

TAXONOMIC NOTES ON SOME MEXICAN AND CENTRAL AMERICAN ELAPHIDIONINE CERAMBYCIDAE (COLEOPTERA)

By E. GORTON LINSLEY¹

During the past seventy-five years, the Elaphidionini of the United States and Canada have become much better known than they were at the time when the Mexican and Central American species were last reviewed (Bates, 1880, 1885). In addition, considerable progress has been made in attempting to understand their generic relationships. This paper is intended to present the result of a review of the described Mexican and Central American species in the light of these developments and to present a revised classification of the genera now known to occur in the region. No attempt has been made to include the West Indian fauna nor to integrate undescribed species, although these have been taken into account where feasible, in testing the validity of concepts.

KEY TO THE MEXICAN AND CENTRAL AMERICAN GENERA OF ELAPHIDIONINI

1. Prosternum with intercoxal process arched, arcuately declivous posteriorly 2
- Prosternum with intercoxal process nearly plane, truncate or rounded behind, abruptly and vertically or concavely declivous; antennal spines usually very long, some of the segments usually bispinose, spine of third segment nearly always much longer than second segment *Elaphidion*
- 2(1). Elytral apices each prominently bispinose, the outer spine usually longer, or truncate and unispinose with the spine long, external; or, some of the outer antennal segments bispinose 3
- Elytral apices without apical spines or unispinose with the spine short, sutural; antennal segments unispinose or unarmed 4
- 3(2). Antennal spines moderate, usually gradually decreasing in length from third segment; episterna of metathorax always narrow and parallel-sided, or nearly so; size small to moderate *Elaphidionoides*
- Antennal spines prominent, often long, some of the segments usually bispinose; episterna of metathorax often broad in front and distinctly narrowed behind; form large,

¹ University of California, Berkeley.

- robust *Enaphalodes*
- 4(2). Metathorax with episterna narrow and parallel-sided, or nearly so 5
- Metathorax with episterna broad in front, distinctly narrowed behind; form large, robust *Eustromula*
- 5(4). Pronotum with a median polished vitta, or antennae with spines on the third to seventh or eighth segments 6
- Pronotum without a median polished vitta, or antennae, at most, with spines on the third to fifth or sixth segments 7
- 6(5). Labial palpi slender, maxillary palpi expanded, securiform; antennae with third to fifth segments spinose, sixth spiculate *Poecilomallus*
- Labial and maxillary palpi similar or the latter only slightly expanded; antennal spines various *Anelaphus*
- 7(5). Antennae and legs bristling with long flying hairs; elytra without pubescent fasciae; antennae with spine of third segment prominent *Anopliomorpha*
- Antennae and legs without long flying hairs; elytra with or without pubescent fasciae; antennae with spine of third segment usually short or lacking *Peranoplium*

Genus *Elaphidion* Serville

Elaphidion Serville, 1834, Ann. Soc. Ent. France 3:66; Lacordaire, 1869, Genera Coléoptères 8:300; Bates, 1880, Biologia Centrali-Americana, Coleoptera 5:24.

This generic name is used in the restricted sense for species in which the opposing faces of the pro- and mesosternum are vertical or concave. The antennal spines are usually very long and the posterior femora are usually but not always spined. In addition to *Elaphidion irroratum* (Linnaeus) and *E. mimeticum* Schaeffer, the following species should apparently be assigned here.

Elaphidion laeve White

Elaphidion laeve White, 1853, Catal. Coleopt. British Mus. 7:102. *Hypermallus laevis*, Bates, 1880, Biologia Centrali-Americana, Coleoptera 5:26.

This species has the form and facies of *Elaphidion* and the prosternum is truncate behind, the mesosternum truncate and subvertical in front, the antennal spines are heavy on the third, fourth, and fifth segments, and the fifth to ninth or tenth segments are bispinose, a combination of characters that would exclude it from

Elaphidionoides (*Hypermallus* Bates). The type, a female, has the antennae about as long as the body, perhaps a little longer, with the eleventh segment not longer than the tenth. The femora are unarmed and the elytral apices are bispinose with the outer spine longer. The integument is dark reddish-brown and subglabrous, but apparently the specimen is badly rubbed or denuded, since a few hairs are evident near the elytral apices. The length is 14 mm.

Elaphidion scabricolle (Bates)

Hypermallus scabricollis Bates, 1872, Trans. Ent. Soc. London, 1872:175.

