

## Redescription of *Linsleyonides* Skiles (Coleoptera: Cerambycidae) and Inclusion of *Elaphidion portoricensis* Fisher

By

STEVEN W. LINGAFELTER<sup>1</sup>

**ABSTRACT** *Elaphidion portoricensis* Fisher is transferred to *Linsleyonides* based on four hypothesized autapomorphies for the genus. *Linsleyonides* is redescribed and diagnostic characters are illustrated. Differences between *Linsleyonides* and the closely related *Elaphidion* are discussed. A key for the three species of *Linsleyonides* is presented.

**Key words:** Systematics, Taxonomy, West Indies, Longhorned Woodborers.

### INTRODUCTION

*Linsleyonides* is a member of the tribe Elaphidiini. This West Indian genus was proposed by Skiles (1985) to accommodate 2 species: *L. albomaculatus* (Champlain & Knull, 1922) and *L. chemsaki* (Skiles, 1985). *Elaphidion portoricensis* Fisher is transferred to *Linsleyonides* because it possesses four character states shared by the other two species of *Linsleyonides* (hypothesized autapomorphies of the genus) which are not known from other elaphidiine taxa. Additionally, *L. portoricensis* lacks the hypothesized synapomorphies of *Elaphidion* and other potentially closely related genera. *Linsleyonides* is redescribed below, and many of the diagnostic morphological features are illustrated. Parenthetical notations are included to indicate hypothesized autapomorphies and deviations from or agreement with Skiles' 1985 description.

### ACKNOWLEDGMENTS

I thank Michael Ivie for bringing this misplaced taxon to my attention and providing me with many specimens for character analysis. His generosity in accommodating me on a research trip to Montana State University to study this and other West Indian elaphidiine taxa is very much appreciated. The habitus illustration was nicely rendered by Elizabeth Roberts. I thank Steve Ashe and Byron Alexander for my training and their support of my studies on Cerambycidae while at the University of Kansas. I thank David Furth, Darlene Judd, Alexander Konstantinov, Allen Norrbom, Norman Woodley, and two anonymous reviewers for constructive comments on this manuscript.

### SYSTEMATICS

#### *Linsleyonides* Skiles

*Linsleyonides* Skiles, 1985: 316. Type species, *Elaphidion albomaculatum* Champlain & Knull, by original designation.

**Description.**—*Size:* small to moderate (7–20mm). *Head:* eye large and coarsely faceted, occupying more than 50% of the exposed region of the head when viewed laterally; distinct, rounded or triangular patches of dense, white or yellow, supraocular pubescence present (Figs. 1–3) (Autapomorphy); frontoclypeal margin arcuate with lateral pits present (first mentioned by Skiles, 1985) (Fig. 5) (Autapomorphy); mandible with a narrow incisor region (less than one-third width of base of mandible when viewed from mesal or biting surface) and an apical and basal indentation separated by an undentate plateau; terminal labial palpomere without digitiform sensillum; terminal maxillary palpomere expanded apically, apical width over half length with distinct, narrow digitiform sensillum (Fig. 6); antenna of female strongly spined apicomeres 3–6, weakly so on antennomere 7; antenna of male, strongly spined mesally on antennomeres 3–5, weakly so on antennomeres 6–7; antenna not spined laterally; antennomeres gradually widened at apices, particularly after antennomere 6; antenna without carina (Skiles, 1985 indicates antennae are partially dorsally carinate, but my clearing of a specimen did not reveal this); antennomere three about two-thirds length of pronotum in male, slightly longer than half length of pronotum in female; terminal antennomere without pseudo-segmental constriction or setae. *Prothorax:* raised median callus and peripheral calli present on pronotum; procoxal cavities open posteriorly; prosternal intercoxal process only slightly expanded apically, gradually declivous posteriorly; lateral margin of procoxal cavity closed (trochantin hidden, propleuron and prosternum fused very close to coxa); pronotum without lateral tubercle or transverse ridges on pronotal disc; prosternum more heavily pubescent in female than male. *Mesothorax:* mesocoxal cavity closed or barely open laterally (mesepimeron contacting mesocoxae directly in some

<sup>1</sup> Systematic Entomology Laboratory, PSI, ARS, USDA, c/o U.S. National Museum of Natural History, MRC-168, Washington, D.C. 20560.  
E-mail: slingafelter@sel.barc.usda.gov

