

other nemas.

Cross sections showed the presence of six longitudinal chords, having four longitudinal series of cells; of these chords the lateral ones are the largest, the ventral and dorsal ones of about the same diameter, and the submedial also of

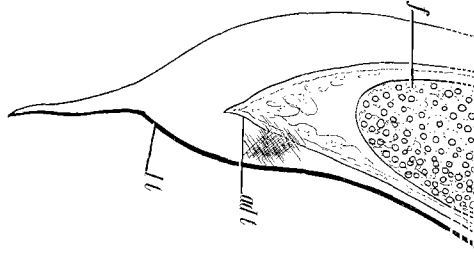


Fig. 7. *Paramermis canadensis* n. sp. Tail end of a larva in moulting stage; ad t, tail end of the adult after the moult; f, fat body; l t, larval tail with the horn-like caudal processus somewhat set off.

about equal size and rather well developed. The so-called fat body consists apparently of cells which in some instances may surround an axial cavity. Numerous somewhat opaque bodies, perhaps nuclei, could be seen between the "globules" of nerve material.

No trace of an excretory pore could be found.

NEW COLEOPTERA FROM SOUTHERN FLORIDA WITH NOTES ON OTHER INTERESTING SPECIES

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During the winter of 1922-23 I made a trip to South America and did not reach my winter home at Dunedin, Fla., until March 14. From then until April 14 I was in the field about that region every day and secured a number of Coleoptera new to my collection, a few of which are new to science. These and other undescribed or scarce species from different points in Southern Florida, some of which have been on hand for several years, are treated in the following pages.¹

***Tachys subpunctatus* sp. nov.**

Elongate oval, subdepressed. Uniform pale reddish-brown, strongly shining; antennae dusky towards tips; legs pale brownish-yellow. Head not inserted in thorax to eyes, as wide across them as front margin of thorax. Antennae less than half the length of body. Thorax subquadrate, sides broadly rounded, subparallel at extreme base, which is distinctly narrower than apex; median line subobsolete; basal transverse impression not tripunctate. Elytra elongate-oval, scarcely wider at base than thorax at middle, sides subparallel or just visibly curved from base to behind middle, thence gradually converging to the rounded tips; disk with sutural stria entire, not punctate, its short recurved portion parallel to suture; remaining striae obsolete, but, when viewed from the side in a certain light, represented by rows of rather large, close-set vague punctures. Dorsal punctures small, the first in front of middle, the second at apical third. Length 2.1 mm.

Described from a single specimen taken April 2nd from the mucky margin of a small pond near Dunedin. Belongs to Group IV of Hayward, and allied to

¹In the notes that follow the sequence and nomenclature is that of Leng's "Catalogue of Coleoptera."

both *incurvis* and *dolosus* but paler and more shining than either, and differing in having the base of pronotum distinctly narrower than apex and in the rows of elytral punctures which are almost invisible from above.

Agabus johannis Fall.—This, the only *Agabus* known from Florida, occurs quite frequently in the stagnant water of ditches and the borders of small lakes near Dunedin. It was formerly recorded by me² as *Agabus semivittatus* Lec., with which species it was confused by Sharp and other authorities on Dytiscidae. Mr. Fall, in his recent paper³, has separated the two, his types of *johannis* from the British Museum, having been originally taken at St. John's Bluff, Fla.

Arthrolips splendens (Sz.)—Three specimens of this handsome little Corylophid were beaten from the foliage of a recently felled pine, one mile north of Dunedin on April 8. The types of Schwarz⁴ were from Tampa and it has since been taken at Key West and Biscayne Bay. In the original description the length, by an error of the printer, was given as 7 mm., whereas it should be .7—1. mm.

Photinus collustrans Lec.—In his original description⁵ of this species Leconte states that the prothorax is "sparsely punctulate," and he gives the length of his type males at 7.2 mm. In a male at hand from Istokpoga the apical fuscous portion, which occupies nearly one-third the length of pronotum, is densely punctate and the length is 10 mm. It was described from Tampa and Enterprise, but Schwarz (MS.) mentions it from several other localities in Florida. Known elsewhere only from Texas.

