

The Coleoptera of Florida.

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(Read before the American Philosophical Society, Feb. 1, 1878.)

The following list is founded upon material collected during two expeditions to Florida. In the spring of 1875 collections were made at Haulover near the northern end of Indian River from February 23d to March 20th, at Ft. Capron, on the same lagoon about a hundred miles south of Haulover, from March 26th to April 28th, at Enterprise on the upper St. Johns River from May 7th to 28th, at Cedar Keys, on the gulf coast, from June 2d to 9th. In the following year collections were made at Tampa from March 24th to April 30th, and again at Enterprise from May 15th to June 27th.

On both trips smaller collections were made at various points: Fernandina April 16th, Palatka February 13th, Sand Point on the Indian River February 19th to 22d, Lake Harney on the upper St. Johns River in the beginning of May, at Baldwin on the Jacksonville and Mobile R. R. on June 1st and June 10th, Lake Ashby in Volusia County and New Smyrna in the beginning of June. A number of interesting species were also obtained on the journey across the peninsula from Tampa to Enterprise during the first half of May.

As the localities where the most extensive collections were made differ greatly in character, and as no points in north-western Florida, nor at the southern extremity of the peninsula were visited, I must abstain from drawing any conclusions concerning the local distribution of Coleoptera in Florida. The sandy plains at Haulover, covered with scrub-oak and saw-palmetto, were not found elsewhere; the ocean and lagoon beaches of the eastern shore, especially at Capron, are rich in peculiar forms, and as the Gulf Stream here flows only six or eight miles off the coast, it is quite possible that many of these species are direct importations brought in the West Indian seeds and drift-wood constantly being thrown upon this low and sandy coast.

The Coleoptera from Enterprise represent the fauna of the "hammocks," a term applied in Florida to the dense hard-wood and palmetto forests, as distinguished from the open and sandy pine lands or cypress swamps. At Tampa special attention was paid to the fauna of the pine forests. In all districts covered with pine woods occur depressions, which in the dry season become swampy meadows, with a fauna remarkably rich in species and in specimens, and nearly identical in character throughout the State.

Notwithstanding the very uniform temperature during the entire year, the dry season, which corresponds with the winter months, causes a disappearance of insects in Florida almost as complete as in the north; in the beginning of March they appear suddenly with the first leaves of the oak,

* With additional descriptions of new species by JOHN L. LECONTE, M. D.

but there is no spring flight of Coleoptera. The beginning of the rainy season about the end of May brings out the full summer fauna.

Though far from complete, the following enumeration of species is judged sufficiently extensive to give a tolerably clear idea of the character of the Floridian fauna.

I desire to express my indebtedness to Dr. LeConte, without whose aid in the determination of species, this list could not have been prepared.

The following abbreviations for localities are used in the List of Species.

A.—Lake Ashby.

B.—Baldwin.

C.—Ft. Capron.

E.—Enterprise.

F.—Fernandina.

H.—Haulover.

K.—Cedar Keys.

L.—Lake Harney.

N. S.—New Smyrna.

P.—Palatka.

S.—Sand Point.

T.—Tampa.

*—Species recorded from Florida not collected by myself.

Descriptions of New Species.

BY E. A. SCHWARZ.

1. **Lebia rhodopus**, n. sp.—Head and thorax greenish or bluish black, subopaque; the former large, wider than the thorax, finely alutaceous, sparsely and obsoletely punctulate; antennæ more than half the length of the body, outer joints stout, joint 3 and base of joint 4 testaceous; palpi black. Thorax small, transverse, on the sides very little rounded and subsinuate before the hind angles, which are rectangular; side margin less broadly reflexed than in *L. viridis*; finely alutaceous, indistinctly transversely rugose or obsoletely punctulate. Elytra blue or greenish blue, shining, very finely alutaceous, striæ finer and more obsolete than in *L. viridis*, interstices subconvex. Beneath bluish black, legs, including the coxæ, bright rufo-testaceous, tarsi blackish, claws pectinate. Length 4.5 mm.; .17–.18 inch.

Allied to *L. viridis* and *pumila*; from the former distinguished by its larger head, which as well as the thorax, is hardly shining, and by the color of antennæ and legs; from the latter by its larger size and the coloration of the upper side and of the legs; from either species by the long and stout antennæ.

Two specimens from Tampa, found in April on the blossoms of *Chamærops serrulata*.

2. **Apenes angustata**, n. sp.—Shining, head and thorax metallic green, elytra dark coppery; beneath black, antennæ, palpi and legs testaceous. Head a little narrower than the thorax, longitudinally strigose,

with some scattered punctures, clypeus alutaceous, minutely and sparsely punctulate. Thorax in front but little wider than long, at the sides less rounded and less narrowed behind than in *A. lucidula*; hind angles indicated by an interruption of the reflexed margin, transversely rugulose and sparsely punctulate, near the front margin more evidently punctate, punctures sometimes confluent in longitudinal rugosities. Elytra of a dark coppery color with an oblong yellow spot at the base of the 6th interval, finely but deeply striate, striæ distinctly punctulate, interstices flat, alutaceous, sparsely and obsoletely punctured. Length 9.25 mm.; .37 inch.

Of the same size as *A. lucidula*, but narrower and with a different form of the thorax; the sculpture of head and thorax is finer, the elytra are darker colored with the scattered punctures on the interstices less evident.

Enterprise; three specimens, apparently females.

CYCLONOTUM.

The four North American species before me may be distinguished by the following table:

- I. Antennæ with more or less solid club; prosternum carinated in front, prolonged behind between the coxæ and almost reaching the mesosternum; first ventral segment carinate; elytra with distinctly impressed sutural striæ at apex:

Antennal club solid, prosternum very short in front of the coxæ: metasternum in the middle slightly but abruptly raised in an oblong shining plate, which is narrowed in front. Size small, rows of punctures on the elytra very obsolete.....**palmarum**.

Antennal club less solid, prosternum moderately long in front of the coxæ, metasternum with an oblong, not elevated, not pubescent, opaque spot. Size large, elytra with regular rows of punctures.....**cacti**.

- II. Antennæ with a loosely jointed club of three joints, prosternum feebly prolonged between the coxæ; metasternum strongly longitudinally carinated, carina shining, more or less punctulate, but not sharply limited laterally; first ventral segment not carinated; elytra without sutural stria.