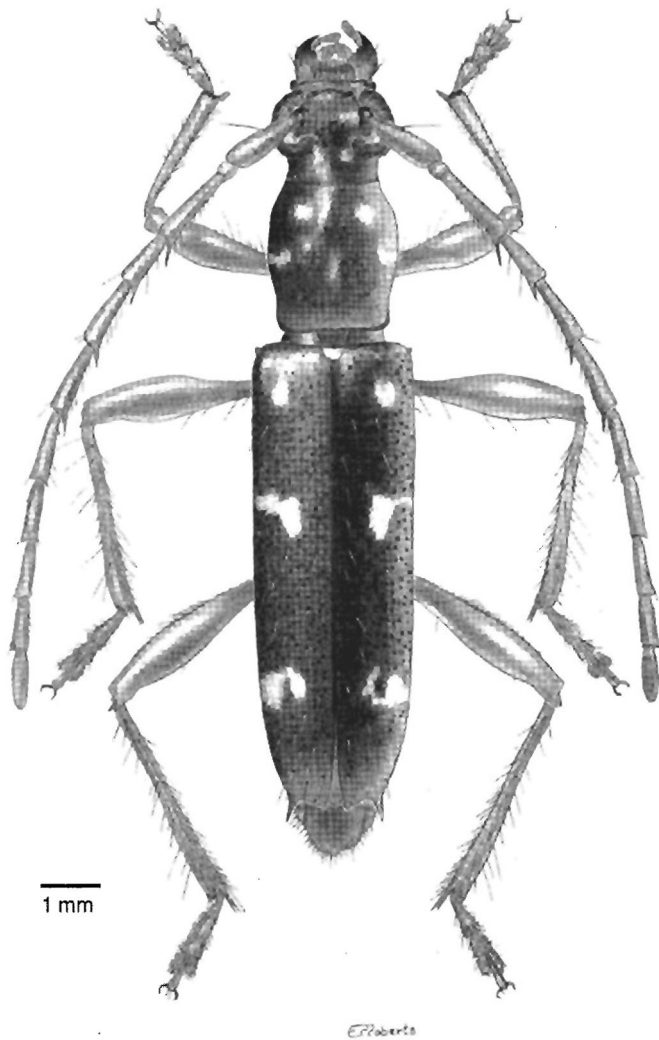
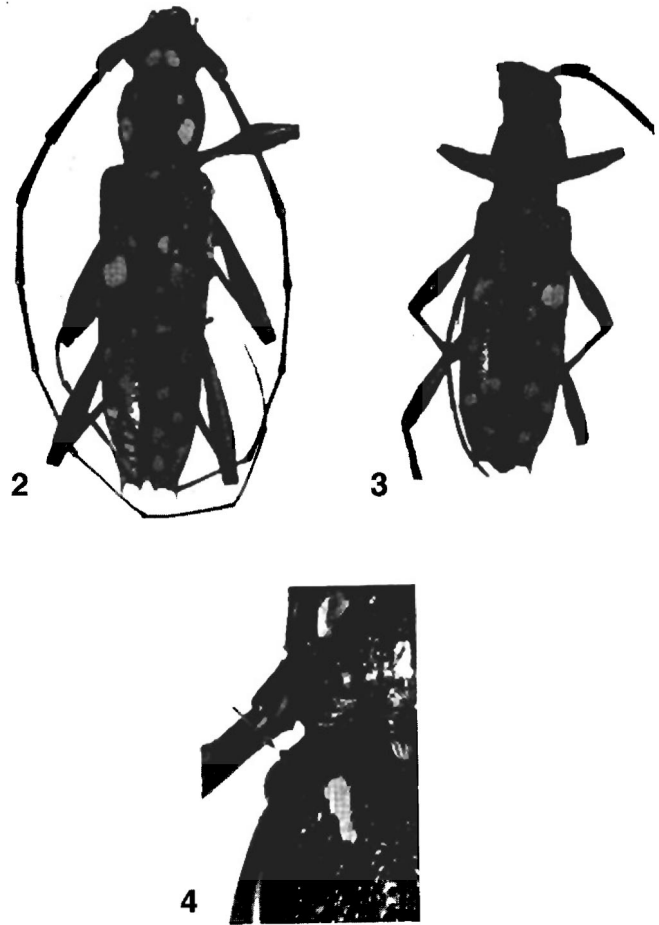


Fig. 1. Habitus of *Linsleyonides portoricensis* (Fisher), female.

