukee, Wis. (Kusterberg); Illinois (Stromberg); Topeka, Kans. (Peterson).


Eswrthum dec.

Posterior tarsi not grooved on outer sides; thorax variable; elytra with rounded humeri, and some dorsal punctures; anterolateral stria usually short, or punctiform, rarely long; metathoracic spiracles short; first ventral segment margined at base; prothorax not margined behind. (Fig. 8.)

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

1. Prothorax deeply sulcate, marginate at tars; elytra quadrate, feebly narrowed behind; basal femur large and
deep, bistratate with a supplementary small fora; hind angle carnate; base finely margined each side.

a. Clystral striae strongly punctured; thorax widely margined especially toward base, wider than long; of dull. sepiopressus Lec.

aa. Clystral striae finely punctured; thorax as long as wide, ventral striae long; dull. rotata Brown.

B. Postmerum feebly or absolutely sulcate; thorax strongly narrowed behind, sides suddenly strongly sulcate, hind rectangular. Prominent, carinate, basal forae deep, bistratate, base margined each side.

b. Clytra feebly carinate at tip, striae distinct, punctate, ventral striae short, subopaque.

c. Hind angles of thorax very prominent.

cocceae Lec.

dc. Hind angles shorter and less prominent; sides of thorax much rounded. mobilis Lec.

87. Eupithecia sepiopressus Lec.

"Thorace subtransverso, postices laterae reflexo marginate"
elytral striae Profunde, punctate, intersectiae planae.

Leg. Fourn. Madrid. 5. 22d. 1862.

Epitome; black, dull, glabrous; head shining, frontal groove deep, elytrum with large impressed puncture each side near outer margin, labrum large, scarcely emarginate, antennae erupted, four basal joints black, tarsi yellow, much under mouth with a large median yellow patch; thorax broader than long, sides rounded, posterior angles rectangular, widely margined, particularly so near the base, basal jointe 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 continuous to base, elytral striae entire but not deep, strongly but not closely punctured, the eighth and ninth closely approximated, scarcely as far apart as the diameter of the ocellate punctures between them, punctellae striatipunctiform, interstitial lines wide, scarcely coming third with a slight impressed puncture behind the middle, last four abdominal segments with two setigerous punctures, one each side of the median line; legs black, tarsi yellow.
Length 13-16 mm

Habitat. Iowa City (Nickham); Louisa Co. (Elliott).
Cincinnati, O. (Dury); Enterprise and Cedar Key, Fla. (Schwarz); Indiana (Bat hley); Illinois (Strong), St. Louis, Mo. (Sumner); Eastern Kansas (Popenoe); Little Rock, Ark. (Nickham); Louisiana (Bolten, Leconte); Texas (Leconte).


17. Evarthne orbata Lecl.

I have seen no specimens of this species.

Length 16-17 mm

Habitat. Iowa (Beborn).
Georgia, Alabama, Missouri, Nebraska (Leconte).

Feronia orbata Lecl. (Nat. Mag. 5, 886.

18. Evarthne colossus Lecl.

Thorax transverso, latitibue valde rotundato, postice
einnatis, angulus posticus valde trunciule, linea transversa
anterioris tenui, basi inutique angularis punctata, elytris dimittis
striae punctatae, interstitialis subconvexus.


Black, glabrous, shining, undersurface black, tip of
abdomen rufous; head smooth, frontal groove deep but
not long, elytral with a setigerous puncture, on each side
near the outer margin, labrum large, not emarginate,
with a least four setigerous punctures; antennae fum-
rigovse, base black, palpi rufous; thorax broader than
long, widest before the middle, narrowed behind, slightly
slightly dilated at base, hind angles acute, basal impressions
large, deep, bistratiate, anterior transverse line interrupted,
median line continuous to base, margin narrow, not reflexed;
scutellum rounded, roughened, elytral striae with pro-
found punctures, eighth and ninth striae approach, in
interstitial line subconvex, the third with a small
puncture, legs rufous, femora black.

Length 16-20 mm.

Habitat. Ames, (Iowa).
Missouri, Kansas, Nebraska, Louisiana (Leconte);
Dallas, Tex. (Hickman).

Feronia (Melpoe) colorosa Lea. Gen. Lyra, Art. 34. A.D.


90. Graithne nodalis Lea. (Fig. 12 Pl. XXX.)

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; outer margins mandibles finely striate near tip, deeply concave on outside near the base;
palpi yellow; antennae black; thorax broader than long, smooth, rounded laterally, narrowed behind, hind angle nearly rectangular, obtuse, anterior angle rounded, basal forene 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
Funicured, punctures obsolete near apex, eighth and
ninth striae approximate, scutellar stria punctiform,
interstitial lines plain, the third wider than the others
and bearing the dorsal puncture; underside black.
Tip of abdomen rufous, sides with a few large punctures;
legs black, tarsi rufous.
Length 15-17 mm.

Habitat: Iowa City (Tikcham), Va. (Leconte).
Pennsylvania, Ohio (Leconte); Indiana (Blatchly).
Illinois, Missouri, Tennessee, Kansas (Leconte); N. and.
(Thickham); Lincoln, Ne. (Shuster); Texas (Leconte).


Corax LeC. Ex 3:49. 1848.


Everthine laterale LeC. . . 253. 1852.

*Anacara* (Dow). (Fig. Pl.23; Fig. Pl.3)

This genus is represented in Iowa by many moderate
or small sized species, all very much alike in ap-
pearance. They are usually found under stones, etc.
I. Thorax wider in front of base.
   a. Posterior tibiae simple in both sexes
   b. Thorax considerably narrowed behind thorax and elytra punctured, succular 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. Succular striae terminating in an ocellate puncture.
   c. Hind angles of thorax obtuse, no distinct oblique impreseion near them, tarsi entirely pale, fourth joint of antennae in greater part pale, Augustata Day.
   d. Hind angles of thorax sharply rectangular, distinct oblique impreseion near angles, tarsi semi-pilose, fourth joint of antennae almost entirely pilose, Gallipiea Day.

bb. Terminal spur of anterior tibiae simple.
   d. Antennae not carinate, base of thorax and
elytra infumated. infumaticollicis Say.
d. Antennae with second and third joint carinate sabure.
e. Scutellar stria with an ocellate puncture.
f. Scutellar stria without ocellite puncture.

91. Ambra carida Say.

Black, feet fuscous, base of thorax and striae of elytra punctured.

Body deep black; labrum deep fuscous; antennae and palpi fuscous: thorax shorter than wide, with a few punctures before, and numerous ones on the posterior depressed margin; dorsal line very distinct; elytra punctured; interstitial line
depressed, a little convex; beneath black: palpi deep fuscous.

7.75-9.5 mm.

Habitat. Iowa City, Maconville (Hickham); Davenport,
Monticello (Putnam); Ames (Oeben).

Primacy, Okt. (Pettib.); London, Okt. (Sanard); Manitoba
(Barrington); Green Mnr. (Bayward and Savage); Buffalo,
N.Y. (Kieffer); Cony Island (Schurpp); Cambridge, N.Y. (Metz),
Cincinnati, O. (Bury); Indiana (Blatchley); Sand Lake Marie,
Detroit, Mich. (Cubbard and Schuyler); Milwaukee, Wis.
(Rautenberg); Illinois (Locute); St. Louis, Mo. (Summers);
IdahoSprings, Colo. (Packard).


93. Amara argutilata Say.

"Oval, blackish epinrue, beneath black: palpi fuscous; thorax
impunctured, as broad as the elytra; palpi fuscous.
Body oval, abdomen blackish coppery, breast black; antennae and palp pale rosy; thorax from the middle to the base as broad as the elytra, impenetrable; posterior angle acute, margin not depressed, dorsal and basal lines distinct; elytra striate, impenetrable, marginal interstitial line serrate on the inner edge; feet rosy.


Very few fine punctures may be seen on the striae before the middle. Horn states that the hind angles are quite obtuse instead of acute as Say gives in the description.

The sexes are entirely alike.

Length: 6.25 - 7.25 mm.

Habitat: Ames, (Polk); Monticello (Putnam).

St. Jerome, Gree (Linn); Grinnell, Oth. (Pettit); Mt. Carmel, Gree; Buffalo, A. Y. (Reneche); Coney Island (Schaupp); Palisades, A. (Schaupp); Cincinnati, O. (Dury); Marquette and Detroit; York (Hubbard and Schwarz); Milwaukee, Wis. (Randerbery); St. Louis, Mo. (Dumme); Lawrence, Kans. (Pennor); Nebraska (Lecointe).


Amara indistincta LeC. Amer. Ent. Soc. ii. 120. 1847.

Amara indistincta LeC. Amer. Ent. Soc. ii. 120. 1847.

Amara indistincta LeC. Amer. Ent. Soc. ii. 120. 1847.

Amara indistincta LeC. Amer. Ent. Soc. ii. 120. 1847.

Amara indistincta LeC. Amer. Ent. Soc. ii. 120. 1847.

Amara indistincta LeC. Amer. Ent. Soc. ii. 120. 1847.