The generic characters of this species are anomalous, but the truncate pro- and mesosternal processes would appear to exclude it from *Elaphidionoides*, which it suggests in facies because of the cylindrical pronotum which is much narrower than the elytra, the pubescent pattern which consists of small tawny patches on the head, pronotum and base of elytra and small white flecks over the remainder of the elytra, the moderate antennal spines which are present only on segments three to six, none being bispinose, the unarmed femora, and the bidentate elytral apices in which the outer angle, at best, is subspiniform.

The type is a female from Chontales, Nicaragua. The integument is reddish-brown, shining, the pronotum coarsely alveolately and subconfluently punctate except for a median longitudinal smooth vitta; the elytra are coarsely, closely punctate at base, the punctures becoming finer beyond middle and disappearing before apex. The antennae (♀) reach to about the apical one-fourth of the elytra, the eleventh segment being but little longer than the tenth.

Elaphidion glabriusculum (Bates)

Hypermallus glabriusculus Bates, 1885, Biologia Centrali-Americana, Coleoptera 5:251.

Like the preceding, this species exhibits anomalous generic characters and might be assigned either to *Elaphidion* or *Elaphidionoides*, depending upon how much weight is given to the truncate, vertical or concave, intercoxal processes of the pro- and mesosterna, and the more prominent spine of the third antennal segment, which is much longer than that of the fourth segment. On these grounds, I have placed it in *Elaphidion*.

In coloration, the integument is reddish-brown, with a few obscure flecks of yellow or tawny pubescence on the pronotum and a few white flecks on elytra. The antennae are slightly longer than

the body in the male with the eleventh segment distinctly longer than the tenth, attaining apical one-fifth of elytra in the female, the eleventh segment scarcely longer than the tenth. The pronotum is coarsely but not alveolately punctate, with a smooth median vitta. The elytra are coarsely, densely punctate at base, the punctures becoming finer and sparser beyond middle, and disappearing or evanescent toward apex, the pubescence is coarse, short, subdepressed, not obscuring the surface except for the widely scattered flecks of appressed white tomentum, and the apices are truncate with the inner angle subacute, the outer angle spiniform. The femora are unarmed. The length varies from 10–13 mm. in the type series from Bugaba, Panama, 800–1500 ft. elevation (Champion).

Genus *Elaphidionoides* Linsley

Elaphidionoides Linsley, 1957, Canadian Ent. 89:283.

Hypermallus, Bates (not Lacordaire, 1869), 1879, Biologia Centrali-Americana, Coleoptera 5:25; Casey, 1912, Mem. Coleoptera 3:292.

This genus is very similar to *Elaphidion* but differs by having the intercoxal process of the prosternum arched and arcuately declivous behind.

Elaphidionoides gibbulus (Bates)

Hypermallus gibbulus Bates, 1880, Biologia Centrali-Americana, Coleoptera 5:25.

Elaphidion arizonense Casey, 1892, Ann. New York Acad. Sci. 6:28.

Hypermallus arizonensis, Casey, 1912, Memoirs Coleoptera 3:299. (New Synonymy)

In this species the elytral apices are always emarginate but the development of the sutural and external spines varies considerably. In some cases the apices are prominently bispinose, in other cases little more than bidentate and frequently the external angle is scarcely more than truncate. Such individuals may run with difficulty to *Elaphidionoides* in the above key but nevertheless the species appears to be best assigned to that genus.

Elaphidionoides lanuginosus (Bates)

Hypermallus lanuginosus Bates, 1885, Biologia Centrali-Americana, Coleoptera 5:250.

Small, cylindrical, rufo-testaceous, irregularly clothed with rather long, appressed, dirty yellowish pubescence. Antennae

about as long as body in the male, nearly attaining elytral apices in the female, spine of third segment much longer than that of fourth, fifth segment minutely spiculate. Pronotum cylindrical, about as long as broad, disk with a median longitudinal smooth area, broad and extending from base to apex in female, short and more or less limited to area behind middle in male. Elytra coarsely punctate, basal punctures mostly separated by one diameter or less; apices truncate with a stout external spine. Femora unarmed.

This species differs from other *Elaphidionoides* in the greater proportional development of the spine at the apex of the third antennal segment.

Genus *Enaphalodes* Haldeman

Enaphalodes Haldeman, 1847, Proc. Acad. Nat. Sci. Philadelphia 3:151; Linsley, 1957, Canadian Ent. 89:283.

Romaleum White, 1855, Catal. Coleoptera Brit. Mus. 8:309; Bates, 1880, Biologia Centrali-Americana, Coleoptera 5:23.

Hypermallus Lacordaire, 1869, Genera Coléoptères 8:302.

Thersalus Pascoe, 1886, Jour. Ent. 2:372.

