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A NEW GENUS AND NEW SPECIES OF AMERICAN LAMPYRINI, AND OTHER NOTES (COLEOPTERA: LAMPYRIDAE, CANTHARIDAE)

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(Plate I)

Three *Lampyridae* and a mid-western species of *Podabrus* are described as new in this contribution. The *Lampyridae* are from the collection of Ohio State University and were received through the courtesy of Dr. J. N. Knull. The author is indebted for the types of the new *Podabrus* to Dr. F. A. Fenton, of Oklahoma Agricultural and Mechanical College, to Dr. Henry Dietrich, of Cornell University, and to Dr. W. R. Enns, of the University of Missouri.

LAMPYRIDAE

Ellychnia bivulnerus new species (Plate I, fig. 1.)

Dorsal surface black, the central convex part of pronotum orange-red in more than basal half, the red area broadly divided medially into two large longitudinal spots, these not attaining the base. Ventral surface black, inner third of hypomera orange-red, sternite 8 of male with a small whitish spot each side near the lateral margin. Length 7.5–8.5 mm.

External structure, vestiture, and sculpture are as in *Ellychnia flavicollis* Lec., differing only in the slightly stouter antennae, in the minute secondary pubescence covering more of the elytral surface and lacking only along the base, and in the ventral surface of the abdomen being smoother and more finely punctate. The ventral surface of the median lobe of the aedeagus is

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entirely corneous, excepting the subapical orifice, the ventro-basal sclerotized processes being represented by lateral enlargements in the usual position of the processes.

Holotype.—Male; Patagonia Mts., Arizona, July 20, 1940, collected by D. J. and J. N. Knull; located in Ohio State University collection.

Paratypes.—ARIZONA: Huachuca Mts., July 20, three males; Patagonia Mts., July 20, one male. Two of the paratypes are in Ohio State University collection, two in collection of author; all were collected by Dr. Knull.

No females of this species have been seen. The whitish lateral spots of sternite 8 have the appearance of being light-producing organs. The resemblance of *Ellychnia bivulnerus* to *Pyropyga fenestralis* Melsh. is rather close, and possibly the two may be found mixed in some collections. The comparatively wide epipleura of *Ellychnia* readily distinguish it from *Pyropyga*.

Micronaspis floridana Green.[1] The allotype of this species has been deposited by Dr. Frank N. Young in the University of Michigan Museum of Zoology, Ann Arbor, Michigan.

With *flavicollis* and *simplex, bivulnerus* constitutes a division of *Ellychnia* characterized by the longer and finer suberect elytral pubescence, and by the more conspicuous minute secondary pubescence covering most of the elytral surface. The two complexes now known as *corrusca* and *californica* have the primary elytral pubescence coarser and decumbent, and the secondary pubescence excessively minute and difficult to perceive, and generally confined to the elytral flanks.

Pleotomodes knulli new species

Pronotum dark piceous, the broad explanate borders, and narrowly along the base, pale testaceous yellow; scutellum pale; elytra piceous brown with narrow pale sutural, apical, and lateral borders, the lateral wider, the sutural enveloping the scutellum; antennae dark piceous; ventral surface and legs pale testaceous yellow. Length 7–8 mm.

Very similar to *Pleotomodes needhami* Green,[2] differing as follows. Form a little broader, somewhat attenuate posteriorly. Eyes extremely large, contiguous beneath, individual eye facets isolated, separated by a distance equal to one-fifth or one-sixth of their diameters. Second joint of antennae longer,

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[1] Trans. Amer. Ent. Soc., 1948, LXXIV, p. 63.
[2] Trans. Amer. Ent. Soc., 1948, LXXIV, p. 65.

about twice as wide as long. Pronotum more transverse, three-tenths wider than long, broadly rounded in front; disk more strongly convex, the entire convexity dark piceous; anterior vitreous spots smaller and less evident. Pubescence of upper surface shorter and denser, similar throughout, decumbent, not more erect on elytra.

Holotype.—Male; Dade County, Florida, May 12, 1939, collected by D. J. and J. N. Knull; located in Ohio State University collection.