Amara pallidea LeC. Body glossy; underside, mandibles, coxae and tarsi tinctured; upper side browned. Three first joints of the antennae rufous; frontal impressions very slight, connecting line very distinct; dorsal channel of the prothorax nearly entire; lateral impressions of the pygidium, punctiform, punctured; elytra not subacuminate, legs yellowish.

Amara pallidea LeC. Body glossy; underside, mandibles, coxae and tarsi tinctured; upper side browned. Three first joints of the antennae rufous; frontal impressions very slight, connecting line very distinct; dorsal channel of the prothorax nearly entire; lateral impressions of the pygidium, punctiform, punctured; elytra not subacuminate, legs yellowish.

The basal impressions of the thorax are hestriate, carinate, hind angles sharply rectangular, the sides of the thorax parallel for a short distance in front of them; elytra not punctured; legs rufous rufice.

The basal impressions of the thorax are hestriate, carinate, hind angles sharply rectangular, the sides of the thorax parallel for a short distance in front of them; elytra not punctured; legs rufous rufice.

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

Length 6.25 - 7.25mm.

Habitat: Iowa City (Hickman).

Sparrow Lake, Okt (Hamilton); New Hampshire (Town);
Green Mtns. (Gayward and Savage); Forest G, New York (Leconte); Camden, Gloucester and Atlantic Co. N. J. (Huyd).
Sault Ste. Marie, Mich (Hubbard and Schw.). Lake Superior region (Leconte); Colorado (Horn).


94. *Amara inquinicollis* Say.

-Oval, blackish bronzed, breadth black; thorax inquinicollis
and rae broad; see the elytra, palpi blackish.

-Body oval, slightly attenuated behind, blackish-browned or
purplish black; antennae brown, three basal joints rufous,
Falpi black, thorax from the middle to the base as broad as the base of the elytra, face impunctured; hind angles acute, dorsal and basal lines distinct, margins not depressed; elytra somewhat narrowed behind, with impunctured striae, lateral interstitial line serrate on the inner edge; feet piceous black.


Closely resemble H. fallax but the third joint of the antennae is not at all carinated.

Length: 7 - 8.75 mm.

Habitat: Monticello (Putnam).

St. Jerome, Ill. (Barron); Lake in, Oshkosh (Puttk); Monticello, J. C. Del. (Puttk); Buffalo, N. Y. (Shear); Coney Island, Palisades, H. J. (Schaefer); Schenectady, A. J. (Smith), Allegheny Co., P. A. (Glass); Cincinnati, O. (Snavely); Marquette and Detroit, Mich. (Hubbard and Schuy); Milwaukee, Wis. (Cant,); St. Louis, Mo. (Cunners); Kansas (Peck); Red Cliff, Colo. (Wicklau); Montana (Horn).


95. Amara fallax, ovalis, supra neaes, thorace latitudine for.

siculo brunio, antennarum modice augmentato, lataribus
rotundatis, angulis nonicibus lati, proximulis, basi attingent.
Sic bipuncta, ulterior stirps postice vi profundioribus pedibus
rugibus, ulterior mero basi praeacetabus, antennis articulis
faceos tribus rugis, sic ad basim carinato.


Oval, slightly attenuated behind, blackish brown, with
black point, breast black; antennae brown, with three basal
joints pale yellow, the base of the third carinate; palpi 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 angle acute, depressed, surface rugose, transversely so on disc, longitudinally so on base; base bifurcate, the external for a the larger.

Dorsal line distinct; scutellum moderately rounded.

Smooth; elytra with sides parallel, infuscated striae very slightly impressed, scutellar stria with an ocellate puncture; interstitial lines for an; feet black with a yellow tinge.

Very hairy.

Length: 7.20 - 7 mm.

Habitat: Barbour (Piana).

St. Jerome, S. (Kauai); Honolulu, Oat. (Potter); Buffalo, N.Y. (Pineche); Brinckmans, Q. (Durh); Alabama, de Sante; Marquette, Mich. (Hobart, and Shidway); Lake Superior region (de Sante); Milwaukee, Wis. (Panteberg); St. Louis, Mo. (Summers); Lawrence, Kans. (Potter); Colorado Springs, Colo. (Summers); Green River, Wyo., Ren, Nev. (Thickham); Helmick Creek, A. Mo. (Summers).


"Ovalis aeneas vel nigro aenea, thorax latitudine fr.
dublo bruiros, antennaeae mediose aequato, latus etre
tundacies, angulis antieris hand prominulcis, basi striudue
vix obsolete bisinata, elytra stricte posticis hand profundio-
bus, pedibus anantesque nigric, hie articulis duode venae

Broadly oval, rounded behind, black with a mygale
purple tinge, beneath black; antennae brown with two
basal joints reflex, the second and third carinate above;
Palpi black; thorax broader than long, from the middle to
the base as wide as the elytra; anterior nearly much
compressed, front emarginate, Posterior angulus rectangulare;
dorsal line obsolete, base bisinata, surface inciprior;
elytra with parallel sides and rounded apex; striae incip-
rior; pronox deeply impressed than in fallax, however,
tegae black, less hairy.
Length 8 mm.

Habitat. Darkness (Putnam).

Aabacka (deunte), Helena, Mon. (Hickham), Utah.

I think the presence of this species rather doubtful.


97 Cnara interstitialis Dyj.

Olongo-costa, supra obscure aenea, thorac. antice agnus, tectice striato, fonie aseletissime punctato, clypei subtiliter striato, punctato, interstitiis alternatis sublevatiis; antennis basi rufa, picie, pedibus nigre.

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

Elle ressemble beaucoup à la Trivialis par la forme et la grandeur, dans l'un des deux individus, que je possède, la couleur est en-dessous d'une bronze un peu obscure, et presque noire de dans l'autre. Les deux premières antennes sont un peu rousseâtre, la yeux sont un peu plus saillante, le corselet est un peu plus court et un peu
Oval, somewhat elongate, moderately convex, brownish-brown, sometimes bright green, epiphragm or nearly black, beneath black; antennæ black, three basal joints greenish, palpi black; thorax less than twice as wide as base as long, narrowed somewhat in front, apex emarginate; hind angles rectangular, disc convex, basal forae distinct; the outer oblique, the inner short, linear; surface not punctured, dorsal line obsolete; elytra finely striate, in indistinctly punctate, interstrial 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 ferric black.

Length 6.5-10 mm.

The acutellar stria is free at its posterior end in most specimens but it may be joined to the first at its apical end. The crenulate punctures of the eighth stria have a wide interval between the basal and apical set of punctures. In the males the middle tibiae are slightly but rather than carinate, and the posterior tibiae are carinate 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 (Nickham); Arizona (Osborn). British Columbia, Manitoba (Barrett), Alaska (Corm); Greene, Out (Pettit); St. Jerome, Que. (Kearn); Nova Scotia (Corm); Maine (Le Conte); Coney Isled., Palisades, St. J. (Czerny); Arvark, et J. (Birkhoff); Penn. (Corm); Cincin.
mati, C. (Wurp), Marquette and Detroit, Mich. (Richland and Schwarz); Illinois (Leconte); Red Bluff, Cal. (Richland); Idaho Springs, Colo. (Richland); Alta, Pass, Colo. (Leconte); Montana, Northern California, Europe, Kamtschatka (Bresl.


Putz. Mem. Liege p. 188. 1866.


Saturnus dej. Sp. Gen. 172. 793. 1821

Putz. Mem. Liege p. 188. 1866.


98. Apura varistriata Dej.

"Subovata, supra obscura sericea; thorace antice subangustate, postice utrique bifurcato, fornicis punctata; elypsiis antiliter
striaire, autanisie, tibie tarsique rufopicea.
Long. 3,5, 3,4 lignes. Larg. 1,5, 1,3 ligne.
Elle est un peu plus grande que la Guenévié, proportion
nellement un peu moins large, et ses couleurs est en-dessus
d’un bronze, sous un peu moins brun. La tête est un peu
plus, allongée. Le carèlet est moins court et moins convexe
dans son milieu. Les ristes transversale médullée et la ligne
longitudinale du milieu sont plus marquées ; l’impression
transversale postérieure est à peine distincte, et le fond et le
bord des deux impressions de chaque côté de la face sont
courants de pointes enfoncées plus marquées et plus serrées ; la
côté sont un peu moins déprimée que les angles postérieurs,
lés élytres sont un peu moins larges ; elles sont striée à pein
prise de la même manière, et le bord inférieur est également
d’un brun rouxâtre : le dessous du corps et le cuirasse sont
d’un brun obscur ; les jambe et le tarse sont d’un rouge
argentique obscur.
Oblong, oval, moderately convex, brownish, or very slightly
piceous, the male shining with faint brown tinge, the females
 dull; antennae rufopiceae, Palpi black, head smooth.
with faint frontal impressions: thorax about one and a half times as wide at base as long at middle, apex deeply emarginate, angles somewhat prominent in front, sides carinate, 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 at most faint, and feebly punctate, sometimes smooth; interstital lines flat, the marginal row irregularly punctate; abdomen smooth, shining, tip of prothorax distinctly margined and with two punctures; legs reflexed cercus.