Enaphalodes is related to *Elaphidionoides*, but the included species are larger and more robust and usually have more prominent antennal spines, the prosternum wider in front, rather than subparallel, and in some species the two sexes exhibit pronounced differences in pronotal punctation and sculpturing. Several species are known to occur in Mexico or Central America, of which the following call for special mention.

Enaphalodes decipiens (Bates)

Hypermallus decipiens Bates, 1885, Biologia Centrali-Americana, Coleoptera 5:248.

This species is closely related to *E. atomarium* but apparently distinct. The type specimen, a male from Pasco del Macho, Mexico, is a little smaller (length 22 mm.) than the average male of *atomarium*, and has smaller, less acute antennal tubercles and antennae which exceed the elytral apices by only two segments.

Enaphalodes coronatum (White)

Elaphidion coronatum White, 1853, Catal. Coleoptera Brit. Mus. 7:100; Bates, 1880, Biologia Centrali-Americana, Coleoptera 5:24, pl. 3, fig. 12.

E. coronatum has somewhat anomalous generic characters but nevertheless the arcuately declivous prosternal process excludes it

from *Elaphidion* as presently defined, and its robust form and well developed antennal spines suggest assignment of the species to *Enaphalodes* rather than *Elaphidionoides*. In coloration it is not unlike *Enaphalodes senex* (Bates) and *E. taeniatum* (LeConte). These last two were synonymized by Schaeffer (1908), and this synonymy is quite probably correct, although the type of the former differs slightly from Texan examples of *taeniatum* in the pattern of tawny flecks on the pronotum.

Genus *Poecilomallus* Bates

Poecilomallus Bates, 1892, Trans. Ent. Soc. London, 1892:151.

Integument shining with scattered long, coarse, erect hairs. Labial palpi slender, maxillary palpi greatly expanded, securiform. Antennae with apical spines on third to fifth segments, sixth segment spiculate, sparsely ciliate internally. Pronotum longer than broad, sides rounded, disk with a median polished callous and a pair of oval tubercles on each side; prosternum with intercoxal process arched, arcuately declivous posteriorly; intermediate coxal cavities closed externally; episterna of metathorax very narrow, attenuated anteriorly. Elytra with apices slightly emarginate, sutural angle feebly dentiform, outer angle narrowly rounded.

Poecilomallus palpalis Bates

Poecilomallus palpalis Bates, 1892, Trans. Ent. Soc. London, 1872: 151, pl. 5, fig. 6.

Head and thorax, basal half of elytra, and a transverse band before apex densely clothed with appressed pale pubescence. Pronotum minutely punctate and densely pubescent except for discal callouses. Elytra rather coarsely punctate near base where most of the punctures are separated by a diameter or less, the punctures becoming smaller at middle and disappearing toward apex, pubescence short, suberect, not dense, with an intermixture of very long erect hairs. Length 11 mm.

Type locality: Temax, N. Yucatan, Mexico.

Genus *Anelaphus* Linsley

Anelaphus Linsley, 1936, Ann. Soc. Amer. 29:464.

At least five species of *Anelaphus* have been recorded from Mexico previously. To these should be added the following Mexican or Central American species which were assigned to *Hypermallus* by Bates.

Anelaphus daedaleus (Bates)

Hypermallus daedalus Bates, 1874, Trans. Ent. Soc. London, 1874:219.

Chestnut-brown, the antennae and legs reddish-brown; pronotum with patches of yellowish tomentum on each side of disk, each elytron with a pair of oblique irregular streaks of ashy-yellow tomentum. Antennae a little longer than the body in the male with third to sixth segments spinose at apex, the seventh minutely spiculate, eleventh segment distinctly longer than tenth, nearly as long as body in female with the third to seventh spinose at apex, the eighth spiculate, eleventh segment not longer than tenth. Pronotum coarsely densely punctate, with a smooth median vitta over most of basal half of mid-line. Elytra coarsely and somewhat rugosely punctate at base, especially on disk, the punctures becoming a little smaller posteriorly; apices subtruncate, inner angle feebly dentiform. Length 12 mm.

Type locality: Chontales, Nicaragua. I have also examined a male from Los Cañas, Costa Rica.

Anelaphus jansoni, n. sp.