Larger, rounded-oval, elytra moderately densely punctulate, legs piceous black, tibiæ distinctly punctulate.....**estriatum**.

Smaller, rounded, almost hemispherical, elytra less densely punctulate, legs stouter, piceous red, tibiæ smooth.....**semiglobosum**.

3. **Cyclonotum palmarum**, n. sp.—Rounded-oval, convex, above black, shining, anterior part of head, sides of thorax and tip of elytra sometimes red, beneath red, metasternum darker in the middle, antennæ, mouth and legs bright rufo-testaceous. Head very finely aciculate and

obsoletely remotely punctulate, antennæ with the first joint elongated, but much less so than in *C. cacti*, 2d joint as thick as the first, longer than wide, 3d much narrower but also longer than wide, 4th very small subtransverse, 5th and 6th very small strongly transverse; the three last joints are absorbed in a large, elongate-oval, solid annulated club, which is almost as long as the first joint and less compressed than in *C. cacti*. Mentum transverse, flat, subopaque, testaceous, not visibly punctured, broadly emarginate in front. Prothorax sculptured as the head, broadly emarginate in front, sides feebly rounded, base straight, anterior angles distinct, not rounded, hind angles obtuse. Scutellum shining, very finely sparsely punctulate. Elytra shining, not densely, finely punctured, with traces of rows of stronger punctures at the apex near the side margin; sutural stria finely impressed and reaching almost to the middle. Prosternum in front of the coxæ very short, linear, carina more prominent in front, intercoxal process long, almost reaching the mesosternum. Carina of mesosternum with the free angle almost rectangular, not mucronate. Metasternum on each side opaque, not visibly punctured, in the middle slightly but abruptly elevated in an oblong, shining plate, which is somewhat narrowed in front and finely remotely punctulate. Abdomen opaque, first segment carinated in the middle. Legs stout, femora punctulate, tibiæ smooth. Length 1.75 mm.; .07 inch.

Enterprise; five specimens, found in May and June, on cut down palmetto trees feeding on the fermenting juice.

C. semiglobosum Zimm. (Trans. Am. Ent. Soc. 1869, p. 250), is in my opinion well distinguished from *C. estriatum*. It is always smaller, shorter and more convex, the front margin of thorax distinctly produced in the middle, the punctation of head and thorax is much finer, that of the elytra less dense, fine in the scutellar region, stronger at apex and at the sides; the legs are stouter and less dark colored, the tibiæ smooth.

4. **Sacium mollinum**, n.sp.—Elongate-oval, shining, above piceous, thorax semicircular with the apex and sides pale, diaphanous anteriorly, finely and moderately densely punctulate. Elytra minutely sparsely punctulate, pubescent, a humeral spot, a curved fascia at the apical third, and the side margin yellowish-testaceous. Beneath piceo-testaceous, abdomen and legs pale, metasternum densely punctulate. The yellow side margin is connected with the humeral spot and with the fascia; the latter is sometimes abbreviated at the sides or reduced to a spot on the disc. Length 1 mm.; .04-.05 inch.

Tampa and Enterprise, many specimens; abundant on *Pinus palustris* in April and June. Shorter and more regularly oval than the other species and of different coloration.

5. **Sacium splendens**, n. sp.—Elongate-elliptical, very shining, thorax semicircular, reddish with an indefinite dark spot in front of middle, apex and sides pale, very finely sparsely punctulate. Elytra piceous-black with an indistinct reddish basal spot inside of the humerus and a common, broad, testaceous fascia behind the middle, exceedingly finely remotely punctulate, pubescence only visible under a very high power. Underside reddish-brown, shining, hardly visibly punctulate, abdomen paler at apex, legs yellowish-testaceous. Length 7 mm. ; .03-.04 inch

Tampa ; many specimens beaten from dead leaves of *Pinus palustris* in April. Varies with the fascia interrupted by the suture, or not reaching the side margin. The apparently unpubescent and very shining elytra with the very fine punctuation will easily distinguish this species.

6. **Scydmaenus divisus**, n. sp.—Fusiform, shining ; head and thorax brown, impunctate, with coarse, erect, moderately long, brownish pubescence. Head not immersed in the thorax, with a thick brush of hairs each side behind the eyes ; antennæ red, stout, longer than head and thorax, intermediate joints as long as wide, club 4-jointed, 8th joint globular twice as large as the preceding, joints 9 and 10 subtransverse, each very little larger than the 8th, terminal joint oval, shorter than the two preceding together ; maxillary palpi with the penultimate joint slender, clavate, last joint not visible. Thorax trapezoid, very little longer than wide at base, smooth, transverse basal impression feeble, interrupted at the middle. Elytra not forming an angle with the thorax, with sparse, long, erect, grayish pubescence, red, evidently punctate anteriorly and smooth behind the middle ; punctate part divided in an inner and outer portion by a broad smooth humeral band, inner portion more finely and sparsely, outer portion more coarsely and densely punctured ; humeral callus moderately elevated ; two distinct basal foveæ each side of almost equal size ; suture not elevated. Beneath piceous, abdomen pale at tip, legs red, femora moderately clavate. Length 1.15 mm. ; 4.5 inch.

Enterprise ; two specimens. Belongs in the group of *S. capillosulus* and is easily distinguished by the peculiar sculpture of the elytra.

7. **Languria marginipennis**, n. sp.—Red ; head, and small rounded discoidal spot on the thorax, scutellum, outer half of femora, the larger part of the tibiæ and the tarsi blackish-green ; antennæ, metasternum, with the exception of the front margin, and the last ventral segment black ; elytra greenish-blue or blue, margin and epipleuræ red. Head alutaceous, distinctly not densely punctured, antennæ with joints 3-6 slender, 7-11 forming an abrupt club, joints 7-10 produced within. Thorax longer than wide, finely aciculate and distinctly not densely punctured, on the sides very little rounded and slightly sinuate before the hind angles ; the

more or less rounded spot in the centre and occupies usually the fourth part of the length of the thorax, but is in some specimens reduced in size. Elytra shining, strongly striate-punctate, punctures finer towards the apex, interstices flat, finely alutaceous, obsoletely remotely punctulate; the red color is usually confined to the thickened margin and to the epipleuræ, but in two specimens the last interstice also is indistinctly red in the middle. Prosternum sparsely punctured, almost smooth in front, mesosternum coarsely punctured, metasternum almost smooth, abdomen finely, remotely punctulate. The red and green colors on the tibiæ are not sharply separated; the base and the upper edge, however, are always dark and the largest part of the lower edge always red. Length 7-9 mm.; .28-.35 inch.