Length 6.0 - 8.2 mm.

The rectal stria is long and usually entire.

Habitat. Iowa City (Nuckham).

Hudson Bay Territory (Cron), Donald, B. C. (Smith);

Sicora, B. C. (Nuckham), Spokane Falls, Wash. (Nuckham);

Northern California (Cron), New, Mex. (Nuckham), Arizona (Morrison), Coolidge, Ariz., Monett, Mo. (Nuckham).
Gita Rice, Colo. (Leconte); Idaho, Springs, Colo. (Packard); Ia. (Horn, Krause); Nebraska (Leconte); Minnesota (Horn); Wis. (Pineche); Illinois (Saunders); New York, New Jersey (Horn); Vermont.

Ar. nematostriata Wey. Sp. Bus. III. 476. 1828

Kame Bull. Mosc. 268. 1848


Horn. Trans. Am. Soc. Nat. V. 29. 1892

nemorata junior. Mosc. I. 29

Rev. Ent. II. 816.

spec. nov. Faun. Por. Mosc. IV. 40. 1837

indistincta. Kame Bull. Mosc. III. 46. 1853

Pizy. Mosc. Liège 195. 1866

var. relicvum. Kame Bull. Mosc. IV. 46. 1853


apachanae Casey Contrib. Colopter. I. 3. 1894

Legendre des.

Black species with iridescent reflections, mandibles
not striate; median toothed, emarginate; ligula not carinate; anterior tarsi of male obliquely dilated (Figs. 2-4. Pl. 8).

But one species has been found in Iowa.

Small species, thorax wider than long, hind angles slightly obtuse, not at all rounded.

Loxandrus trigonellus Lec.

Thorax latitudines excegit brevior antiquamem ad angulos lateribus latis rotundatos angulus posterius obliquis minimae rotundatae, bae utrique striato vis parce punctato, elytris stric profundis vis oblongis punctulatis pedibus


Oblong, black, shining; head smooth, polished; frontal impressions distinct; labrum, antennae, and halpi reflexores.

Proximae; three basal joints of antennae glabrous; thorax about as long as broad, scarcely narrowed behind; sides armate, apex emarginate; posterior angles slightly rounded; basal impressions single, linear, straight; anterior and dorsal lines impressed. Clytra with deeply im-
pressed, obiolutely punctured striae, the ninth stria is
lost in the concavity of the margin and is distant
from the ocellus; punctures on 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.

Habt.: Iowa City (Hickham).

Pennsylvania, Georgia (Leconte); Florida, Louisiana
(Champl); Arkansas.

{bogus text}


Sciurini. Tribe II.

Head short, moderately stout, with two supra-orbital
setae, elytral short, not prolonged between the mandibles,
emarginate, and exposing the basal membrane of the labi-


usuall short, evaginare, longitudinally impressed. Eye
moderate in size, not very distant from the mouth, except
in Dicadne, where they are small and very distant.
Mandibles stout, more or less arcuate, like usually, ob-
tuses, except in Dicadne, where they are freely arcuate and
acute. Maxillae hooked at tip, ciliate within, the outer
both rather slender, biarticulate, the palpae moderate in
length, the last joint variable in some. Antennae deeply
evaginare, without tooth, the ligula and paraglossae
variable in form, the former bisetose at tip, the palpae
moderate, the last joint variable in some, 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 Radiatia).
Thorax variable in form, with one (rarely two) lateral esti-
gnum punctures, and one near (rarely at) the hind angle.
Body not pedunculate. Clypeus margined at base, sides,
at most moderately inflected, the margin rarely (licinere)
retrorse, not interrupted, without internal pleae, surface
striate, and with one (Diplochila), two (Radiatia), or no
dorsal prominence (Dicaelus). Posterior style at tips.
Mesosternum conical in front, the siphuncus very narrow.
Metasternal siphuncus distinct. Posterior coxae contiguous.
Anterior tibiae deeply emarginate within, the middle
and posterior tibiae slightly apiculate or ciliate externally.
Tarsi slender, claws simple.

The anterior tarsi of the males have three joints
rather broadly dilated, densely spongy, truncate, and
emarginate 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 entirely glabrous.

Eighth and ninth striae of elytra very closely approxi-
mated. The third interval with a dorsal prominence.
Elytra very finely carinate.
Eighth and ninth striae distant.

Elytra not carinate at apex. Seventh interval more or
less carinate at base.

Dicaelus 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 obtuse at tips; Dicaelus has it more or less triangular and Badiestra somewhat oval and flattened.

Diplochila Brullé.

Black, smooth species of medium size living under stones, or in wet places. (Figs. 4 & 5, Pl. X).

The species found here are distinguished as follows:

Kind angles of thorax distinct.

Thorax broad, base broader than apex; outer striae of elytra feeble; smaller.

Laticollis less.

Van. major less.

Thorax less transverse, broadest at middle; base scarcely wider than apex; outer striae distinct.

Impressicollis Dy.

Kind angles obtuse.

Outer striae of elytra feeble; obtusa less.
Diplodicta laticollis, Lcl.

Black, smooth, polished; head short, smooth, very flat, front concave; antennae black; palpi more 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 rectangular humeri, parallel margins, and slightly sinuate apex; striate, impunctured; third interval with row 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 reflex.

Some of the specimens of this species have a slight tendency toward a striped elytra - red and black alternately.

Length, 13.15 mm.

Habitat: Independence; Iowa City (Mickle); above (Debow).

St. Jerome, Wis. (Hansen); Brinley, Ont. (Pettit); Buffalo,
Diplochela major

Similar to the preceding, but larger, entirely black, the third interstria with from one to three dorsal punctures; striae absolutely punctured.

Length 18 mm.

Habitat. Independence, Iowa City (Nicholls); Ames (Osborn).

Kimesby, Ont. (Pettit), London, Ont. (Sanford); Ottawa, Ont. (Harlingtson); Buffalo, N. Y. (Kimesby), Palisades, N. J. (Smith); Florida (Schwarz); Detroit, Mich. (Hubbard and Schwarz); Milwaukee, Wis. (Rauser); Indiana (Blatchley), Louis.
Diplochila impressicollis Hey.

Sige, thorax subquadra-tio, antice substantismo, fari
striqué profondus striato; elytre striée, strié bellocaste
buitate, pénètroque impressa.

Long. 6 lignes. Larg. 3/4 ligne.

Il est plus petit que le Polytro, proportionnellement plus
large, et il se rapproche un peu des Calathus par la
forme. La tête est presque ovale, à peine striée postérieu-
ment, lisse, légèrement échancrée et assez fortement dépimée
anterieurement, et elle a entre les antennes deux impressions
longitudinales assez fortement marquées. La tête supérieure
est plus petite que dans le Polytro. Les mandibules sont
presque droites et presque obtusées. Les tarsees sont d’un
boum moindre, avec l’extrémité de chaque article un peu
roussâtre. Les antennes sont d’un boum moindre et
général trois fois que la tête et le corset réunies. Les
yeux sont brunâtres et peu saillantes, le corset 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 pas 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 échauffé; les angles antérieurs sont arrondis; le côté court légèrement rebondi; les angles postérieurs sont presque coupés carrément; la base est légèrement échauffée dans son milieu, et coupée en deux obliquement sur les côtés. Les élytres sont plus larges que le corps, en ovale assez allongé et légèrement convexe; les stries sont assez marquées; elles paraissent liées à la vête simple, mais avec une forte toupe où voit qu'elles sont très légèremcnt ponctuées; il n'y a pas de rudiment de strie à la base, près de l'œil; les intervalles sont presque planes, on voit sur le troisième, près de la seconde
Black, less robust than the preceding; head less con.
can. elytra more or less red with black: antennae black.
falci: mena, tip of last joint truncate. Perises, thorax, one
and a half times as broad as long, sides rounded, hind
angl. rectangular, prominent, basal impressions large
and deep: linear; dorsal line impressed; surface not jun-
ceted: elytra with impunctured striae; third interval
with a puncture behind the middle, the marginal one
with an interrupted series of punctate punctures: under
surface and legs black.

length 17 mm.

Habitat. Ames (Iowa).

Erinacea, But (Pettit); Michigan (Ypsil.), Milwaukie,
Wiz. (Pantechong), Illinois (Coom), St. Louis, Mo. (Eumemere).
Denver, Utah (Dickson), Washington (Coom).

Puncture impressed at the base. Or. Sen. I. 1837.

Diplochila obtusa Lec.

Flat, black species; frontal markings of the head distinct; antennae black, basal joints subflattened; palpi reflex; thorax a little broader than long, with slightly rounded sides; hind angles obtuse, anterior angles depressed; basal impressions moderate, distinct; dorsal line impressed; surface not punctured; elytra striate, infumate, first stria broken near the scutellum, marginal ones feeble, sometimes absent; marginal interval with an interrupted series of camellate punctures, widely separated near the middle; legs black.

Length 12 mm.

Habitat. Iowa City (Dickhau).
Illinois (boro); St. Louis, Mo. (Summore); Topeka, Kans.
(Topeca); Lincoln, Nebr. (Shinew); Mississippi (Yad); Arada.
(boro).