Photuris pennsylvanica lineaticollis Dej.?—Following his description of *Photuris pennsylvanica* (DeG.) Leconte says:⁶ "In southern specimens the pale discoidal vitta of elytra is occasionally wanting; these are *Photuris lineaticollis* of DeJean's Catalogue." I have at hand two examples of *Photuris* taken at Eustis, Fla., April 6, which evidently belong here, but they differ from *pennsylvanica* (DeG.) not only in having the median discoidal stripe wanting, but in the disk of elytra being a much darker brown, and the antennae wholly piceous-brown, whereas in *pennsylvanica* each joint is pale at base and tip. The length is 14 mm., or longer than the average *pennsylvanica*. If the differences mentioned hold good in all southern specimens, they should be regarded as a distinct variety if not species. In his later "Synopsis of the Lampyridae"⁷ Leconte placed them as var. "a" of *pennsylvanica*, but both Henshaw and Leng in their Check List and Catalogue, have ignored the form.

Tytthonyx furtiva sp. nov.

Elongate, slender. Dull fuscous-black, thickly clothed with short appressed grayish hairs. Head, except occiput, scutellum, prosternum and side margins of meso- and metasterna, yellow; thorax yellow with a broad, dusky line each side of the deeply impressed median line. Antennae three-fourths the length of body, strongly serrate, second joint one-third the length of third, the latter much shorter than fourth. Thorax one-half wider than long, front margin truncate, hind one broadly rounded into the sides which are straight and parallel from middle to the rectangular front angles; disk impunctate but with a distinct circu-

2.—Bull. Amer. Mus. Nat. Hist., XLI, 1919, 314.

3.—Review of N. Amer. species of *Agabus*, 1922, 10.

4.—Proc. Amer. Phil. Soc. XVII, 1878, 357.

5.—Proc. Amer. Phil. Soc., 1878, 407.

6.—Proc. Acad. Nat. Sci. Phil., 1851, 337.

7.—Trans. Amer. Ent. Soc. IX, 1881, 37.

lar impression on the outer side of each of the dark median lines. Scutellum heart-shaped, its apex with an obtuse median notch. Elytra reaching second ventral, their tips separately rounded; disk of each with two vague carinae, the intervals finely rugosely granulate. Length 4.8 mm.

Dunedin, April 11; taken by beating in Skinner's hammock. Differs from our other three known species by the narrower pronotum with rectangular front angles and the yellow heart-shaped scutellum.

Melanotus clandestinus (Er.).—Dunedin, April 11, one specimen taken while beating in the same hammock. Leng does not include Florida in his distributional notes, but it has been recorded⁸ by Wickham from St. Petersburg and Tampa.

Nematodes atropos (Say).—Two specimens taken by beating dead limbs in the same hammock, March 23-29. Schwarz (Ms.) mentions it from Crescent City. No other Florida record.

Melanophila notata opaca Lec.—I cannot agree with Leng who, in his Catalogue, makes this an absolute synonym of *notata*. Aside from color, it being always devoid of spots, it is a large broader form with elytra more coarsely granulate-punctate and hind angles of thorax with a distinct short fine carina, mentioned by Leconte in his original description, but never present in typical *notata*. It is more likely to prove a distinct species than a synonym, but is best held at present, as Henshaw placed it, as a variety of *notata*. Four examples of this var. *opaca* are at hand, three from Dunedin and one from Ormond.

Actenodes acornis (Say).—A single specimen of this Buprestid was taken March 26 while beating in Skinner's hammock, northeast of Dunedin. Another is in my collection from Ormond. The only record of its occurrence in the State is that of Castle and Laurent⁹ at Jacksonville.

Scirtes ovalis sp. nov.

Broadly oval, subdepressed. Above a uniform rather pale reddish-brown, thickly clothed with moderately long appressed yellowish hairs, under surface slightly darker, the abdomen and femora tinged with fuscous. Head beneath without a suborbital ridge. Antennae slender, the second and third joints subequal in length, the second the stouter, the two united scarcely equal to fourth. Entire upper surface finely, densely aciculate-punctate, each puncture bearing a hair; under surface and femora similarly punctate, the hairs shorter. Length 3-3.5 mm.

Described from a half dozen specimens taken by H. C. Fall and myself on the ground beneath a sphagnum-like moss growing by the side of a road-side ditch, three miles east of Dunedin. Relatively broader, more depressed and much paler than our northern *tibialis*, the pubescence of upper surface more dense.

Scirtes piceolus sp. nov.