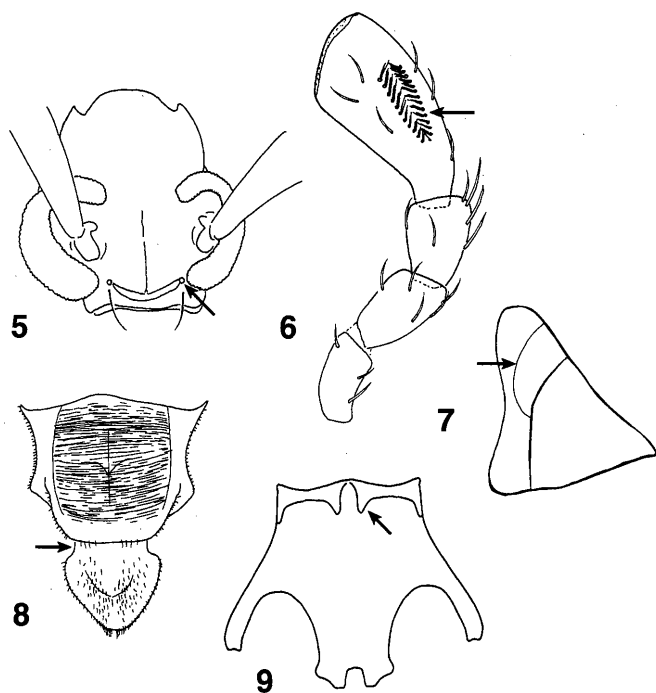


Figs. 2-4. Habiti and diagnostic characters of *Linsleyonides*. 2—Habitus of *L. chemsaki* Skiles, male. 3—Habitus of *L. albomaculatus* (Champlain & Knoll), female. 4—Epipleural tooth on *L. portoricensis*.

specimens, in others, closure of metasternum and mesosternum prevents this contact); anterior margin of mesosternum as in Fig. 9; intercoxal process of mesosternum with small, indistinct lateral projection into acetabular excavation in mesocoxa; wide, truncate notch in mesosternal intercoxal process; anterior margin of mesonotum broadly rounded (Fig. 8); mesoprescutum (scutellum) with basal constriction and small apical notch on otherwise rounded posterior margin (Fig. 8); mesepisternal carina evenly arcuate (Fig. 7). *Metathorax*: metasternal notch acute; metasternal sulcus incomplete, only attaining anterior one-third of metasternum; metepisternum with longitudinal keel positioned equidistant from dorsal and ventral margin, more heavily sclerotized ventral to keel; metepisternal notch at posterior margin narrow and reaching approximately half way to keel. Legs: mesal and lateral mesofemoral apices dentiform to weakly spinose; mesal

and lateral metafemoral apices spinose; metafemur linear to slightly enlarged at middle; metafemur finely punctate; meso and metatibia with very reduced carina proximally, not visible distally; metacoxa with pronounced ridges on anterior face. *Wings*: elytron with scattered spots of dense white or yellow pubescence (Figs. 1-3) (Autapomorphy); elytral humerus with small, distinct tooth (Fig. 4) (Autapomorphy); elytra with strong apicolateral spine and dentiform sutural angle; hind wing MP-CuA incomplete, not contacting MP1+2; hind wing without CuA1+2.

**Diagnostic characters.**—The hypothesized autapomorphies for *Linsleyonides* include the distinct postocular patches of pubescence as well as the small, dense, pubescent patches on the elytra (Figs. 1-3); the elytral humerus with a small epipleural tooth (but also present in some Eburini, Fig. 4); and the arcuate frontoclypeal suture with



Figs. 5-9. Diagnostic characters of *Linsleyonides*. 5-Head showing frontoclypeal pits. 6-Maxillary palp showing medially positioned digitiform sensillum. 7-Mesepisternum (anterior to the left) showing arcuate carina. 8-Mesonotum and scutellum (anterior to top) showing constricted scutellar base. 9-Mesosternum showing sclerotized pattern on anterior margin.

lateral pits (first discussed by Skiles, 1985) (Fig. 5). Other diagnostic characters not widely distributed in Elaphidiini include the incomplete metasternal sulcus; terminal antennomere without subapical setae and without pseudoantennomere constriction; and the sclerotization pattern of the anterior margin of the mesosternum (Fig. 9).