Ft. Capron, Tampa, and Enterprise; six specimens. This species resembles in form *L. tædata*, it is, however, a little more elongate with the thorax longer.

8. **Tomarus hirtellus**, n. sp.—Oblong-oval, convex, shining, fusco-testaceous. Head and thorax finely, sparsely punctulate, sparsely pubescent; antennæ less slender than in *T. pulchellus*. Thorax twice as wide as long, on the sides subsinuate before and slightly undulate behind the middle, base sinuated each side, basal impressions deep. Elytra with sparse, suberect, grayish pubescence, and with some scattered long erect hairs, strongly irregularly punctate in front, punctures becoming finer and obsolete towards the apex; an indefinite, often abbreviated, fascia at the middle and another on the apical third black. Beneath finely, sparsely pubescent, pro- and metasternum evidently punctulate; legs pale. Length 1.25-1.5 mm; .05-.06 inch.

Smaller and shorter than *T. pulchellus* and easily distinguished by its more evident pubescence and stronger punctuation on the elytra. The pubescence of *T. hirtellus* and the form of the thorax, whose side margin has the tendency to become serrulate, bring the genus *Tomarus* still nearer to *Paramecosoma*.

9. **Lathropus pictus**, n. sp.—Opaque, head and thorax ferrugineo-testaceous, the former densely rugosely punctulate, emarginate in front, antennæ ferrugineous, second joint and the club blackish, joints 3-8 very small, together hardly as long as the club. Thorax transverse, side margins undulate, apical margin and base straight, anterior angles almost rectangular, hind angles prominent; finely and densely rugosely punctulate, without any trace of impressions, lateral lines feeble. Scutellum small, transverse. Elytra much less elongate than in *L. vernalis*, fusco-testaceous, finely punctate-striate, with numerous rows of exceedingly short, rigid, whitish hairs; a circumscutellar cloud and a common fascia, concave and dentate anteriorly, blackish. This fascia is formed of three indefinite spots on each elytron, the first at the suture a little behind the

middle, the second, oblong, in front and outside of the first, the third at the side margin. Metasternum and abdomen piceous, finely sparsely punctulate; legs pale. Length .05 inch; 1.25 mm.

Smaller and especially shorter than *L. vernalis* and distinct by the disc of the thorax without impressions, by the sculpture and pubescence of the elytra and by the color.

Haulover Canal, Volusia County; four specimens found under bark of a dead *Quercus virens*.

10. **Læmophilæus Chamæropis**, n. sp.—Less elongate, depressed, glabrous, shining, bright rufo-testaceous, elytra pale ochreous. Head large, transverse, flat, not impressed on the disc and without median line, finely and sparsely punctulate, marginal line close to the margin in front and at the sides, base not margined; antennæ with distinct 3-jointed club; labrum large, transverse, truncate in front. Thorax finely, sparsely punctulate, with a single lateral line joining the basal marginal line and with an impressed puncture of moderate size each side in the middle outside of the lateral line; anterior angles not prominent in either sex. Scutellum transverse, triangular. Elytra at base very little wider than the thorax, slightly dilated behind the humeri, which are obtuse but not rounded; each elytron with six fine striæ: the humeral stria more distinct and impunctate, 5th stria also more distinct, obsoletely punctulate, the inner striæ less distinct and feebly punctulate, sutural striæ at apex more impressed than in front. Interstices flat impunctate. Head beneath, pro- and mesosternum impunctate, metasternum and abdomen finely sparsely, last ventral segment more densely punctulate. Length 1.5–2 mm.; .06–.08 inch.

♂ Head wider than the thorax, front produced, emarginate at middle, distinctly sinuate each side, with the teeth long and acuminate; antennæ slender, more than half the length of the body, with all the joints longer than wide. Thorax strongly transverse, sides oblique, convergent towards the base and subsinuate before the hind angles, which are obtuse; lateral line oblique; elytra as long as head and thorax together.

♀ Head as wide as the thorax, front produced, emarginate in middle, hardly sinuate at the sides, teeth much less prominent; antennæ less slender, outer joints as long as wide. Thorax less transverse, sides sub-parallel, slightly arcuate and sinuate before the hind angles, which are rectangular, lateral line straight; elytra a little longer than head and thorax together.

11. **Nemicelus marginipennis** Lec.—The two sexes differ from each other most remarkably and might be easily mistaken for two distinct species. The form described by LeConte (Proc. Ac. Nat. Sc. 1854, p.79), I take to be the ♂. The female differs chiefly by the following characters: Less elongate, opaque above, color of upper and underside darker. Head densely rugosely punctulate with an obtuse tooth behind the eyes, eyes smaller, less elongate and less oblique, more convex; antennæ with the first joint only one-half longer than wide, shorter than the two following together. Thorax hardly longer than wide anteriorly, more dilated in front, not emarginate at apex, apical edge thickened, base much less lobed in the middle, surface densely rugosely punctulate. Elytra almost entirely covering the abdomen, less truncate at apex, distinctly pubescent, densely punctulate, striæ less evident. Prosternum shining, punctate, process between the front coxæ hardly visible, propleuræ opaque, sculptured as the thorax; mesosternum much smaller, less broadly rounded in front, dilated behind, shining punctate; metasternum and abdomen opaque, the latter less elongate, last segment not longer than the preceding with a large shallow impression. Hind tarsi 4-jointed as in the male.

The genus *Nemicelus* was first described by Dr. LeConte, and is certainly distinct from *Hemipeplus*.