Paratype.—Male; same data and location as holotype.

Amplifying the distinctions given above, it is noted that in *P. needhami* the form is parallel, not narrowed posteriorly; the eyes are distinctly separated beneath and have their individual facets more convex and densely crowded, being virtually contiguous; and the pronotal piceous spot does not occupy all of the central convex area, and is more or less divided except in front. A very conspicuous difference between the two species is afforded by the longer, sparser, and nearly erect elytral pubescence of *needhami*. The present species is named in honor of Dr. J. N. Knull.

PARAPHAUSIS new genus

MALE.—Body elongate oval, sides subparallel; integuments subgranulate. Head, when retracted, completely covered by the pronotum, its ventral surface rather abruptly declivous (as viewed from below) behind the eyes, the occipital foramen not advancing as far as the transverse rim of the declivity. Eyes not enlarged, widely separated above and beneath. Antennae approximate, short and stout, compact, cylindrical, not compressed; 11-jointed, second joint short, third subequal to the following, terminal joint with a minute flat circular appendix. Clypeus semicircular, the suture distinct. Mandibles very small, nearly straight, distant, subconical, the tips blunt. Maxillary palpi large and stout, compact, tip of fourth joint testaceous and having the appearance of a terminal appendix; labial palpi minute (?).

Pronotum semi-elliptic, anterior angles obliterated, posterior angles rectangular, narrowly rounded; disk without anterior vitreous spots; sides broadly explanate. Hypomera open anteriorly, inner margin not sinuate.

Elytra elongate, not extending to abdominal apex, without discal costae; sides declivous at the humeri, thence narrowly subexplanate; vestiture dual; epipleura obliterated behind the usual wider basal part.

Abdomen with eight visible sternites, without light organs, spiracles dorsal; apical angles of sternites not produced; tergites not visible from below at the sides, except tergite 7 which is slightly wider and considerably longer than its sternite; sternite 8 with a median process, sternite 9 deeply notched, pygidium truncate.

Legs short and stout, compressed; tibiae apparently without spurs; fifth tarsal joint extending for most of its length beyond lobes of fourth; claws simple.

Female unknown.

GENOTYPE: *Paraphausis eximius* new species.

Paraphausis is most nearly related to *Phausis,* from which it differs essentially in the structure of the mandibles and in lacking the two anterior vitreous spots of the pronotum. The mandibles of *Phausis* are well developed, arcuate and decussate, with the tips acute.

Paraphausis eximius new species (Plate I, fig. 2.)

Piceous black, pronotum except explanate sides and broad anterior border, scutellum, maxillae except palpi, underside of prothorax and mesothorax except fuscous borders of the former, pygidium, and abdominal sternites 8 and 9 fulvous. Surface feebly shining, the elytra more opaque; pubescence fine and short, decumbent, rather sparse throughout. Length 4–4.5 mm.

MALE.—Head transverse; eyes prominent, rather small, separated beneath by a distance one-third greater than their length, more distant above, individual facets convex and very narrowly separated. Antennae slightly longer than pronotum, first joint wider than long, second strongly transverse, third triangular, joints 4 to 11 quadrate, subequal, tapering only feebly to apex, terminal appendix testaceous. Terminal joint of maxillary palpi short, about as long as wide, widest at base.

Pronotum one-fifth wider than long, lateral margins subparallel or feebly converging from the hind angles, base very shallowly emarginate in a broad circular arc; fulvous median area shining, sparsely granulate-punctate, subalutaceous each side; sides abruptly reflexed, these and the dusky anterior border densely and coarsely punctate, the punctures circular, interstices irregularly roughened.

Elytra three times as long as pronotum, reaching to abdominal tergite 7, conjointly one-half as wide as long, at middle about one-fourth wider than pronotum; fine surface rugulosity forming dense and shallow punctiform impressions, setigerous punctures of the intervals finely granulate; minute secondary pubescence evenly distributed, lacking along the base.

Abdomen with ventral surface rather closely granulate, intervening surface shining, minutely and densely punctulate; sternite 8 not emarginate, with a blunt subtriangular median process a little longer than wide; sternite 9 with a deep and narrow triangular apical notch.

