

SEVEN NEW SPECIES OF ELAPHIDIINI (COLEOPTERA: CERAMBYCIDAE) FROM
THE DOMINICAN REPUBLIC WITH TAXONOMIC NOTES, NEW COUNTRY
RECORDS, AND A KEY TO *ELAPHIDION* AUDINET-SERVILLE FROM HISPANIOLA

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Abstract

Seven new species, two new combinations, two new synonyms, and four new country records of Elaphidiini longhorned woodborers (Coleoptera: Cerambycidae) from the Dominican Republic are presented. *Elaphidion compressipenne* Fisher is transferred to *Ceresium* Newman as *C. compressipenne* (Fisher), **new combination**. *Callidium lucidum* Olivier is transferred to *Metaphrenon* Martins as *M. lucidum* (Olivier), **new combination**. A neotype (USNM) is designated for *Elaphidion fullonium* Newman, and *Elaphidion confusum* Fisher is a **new synonym** of that species. *Elaphidion pilosum* Fisher is a **new synonym** of *Anelaphus mutatum* (Gahan). *Nesiosphaerion testaceum* (Fisher), *Anelaphus crispulum* (Fisher), and *Elaphidion androsensis* Fisher are recorded for the first time from the Dominican Republic. Taxonomic confusion concerning *Elaphidion bidens* (Fabricius) is clarified. The following **new species** are described from the Dominican Republic: *Anelaphus praeclarus* Lingafelter (type locality: Guaraguao, La Altagracia Prov.), *Nesiosphaerion charynae* Lingafelter (type locality: Cabo Rojo, Pedernales Prov.), *Psyrassa woodleyi* Lingafelter (type locality: Road 47 between Los Pinos and Angel Félix, Independencia Prov.), *Elaphidion auricomma* Lingafelter (type locality: Guaraguao, La Altagracia Prov.), *Elaphidion iviei* Lingafelter (type locality: Filipinas, Barahona Prov.), *Elaphidion nearnsi* Lingafelter (type locality: Punta Cana, La Altagracia Prov.), and *Elaphidion wappesi* Lingafelter (type locality: Puerto Plata, Puerto Plata Prov.). A key to the twelve *Elaphidion* species from Hispaniola is provided.

This study joins Lingafelter and Woodley (2007) and Lingafelter and Nearn (2006; 2007) as the fourth in a series of papers that documents and describes the diverse longhorned beetle fauna of the Dominican Republic. Lingafelter and Ivie (2005) helped stabilize the taxonomy in Elaphidiini (Coleoptera: Cerambycidae: Cerambycinae) by correcting generic assignments of species within the tribe, primarily *Elaphidion* Audinet-Serville. These papers together form the foundation for the *Field Guide to the Longhorned Beetles of the Dominican Republic* (Lingafelter *et al.*, in prep.) that will serve to document all the described species from the country. In this paper we transfer two species from *Elaphidion*, designate two new synonyms in *Elaphidion*, describe seven new species of Elaphidiini, record new country records for three species of Elaphidiini, and provide a key to *Elaphidion* of Hispaniola.

The Dominican Republic, with its varied habitats including both the highest and lowest points in the Caribbean, contains a high diversity of insects as revealed through many recent collecting expeditions. It is central to one of the most critical biodiversity regions in the world, known as the Caribbean Islands Hotspot (Conservation International and Mark McGinley 2007). Recent zoological expeditions (summarized in Lingafelter and Woodley 2007) have focussed on Hispaniola in recognition of its importance in this regard.