Nicodius Rowl

Large species, usually pure black, but sometimes a
beautiful violet or blonged purple, found under stones
or pieces of wood.

Maxillae destitute of an articulated nail at tip;
terminal joint of palpi obscure, truncate; labrum
emarginate, with a longitudinal impressed line; hind
thoracic angle convex, the humeral angles, anterior-
tibiae emarginate; anterior tarsi of male with dilated
joints, furnished beneath with dense granuliform pap-
ille.

(Tpis. 1, 3 B. Pl. x).

The four species found in Iowa are separated in
the following manner:
Thorax at middle of margin with one setigerous puncture.

Olytra striate with equal intervals.

Supruseous, or brassy, splendidus Day.

Purple, purpuratus Rowl.

Olytra striate, but intervals interrupted by ocellate
punctures.

Sculptulis Day.

Thorax at middle of margin with two setigerous puncture.
Form moderately elongate; intervals equal, striæ sometimes finely punctured; carina moderate.

Dicerca splendidus Say.

Thorax violaceous; elytra emerald 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 de-fused, 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; striæ profoundly impressed; breath bluish-purple; feet black.

Say, June, New Phil. Dec. 18, 1825.

This is by far the most beautiful species of the genus in our fauna. When the light falls perpendicular, light 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 18-20 mm.

lara of P. splendidae

colour—dark green, subopaque, space between end of setae and the lateral margines of abdominal segments brownish yellow; head reddish yellow; ventral surface more blue than dorsal, the parts of the integument not covered by setae brownish yellow.

form—rather elongate, fusiform, narrower anteriorly.

head not deeply inserted in thorax, a little concave above, broader 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 mandibles; first joint shorter and stoutier 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.

Mandibles 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 tube-like, 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 palp, 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 angle it is naked.

Metathorax 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 have a scute similar to the thoracic piece but a little narrower, each scute having a distinct median line and a large lateral fora with a raised centre, as well as the oblique impression shown on the thorax. The ninth segment is narrower than the others and bear 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 sparingly armed with small
points. The lateral margin of each segment of the abdomen is armed with a conical, tooth-like plate, bearing setae. In ventral aspect each of the segments from the first to the seventh bear 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. Legs long, conical, grooved beneath.

Miracles nine on each side, the first pair situated under the anterior angles of the mesothorax, the remainder in the dorsal portion of the connecting membranes of segments one to eight of the abdomen.

Ligae gradually longer from the first to the third pair, coxae conical, prominent; femora longer, longer towards the tips, and with a 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. 3, pl. XV.)
The species is remarkable chiefly for the great size of the head. The entire length is 16 mm, or excepting the protruding hind tarsi 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 specimen was found under stones on a damp hillside. In captivity they were fed on snails (Patula alticola) 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); Davisport (Putnam); Ames (Ottawa).
Rock Island, Quincy, Ill. (Strome); St. Louis, Mo. (Saunder); Eastern Kansas (Rhorer); Nebraska, Louisiana (Brown); Texas (Conant).

105. *Nicaeia purpureata* Bw.

"Torace transversus, purpureo inornatus, elytris sulcato-tie, corporis abbreviato, dilatato."


Blackish purple above, beneath black. Head black with a purplish cast. Particularly near the neck, slight byssus, frontal forae deep, connecting line distinct. Labium deeply emarginate, and with a row of setigerous punctures; antennae black, the hairs ferruginous toward the tip; palp black, tip of last joint picaceous; thorax purple, similar in shape to that of *Splendida*; epipleur: excrusta moderate, smooth, triangular, black; elytra blackish purple, humeri strongly angulate, sides sulcated, apex rounded, striae profused, recurved, intervals very convex, humeral carina very long, legs black."
Length 20-25 mm.

Habitat: Warrenport (Putnam), New York (Corn); Pennsylvania (Bay); Canandaigua, Clinton, St. Louis, Mo.; St. Louis, Mo.; Florida (Corn); Cincinnati, O.; (Wag); Indiana (Blatchley); Detroit, Mich. (Cubbard and Schwarcz); Milwaukee, Wis. (Buntzenberg); Illinois (Corn); St. Louis, Mo. (Summers); Bayou La Fourche, La. (Tomberlin).


chalycheus Day. Sp. II. 685. 1834.


insector Leu. " " IV. 326. 1845.


cyanescens Day. Sp. II. 686. 1831.

106. Perissina sculptilis Day.

Black; elytra with irregular serpentine striae.

Body entirely black, immaculate; thorax very slightly
noodles at base; the lateral edge not at all excurved near the basal angles, and the commencement of the anterior curvature of this edge is at the middle of its length; elytra with their striae very irregularly sinuose, the interstitial lines are irregular, and unequal on their sides, and exhibit a very few radiations punctures, with raised centers. Say, Trans. Am. Phil. Soc. 22, 58, 1828. length 18-20 mm.

Habitat. Independence, Iowa City (Wicklau); Boone (Desmo); Golfax.

Pennsylvania (Say); Cincinnati, O. (Dury); Maryland, District of Columbia (Corn); Anne Arbor, Mich. (Gibbard and Schwartz); Milwaukee, Wis. (Panzerling); Illinois (Corn); St. Louis, Mo. (Sumner); Celga, I. Dak. (Truman); Kansas (Corn); Montana, Colo. (Packard).


107. Dicelie elongatae Bow.

Thoraces subquadrate, nigro; elytris sculptis, con.

Torso elongate, entirely black; antennae black with ferruginous tinge; palpi black with tip of last joint
peripheral; thorax subquadrate, slightly margined before,
margined depressed, lateral edge slightly reflected,
oral line continuous to base, basal impressions not
distinctly sinuate before, basal lines distinct, surface
rugose, particularly on last four hind angles not angular
basally; elytra with profound punctures, striae, humeral carinæ elongate, interstices convex.

Length 15-18 mm.

The larva resembles that of other Dicoleus but
differs 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 recurved; 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 hair; the tip of the first maxillary joint is
furnished on the inner side with a small spine, the
black centers of the dorsal abdominal segments are
narrower than in some species, and the larger trans-
verse plates of the ventral segments are somewhat dif-
frent.

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 lab-
rum - and a triangular apex which disappears
with the pupa skin. The falci are very elongate and
the halter prolonged.

After six days, the eyes of the pupa become dark,
then the mouthparts brown, and after ten days the
mimago is fully developed. It remains white for two
days longer, becoming black at the end of the twelfth
Day.

Habitat: Iowa City (Nielman); Kansas (Bebone).

Brunswick, Ont. (Pettit); Buffalo, N.Y. (Pruhe); Huron, Ill. (Smith).

Maryland, District of Columbia (Merr), Enterprise, Fla. (Schwartz); Ojai Springs, Miss. (Weed); Cincinnati, O. (Dury); Illinois (Horn); Milwaukee, Wis. (Rantenberg), St. Louis, Mo. (Sumner); Kansas (Popenoe); Bayou la Fourche, La. (Toumey); Texas (Horn).


(forma?) Leb.


Bactetis Claire. (Loc. 5th Pl.)

Antennae with two basal joints glabrous; terminal joint of halpi somewhat oval and flattened; eighth and
ninth striae of the elytra not approximated; the third interval with two dorsal punctures, apex not eminate.

The Iowa species are separated as follows:

Elytral striae deep, interspaces narrow, convex; antennae and legs rufotestaceous, elytra rufotestaceous, clouded behind.

Elytral striae fine, interspaces flat.

\[ \text{Elytra maculate.} \]

\[ \text{Elytra immaculate.} \]

\[ \text{—notatus. Kald.} \]

Elytral striae fine, interspaces flat.

\[ \text{Elytra maculate.} \]

\[ \text{Elytra immaculate.} \]

\[ \text{—notatus. Kald.} \]

\[ \text{—scanidus. LeC.} \]

45. \[ \text{Radiater notatus. Kald.} \]

\[ \text{Antennae and legs rufotestaceous, elytra rufotestaceous, maculate; elytral striae deep, interspaces narrow, convex.} \]

\[ \text{Length 4.5 mm.} \]

\[ \text{Habitat: Iowa City (Wicklume). Rare.} \]

\[ \text{Huntington, Sl. (Schiapp), Staten Is. (Schiapp), Detroit,} \]

\[ \text{Mick (Hubbard and Schwarz), Milwaukee, N.Y. (Pau} \]

\[ \text{tersberg), Illinoia (Leeute), St. Louis, Mo. (Summers), Topeka,} \]

\[ \text{Kan. (Popenoe), Louisiana (Leeute).} \]
I have seen no specimen of this species.

19. Radiata punctulata Leev. (Fig. Pl. xvi).

Tetrameres with black markings: head black, smooth shining; antennae testaceous, the joints ringed with dark brown bands; palpi testaceous with a dark terminal joint; thorax testaceous, broader than long, widest before the middle, feeble emarginate at apex, narrowed behind, sides arcuate, sinuate posteriorly, angles rounded, dorsal impression extending to base, basal impressions shallow but broad; elytra with fine incipient striæ, intervals flat, a broad median band of iridescent black interrupted at the sutures and an apical patch of black, the rest of the surface bright yellow; undersurface black; legs, trochanters and coxae testaceous.