Male: Form moderately robust. Integument dark reddish-brown, clothed with short, depressed hairs and with condensed patches of appressed white pubescence. Head moderately finely, densely punctate behind upper lobes of eyes; antennae a little longer than the body, third to sixth segments spinose at apex, eleventh segment longer than tenth, more or less appendiculate. Pronotum wider than long, sides feebly rounded, disk with a narrow, longitudinal, median polished ridge extending from base to apex and slightly wider at middle, an oval, polished, coarsely punctate callous on each side in front of middle and a similar but more elongate callous behind the middle and closer to the sides, surface very finely densely punctate and thinly clothed with short, coarse, appressed pale hairs mostly oriented transversely, antero-laterally, or anteriorly, condensed into small patches at base and apex of median line, at base and apex of sublateral callous, and at middle of side; prosternum finely rugoso-punctate. Elytra coarsely punctate at base where the punctures are mostly separated by less than one diameter, becoming much finer beyond middle; surface uniformly clothed with short, depressed or recurved hairs, with irregular patches of appressed white pubescence, densest on humeri, along sides, at middle, and near apex; apices rounded to the suture. Abdomen finely, densely punctate, uniformly pubescent. Length 18 mm.

Female: Antennae reaching nearly to apical one-third of elytra, outer segments short, eleventh segment not longer than tenth; pronotum coarsely and somewhat confluent punctate on each side of polished median ridge; prosternum transversely rugose. Length 17 mm.

Holotype male, *allotype* female, and three male *paratypes* from Chontales, Nicaragua (Janson) in the collection of the British Museum (Natural History).

Notes: In size and form this species resembles *A. inermis* (Newman), with which it was confused by Bates. It differs at once, however, in the sculpturing of the pronotum which has a median polished ridge extending from base to apex in both sexes, and the form of the elytral apices which are rounded to the suture and not truncate.

***Anelaphus panamensis*, n. sp.**

Male: Integument reddish-brown, clothed with short, depressed or recurved hairs, with condensed patches of longer, tawny, appressed pubescence. Head moderately finely, densely punctate behind upper lobes of eyes; antenna slightly longer than the body, segments three to six spinose at apex, eleventh segment longer than tenth, slender. Pronotum a little wider than long; sides very feebly rounded; disk with an elongate, longitudinal, median polished area which does not reach base or apex and an ill-defined, coarsely punctate longitudinal, arcuate callous on each side, intermediate area finely densely punctate; surface thinly clothed with moderately long, coarse, appressed, tawny hairs mostly oriented transversely, antero-laterally or anteriorly, condensed into patches at base and apex of median line, along arcuate sublateral callous and near sides; prosternum rugoso-punctate. Elytra coarsely and very densely punctate at base where the punctures are nearly contiguous, becoming smaller over apical one-third, surface irregularly clothed with condensed patches of moderately long appressed tawny pubescence; apices rounded to the suture. Abdoment shining, thinly clothed with long pale hairs. Length 14 mm.

Female: Antennae reaching to apical one-fourth of elytra, eleventh segment not longer than tenth; pronotum, coarsely, irregularly punctate on each side of mid-line, which is not so well defined as in the male, punctures mostly separated; prosternum coarsely punctate and transversely rugose. Length 13.5 mm.

Holotype male and *allotype* female from V. de Atitlan, Panama, elevation 25–3500 ft. (Champion, in the collection of the British Museum (Natural History)). Other specimens from Bugaba and Mirandilla also appear assignable to this species but have not been designated paratypes.

Notes: This species is smaller than *A. inermis* and *A. jansoni* and the elytra are more densely punctate and the pubescence of the condensed patches is somewhat longer and tawny rather than ashy-gray. The median pronotal vitta is more elongate than in *inermis* but does not extend to the basal or apical margins, as in *jansoni*. The discal punctation of the pronotum is also distinctive, especially in the female.

Anelaphus subseriatus (Bates)

Hypermallus subseriatus Bates, 1885, Biologia Centrali-Americana, Coleoptera 5: 250.

This species is apparently related to the preceding, but differing in the arrangement of the elytral pubescence which is dirty yellow, irregular but moderately dense, with the coarse punctures showing through as in some *Hesperophanini*. The antennal segments are heavy and flattened, with spines at the apices of third to seventh segments, at least. Length 13–16 mm.

Type locality: San Lorenzo, Panama.

Genus *Peranoplium* Linsley

Peranoplium Linsley, 1957, Amer. Museum Novitates, 1828:17.

This genus is closely related to *Anopliomorpha* but differs in the absence of long flying hairs from the legs and antennae. The spine of the third antennal segment is usually short, sometimes lacking. In some of the species the elytra have pubescent fasciae.