Oblong-oval. Above wholly dark piceous-brown, strongly shining, almost devoid of pubescence; sutural and side margins of elytra narrowly paler; antennae dusky brown, paler at base; under surface dull reddish-brown, irregularly mottled with fuscous, minutely pubescent, the legs somewhat paler. Second and third antennal segments very short, united scarcely equal to fourth. Head and thorax almost impunctate. Elytra densely, finely and shallowly punctate. Length 2.5 mm.

8.—Bull. Buff. Soc. Nat. Sci., IX, 1909, 401.

9.—Ent. News, VIII, 1897, 8.

Dunedin, February 22. Taken by sweeping herbage about the border of Jerry Lake. More oblong and less convex than *orbiculatus*, the punctures of elytra much more dense and devoid of hairs, except a few scattered ones on humeri and near hind angles of thorax.

***Languria erythrocephalus* sp. nov.**

Elongate, subcylindrical. Head, thorax, scutellum and under surface red, minutely alutaceous, finely and very sparsely punctate; apex of last ventral black; elytra bluish-black, in some specimens with a reddish tinge along the suture; femora black, reddish at base; antennae, tibiae and tarsi piceous. Antennae more slender than in allied species, club 5-jointed, joint 7 but slightly wider than 6, 8-10 gradually increasing in width, 11 oval, narrower than 10. Thorax nearly two-thirds longer than wide, sides feebly sinuate at basal fourth, thence almost straight to apex. Elytra not wider at base than thorax; sides regularly and very gradually tapering to apex; striae not impressed, marked with close-set punctures, these obsolete near apex; intervals smooth. Length 8-10.5 mm.

Described from eight specimens taken March 2, 1922 by sweeping weeds along the margins of a drainage ditch at Moore Haven. Resembles *L. marginipennis* Sz. but the latter has the head black, more coarsely punctate, joints of antennal club much wider and epipleura in great part red.

***Hyperaspis nigropennis* sp. nov.**

Broadly oval, strongly convex. Black, shining; side margins of thorax above and beneath rather broadly reddish-yellow; elytra without spots; front femora except under side, tips of middle and hind ones and all the tibiae and tarsi reddish-brown. Entire upper surface finely evenly, rather sparsely punctate. Elytra widest at middle, their tips broadly and bluntly rounded. Length 3 mm.

Dunedin, March 28. Taken while beating in a dense moist hammock. The immaculate black elytra, taken in connection with the broad reddish-yellow side margins of thorax, easily distinguish this from all our known species.

***Hyperaspidius flavocephalus* sp. nov.**

Oblong-oval, convex. Head, thorax, except at base, narrow humeral margin of elytra and front and middle legs, clear yellow; basal margin of thorax, except the angles, and elytra, except humeral margin, shining black; meso- and metapleura and basal ventral segments piceous-black; hind legs and last two ventrals reddish-brown. Head flat, wider than long, almost vertical, minutely and sparsely punctate. Thorax more than twice as wide as long, side margins feebly curved; disk very finely, shallowly and rather sparsely punctate. Elytra conjointly oblong-oval, at base slightly narrower than middle of thorax; umbones feeble, disk sparsely, minutely aciculate-punctate. Under surface densely, rather finely, rugosely punctate, each puncture bearing a fine gray appressed hair. Pygidium in great part exposed, finely and densely granulate-punctate. Length 2 mm.

Dunedin, March 27. Taken by sweeping low herbage along the bay front.

Delphastus pallidus (Lec.).—This minute pale coccinellid occurs sparingly about Dunedin, November-April, hibernating in bunches of Spanish moss, and in spring found on oak and foliage of low herbs near ponds. It was described¹⁰ from a unique taken at Sand Point, Fla., and has not since been recorded.

10.—Proc. Amer. Phil. Soc., 1878, 400.

Zophobas morio (Fabr.)—A number of specimens of this large Tenebriod have been recently sent me from Chokoloskee, where they were taken beneath a house close to the beach. Schwarz, in his "Coleoptera of Florida," states: "Occurrence very doubtful, mentioned by Dr. Horn on specimens from the Bahamas." In his later MS. notes he mentions its occurrence at Key West, where it was taken by Morrison.

Microzogus insolens Fall.—This minute Ptinid, described ¹¹ from Key West and Biscayne Bay, and hitherto known only from those two stations, occurs quite frequently near Dunedin, both on the foliage of the buttonwood, *Conocarpus erecta* L., a sub-maritime shrub, and on ferns in dense hammocks.