Length 5.5 - 6.5 mm.

Habitat. Iowa City (Hickam); Ames (Debor). St. Jerome, June (Hansen); Grinnell, Oct. (Pettit). London.
Ont. (Daunce); Buffalo, N. Y. (Reiche); Georgia (Leconte); Indiana (Leconte); Maywood, Ill. (Macott); Detroit, Mich. (Hubbard and Schram); Milwaukee, Wis. (Rauterberg); Bayfield, Wis. (Hickman); St. Louis, Mo. (Summers); Busy; St. Clare, Idaho (Hickman).


10. 

B. denticornis Linn. Lee.

"Signis, thorace subovalis, postice sunt angustato et
retinque forato, angulis posticis valde rotundatatis,
elytris vicissibus, profunde striatis, bifarium, inter
stigmatibus connexis, antennis fusce, pedibus flavo-testaceis."


The thorax is not wider than long, oval, scarcely trapezoidal, emarginate at apex, sides arcuate, scarcely reflexed, posterior angles very much rounded, dorsal line deep, abbreviated at apex, transverse impression faint, basal impressions deep but small; elytra with
Slight cast tinged with brassy; palpi dark testaceous; legs yellow.

Length: 6.25 mm.

Habitat: Iowa (Oborne).

Milwaukee, Wis. (Ranterburg); Louisiana (Leconte); Enterprise, Tampa, Fla. (Schwarz).

This species is included in the Iowa list by Mr. Oborne but it is marked doubtful. I have been unable to obtain any specimens.

*B. flaviceps* de Or. Am. Phil. Soc. X. 388. 1853.


_Trib. 12. Platynini._

Head oval, rarely elongate, eye not very distant from the mouth, and supra-orbital setae, front slightly surrounded before the eyes, elytrae moderately prolonged, and with a setigerous puncture each side. Labrum moderately prominent, usually truncate in front and sex seta, rarely deeply emarginate. Mandible moder-
nately prominent, feebly arcuate, acute at tip, without external setae. Maxillae hooked at tip, ciliate or spinose within, outer lobe biarticulate, palpi moderate in length, the terminal joint variable, rarely recurved.

Mantum deeply sinuate, toothed or not, basal membrane more or less prominent, tegula very variable in form, bisetose in front, the paraglossae variable in form and extent of union with the tegula; palpi moderate, the last joint somewhat variable in form, the penultimate bisetose in front. Eyes moderately prominent, close to the mouth beneath. Mentumus slender, rarely (Peregona) slightly thickened, arising below a slight frontal ridge, the clypeus 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 structure, a second at the hind angles, when the latter is distinct, or in front of the angle when it is
oblique or rounded. Clytra margined at base; sides narrowly inflexed; margin entire, without internal suture; apex obliquely sinuate, sometimes deeply or even barely perceptibly; dorsal punctures usually present, surface striate, the eighth stria distant from the margin, except in Perigona. Episternum not prolonged at tip. Meteosternal 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, not pectinate.

The male has the anterior tarsi with three joints feebly 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. Platyni.
Eighth elytral stria confluent with the margin in its basal half, deeply impressed, and attaining the extreme.

**Group Platynae.**

The following genera occur in Iowa:

- Rhyacodes monte less serrate, mentum toothed.
  - *Tarsi glabrous above*  
  - *Calathene Bow*  
- Rhyacodes not serrate.
  - *Mentum toothed*  
  - *Platynae Bow*  
  - *Mentum not toothed*  
  - *Chloropeus Dy*.

**Group Perigonaee.**

This group is represented by one genus *Perigonaee*. The mentum has its epistome prolonged to rare acute spine, the incisuration is deep, toothless. The tegula is narrow and truncate at tip, the paraglossae slender and a little longer than the tegula, and united with the latter by a thin almost transparent membrane, which extends from the base of the paraglossae to the tip of the tegula. The antennae are rather stout beyond the third joint, the second joint is as long as
the third. (Fig. 78, Pl. x).

**Gallathus Brevi** (Fig. 78, Pl. x).

Moderate sized, black or dark species.

Thorax not rounded behind, basal foveae obsolete.

Body elongate, thorax as broad as long, sides moderately reflexed.

Gregarious Say.

Thorax somewhat narrowed behind, rounded, basal foveae larger.

Body stouter, thorax a little longer than broad.

Gregarious Say.

**Gallathus gregarius** Say.

Dark reddish-brown; limbs and margin of thorax paler, thorax at base equal to the base of the elytra.

Body dark chestnut, blackish each side beneath; head dark chestnut; eye and mandibles at tip black; antennae and palpi reddish brown, the former half as long as the body; thorax rather longer than broad, impressed, lateral margin distinct, and with the posterior margin paler.
the latter rather broader than at tips and equal to the
base of the elytra; dorsal and posterior lines indistinct,
rugose rounded; elytra with incurved striae, marginal
taller 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.

Say. Trans. Am. Phil. Soc. II. 47. 1833.

Length, 10-10.5 mm.

Habitat. Iowa City (Hickham); Bruce (Deborne); Davenport
(Putnam).

St. Jerome, Que. (Caune); St. John's (Pettib); Spanaway
Lake, Wash. (Hamilton); Green Bay, Wis. (Rayward and Savage);
Buffalo, N. Y. (Reiche); Baltimore, Md. (Schafpp); Paris (Say);
Florida (decore); Cincinnati, O. (Dury); Detroit, Mich. (Hub-
bard and Schwab); Bayfield, Wis. (Hickham); Milwaukee,
Wis. (Pantling); St. Louis, Mo. (Simpson); Kansas (Fifeuer);
Nebraska and Dakota (Hickham).

Feronia gregaria Eay. Trans. Am. Phil. Soc. II. 47. 1833.

Carabus gregarius Melch. Cattal.

1. By. Trans. Soc. 15. 27. 1837.

112. Galathus immaculatus Say.

Black, glabrous, immaculated; antennae and palpi pale rufous; feet testaceous.

Body black, immaculated, glabrous; antennae slender, extending beyond the humeri, and with the palpi pale rufous, thorax broadest rather before the middle, contracted behind, margin a little depressed behind, the edge somewhat recurved. Posterior angles obtusely rounded, face immaculated; elytra profusely striate, striae immaculated; intersticial lines coming the third one with two distinct suture of the thorax readily distinguishes this species.
Length 2.75 - 11 mm.

Habitat. Iowa City (Wickham),

Eunora, B. E. (Wickham); Bruce LF, Oshkosh (Pedde); Atlantic
City, N.J. (Lieberk.); Germantown, Pa. (Say); Marquette and
Detroit, Mich. (Hubbard and Schwarz); Bayfield, Wis.
(Wickham); Milwaukee, Wis. (Rautenberg); Trempealeau, Wis.
(Lieberk.); St. Louis, Mo. (Dennisee).


Platymex Bow. (Fig. 4 of Pl. X).

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
sluce.

a. Front tarsi without grooves, middle and hind
tarsi with lateral grooves.

6. Hind angles of thorax rectangular, thorax strongly margined, elytra with three dorsal punctures, metathoracic episterna punctured.

**exsilius Key**

**as.** Lateral grooves on all tarsi.

**c.** Green or blue; base of antennae, palpi, and legs ferruginous; dorsal punctures four to seven.

**d.** Color above uniform bluish, elytra infuscated. **extensiollus** Say.

**d**. Color uniform green. **var. viridis** Lea.

**dd.** Head green, thorax yellow, elytra cupreous, finely punctured. **decora** Say.

**add.** Tarsi without lateral grooves.

**ddd.** Head and thorax black, elytra paler, hind angles of thorax rectangular, striae of elytra deep, punctured. **humorhisbologue** Fab.

II. Thorax with rounded hind angles, side margins wider toward the base, reflected, tarsi without distinct lateral
as. Antennae, Tarsi, and legs black, dorsal punctures three.

b. Black, thorax with side margin wide and strongly reflexed near the base, elytral striae deeply, feebly punctured. *melanarius* Drj.

bb. Brown, thorax with side margin narrowly reflexed at base, elytral striae deep, impunctured.

c. synapsis Say.

bbb. Black, side margin of thorax narrow, elytral striae obsolete or slightly impressed, impunctured.

c. pneumatus Lyl.

aa. Base of antennae and legs ferruginous.

b. Brownish black, or green, dorsal punctures of elytra three.

bb. Green elytral dorsal punctures five to six, slight, dark.

ccc. Black, four outer joints of antennae white, dorsal punctures five.
aa. Base of antennae and legs brown, dorsal punctures four to eight.

d. Green, elytra with cuprous vitta extending to fourth stria, dorsal punctures eight to large.
  forate.

ii. punctatus Fab.

dd. Black tinged with green or purple, dorsal punctures normal, four to seven. \textit{Pleciinus Say.}

iii. Thorax rounded oval, margin narrow, basal impressions punctiform, dorsal punctures three.

a. Black, tarsal grooves wanting, leg red, elytral striae strongly punctured. \textit{renivestis} Dej.

aa. Greenish bronze, tarsal grooves on first joint, elytral striae very fine, finely punctured. \textit{areuguinus} Dej.

iv. Thorax oval, margin narrowly reflexed, dorsal punctures of elytra four to seven, small, tarsal grooves indistinct, subsences of antennae longer on third joint.

a. Thorax longer than wide, legs testaceous.

b. Thorax narrowed behind, antennae darker at base, \textit{ruficornis} Dej.