12. **Nemicelus microphthalmus**, ♀ n.sp.—Linear, pale, yellow-testaceous. Head quadrate, subconvex, behind the eyes straight, then suddenly narrowed and forming a short neck, somewhat shining, sparsely and obsoletely rugose; eyes small, round, convex, very coarsely granulated, mandibles deeply emarginate and black at tip; antennæ a little longer than head and thorax, first joint stout one-half longer than wide, shorter than the two following together, joint 2 globular, the following 4 joints as long as wide, equal, 7 and 8 a little larger than the preceding, the three last joints abruptly larger, 9 and 10 hardly transverse, terminal joint oval acuminate. Thorax but little longer than wide anteriorly, feebly and broadly emarginate in front, sides oblique, convergent towards the base, subsinuate anteriorly and broadly sinuate before the hind angles; base almost straight, not lobed, apical edge thickened, anterior angles obtuse; rounded at tip, posterior angles obtuse; surface somewhat shining, indistinctly, rugosely punctulate with a faint trace of an impressed median line, basal impressions large and deep. Scutellum opaque, subquadrate and a little broader behind, apical side rounded. Elytra almost covering the abdomen, subopaque, paler than the head and thorax, darker at the sides and with a short dark line on each elytron near the suture at the apical fourth, densely and equally rugosely punctulate with hardly any trace of striæ. Pro- and mesosternum shining, sparsely punctulate, propleuræ opaque, sculptured as the thorax, front coxæ very narrowly separated, metasternum and abdomen subopaque densely and finely punctulate, last ventral segment hardly longer than the preceding with a round impression, occupying nearly the whole surface. Length 3.25 mm.; .13 inch.

♂ Unknown to me.

A single specimen from Enterprise, found in May, attracted by the light, is before me, another specimen from Tampa is in the cabinet of Dr. LeConte. Smaller and narrower than the smallest females of *N. marginipennis* and very distinct, especially by the form of the head and by the small, round eyes.

13. **Philothermus puberulus**, n. sp.—Elongate-elliptical, transversely convex, dark chestnut-colored, shining, above with distinct, fine, erect pubescence and with some longer hairs at the sides. Head sparsely punctured, antennæ shorter than in *Ph. glabriculus*, apparently 10-jointed, joints 2 and 3 slender, the following six joints small, 7-9 strongly transverse, joints 10 and 11 forming a solid club as in *Cerylon*. Thorax less transverse and less strongly margined than in *Ph. glabriculus*, rounded on the sides, moderately sparsely punctured. Scutellum transverse, shining, with a few punctures. Elytra strongly striate-punctate, interstices finely, sparsely punctulate. Prosternum and propleuræ distinctly, not densely, metasternum and first ventral segment in the middle finely and sparsely, at the sides very coarsely punctured, segment 2-4 each with two transverse rows of strong punctures, last segment more finely punctulate; legs testaceous. Length 2 mm.; .075 inch.

Abundant in Florida under old bark of *Pinus palustris*. Smaller, narrower and more convex transversely than *Ph. glabriculus*, with the sculpture above and beneath stronger and at once distinguished by the much more evident pubescence and by the form of the antennal club. By this last character *Ph. puberulus* forms a passage to *Cerylon*. Sexual characters are not evident; some specimens have the sides of thorax less rounded; these are probably the males.

14. **Olibrus princeps**, n. sp.—Rounded-oval, pale rufo-testaceous, thorax with a large brownish discoidal spot. Elytra black each with a large, oval, bright orange-colored spot at the suture before the middle, outer half of the basal margin and the lateral margin narrowly, apex broader yellow; very finely striate, striæ minutely and remotely punctulate, interstices obsoletely sparsely punctulate, punctures more distinct near the lateral margin. The sutural stria alone is deeper impressed; mesosternum not protuberant. Length 2.5 mm.; .10 inch.

One specimen in the collection of Mr. H. G. Hubbard from New Smyrna; another specimen found by me at Enterprise in May is in the cabinet of Dr. LeConte. A very striking species by its color, belonging in the group of *O. apicalis*.

15. **Brachyacantha querceti**, n. sp.—Rounded, convex, shining, black; head and thorax finely not densely, elytra somewhat more strongly punctured. Each elytron with a large, transverse humeral spot, which is obliquely truncate inside and leaves a very narrow basal margin black and with a smaller, rounded-oval spot at the outer apical angle not touching the margin, orange-red. Side pieces of metasternum and sides of abdomen densely punctured, propleuræ and legs yellow, femora infusate at base. Length 2–2.75 mm.; .08–.11 inch.

♂ Head, front margin of thorax narrowly, anterior angles and side margins more broadly, epimera of mesosternum entirely whitish-yellow.

♀ Head black, or piceous in front, thorax black or with the front margin and front angles narrowly piceous-testaceous, epimera black or piceous.

var. *α* Humeral spot small and narrow.

var. *β* Humeral spot interrupted at middle.

Widely distributed in Florida; abundant on oak shrubs.

16. **Hyperaspis paludicola**, n. sp.—Oblong-oval, less convex, black; head subopaque, finely alutaceous, obsoletely sparsely punctulate; thorax opaque, sides yellow, sculptured as the head. Elytra shining, distinctly moderately densely punctate, an oval discoidal spot, the side margin and the apex yellow. The yellow side margin is throughout of equal width, following the undulation of the side margin of the elytra; at the apex it turns inwards and becomes broader, but does not reach the suture. Mouth, antennæ, epipleuræ, legs, sides and apex of abdomen, yellow. Length 1.35–2.25 mm.; .07–.09 inch.

♂ Head and front margin of thorax yellow.

Very common in Florida on swampy meadows in the Pine lands. Resembles in coloration certain varieties of *H. undulata*, but it is longer, less convex and also a little smaller, with the thorax opaque and less distinctly punctulate; the yellow side margin is always of equal width and never broken into spots.

17. **Strigoderma exigua**, n. sp.—Oblong-oval, convex, shining, above glabrous and only at the sides fringed with a row of longer hairs. Head piceous with greenish reflection, transversely convex behind, flattened in front, moderately sparsely punctate and not rugose, vertex more remotely punctulate; clypeus parabolical, not separated from the front, broadly rounded at apex and strongly reflexed; antennæ piceous. Thorax transversely convex, emarginate at apex, at the sides strongly rounded and narrowed in front of middle, not angulated in the middle, slightly narrowed towards the base, which is straight and not produced in the middle; hind angles obtuse, rounded; surface piceous with greenish reflexion, apex and sides pale ochreous, sparsely punctured without impressions. Elytra fusco-testaceous, punctate-striate, alternate intervals more elevated, con-

vex, smooth, pale ochreous-yellow. Beneath piceous, with sparse long pubescence, legs testaceous, femora infuscate; front tibiae not dentate, the apical tooth being a mere prolongation of the outer apical angle in the axis of the tibiae, upper edge therefore almost straight, only very slightly sinuate at the base of the apical process, outer side neither carinate nor sulcate, smooth with exception of a row of punctures along the upper edge; first four tarsal joints short, claws strongly incurved at base. Length 4-4.5 mm.; .16-.18 inch.