Catorama sectans Lec.—One specimen taken near Dunedin, January 21, from beneath the bark of a recently felled pine. Known hitherto only from Texas.

Cryptorama minutum (Lec.)—Taken at Everglade, March 14, by beating a species of *Crataegus*. Described ¹² from Enterprise, Fla., and recorded from no other station in the State, though known also from Texas and Oklahoma.

Ptilinus ruficornis (Say).—A single specimen was beaten from a mass of dead vines near Dunedin, on March 28. Not before recorded south of West Virginia. The four species of Ptinidae above mentioned were identified for me by H. C. Fall.

Bostrichus bicornis (Web.)—Three specimens were taken at Dunedin March 27 by beating the foliage of the wax-myrtle, *Cerothamnus ceriferus* L. Known from the State heretofore only from Enterprise and St. Augustine.

Leptostylus arcuatus Lec.—On April 9 a half-dozen specimens of this Lamiinid were beaten from the leaves of some recently felled pines one mile north of Dunedin. It was described ¹³ from a single specimen taken at Tampa and I can find no definite locality record of its occurrence elsewhere, although Casey's *L. lecontei* ¹⁴ from Ft. Worth, Fla. is probably a synonym. Leconte gave the length at 8 mm., but it ranges from 7.5 mm., male, to 11 mm., female.

Astylopsis (Leptostylus) guttata (Say).—This species was beaten in small numbers from the same trees as was *L. arcuatus*. It has not before been recorded south of South Carolina.

Xanthonia villosula Melsh.—A single specimen was taken at Dunedin, March 18, by beating wax-myrtle. Not before recorded south of Georgia.

Fidia longipes (Melsh.)—A specimen is at hand taken June 21 by P. W. Fattig at Gainesville. The first record for the State.

Metachroma luridum (Oliv.)—Known heretofore only from South Carolina and Georgia. Specimens are at hand from Eustis, April 7, beaten from oak, and Dunedin, March 29-July 1, on the latter date at porch light.

***Metachroma robusta* sp. nov.**

Oblong-oval, robust, convex. Color a nearly uniform pale brownish-yellow, strongly shining, the thorax slightly darker than elytra; joints 7-11 of antennae, apical third of tibiae and tarsi fuscous. Head and thorax minutely alutaceous, very finely and sparsely, almost invisibly punctate, the clypeo-

11.—Trans. Amer. Ent. Soc., XXXI, 1905, 135.

12.—Proc. Amer. Phil. Soc., XVII, 1878, 409.

13.—Proc. Amer. Phil. Soc., 1878, 414.

14.—Mem., IV, 1913, 305.

frontal suture wholly wanting. Thorax transverse, convex, nearly twice as wide as long, its side margins very narrow, almost straight. Elytra slightly wider and about two and a half times longer than thorax; disk convex, striae unimpressed but with regular rows of relatively coarse punctures, these separated by a distance equal to their own diameters and becoming finer near apex. Abdomen finely and sparsely punctate, each puncture bearing a rather long appressed yellowish hair. Hind femora unarmed. Length 3.5 mm.

Fort Myers, Fla., April 20. Collected by W. T. Davis, New Brighton, Staten Island, N. Y.; type in his collection. Belongs under No. 8 of Horn's Key,¹⁵ but differs from the others there found by its uniform pale color, convex form, regular rows of coarse elytral punctures, etc.

Metachroma strigicolle sp. nov.

Allied to *quercatum* (Fabr.) but smaller and more oblong. Head, elytra, antennae and legs a uniform reddish-brown; thorax and under surface chestnut-brown. Head minutely alutaceous, finely, sparsely punctate, the clypeo-frontal groove evident but fine. Thorax subelliptical, one-half wider than long, sides rounded into base, disk finely rather densely strigose-punctate and with a vague interrupted smooth median line. Elytra not alutaceous; sides parallel from base to apical third, thence broadly rounded to apex; disk with striae not impressed, more coarsely and distinctly punctate than in *quercatum*. Under surface minutely alutaceous, impunctate. Hind femora unarmed. Length 3 mm.