Lobate, vaga, dorsal, oblong-oval, pointe subangulata; elytra elongato-oblonga, profunde striata, punctatura tribus impressa.

Long. 52 lignae. Larg. 2 lignae.

Il ressemble beaucoup au Pagatia, il est un peu plus petit. La couleur est à peu près de la même forme; seulement les bords latéraux sont un peu moins largement déprimés. L'extrémité des élytres est un peu plus fortement cintrée; les stries sont un peu moins profondément marquées, et il n'y a que trois points enfoncés sur le troisième intervalle, ceux-ci sont à peu près dist obtenues comme dans l'Augestia. Le premier seulement est un peu plus près de la base. Dej. Sp. Gen. III. 108, no. 6, 1828.

Black, glabrous, shining, wings well developed; mandibles, base of antennae and palpi nymph, thorax na
little broader than long, widest before the middle, narrowed
behind, strongly margined, depressed, hind angles slightly
rounded, rectangulate, anterior and posterior as well as
median line impressed; elytra with broadly rounded
humeral angles and, obliquely incised tips, 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 chaetose red, posterior once, and lige black.

Length, 10-11 mm.

Habitat: Iowa City (Hickham); Prairie Port (Putnam).

Cedars Bay (Leconte); Beiney, But. Petit.

Spamoke Lake, But. (Hamilton); Hamlooke, R. C. (Hickham);
Victoria, Van. (Hickham); Oregon (Leconte); Cora d'Aileau,
Idaho, Helena, Rev. (Hickham); St. Louis, Mo. (Sammels);
Bayfield, Wis. (Hickham); Milwaukee, Wis. (Pfitzner, Pfitz
Marquette, Mich. (Buffard and Schwanz); Cincinnati, O.
(Day); Buffalo, N.Y. (Reiche); Gaines, Ft. Lee, Va. (Smith).
Green Notis. (Hayward and Savage).

Platynerus cinnacalis Lee Proc. Acad. Nat. Sci. 1857. 44. 1854

Lee Bull. Bk. Ent. Soc. 1846. 1877


Lee Ann. Lyce. I. 1. 1850

Platynerus depressus Lee Agassiz Ent. Soc. 1850

Lee Proc. Acad. Nat. Sci. VII. 44. 1854

Platynerus extenuicollis Say. (Fig. 2. Pl. xiv)

Head and thorax greenish; elytra green or purplish; breast fuscous; black; feet testaceous.

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 securate, basal lines dilated, concave, dorsal line distinct; scutel blackish-purple; elytra green or purple, striae impressed, interstitional lines convex, third one with four or five obsolete remote punctures; feet testaceous. Say Trans. Am. Phil. Soc. II. 54. 1828.
The facial impressions of the thorax moderate, some time deep, hind angles obtuse.

Length 8–9.75 mm.

Larva of *P. extenuicolis* Say.

Length 8 mm.

Form elongate.

Color. Base of antennae, and anterior part of the head, eyes, mouth parts, legs, and the last three quarters of the anal appendage pale yellow; head and thorax black; the sutures of the abdominal segments brown above, lighter beneath.

Head hexagonal, constricted beyond the base, nearly as broad as long, slightly convex above, angles rounded.

Eyes small, oval, 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
on the outside near the apex, fourth very slender; all set with a few long bristles.

Mandibles acute with one tooth near the base.

Maxillae free, below the long cardinal piece. are the usual appendages, the exterior (palpi) consisting of four joints, first short and stout, second somewhat longer, third and fourth shorter and more slender; the inner (lobe) have two joints, the first stout, the second conical, much more slender.

Mantle transversely oval without tooth, supporting the Byriform ligula, narrowed at base, broadest at middle; palpi two-jointed, the basal joint very long and thick, the terminal much more slender and shorter; between the palpi is a triangular prolongation set with three bristles.

Prothorax platous, 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.

Meta- and metathorax much shorter than prothorax.
with anterolateral 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 scent, covering the whole surface are divided by a longitudinal median impression and are covered with erect hairs. The scent is formed like those in Bicaelus, so are the spiracles. (Fig. 3–5, Pl. 22).

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; are hidden in the ground. By freezing water on the spot, they will come out and are then easily captured. They will not eat meat during captivity, but will such scarabaeid larvae greedily.

Habitat. Iowa City, (Nickham).

Iowa Scotia (Jones); St. Jerome, Que. (Hauser); Triumph, Ont.
Pettib), Sparrow Lake, Ont. (Hamilton); Green Muskeg.
Hayward and Savage); Mazzei (Kariis); Buffalo, N. Y.
(Bionoe); Theander, Pa. (Schlepp); Allegheny, Pa.
(Hamilton); Oswego, Madison, Wis. (Smith); Detroit, Mich.
(Hubbard, and Schwanz); Lake Superior region (Leconte);
Milwaukee, Wis. (Puente); St. Louis, Mo. (Summers);
Huse (Pope); Suisun Bay, Alde (Hickman); Texas
(Leconte); Clear Creek Canyon, Calif., California (Leconte).
IV. 24. 1837.
Platyne extenuicollis Lee. Agassiz 's, Supp. 205. 1850.
Schlepp. " " III. 91. 1881.

Similar in appearance to *P. extensicollis* Say, of which it is a variety, but uniform green above.

*Habitat.* Danversport, Monticello (Rutnam).


Head, deep green; thorax rufous; elytra, deep emerse.

Head deep green; purplish at base; antennae and palpi rufous, dusky at tips; labrum and mandibles purplish; thorax pale rufous, narrower than the elytra, broadest before the middle, a little contracted behind, hind angle obtuse; dorsal line slightly impressed, basal one distinct; elytra, disc obscurely emargined to the eighth stria,
marginque, intestinal lines somewhat convex, strie
incurvated; pectoral pale, suffusc; pectopectoral black
slightly purpurascens, incurvated; feel testaceous;

The elytra is very finely punctured.

length 7.75 - 8.5mm.

Habitat. Iowa City (Nicklau), Vannvort (Putnam),
Ames (Oborn).

Girontsby, Buff. (Pettit), Buffalo, N.Y. (Reineche), New York
City (Schaupp), Newark, N. J. (Smith), Toronto, Tla. (Schwanz);
New Orleans, La. (Ferriss); St. Louis, Mo. (Semmens);
Detroit, Mich. (Hubbard and Schwanz), Milwaukee, Wis.
(Rantchburg); Lake Superior region (Leconte); Kansas (Popena);
Cal., S. Mex. (Leconte), Albuquerque, N.Mex., Tucson, Ariz.
(Nicklau).


Plaguna decorne. loc. Agassiz’s Spt. 235. 1850.


17. Platyclerus obscurus Kirt. Set.

This was originally described from the United States under the name Pseuilue by Mr. Le Conte. I give his description, that of Herbst not being obtainable.

Pseuilue, nigro, nitide, parce brunice rubrascens, capitis parce punctato, thorace laetitudine longior, convexo, cordato, petie constricta, angulie postico rectis, disco oblongo, basi et apice distinctius punctatis, elytris thorace duplo latioibus oblongis convexis, profunde striatis intersticio conico, meridiani punctulis, piccis lateribus late supescentibus, antennis fulvis, pedibusque nitidis.


Black; head sparsely punctate; antennae and palpi reflex; 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 absolutely 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, diffuse; anterior tibiae scarcely dilated at apex, with the emargination extending nearly to the middle.

Length 4.25 mm.

Habitat: Iowa City (Nicholai).

St. Jerome, Jue. (Kaneew); Vermont (Hamilton), Mass. (Harrie); Buffalo, N. Y. (Reineche); Penn. (Hamilton); Detroit, Mich. (Hubbard and Schwart); Illinois (Hilcox); St. Louis, Mo. (Schwemme); Kansas, Oregon, Central and Northern Europe, Siberia (Hamilton).

Eosaloea obesa obscurus Lept. Corp. 6. tab. 59. f. 5. 1785.

E. obesa obesa Fab. Corp. 6. tab. 140. 1792.

Fab. Corp. 6. tab. 136. no. 96. 1801.
118. Platyma melanariae Dej.

Tégiment, thorax suboblongato; elytræ ovatis, striatis, striis obiis punctatis, punctata tribus impressis.

Long. 0,45, 4½ ligne. Larg. 0,18, 1¼ ligne.

Il ressemble beaucoup aux Pictorum. Il en diffère par sa couleur entièrement noire et sans aucun reflet brunâtre; par son collet plus étroit; par les stries des elytræ qui sont un peu moins marquées. J'emploie les jambes, les tarse et le premier article des antennes sont d'une couleur plus

Réticule, viger; thorace quadrato; elytre latérose, sub.
quadrate; profonde striated; femelle très inégale; autonome une aprile tarsique rougeâtre.