Three specimens are before me which I found on oak shrubs on the sand hills east of Lake Altapopka in May. Easily distinguished from our two other species by its smaller size, more regularly oval, convex form, by the glabrous upper surface, by the sculpture of head, thorax and elytra and by the formation of the front tibiae.

18. **Taphrocerus puncticollis**, n. sp.—Elongate, above blackish-blue, or black with faint æneous tinge, shining. Head less strongly excavate, very finely alutaceous, distinctly, moderately sparsely punctate, punctures deeper than in *T. gracilis*. Thorax transverse, narrowed in front when viewed from above, sides sinuate before the hind angles, which are rectangular, base strongly lobed in the middle, lobe broadly emarginate; surface uneven with a distinct carina in front of the hind angles, very finely alutaceous, coarsely unequally punctured, each puncture bearing a very short scale-like hair. Scutellum transverse, shining. Elytra impressed at base, impressions on the disc not obvious, serrate at the outer apical angle; anteriorly moderately strongly striate-punctate, punctures obsolete towards the apex, each with a very fine, short hair, interstices on the disc unequal; the striae therefore appear subgeminatae; humeral carina broadly interrupted at middle. Beneath bluish-black or black, metasternum coarsely punctured; abdomen with sparse shallow punctures, last segment with a deep, semicircular marginal sulcus. Length 5 mm.; .20 inch.

Enterprise and Cedar Keys; two specimens. More elongate than *T. gracilis* and distinguished by the deeper punctuation of head, thorax and metasternum and by the elytra less even, without patches of pubescence; from *T. agriloides* it differs chiefly by the form of the thorax, which in the latter species is not narrowed in front when viewed from above.

19. **Brachys fascifera**, n. sp.—Similar to *B. ovata*, but shorter, broader in front and more attenuate behind, and easily distinguished by the broad white fascia on the elytra and by the formation of the prosternum. Head and thorax as in *B. ovata*, the former less strongly excavated. Elytra striate-punctate, punctures finer and obsolete towards the apex, anteriorly with irregular lines and patches of fulvous and whitish pubescence.

behind the middle with a broad fascia of dense whitish pubescence, with only a few fulvous hairs intermixed; behind this with two other undulated fasciæ composed of fulvous hairs bordered anteriorly with white; humeral and marginal carina as in *B. ovata*. Fissure of prosternum not reaching the hind margin, but leaving a comparatively broad margin intact, apex of metasternum in the middle suddenly and deeply emarginate. Last ventral segment with the usual marginal sulcus, not emarginate in the male; broadly rounded in the ♀, less broadly in the ♂; anus very finely pectinate. Length 4.5–5 mm.; .18–.20 inch.

Widely distributed in Florida and not rare; lives on *Quercus virens*. In *B. ovata* and *tesselata* the undivided portion of the prosternum is very narrow and the metasternum is broadly triangularly emarginate in front.

20. **Pachyscelus cæruleus**, n. sp.—Short ovate, black, head and thorax bluish-black or black with æneous tinge, scutellum and elytra bright blue, shining. Head deeply channeled, alutaceous, obsoletely punctulate, thorax without lateral depression and with sparse shallow punctures almost obliterated on the disc, more obvious at the sides, finely alutaceous at the sides. Elytra with a deep impression at the sides before the middle, and with another obsolete one near the suture behind the middle, plainly punctured, with traces of regular rows on the disc. Length 2–3 mm.; .08–.12 inch.

♂ Last ventral segment with an oblong impression at apex, apical margin produced in the middle into two prominent processes each of which terminates in four small teeth.

♀ Last ventral segment not impressed, apical margin produced in the middle in an acute point.

Very abundant everywhere in Florida. In form and size this species resembles *P. lævigatus*; the elytra are however less triangular and more rounded at the sides; it differs also by its color and by the thorax not being impressed at the sides. Very probably there will also be a difference in the sexual characters of the males but I have not seen the ♂ of *P. lævigatus*. In *P. purpureus* the last ventral segment of the ♂ has a similar impression but the two processes are more separated from each other and each terminates in three teeth.

21. **Temnopsophus impressus** n. sp.—Black, shining; head piceous or piceous-red, finely alutaceous and sparsely punctulate with a fine median line on the vertex, antennæ two-thirds as long the body, piceous-red at base. Thorax almost longer than wide in front, strongly convex,

transversely depressed before the base, strongly rounded at apex and produced in the middle, at the sides rounded anteriorly, towards the base narrowed and subsinuate; base distinctly emarginate and finely margined; surface piceous or piceous-red, smooth in the middle, finely alutaceous and obsoletely punctulate towards the sides. Scutellum semicircular, opaque. Elytra elongate-oval, widened behind, basal third strongly depressed and transversely impressed, apical two-thirds ventricose, convex, sides sinuate in front of middle; color black with a large yellow marginal spot behind the humerus, base frequently piceous-red; depressed part coarsely, densely, ventricose part sparsely punctured, each puncture bearing a short whitish hair. Legs piceous-black or piceous-red, hind tibiæ slender, slightly curved. Length 2-2.5 mm. ; .08-.10 inch.

♂ Sides of head in front of eyes straight, convergent anteriorly, antennæ with the first joint formed as in the ♂ of *T. bimaculatus*, elytra more elongate, less ventricose behind.

♀ Sides of head rounded anteriorly, first joint of antennæ not dilated, a little longer than the two following together, elytra strongly convex and ventricose behind.

Eight specimens are before me, found on the meadows north of Lake Ashby, Volusia county, in June.

The yellow humeral spot extends sometimes so as to nearly reach the suture.

Easily known from *T. bimaculatus* by the form of the elytra.