Described from two specimens taken at Dunedin March 21 and April 11, at porch light. The smaller more parallel form, wholly pale antennae and uniform reddish-brown non-alutaceous elytra, with striae punctures distinctly coarser, separate this from *quercatum*.

Hypolampus pilosa Ill.—In his list of Florida Coleoptera, Schwarz includes this from Tampa as "very rare." It has since been taken by others at St. Petersburg and Enterprise. About Dunedin it occurs in small numbers in March and April on weeds and grasses along the margins of ponds and hibernates in bunches of Spanish moss.

Disonycha albida sp. nov.

Rather broadly oval. Body above and beneath a uniform ivory-white; antennae black, the basal joint pale; apical half of tibiae fuscous; tarsi picous, the pulvilli white. Antennae less than half the length of body, very stout for the genus; joints 2-4 gradually increasing in length, the fourth more than twice the length of second and longer than fifth, 5-10 subequal, thickly and finely pubescent with appressed brown hairs and with scattered erect ones, 11 oval, pointed. Upper surface glabrous, impunctate. Thorax more than twice as wide as long, base bisinuate, obtusely emarginate at middle; sides broadly obliquely curved, front angles obtuse, slightly lobate. Elytra not wider at base than thorax, humeri rounded, umbones obsolete. Abdomen and femora rather finely, sparsely, shallowly punctate, minutely pubescent. Length 7.6 mm.

Type in collection of W. T. Davis, taken by him on Big Pine Key, Fla., September 19, 1913. The uniform pale color with stout black antennae easily distinguish it from all other species of the genus.

Mylabris (Bruchus) ochraceicolor Pic.—This is the *Bruchus ochraceus*

Schaeff., described from Brownsville, Texas and known only from that State. His name was preoccupied. Specimens are at hand from Ormond and Long Key, Fla. The one from Long Key was taken from beneath a board on the ocean beach.

Mylabris (Bruchus) obtectus Say.—I can find no definite record of this well known cosmopolitan "bean weevil" from Florida. A number were taken, March 28, from a small sack of beans in my residence.

Mylabris (Bruchus) hibisci (Oliv.)—Not before recorded from Florida. Specimens are at hand from Bassenger and Palmdale, where they were swept from the foliage of *Hibiscus spiralis* Cav., growing along the banks of streams. They differ from Indiana examples in having joints 7--11 of antennae blackish, and only the basal third of hind femora dark.

Mylabris (Bruchus) aequalis Sharp.—A single specimen of this little Bruchid was swept March 26, from low herbage north of Dunedin. It is a Neotropical form, known in the United States hitherto only from Texas.

Zabrotes subnitens Horn.—A number of examples have been taken about Dunedin in early spring by sweeping dwarf huckleberry and other low herbage. One specimen was beaten from Spanish moss at Lakeland and another is at hand from Crawford County, Indiana. Not before recorded from either Florida or Indiana.

THE ODONATA OF THE THUNDER BAY DISTRICT, ONTARIO.

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Since the year 1907 when the writer first visited Nipigon and Fort William, Ont., he has examined a considerable number of dragon flies from Thunder Bay District, comprising several collections, which taken together are believed to include most of the species found in this region; and though doubtless still far from complete, the list of species seems worthy of placing on record.

The collections are as follows:—

(1) Small collections made by the writer at Nipigon and Fort William from August 26 to 30, 1907, August 4 to 10, 1910, and on June 18 and 19, 1913.

(2) A larger collection made by Mr. T. B. Kurata and the writer at Orient Bay, Lake Nipigon, July 12 to 24, 1920.

(3) A considerable number of specimens collected by Mr. N. K. Bigelow of the Ontario Fisheries Research party during the seasons of 1921, 1922 and 1923 at Orient bay and a few other stations on Lake Nipigon.

(4) Nymphs and a few adults collected by other members of the Ontario Fisheries Research party at Lake Nipigon, 1921—1923, including specimens from the stomachs of sturgeon, suckers and wild duck (American Golden-eye).

(5) A large number of specimens in the collection of the Carnegie Museum, Pittsburgh, collected at Orient Bay, Ombabika Bay (north end of Lake Nipigon), Longuelac (C.N.R., on Long Lake) and other localities mainly by Mrs. G. K. Jennings.

The Thunder Bay District lies within the Canadian Zone and is still largely covered with virgin forests, chiefly of the subarctic coniferous type. Like other portions of the great Archaean region of Canada it abounds with