Materials and Methods

The following collections were examined in the course of this and other research on Cerambycidae of Hispaniola (curators and/or contact persons listed for most). The acronyms are used in the Type Material sections following each species description and in the Discussion of other species accounts. Some material from USNM and CMNH, representing the included species, ultimately will be deposited in the DRMC. The online primary type photographic databases of the Smithsonian Institution (Lingafelter and Nearn 2008), American Museum of Natural History (AMNH 2008), and Museum of Comparative Zoology, Harvard University (MCZC 2008) proved very useful:

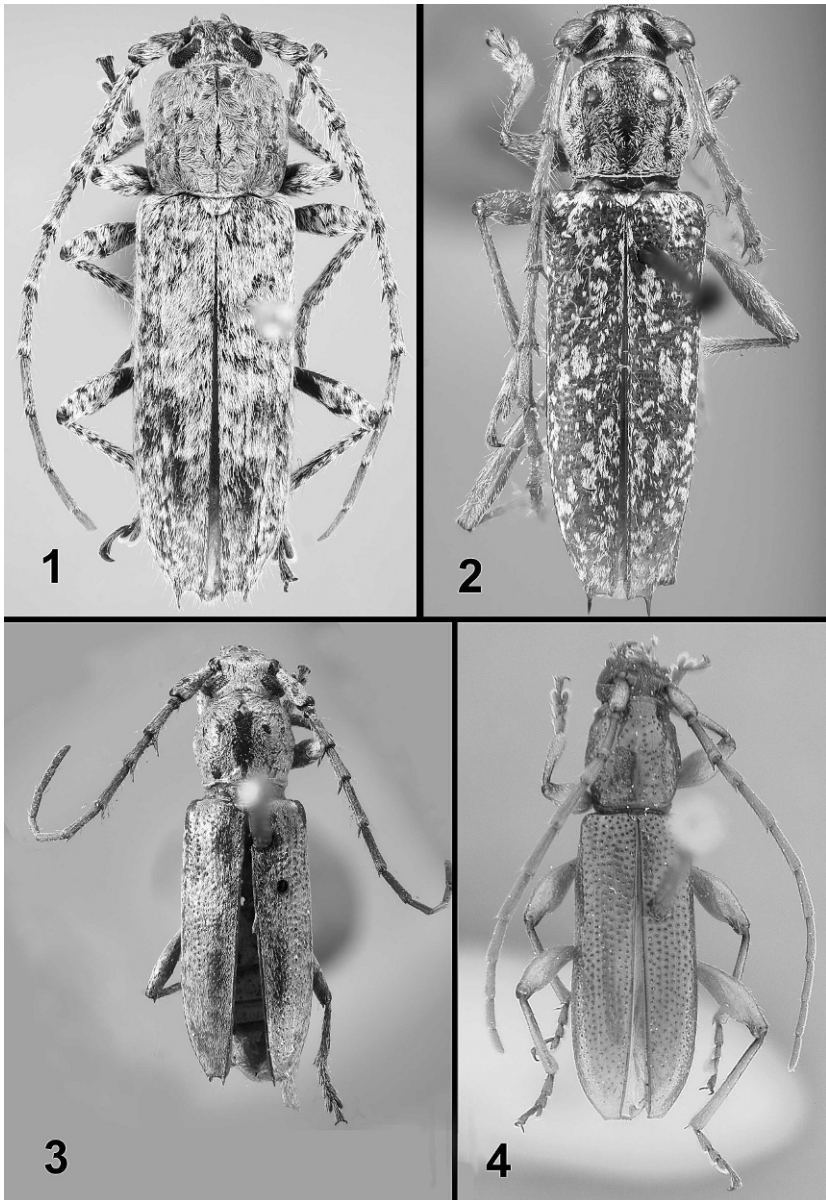
AMNH	American Museum of Natural History, New York, NY, U.S.A. (Lee Herman)
BMNH	The Natural History Museum, London, England (Sharon Shute)
CMNH	Carnegie Museum of Natural History, Pittsburgh, PA, U.S.A. (J. Rawlins, R. Davidson, R. Androw)
CUNM	Copenhagen University Natural History Museum, Copenhagen, Denmark (A. Solodovnikov)
DRMC	Museo Nacional de Historia Natural, Santo Domingo, Dominican Republic (K. Guerrero)
EFGC	Edmund F. Giesbert Collection, Gainesville (at FSCA), FL, U.S.A. (M. Thomas)
ENPC	Eugenio Nearn Private Collection, Albuquerque, NM, U.S.A.
FDZC	Fernando de Zayas Collection, Havana, Cuba (the Zayas Family)
FSCA	Florida State Collection of Arthropods, Gainesville, FL, U.S.A. (M. Thomas)
FSPC	Fred Skillman Private Collection, Cochise, AZ, U.S.A.
JCPC	Julio and Charyn Micheli Private Collection, Ponce, Puerto Rico, U.S.A.
JEWC	James E. Wappes Private Collection, San Antonio, TX, U.S.A.
MCZC	Museum of Comparative Zoology, Harvard University, Cambridge, MA, U.S.A. (B. Farrell, P. Perkins)
RHTC	Robert H. Turnbow, Jr. Private Collection, Ft. Rucker, AL, U.S.A.
USNM	National Museum of Natural History, Smithsonian Institution, Washington, DC, U.S.A. (S. Lingafelter)
WIBF	West Indian Beetle Fauna Project, Bozeman, MT, U.S.A. (M. Ivie)