Holotype.—Male; Huachuca Mts., Arizona, July 20, 1937, collected by D. J. and J. N. Knull; located in Ohio State University collection.

Paratype.—Male; Miller Canyon, Huachuca Mts., Arizona, July 21, collected by H. A. Wenzel; located in Ohio State University collection.

The labial palpi are not clearly visible in either of the two specimens available. In the holotype no trace of labial palpi could be detected. In the paratype there are obscurely visible between the maxillae two minute appendages of which the terminal joint appears to be compressed, and widest at the truncate apex. The partly exposed genitalia are of the type usually found in this part of the lampyrid series. The median lobe extends beyond the lateral lobes, is vertically compressed, and is bluntly rounded at apex. The lateral lobes are arcuately narrowed to apex, each terminating in a small and abruptly limited subglobular knob.

CANTHARIDAE

Podabrus infumatus new species (Plate I, fig. 3.)

Pale fulvous, antennae except base of first joint, tips of palpi, femora at apex, tibiae, and tarsi black; disk of elytra more or less dilute fuscous in the male, black in the female with the base and margins pale, the sutural narrowly, the lateral pale margin expanding basally to include the humeri; ventral surface of abdomen pale or somewhat dusky medially, largely dark in the female. Length 10–13.5 mm.

MALE.—Eyes moderately large, head one-fifth wider than pronotum, shining, without alutaceous sculpture, densely and finely punctate posteriorly; epicranium beneath similarly but less densely punctate, nearly smooth in front and medially. Antennae slender, two-thirds as long as the body, vestiture unmodified, second joint three-fourths as long as third, median joints about three times as long as wide.

Pronotum one-fourth wider than long, widest at middle, sides subparallel, anterior angles broadly rounded, hind angles subrectangular, not prominent (dentiform in paratype); surface shining, without alutaceous sculpture, very sparsely and finely punctate, the punctures coarser and denser anteriorly and on the rather prominent basal callosities, median line feebly indicated; sides rather broadly explanate, reflexed in basal third, the hind angles strongly concave.

Elytra finely and densely rugulose, smoother at base; pubescence moderately dense, short, much inclined, fulvous.

Abdomen feebly shining, minute secondary pubescence dense throughout; sternite 7 not membranous medially, apex of sternite 8 broadly emarginate in a circular arc.

Legs long and slender; vestiture of femora short and decumbent, of tibiae longer and more erect, somewhat bristling on front and middle tibiae; underside of front femora near apex of trochanter with a denser patch of longer erect hairs having their tips curved; anterior tibiae straight, not broader apically; metacoxae not sexually modified; claws acutely toothed, the protarsal more narrowly cleft and with the tooth longer. Dorsal plate of aedeagus glabrous above, beneath with long erect hairs throughout, these extending posteriorly in the form of an apical fringe which is interrupted only at the bottom of the somewhat variable emargination.

FEMALE.—Differs from the male in having the eyes smaller, the head not as wide as the pronotum; the antennae shorter, one-half as long as the body, with the second joint only slightly shorter than the third; elytral pubescence darker on the disk, fulvous on the pale margins; abdominal sternite 8 with a very small triangular apical notch; vestiture of legs unmodified, shorter and more inclined on the tibiae; claws similar throughout, widely cleft, the tooth blunt and one-half as long as the apical part.

Holotype.—Male; La Flore County, Oklahoma, April 30, 1934, collected by C. A. Sooter; located in Cornell University collection, type number 2479.