Long. 5. ligne. Long. 2. ligne.

Il se rapproche un peu de l'Helgusticollis, mais il est
plus grand, proportionnellement plus court et plus large, et
sa couleur est de même d'une noir brillant sous-dwets. La
tête est oblongue, presque triangulaire, un peu rétrécie post-
érièrement, lisse, et elle a entre les antennes deux impos-
ings longitudinales assez fortement marquées. La tène supé-
érieure et le mandibule sont d'une brune noircâtre, les
pattes sont d'un brun rouxâtre. 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 rou-
xâtre, les autres sont d'un brun rouxâtre. Les yeux sont
assez grands et peu saillante. La conchat 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
rides transversales modulées; à peine distinctes; la ligne
longitudinale du milieu est assez marquée et ne dépasse
pas les deux impressions transversales, qui sont au-delà
assez marquées, et dont l'extérieur est un arc de cercle; le
bord antérieur est assez fortement échancré; les angles ante-
rieurs 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'écorce est lisse, triangulaire, et sa largeur dépasse
à peine la base des élytres. Elle est plus large que le corollet, assez courte, parallèle, presque carré
allongé, très légèrement convexe, triangulaire un peu oblique-
ment et un peu arrondie à l'extrémité; elle est couverte
neuf stries lisses et fortement marquées, et commence
court d'une dixième à la base. Près de l'écorce, les troiséme et quatrième, cinquième et sixième se réunissent
deuix à deux et ne sont pas tout à fait jusqu'à l'extrémité;
les intervalles sont relevés et légèrement arrondis; on voit
sur le troisième trois points enfoncés assez distinctes; le
premier près la base, près de la troisième strie; le second
Prière de la seconde, un peu avant le milieu, et la troisième
seconde près de la seconde, à peu près, aux trois quarts de
l'élytre; ou vont eux seuls le long du bord extérieur quelques
points enfoncés assez éloignés les unes des autres. Le deux-
me de corps, les cuisses et les jambes sont noires. Les tarsees

Black, smooth, shining: antennae and palpi black,
the former lighter towards tip: thorax transversely oval;
side margin wide, strongly reflected at base; base truncate;
hind angles obtusely rounded; dorsal line impressed;
basal impressions large, somewhat rugose; surface smooth;
elytra with deep, finely punctured striae; third intervals
with three impressed punctures; base narrowly margined;
aper, feebly sinuate; legs black, tibiae and tarsi obscurely
punctate, tarsi with distinct lateral groove but no med-
ian one.

Length 8-10 mm.

Habitat: Iowa City (Mitchell); Ravengoth (Putnam);
Dunve (Delware).

British Columbia (Harrington); Sparrow Lake (Getz).
Bingham, Ohio (Pitts); Harris's (Pitts); Denver (Harris); Buffalo, N.Y. (Benech); New York City (Benech); Cleveland, Chicago, N.Y. (Smith); Cincinnati, O. (Dury); Marquette, Detroit, Mich. (Buchard and Schwart); Milwaukee, Wis. (Hartberg); Volga, S. Dakota (Freeman); Oregon (Dexter).

_Agromyra melanariae_ Dej. Sp.ewn. 152, 1828.

_Nymphepsa._ Ren. Am. 24, 1837.

_Auchonina melanariae_ Dej. Sp. unw. 74, 1831.


_Agromyra scutellaris_ Day, Journ. Acad. 37, 146, 1843.

119. _Platus cupreinae_ Day.

_Green, polished; common disc of elytra cupreous._

_Bibian._

_Head green, antennae, labrume, and palpi black; thorax impunctured, green varied with purple, rather narrower than the elytra, regularly curved each side to the
Eyes, posterior angles none, dorsal and basal lines distinct; the latter dilated; elytra coppery, brilliant; margin green; striae acute, punctured, interstitial lines flat; prothorax and prothoracic dark green; feet green, tibiae, tarsi, and trochanters fuscous.

Dorsal Elytra brilliant green slightly tinged with coppery; head and thorax tinged with purple.


Another variety from Lake Superior, &c. has the head, thorax and margin of the elytra greenish blue, and the sides 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 sides margin is 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 (Hickham), Ames (Oeborn).

Kanitota (Harrington), Linnelly, Out (Pettit), St.
Jerome, Je. (Hauen); Nova Scotia (Jones); Buffalo, N.Y. (Reinsch); Caldwell, A. J. (Grane); Detroit, Marquette, Mich. (Buchh. and Schw.) ; Bayfield, Wis. (Richard); Mil-
waukee, Wis. (Pautenlog); St. Louis, Mo. (Summers); Kansas, Colo. (Decone); Mullan, Now., Laramie, Wy., Portland and
The Valley, Or., Victoria, B.C. Dul., Elko, Nev., Albuquerque, N. Mex. (Richard); Texas (Decone); California.


Platynus cupriennus Lea. Ag. Sup. 265. 1850.


var. auriculatus Lea. Smithsonian Misc. 18. 1863-64.


120. Platynus farali Lea.

Agene, nitidus, thorace latitudine non omnino
ovali convexisculo; bordice subaurustato; angulis posterioris
rotundatis, impressiibus faraliibus profundis fere
percutiatis, tubiculo obscuro instructis, elytris thorace
dulcio laticinio, oblongo, minus convexis, striae moderat
profundie, intertectis paulo convexis, Dio subtiliter tri-
sectato, autem (sic.), articulo mero pedicuque

Bluish black; first joint of antennae ferruginous,
second and third joints, the remainder brown; palp
e ferruginous, with the last joint rufous; thorax longer
than broad, very slightly narrowed behind, sides arcuate,
margine narrow, reflexed at base; posterior angles
much rounded; basal impressions small, not pro-
longed anteriorly, sparsely punctured; dorsal and
tarsal lines distinct; elytra with moderately deep incu-
punctured or very finely punctured striae; third
interval with three small punctures, the second and
third being placed on the second stria; legs yellow.

Length 7.75 mm.

Habitat. Iowa City (brick yard). Commun.

Debakey, J. J. (interest); Penn. Mus. Arb. (Stouton).


121. Platygnes rubescens Say.

Brown, polished; bnaowh black; elytra coppery; feet dark.

Eyes medium; mouth black; antennae, labrum, and palpi black; thorax punctured; green, rather narrower than the elytra, broadest in the middle, regularly, annulated 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 punctured, interstital lines nearly flat; piceus, and post-piceus black; feet piceous; thighs testaceous at base, matrix black.

Say, Trans. Ams Phil. Soc. x. 52. 1826.

Length 7 - 8.75 mm.

Hab. Iowa City (Vickham); Once (Osborn).

Ontario, Quebec; Green Nature (Hayward and Savage); Buffalo, N.Y. (Reineche), Palisades, N.J. (Schaufel), Penn.
(Leconte); Columbus Co. O (Hill and Bomberger); Indiana (Batesley); Detroit, Mich. (Hibbard and Schuyler); Harris- Lee, Ill. (Pandell); Kansas (Gove; Prence); Nebraska, Florida (Leconte).

_Agonum mutans_ Say, ..., *ibid.* IV. 423, 1834.
_Agonum fenestratium_ Say, B. Linn. Soc. III. 145, 1828.

122. _Platynoe ficticorium_ Say, Nu. I have seen no specimens of this species.

Length 8 mm.

Habitat. Iowa (Selys and Reutermeuller).

Illinois, Florida (Leconte).

_P. ficticorium_ Say, Zoologist II. 414, 1844.

123. _Platynoe brunneatus_ Fab.
"Carabica, alata viridi-amera, elytrar funicli greutioo-
impressio."

Tab. Syst. Ed. 1. 186. no. 89. 1801.

Green: head green slightly tinged with cupreous; an-
tennae and palpi black, the base of the former tinge-
orous; thorax rounded, slightly truncate at base, very
finely margined, posterior angles much rounded, facial
impressions small and steep, dorsal line distinct;
color green, disc somewhat cupreous; elytra sub-ellipti-
cal, emarginate at base, slightly sinuate at tip, finely
stipple, intervals flat, the third with four distant, profon-
dy excavated, quadrate forse; color opaque green with a
common disc to the fourth stria of cupreous; feet infe-
trious; the funica metallic green; undersurface of body
blackish green.

Sometimes funicae are found on each elytron
instead of four.

Length 7.5 mm.

Habitat. Iowa City (Vickham); Ames (Borden).

Lincoln, Okt. (Pettit); Buffalo, N.Y. (Riebeke); Swartz,
N.J. (Smith); Philadelphia, Pa. (Liebeck); Tampa, Fl. (Schubay);
Cincinnati, O. (Nung); Indiana (Blatchley); Detroit, Mich. (Hubbard and Schwarz); Milwaukee, Wis. (Rautenberg); St. Louis, Mo. (Summers); Eastern Kansas (Popenoe).

Carabae 8-punctata Fab. Dey. Suppl. 56.