KEY TO THE MEXICAN AND CENTRAL AMERICAN PERANOPLIUM

1. Pronotum and elytra with patches of dense white pubescence 2
- Pronotum and elytra without patches of dense white pubescence, the pubescence irregular, appressed, griseo-fulvous, intermixed with longer suberect hairs; pronotum ovoid-cylindrical, disk with a post-median smooth callous; elytral apices subtruncate, slightly rounded externally, sutural angle denticiform. 11 mm. *misellum*
2. Pronotum subcylindrical, disk with a linear median smooth callous, pubescent spots large and well defined; antennae with segments three to six spinose at apex, seventh segment minutely spiculate; elytral apices emarginate, both angles distinct. 12 mm. *eximium*
- Pronotum with sides broadly rounded, disk without a smooth median callous, pubescent spots small, poorly defined; antennae with segments three to five spinose at apex, sixth

segment minutely spiculate; elytral apices entire, not emarginate. 9–10 mm. *undulatum*

Peranoplium misellum (Bates)

Hypermallus misellus Bates, 1880, *Biologia Centrali-Americana*, Coleoptera 5:251.

Moderately small, subcylindrical, brown, appendages and elytra slightly more reddish-brown; pubescence appressed, griseo-fulvous, somewhat irregular, with an intermixture of longer erect and suberect hairs, which are not, however, as long as diameter of second antennal segment. Antennae of male as long as or a little longer than the body, third to fifth or sixth segments spinose at apex, the following segment spiculate, eleventh segment longer than tenth, that of female shorter than the body, segments three to six spinose at apex, seventh segment spiculate, eleventh segment not longer than tenth. Pronotum ovoid-cylindrical, disk with a short postmedian smooth callous. Elytra with apices subtruncate, sutural angle dentiform. Femora simple. Length 11 mm.

The type, a male, is from Guatemala. Examples have also been seen from Costa Rica and Panama.

Peranoplium eximium (Bates)

Hypermallus eximius Bates, 1885, *Biologia Centrali-Americana*, Coleoptera 5:250.

Brown, elytra and abdomen reddish-brown, antennae and legs rufotestaceous; pronotum with a pair of dense patches of white pubescence on each side of disk, a sublateral patch at base and a lateral patch at middle; elytra with a broken sinuous transverse series of white patches at middle, another before apex; thoracic sterna white pubescent marginally. Antennae slender, a little longer than the body, third to sixth segments spinose at apex, seventh spiculate. Pronotum subcylindrical, more or less alveolate-punctate, with a smooth median vitta. Elytra feebly emarginate-truncate at apex, angles distinct but not dentiform. Length 12 mm.

The type is from Oaxaca, Mexico.

Peranoplium undulatum (Bates)

Hypermallus undulatus Bates, 1880, *Biologia Centrali-Americana*, Coleoptera 5:25.

Dark brown, elytra, abdomen, and appendages dark reddish-brown; pronotum with two or three poorly defined patches of white pubescence on each side of disk, another near lateral margin; elytra

each with a sinuous transverse patch of white pubescence at middle and an oval spot before apex; anterior coxae, mesosternum, and metasternum at sides, white pubescent. Antennae shorter than the body in both sexes, but longer in the male than in the female with the eleventh segment distinctly longer than the tenth and more or less appendiculate, segments three to five spinose, sixth segment spiculate. Pronotum broadly rounded at sides, disk alveolate punctate without a smooth median vitta. Elytral apices entire, not emarginate or dentate. Length, ♂: 12–14 mm., ♀: 9–10 mm.

The type locality is Trapiche, Mexico.

Genus *Anopliomorpha* Linsley

Two species of this genus have been recorded from northern Mexico, *A. reticolle* (Bates) and *A. rinconium* (Casey).

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THE DESIGNATION AND DESCRIPTION OF THE NEOTYPE OF *TIPULA FRATERNA* LOEW (TIPULIDAE: DIPTERA).

By DENNIS HYNES¹

During the course of a taxonomic study of the "*fraterna*" complex, it became necessary to designate a neotype for *Tipula fraterna* Loew. The type of this species was described by Loew in 1864, and the type material has since been reported as lost (Alexander, 1915). Dr. Alexander (personal communication) informed me that the late Dr. Nathan Banks had examined the type material of certain species described by Loew (1864) in an attempt to find the types of *T. fraterna* and others which have also been lost. A letter was sent to the Harvard Museum of Comparative Zoology, where this material is located, asking if Dr. Banks had been successful in locating the insects, particularly *T. fraterna*. Dr. W. C. Brown (personal communication) informed me that he was "unable to find any material among the Tipulidae that is in any way marked

¹ Department of Biology, California State Polytechnic College, San Luis Obispo, California.



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