Species treatments are grouped as follows: new combinations, new synonyms, and new country records are listed first, in alphabetical order, followed by new species descriptions. Label redundancy among paratypes and non-types is minimized by not repeating identical localities within a species treatment in Material Examined sections. Holotype label data are verbatim and placed in quotes.

Anelaphus crispulum (Fisher)

(Figs. 1, 5a,b)

Discussion. This species, described by Fisher (1947) from two females from Guánica, in southwest Puerto Rico, was collected in eastern Dominican Republic in 2004 and 2005 (**new country record**). Specific label data are as follows: La Altagracia Prov., Parque Nacional Guaraguao, 18°19.568'N, 68°48.500'W, 0–5 m, 28 June 2005, Norman E. Woodley (1 female, USNM); La Altagracia Prov., Punta Cana, near Ecological Reserve, 0–5 m, 18°30.477'N, 68°22.499'W, attracted to lights, 2–7 July 2005, N. Woodley (1 female, USNM); La Altagracia Prov., Parque Nacional Guaraguao, 18°19.568'N, 68°48.500'W, 0–5 m, 19 July 2004, blacklight, Lingafelter, Micheli, Guerrero (1 male, USNM).



Figs. 1–4. Habitus photos of Dominican Republic Elaphidiini. **1)** *Anelaphus crispulum* (Fisher), male; **2)** *Elaphidion fullonium* Newman, neotype, male [=holotype of *Elaphidion confusum* Fisher], (USNM); **3)** *Elaphidion bidens* (Fabricius), holotype; **4)** *Nesiosphaerion testaceum* (Fisher), female.