22. **Eupactus viticola**, n. sp.—Piceous or piceous-red, glabrous, shining. Head distinctly punctulate, frontal lines before the eyes, and transverse suture evident; clypeus opaque, rugosely punctulate; eyes not prominent, moderately coarsely granulated. Antennæ piceous-red; first joint large, shining, punctulate, strongly curved, narrowed towards the extremity; second joint as wide as the first, as long as wide, not curved inwards; joint 3 as large as joint 2, triangular; joints 4, 6 and 8 very small, strongly transverse; joints 5 and 7 a little larger, strongly transverse, and produced inwards; last three joints strongly compressed, the 9th twice as long as wide, as long as 2-8 together, and as long as 10 and 11 together, outer margin straight, inner margin convex, inner front angle somewhat produced, inner basal angle rounded; joint 10 longer than wide, truncate at tip, outer margin straight, inner margin strongly sinuate at the basal half; joint 11 closely applied to the 10th, as long as wide, rounded at tip; maxillary palpi with the last joint large, triangular. Thorax anteriorly a little wider than long in the middle, very convex transversely, apical margin slightly produced at middle, and feebly sinuate each side, sides straight, strongly convergent in front, base lobed at middle, feebly sinuate each side; front angles strongly deflexed, acute, but not prominent, hind angles obtuse, rounded; finely, sparsely punctulate, more densely towards the anterior angles, and with an impressed marginal line at the sides. Scu-

tellum acuminate at apex, sides rounded with a few fine punctures. Elytra with an indefinite longitudinal impression at the sides behind the middle, suture very feebly elevated behind the scutellum, very finely and sparsely punctulate, punctures on the disc hardly visible, and with a single, sometimes obsolete, row of fine punctures not far from the suture on the basal half. Metasternum shining, very finely; remotely punctulate, coxal plates hardly widened externally, evidently punctate. First ventral segment finely and sparsely punctulate, excavated parts opaque, rugose, second segment longer than the first, very finely and remotely punctulate; third and fourth segments of equal length, each shorter than the second, and similarly punctulate, punctures denser and stronger at the sides; last segment as long as the second, moderately sparsely punctulate. Length 2-3 mm.; .08-.12 inch.

Enterprise, many specimens beaten in June, from dead vines of a species of *Vitis*.

23. **Metachroma maculipenne** n. sp.—Oblong, convex, shining. Head testaceous with the ocular sulci strongly marked, meeting in the middle, and with a distinct median line; clypeus coarsely punctured, broadly emarginate anteriorly, front less coarsely and less densely punctured; labrum trilobed, middle lobe triangular, lateral lobes broad, truncate. Thorax transverse, convex, at apex a little produced, at the sides strongly rounded and margined; anterior angles auriculate, posterior angles dentiform, prominent; brownish-red with three indefinite spots often confluent in an M-like mark; coarsely, not densely punctured, on the disc finely, at the sides more distinctly alutaceous. Scutellum piceous, smooth, or with a few punctures. Elytra parallel at the sides, broadly rounded at apex, strongly, regularly striate-punctate, punctures fine at apex; interstices very finely, remotely punctulate, eighth interstice broad, including two striæ; fusco-testaceous, suture infusate, each elytron with three black spots: one at the margin behind the humerus, the second on the fifth interstice before the middle, the third between the sixth and eighth stria a little behind the middle. Epipleuræ of thorax black, smooth; metasternum piceous, shining, sparsely rugose; abdomen reddish-testaceous, sub-opaque, alutaceous and obsoletely punctate; legs pale. Length 3.5-4.25 mm.; .14-.17 inch.

Enterprise, many specimens found in June, mostly on *Quercus virens*. This species resembles very much certain varieties of *Paria sexnotata*.

24. **Chrysomela Cephalanthi**, n. sp.—Oval convex; head opaque; brown, almost smooth, maxillary palpi with the last joint a little longer than in *C. similis*, but not dilated. Thorax short, emarginate at apex, straight at the sides, uniformly brown, opaque, with a few scattered punctures on the disc, side margin not thickened, coarsely punctured. Elytra yellow, shining, with three regular brown vittæ not joining each other: one on

the suture not abbreviated, but very little narrower at apex than in front and including two regular striae of moderately coarse punctures; the second and third abbreviated at base and apex, the former limited each side by a regular stria of punctures and including two short irregular striae behind the middle with a few punctures in front; the outer vitta is margined interiorly with a stria of punctures and includes two long almost regular striae; the outer marginal stria is broadly interrupted at middle; the yellow parts are impunctate with the exception of a humeral line of very fine punctures. Underside, including the epipleurae, brown with scattered moderately fine punctures; legs very coarsely punctured, claw joint not dentate, claws stout, distant. Length 6-7.25 mm.; .24-.29 inch.

Ft. Capron and Lake Harney, two specimens; also found at Tampa; lives on the Button Bush. Belongs to *Calligrapha* Er. and is to be placed near *C. similis*, from which it differs by its more elongate form, by the straight side margin and less punctured disc of the thorax, by the regular vittae and sculpture of the elytra and by the coarsely punctured legs.

25. **Systema pallipes**, n. sp.—Elongate-elliptical, convex, shining, black; head and thorax often reddish-brown, base of antennae and legs pale testaceous. Head carinate in front, impressed median line fine, smooth anteriorly; sculpture of posterior part variable, either finely, remotely punctulate or more coarsely punctate with indistinct transverse rugae. Antennae pale, the last four or five joints black, second joint slender, twice as long as wide. Thorax as in *S. frontalis*, but much more convex transversely, sculpture variable, either shining, finely, sparsely punctate, or less shining, alutaceous, with the punctures coarser and less sparse. Scutellum smooth, shining. Elytra elongate, very little broader at base than the thorax, humeri rounded, shining, evidently not densely punctate, with traces of an impressed sutural line. Length 3-4 mm.; .12-.16 inch.

Many specimens from different parts of Florida, abundant on the swampy meadows in May and June. More elongate, narrower and more convex than *S. frontalis*, with the elytra narrower at base, and easily distinguished by its pale legs.

26. **Epitrix brevis**, n. sp.—Short-ovate, black, shining, antennae, mouth and legs red, posterior femora infusate. Head impunctate; thorax shining, more finely punctulate than in *E. cucumeris*, basal impression very feeble. Elytra with the striae on the disc hardly impressed, punctures finer than in *E. cucumeris*, interstices on the disc flat, at the sides narrower and convex. Length 1-1.25 mm.; .04-.05 inch.

Ft. Capron and Enterprise, seven specimens; occurs also in Ohio. Allied to *E. cucumeris*, and of the same color and

with the thorax also shining, but smaller, much shorter, and with the basal impression of the thorax much less evident.