**Distribution and Diversity of *Linsleyonides*.**—This attractive genus occurs in extreme southeastern United States and the West Indies; particularly southern Florida and Cuba (*L. albomaculatus*), Virgin Islands and Puerto Rico (*L. portoricensis*), and Jamaica (*L. chemsaki*).

**Discussion.**—*Linsleyonides* and *Elaphidion* share the basic form of the sclerotization of the anterior margin of the mesosternum, but in *Linsleyonides* there is a posterior medial projection (see arrow, Fig. 9). Additionally, the mesofemoral and antennal spines in *Linsleyonides* are not as prominent as in *Elaphidion*, and *Linsleyonides* lacks the abruptly declivous prosternal intercoxal process characteristic of *Elaphidion*.

A phylogenetic analysis of Elaphidiini (Lingafelter, 1998) using implied weights (PIWE, Goloboff, 1993) showed *Linsleyonides* to be closely related to several genera including *Elaphidion* Audinet-Serville, *Curtomerus*

Stephens, and *Eburia* Lepeletier & Audinet-Serville. An equal weighting phylogenetic analysis of the same taxa in that study (Lingafelter, 1998) using PAUP (Swofford, 1991) showed *Linsleyonides* to be a sister taxon to other Elaphidion exemplars. These analyses used an exemplar approach and included *L. portoricensis*. Because the type species of the genus, *L. albomaculatus*, and some potentially closely related West Indian genera were not available for dissection and inclusion in that study, further analyses are required for a robust hypothesis of relationships among these closely related genera.

SPECIES CATALOG OF *LINSLEYONIDES*

*Linsleyonides albomaculatus* (Champlain and Knull), 1922: 146. Originally described as *Elaphidion*, transferred to *Elaphidionoides* by Linsley (1963), then placed in *Linsleyonides* by Skiles (1985). Designated as type species of *Linsleyonides* by Skiles (1985: 316). Type locality: Miami, Florida. Type deposition: Field Museum of Natural History (Chicago, Illinois); not examined.

*Linsleyonides chemsaki* Skiles, 1985: 317. Type locality: Hardwar Gap, Jamaica. Type deposition: Canadian National Collection, Agriculture Canada (Ottawa, Ontario); examined.

*Linsleyonides portoricensis* (Fisher), 1932: 33. **New Combination**, transferred from *Elaphidion*. Type locality: Coamo Springs, Puerto Rico. Type deposition: American Museum of Natural History (New York, New York); examined.

Key to species of *Linsleyonides*

1. Postocular pubescence in large, rounded, contiguous patches (Fig. 2); patches of pubescence on head, pronotum, and elytra yellow; pronotal disc with four round patches, anterior two smaller than posterior two..... ***L. chemsaki* Skiles**
- Postocular pubescence in small, triangular, typically non-contiguous patches (Figs. 1, 3); patches of pubescence on head, pronotum, and elytra white; pronotal disc with four or six patches, anterior two rounded and larger than the others ..... 2
2. Each elytron with at least seven distinct, rounded patches of pubescence of differing sizes (Fig. 3) ..... ***L. albomaculatus* (Champlain & Knull)**
- Each elytron with three triangular or irregularly shaped patches of pubescence (positioned basally, antemedially, and at posterior one-third) (Fig. 1) ..... ***L. portoricensis* (Fisher)**

## LITERATURE CITED

- Champlain, A. B. and J. N. Knull. 1922. New North American Coleoptera. *Entomological News* 33: 144-149.
- Fisher, W. S. 1932. New West Indian cerambycid beetles. *Proceedings of the United States National Museum* 80(22): 1-93.
- Goloboff, P. A. 1993. *Pee-Wee*, Version 2.1. Program and documentation. New York, NY.
- Lingafelter, S. W. 1998. The genera of Elaphidiini Thomson, 1864 (Coleoptera: Cerambycidae). *Memoirs of the Entomological Society of Washington* 20: 1-118.
- Linsley, E. G. 1963. The Cerambycidae of North America. Part IV. Taxonomy and classification of the subfamily Cerambycinae, tribes Elaphidionini through Rhinotragini. *University of California Publications in Entomology* 21: 1-165.
- Skiles, D. D. 1985. New genera and species of elaphidionine Cerambycidae (Coleoptera) from North America and the West Indies. *The Coleopterist's Bulletin* 39: 305-320.
- Swofford, D. L. 1991. *Phylogenetic Analysis Using Parsimony (PAUP)*, version 3.0. Illinois Natural History Survey, Champaign.