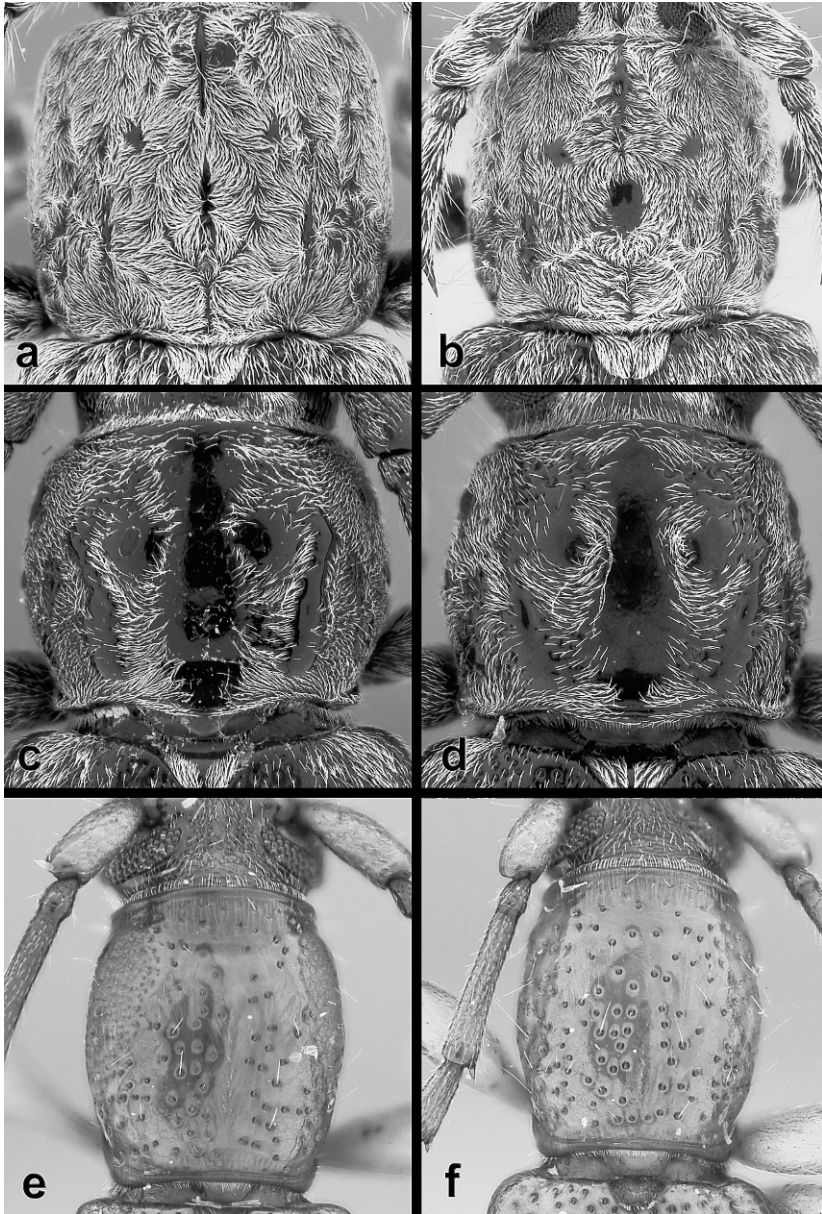


Fig. 5. Pronota of Dominican Republic Elaphidiini. **a)** *Anelaphus crispulum* (Fisher), male; **b)** *Anelaphus crispulum* (Fisher), female; **c)** *Elaphidion androsensis* Fisher, male; **d)** *Elaphidion androsensis* Fisher, female; **e)** *Nesiosphaerion testaceum* (Fisher), male; **f)** *Nesiosphaerion testaceum* (Fisher), female.

The Dominican Republic records include the first known male of the species (Fig. 1). The male differs from females in the following aspects: The pronotum is covered by a much denser vestiture of golden pubescence, nearly concealing the middle glabrous callus (Fig. 5a) (less pubescent and with larger glabrous middle callus in females, Fig. 5b); and the antennae, with the last antennomere distinctly longer than the penultimate, extend to the elytral apex (the terminal antennomere is subequal to the penultimate and the antennae are distinctly shorter than the elytra in females).

***Anelaphus mutatum* (Gahan)**

Elaphidion pilosum Fisher 1932: 36, **new synonymy**

Discussion. The type of *Elaphidion pilosum* Fisher (AMNH 2008) is somewhat similar to *Elaphidion tomentosum* (Chevrolat), but the broadly inflated pronotum (much wider than head at widest point) and the lack of an acutely declivous prosternal process places it in *Anelaphus* (Lingafelter 1998). It is a new synonym of *Anelaphus mutatum* (Gahan) as no characters can be found to distinguish them. *Anelaphus crispulum* (Fisher) is very similar with respect to size and the bispinose elytral apices, however it varies by having pubescence mostly uniform on the elytra (much denser on the anterior half in *A. mutatum*).

***Ceresium compressipenne* (Fisher), new combination**

Elaphidion compressipenne Fisher 1932: 35.