27. **Chaetocnema crenulata**, n. sp.—Broadly-oval, very convex, but little narrowed in front, elytra strongly and suddenly declivous behind, broadly rounded at apex; head and thorax sub-opaque, dark brassy, elytra shining, dark æneous; beneath black, antennæ and tibiæ testaceous, femora black. Head very little prominent, almost vertical, flat in front, very wide between the eyes, ocular sulci connected by a strongly curved line; not pubescent in front, finely alutaceous, impunctate; eyes large, moderately convex, touching the thorax; antennæ slender, last joint infusate at tip, labrum shining, impunctate, denticulate in front. Thorax twice as wide as long in the middle, at apex produced in the middle and slightly sinuate behind the eyes, at the sides almost straight, strongly margined, base broadly rounded, finely margined; front angles rectangular, hind angles obtuse, rounded at tip; surface alutaceous, strongly, sparsely and unequally punctured. Scutellum shining, impunctate. Elytra regularly, coarsely punctate-striate, striæ hardly impressed on the disc, scutellar stria not reaching the middle, interstices sub-convex on the disc, convex at the sides, finely and obsoletely punctulate. Pleuræ of thorax and prosternum smooth, shining, the latter not margined between the coxæ; mesoternum not visible, metasternum short, smooth, shining, strongly narrowed each side and emarginated by the middle and hind coxæ, anteriorly margined by a row of coarse punctures, posteriorly each side with an impressed, feebly punctured line, lateral marginal line impunctate, medial line very fine, side pieces opaque, impunctate. First and second ventral segment shining, sparsely punctate, the remaining segments less shining, alutaceous, punctulate. Posterior femora strongly incrassate.

Crotch, Proc. Acad. Nat. Sc. Phila., 1873, 74.

Sumter County, four specimens. Distinct by the form of the body, and by the characters of the underside mentioned above.

28. **Chaetocnema quadricollis**, n. sp.—Ovate, less convex, shining, above æneous, head and thorax often brassy; antennæ and legs bright testaceous-red, hind femora more or less infusate. Head prominent oblique, deeply transversely impressed in front, not very wide between the eyes, ocular sulci connected by a transverse impression, which is foveiform in the middle; very finely alutaceous with a few scattered punctures; eyes smaller, convex, labrum with a transverse row of punctures in front; antennæ slender, last joint infusate at tip. Thorax large, less convex, twice as wide as long, a little wider in front than at base, on the sides slightly rounded and distinctly margined, base rounded, finely margined; front angles moderately deflexed, thickened, hind angles distinct, obtuse; surface more or less distinctly alutaceous, sparsely punctulate. Scutellum small, shining, impunctate. Elytra at base evidently wider than the thorax, not acuminate at apex, regularly, moderately coarsely punctate-

striate, scutellar stria not reaching the middle, interstices smooth, sub-convex. Beneath, black; epipleuræ of thorax shining, impunctate, prosternum coarsely punctate, sometimes with a smooth space in the middle, margined between the front coxæ, mesosternum visible, declivous, metasternum moderately long, smooth, shining, hind margin almost straight and not emarginated by the hind coxæ, marginal line feebly punctulate in front, simple behind and at the sides, side pieces opaque, abdomen often alutaceous, first and second segment shining, sparsely punctate, the remaining segments less shining, punctulate. Hind femora moderately incrassate, more or less infusate, sometimes entirely testaceous. Length 1.50–1.75 mm.; .06—.075 inch.

Enterprise and New Smyrna, many specimens, in May and June. This species has exactly the aspect of a small *Crepidodera* and is distinguished by its less convex form, by the quadrate thorax, which is much narrower at the base than the elytra, and by the form of the metasternum. The sculpture of head and thorax is subject to variations as in the other species; but the form and sculpture of the sterna appear to offer more reliable characters.

29. **Microrhopala floridana**, n. sp.—Elongate, parallel at the sides, moderately shining, uniformly blackish-blue. Head sculptured as in *M. cyanea*, second joint of antennæ as long as wide, third joint a little longer. Thorax at base but little wider than long, narrowed in front, transversely convex, at the sides almost straight, base lobed in the middle and strongly sinuate each side, anterior angles acute, prominent, posterior angles obtuse; very coarsely punctured and in some specimens with a fine, impressed median line. Elytra with eight regular rows of very coarse punctures, alternate interstices evidently carinate. Prosternum with coarse punctures, metasternum punctate at the sides, abdomen sub-opaque, indistinctly punctulate. Length 3.75–4.5 mm.; .15–.18 inch.

Differs from *M. cyanea* by its narrower and more elongate form, less transverse thorax, and by the costate elytra. One specimen is almost pure black above.

Sumter county, many specimens, also found in Tampa and Enterprise.

30. **Strongylium anthrax**, n. sp.—Sub-opaque, deep black, and only the last joint of antennæ yellowish. Head formed as in *S. tenuicolle*, anteriorly sparsely and finely, posteriorly more strongly and densely punctulate; antennæ slender. Thorax at base a little wider than long, at the sides slightly rounded anteriorly, parallel posteriorly, base feebly sinuate each side, front angles rounded, hind angles rectangular, not densely punctulate, and not grooved, basal margin less thickened than in *S. tenuicolle*. Elytra

with eight rows of coarse punctures, the inner two striæ sub-impressed, interstices hardly convex, impunctate. Length 13.50 mm.; .54 inch.

One specimen from Enterprise; another from the same locality is in the cabinet of Dr. LeConte; lives on dead oak twigs. Of the size of *S. tenuicolle*, but less convex and easily distinguished by the sculpture of the elytra.

31. **Hymenorus dorsalis** Zimm., MS.—Elongate-oval, sub-impressed, above sub-opaque, with sparse, long, sub-erect pubescence, beneath shining, piceous-red, antennæ and legs red, elytra black, broadly red at base. Head strongly and sparsely punctate, angulated each side in front of eyes, which are larger and more approximate than in any other species before me, antennæ stout, two-thirds as long as the body, outer joints more than twice as long as wide, last joint of maxillary palpi with the apical side decidedly longer than the external. Thorax at base almost twice as wide as long, semicircular, finely margined, base feebly lobed in the middle, hind angles rectangular, moderately strongly not densely punctured. Elytra punctate striate, striæ hardly impressed with the punctures finer than those of the thorax and not closely placed, interstices flat, finely and sparsely punctulate; the red color occupies not quite one-third of the length of the elytra.

Tampa and Enterprise, two specimens, beaten from old palmetto leaves. Distinguished from the other sub-opaque species by the larger eyes, by the not dense punctuation of the thorax, by the sculpture of the elytra and by its color.