Fab. Dey. Ed. 7. 186. 1801.

Tronca 8-punctata Say. Trans. Linn. Phil. Soc. 77. fl. 1823.


Platynue plagiata Say.

"Blackish, glabrous; thorax transversely suborbicular, margined; elytra with acute Interrupted striae.

Head: purple; black slightly tinged with green; antennae blackish, suffused at base; palpi suffused or fuscous; thorax a little narrower than the elytra, transversely suborbicular; blackish slightly tinged with green; margin depressed, edge a little recurved, particularly at the hind angles, which are not recurved; dorsal line, and anterior transverse line impressed, basal line almost obsolete.
in the concavity of the lateral face, which is a little
rugose; elytra blackish with an obsolete purplish tint;
strias not profound, acute, impressed; interstitial
ducts very slightly convex, foveate and postfoveate black;
feet black; tibiae and tarsi fuscous; abdomen black.

Say, Trans. Amer. Phil. Soc. II. 46. 1823.

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 edge of a
uniform dull reddish color.

Length 7.5 - 2.5 mm.

Habitat. Iowa City (Neffham),

Tremblay, Out. (Pettit), London, Out. (Shaw), Maine
(Sevare); New York City (Schaeffer); Penn. (Say); Georgia (Lee);
Columbia Co., O. (Bell and Bonnager); Bayfield, Wis.
(Neefham); Illinois (Sevare); Bismark, N. Dak. (Allrich),
Eastern Kansas (Davenport); Salida, Colo. (Neffham); Texa
(Sevare); Santa Fe, N. Mex. (Sevare).

Travilia Pacifica Say. Trans. Amer. Phil. Soc. II. 46. 1823.

125. Platypus fegiannini Dyll.
Black, glabrous, punctured; antennae at base,
depth more; thorax narrower than the elytra; rounded,
widest before the middle; hind angles slightly projecting,
edge not excised, base punctured, basal impression
broad and shallow, very indistinct; dorsal line obsolete,
basal line wanting; elytra closely encumbrate at base,
obliquely sinuate at apex, striae obsolete or feebly
impressed, punctured, third interval with three
small dorsal punctures; feet black; picine; tibiae
rather lighter; middle and anterior trochanters often
a deep red.

Length: 5.5 - 7 mm.

Habitat: Iowa City (Iowa); Ames (Iowa).
Alaska, British Columbia (Hamilton); London, Ont.
(Barnes), Grinley, Oth. (Pettit); St. Jerome,Paste. (Caussen); Buffalo, N. Y. (Reichen); New York City (Schaupp); Detroit; Nash (Hubbard and Schwanz); Bayfield, Wis. (Hickham); Milwaukee, Wis. (Rauterberg); Maywood, Ill. (Harecott); Lawrence, Kan. (Piper); Colo. (Sivore); Prairie Pass, and Ft. Vancouver, Brq. (Seout); Northern Europe, and Siberia (Hamilton).

Tromia, Solidata, Brn. Phil. Soc. III. 57. 1833.

Algornum, Absolutsa, Brn. II. 423. 1837.


† Lee. Agassiz. A. Soc. 205. 1850.


126. Platynus aegrotinus Rej.

"Tarse, small; clavae ovato; elytra oblongo-ovata, subflata striato, punctata, punctique tribus impunctis; pedibus rufescentibus.

Long. 3 lignae. Larg. 1/2 ligna.

Il est à peu près de la grandeur de Platynus, et sa couleur est en-dessous d’un tond jaune, obèse, en une brusque. Le corset est un peu plus court, plus large, plus courbé et plus arrondi sur sa côté; la ligne longitudinale, ses impressions transversales et celle de chaque côté de la base sont très-peu marquées; le bord antérieur est en peu moins échancré; les côtés sont moins rebordés, et le angle postérieur sont beaucoup plus arrondies. Les élytres sont un peu plus longues, proportionnellement un peu plus larges à leur base et un peu plus courbes; les stries sont fines, peu marquées et distinctement punctuées; les intervalles sont planes, et l’on voit sur le troisième trois points.
enfonsée distincte: le premier pris de la troisième strie, et les deux autres pris de la seconde. Le dessus du corps est d'un brun noisette, les pattes sont d'un brun rouxâtre, avec la base des cuisses plus pâle et presque jaunâtre."

Brouzy. black: base of antennae piceo-testaceous, sometimes entirely brownish black; thorax rounded oval, margin very narrow, posterior angles very much rounded, basal impressions inconspicuous, dorsal line obsolete; elytra nearly twice as wide as thorax, finely emarginate at base, moderately convex, striae very fine, very finely punctured, intervals flat, the third trigonate: legs piceo-testaceous; tarsal grooves on the first joint.

Length 5.5 - 7 mm.

Habitat. Iowa City (Nickle); Davenport (Putnam), Vermont (Leconte); Hoboken, N. J. (Schaeffer); Peru, Georgia (Leconte); Detroit, Mich. (Hubbard and Schwarm); Lake Superior region (Leconte); Milwaukee, Wis. (Panzer); Indiana (Blatchley); Illinois (Leconte); Lawrence, Kan. (Popper).


Leech Bull. 32. Ent. Soc. III. 47. 1879.

137. Platyus semiostriatus Lee.

Longissimus, nigres nitidus, thorace ovali, latitudinis paulo longior, margine laterali angustius, ad basim rectiusque fons.

Pars profunda impressa, linea dorsali tensa, elytræ ovali.

Buse thorace latioribus basi paulo incarnatiis, stria profun
disse fortiter punctatis, intersticio trio triplunctato, pedibus

rufo testaceis, antennis palpisque fascis, basi rufo testaceis.


Black, shining; antennæ, and palpæ rufo testacei.

Thorax rounded oval, margin narrow, hind angle much rounded, basal foræ small but profoundly impressed.

Dorsal line feeble; elytra oval, striae deep, strongly

punctured, intervals convex, the third trinuclutate; legs

rufo testacei.

Length 7.5 mm.

Habitat: Iowa City (Nicholson).
Montreal, Que. (Canada); New York City (Schaupp);
Briarcliff Manor, N.Y. (Haldeman); Cincinnati, O. (Dury);
Detroit, Mich. (Hubbard and Schwarz); Milwaukee, Wis.;
(Pratt and Cruger); Illinois (De cone); St. Louis, Mo. (Sumner).


Kans. Soc. 1881, p. 92. 1891.

28. Platyme nigrolinea Leu.

Dors varius nigrescens, elongatus, thorace latitudine paulo
longior, ovali, postice paulo angustato, angulis posticis
rotundatis, margine tenuiter reflexo postice paulo lato, im-
pressionibus basaliibus lati minus profundius, elytris elon-
gatis ellipticis, thorace vir acquis laticibus, piecis striis
terribus, interstitialiis planissimis, sic punctatis 5-punctis;
pedibus nigris, antennae piecis extremitum pallide rufis.


Black, elongate; face of antennae and tarsi rufescent, tip
of the former paler; pubescence begins on the third joint;
thorax oval, longer than wide, narrowed behind, side mar.
gins moderately reflexed, basal impressions moderate, dorsal line distinct, posterior angles rounded; elytra elongate, elliptical, striate not punctured, third interval with from five to seven small punctures; under surface black; femora four, tarsal grooves indistinct.

Length 75-80 mm.

Habitat: Iowa City (Nechan), Boone (Osborn).

Black (Lecointe); St. Peter's, N. Y. (Petit), Spann, Lake, Ont. (Hilton); Buffalo, N. Y. (Rheede), Pelisade, N. Y., St. J. (Schuyler), Cincinnati, O. (Dury), Detroit, Marquette, Mich. (Hood, and Schwarz), Bay field, Wis. (Nechan), Milwaukee, Wis. (Rabenho), Lawrence, Kan. (Poorman).

Pseudonoea lea B. A. L., S. E. 245, 1850.


Agonum picinum var. C. H. F. Tuin, Bor. Am. vi. 25, 1837.

Graziow's Manu Bull. fliore. viii. 142, 1853.


129. Platynus saturatus Lee.
Piceo detacuum, nitidum elongatum, capite nigro, thorace ovali, latitudine longior, terminate margiinato, angulis posticis rotundatis, impressionibus basalibus farina minime impressis, elytris thorace laevioribus, elongato ellipticiis, striis tergobus intersticioibus planis, Dioeceticis, maleae cucullus impressus, antennae fuscae, articulo uno rufo.


Head black, antennae fuscous, basal joints and palpi rufous; thorax black, oval, shining, longer than broad, side margins narrow, hind angles rounded, basal impressions small, not strongly marked; elytra black or brown, finely striate, third interval with more or less than four junctions, underside black; legs rufous.

Length 3.5 mm.

Habitat. Iowa City (Nichllem).

Maine (Leconte); Buffalo, A. Y. (Reiche); Anark, A. (Smith);
Indiana; Marquette, Detroit, Nisich (Hubbard and Schwartz); Ill. (Leconte); Milwaukee, Wis. (Rartherg); St. Louis, Mo. (Summers).}

Mullan, Neov. (Nichllem).