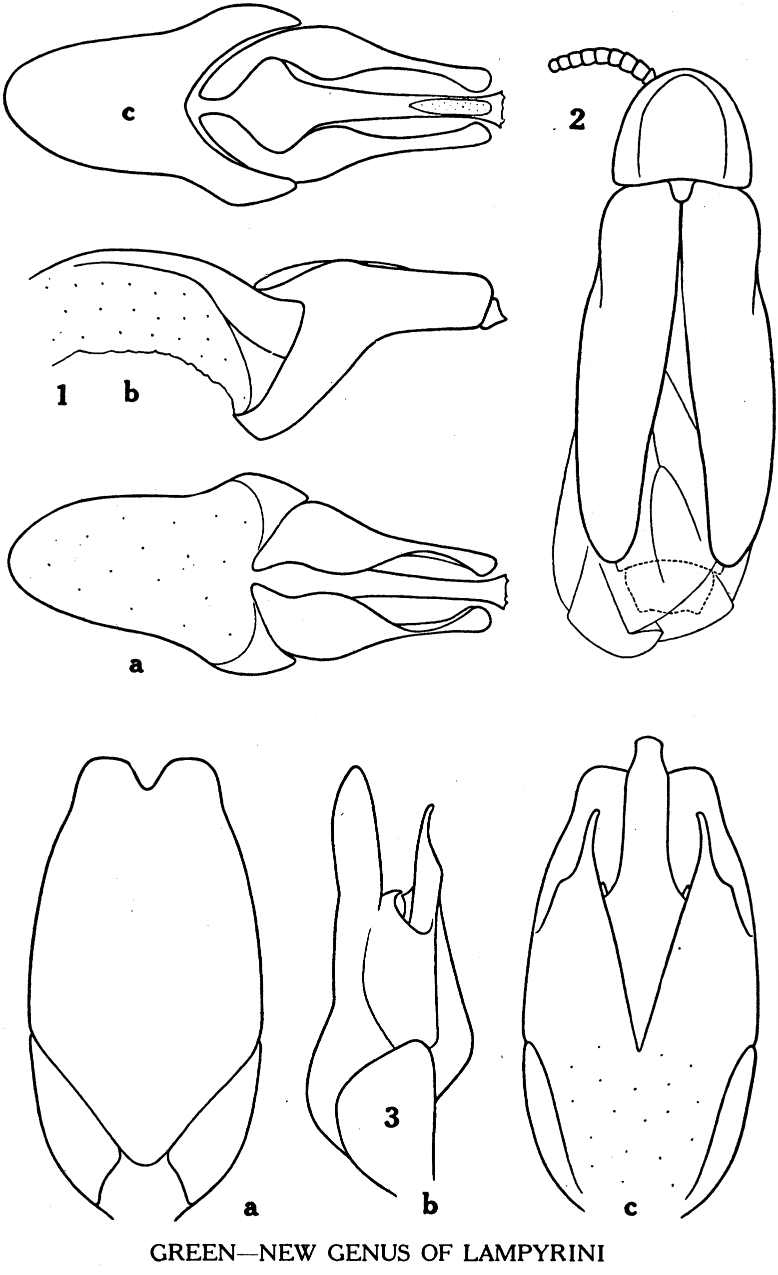
Allotype.—Female; Gravois Mills, Missouri, June 11, 1939, collected by W. R. Enns; located in author's collection.

Paratype.—Male; Spavinaw, Oklahoma, May 6, 1934, collected by A. E. Pritchard; located in author's collection.

The normal color of the elytra of this species is perhaps not adequately indicated by the material at hand. In the holotype the elytra are almost entirely fulvous, only faintly darker toward apex. In the male paratype the elytral infuscation is much more evident, extending from near apex two-thirds or more toward base, but not attaining either the lateral or sutural margins. The elytra of the female allotype, as described in the first paragraph, are colored very nearly as in *Podabrus falli,* near which species *infumatus* should stand in our list. The former differs from *infumatus* in its entirely pale legs and antennae, and in the male genitalia.

EXPLANATION OF FIGURES

The letters a, b, and c signify, respectively, dorsal, lateral, and ventral aspects. Fig. 1.—*Ellychnia bivulnerus* new species, male genitalia. Patagonia Mts., Arizona, VII–20–40, D. J. and J. N. Knull. Fig. 2.—*Paraphausis eximius* new species. Huachuca Mts., Arizona, VII–20–37, D. J. and J. N. Knull. Fig. 3.—*Podabrus infumatus* new species, male genitalia. La Flore County, Oklahoma, IV–30–34, C. A. Sooter.



GREEN—NEW GENUS OF LAMPYRINI