32. **Isomira valida**, n. sp.—Elongate-oval, convex, piceous, less shining, with moderately dense sericeous pubescence; antennæ, palpi, tibiæ and tarsi dark red. Head densely punctured, eyes very large, coarsely granulated, much less widely separated from each other than in *I. 4-striata*, antennæ slender, more than half the length of the body, second joint not quite half as long as the third, the latter as long as each of the following joints, last joint of maxillary palpi less broadly triangular than in *I. 4-striata*, apical side shorter than the external, inner side straight. Thorax twice as wide as long, on the sides strongly rounded, and strongly narrowed from base to apex, base slightly sinuate each side, finely margined, hind angles rectangular; densely punctate, in front of the scutellum with a short smooth, impressed median line, basal impressions feeble. Elytra at base twice as wide as the thorax, and three and a half times as long, densely, less finely punctulate, punctures forming transverse rugosities, obsoletely striate-punctate, the two inner striæ impressed behind. Epipleuræ of thorax, pro- and mesosternum densely rugosely punctulate, metasternum strongly punctured, posteriorly smooth, shining; abdomen densely, finely punctulate. Length 6.75–7.50 mm.; .27–.30 inch

Enterprise, four specimens, found in May, under old leaves.

Larger and broader than *I. quadristriata*, with the eyes much larger, the thorax wider, more arcuate on the sides, elytra denser and stronger punctate with the striæ on the disc more evident, underside less shining, more densely punctate. The elytra are in fact regularly striate-punctate, but the striæ are not impressed and the fine lines of punctures are confused by the equally strong punctuation of the interstices.

33. **Xylophilus quercicola**, n. sp.—More elongate than any other species before me, having the appearance of a small *Anthicus*. Head, with the eyes, a little wider than the thorax, convex behind, piceous, finely, not densely pubescent, minutely and sparsely punctulate, eyes widely separated, not oblique, antennæ red, longer than head and thorax, with moderately long, soft pubescence, intermediate joints longer than wide, outer joints as long as wide, penultimate joints subtransverse, terminal joint black, larger than the preceding, ovate, acuminate. Thorax as long as wide, at the sides rounded anteriorly, a little narrowed behind, base straight, hind angles obtuse, disc moderately convex with an obsolete impression each side in the middle, without basal impression; sub-opaque, finely pubescent, minutely, sparsely punctulate; color variable, testaceous at base, more or less black in front, or entirely testaceous. Elytra at base almost twice as wide as the thorax, elongate, parallel on the sides; on the disc anteriorly depressed, sub-opaque, alutaceous, moderately strongly, not densely punctate, smooth at apex; whitish pubescent, testaceous, an indefinite circum-scutellar spot, a large spot each side behind the middle, the apex and sometimes the side margins black, the black color of the apex ascends along the suture. The pubescence is sparse on the black and dense on the testaceous parts. Beneath rufous, pubescent, sub-opaque, punctate, abdomen often blackish, impunctate; legs testaceous. Length 1.75 mm.; .07 inch.

Tampa, seven specimens, on oak shrubs, in April. I do not perceive any sexual characters.

34. **Xylophilus ptinoides**, n. sp.—Piceous, sub-opaque, sparsely pubescent. Head, with the eyes, wider than the thorax, immersed in the thorax almost as far as the eyes. neck and hind margin of head, therefore, not visible; front but little convex transversely; finely and densely punctulate, eyes large, oblique; antennæ slender, two-thirds as long as the body, with long, stiff pubescence, pale yellow, third and fourth joint more than twice as long as wide, the outer joints still longer; last joint as long, and a little wider than the preceding, obtusely rounded at tip, infusate. Thorax as long as wide, quadrate, very convex transversely, not rounded on the sides, front margin straight, base rounded, opaque, densely and finely punctured; sparsely whitish pubescent, the margins and lateral vitta each side more densely pubescent, upper surface uneven with some shallow

indefinite impressions, with no distinct basal impression; color piceous, base and apex reddish. Elytra oblong, at base twice as wide as the thorax, parallel at the sides, somewhat shining, coarser and less densely punctured than the thorax; near the base with a reddish, angulated, whitish, pubescent fascia, near the apex with several other whitish pubescent spots, which form two interrupted fasciæ. Beneath piceous; sterna opaque, finely pubescent, densely punctulate; abdomen glabrous, shining, at base coarsely, at tip finely punctulate. Front legs and all the tibiæ pale, intermediate femora infusate at base, hind femora piceous. Length 1.5 mm.; .06 inch.

Enterprise and New Smyrna, two specimens, in which I do not see sexual characters. This species has the appearance of a small *Plinus*, and is distinguished at once from all species, except the *X. ventricosus* Lec., by the form of the head. The latter species has the head still more immersed in the thorax, the eyes touching the front margin of the thorax, but is otherwise quite distinct from *X. ptinoides*.

35. **Glipa hieroglyphica**, n. sp.—Elongate, cuneiform, black, head anteriorly densely covered with yellowish cinereous pubescence, posteriorly more sparsely pubescent, hind margin fringed with cinereous pubescence; antennæ from the fourth joint broadly serrate; maxillary palpi testaceous, upper edge black, last joint very broadly securiform, flat, apical edge not hollowed out. Thorax transverse, at apex produced in the middle, basal lobe rounded; densely punctulate, cinereo-pubescent, with the usual black spots. Scutellum rounded triangular, densely whitish pubescent. Elytra opaque, densely punctured, grayish pubescent; each with a narrowed angulated line, which begins at the scutellum and ends at the side margin a little before the middle, resembling rudely the figure 5 on the left, and on the right elytron the same figure reversed, and with a narrow oblique fascia at the apical third, cinero-pubescent. Beneath densely cinereo-pubescent; anterior femora pale testaceous, black at tip, anal style long, carinate above, at the tip emarginate, and densely cinereo-pubescent, fifth ventral segment longitudinally excavated. Length 10.5–11.25 mm.; .42–.45 inch.

Enterprise, four specimens in May. In one specimen the penultimate joint of the maxillary palpi is fringed internally with dense whitish pubescence; this is probably the ♂. I have not been able to compare this species with *G. hilaris*, which, according to the description given by Dr. LeConte (Proc. Ac. Nat. Sc., Phil., 1862, p. 46), has the last joint of the maxillary palpi hollowed out, and which has different markings on the elytra.*

*In four specimens of *G. hilaris* examined the 5th ventral segment is not longitudinally impressed. LEC.



Schwarz, Eugene Amandus. 1878. "The Coleoptera of Florida." *Proceedings of the American Philosophical Society held at Philadelphia for promoting useful knowledge* 17(101), 353–372.

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