Discussion. Lacordaire (1869) established the group “Callidiopsides” (representing the Tribe Callidiopini) based on genera having middle coxal cavities closed laterally, first abdominal segment not elongate and of normal dimensions, antennae unarmed, elytra without costae or eburneous ridges, and antennal tubercles contiguous, depressed, and nearly glabrous. Based on these features, *Elaphidion compressipenne* Fisher best fits this tribe. The genus with which it shares most characters is *Ceresium* Newman, and I tentatively place it in that genus as *Ceresium compressipenne* (Fisher), **new combination**.

Ceresium is in need of revision, and many species need to be studied more thoroughly as they are known only from their often brief original descriptions. For example, *Ceresium miserum* (Thomson) is known from Hispaniola, although I have not examined the type. *Ceresium* is primarily an Old World genus, so species in the New World represent enigmatic foci for future studies.

***Elaphidion fullonium* Newman**

(Fig. 2)

Elaphidion confusum Fisher 1932: 32, **new synonymy**

Discussion. The type of *E. fullonium* Newman (1841) cannot be located in either the BMNH or Oxford Collection. *Elaphidion confusum* Fisher (1932) (type locality of Hinche, Haiti) matches the original description of *E. fullonium* (type locality also of Haiti; shared characters include one apical elytral spine, no femoral spines, bispinose antennae), and I designate it as a **new synonym** of that species. I designate the holotype of Fisher’s *E. confusum* (Fig. 2) in the USNM as a neotype of *E. fullonium* to stabilize the nomenclature and species concept.

***Elaphidion bidens* (Fabricius)**

(Fig. 3)

Stenocorus bidens Fabricius 1787: 143

[not] *Cerambyx bidens*, Olivier 1795: 42. Misidentification (*not* a formal description).

Discussion. Fisher (1932: 22) stated that “this species was described by Fabricius 1787 from South America.” He also mentioned that the “type” of *bidens* Olivier (1795) differs from *bidens* of Fabricius (1787), being listed as a synonym of *E. irroratum* (Linnaeus) in Aurivillius (1912). After examining the holotype from CUNM (Fig. 3) and the original Olivier (1795) and Fabricius (1787; 1792) literature, a clarification of the nomenclature and taxonomy is warranted.

First, Olivier (1795) did not describe *bidens* as a new species. He referred to Fabricius’ type in his characterization of the species. It is clear that he misidentified specimens he had, thinking they were *E. bidens* (Fabricius). He stated that the antennomeres are bispinose in his description and illustrated this, along with pronounced elytral apical spines (Olivier 1795: plate 17, fig. 125, species no. 53). This led Aurivillius (1912) to synonymize *bidens* of Olivier with *E. irroratum*, a formal act which was not necessary since Olivier did not describe *bidens* as a new species.

Fisher (1932) incorrectly stated that *bidens* Fabricius is South American. Presumably this assumption was based on his interpretation of “America meridionale” used by Fabricius (1787; 1792). This was a common but vague geographic description that can refer to any southern America region, including Florida, Texas, the Caribbean, and points south. Fabricius (1787) indicated that the type originated from the Paykull collection. Examination of the type (Fig. 3) shows that this species is dissimilar to Hispaniolan *Elaphidion*, and very similar to *E. mayesae* Ivie from St. Thomas and Puerto Rico. Unfortunately, there is no label other than “*bidens*” on the specimen, and no information about where Paykull collected in Zimsen (1964). There are no *Elaphidion* species from South America (with the exception of *E. irroratum* that ranges into coastal regions of northern South America). While the taxonomic relationships of *E. bidens* Fabricius and *E. mayesae* Ivie need to be explored further, it is clear that *E. bidens* is neither South American nor Hispaniolan and should therefore be excluded from lists of species for those regions.

Elaphidion androsensis Fisher

(Fig. 5c,d)

Discussion. This species, described by Fisher (1942) from a unique female from Andros Island, Bahamas, was discovered in western Dominican Republic (**new country record**). Two specimens now are known from Hispaniola, with the following label data: Dominican Republic, [Independencia Prov.], 7 km on road to Caseta No. 1, P. N. Sierra de Bahoruco, 777 m, 18°17.711'N 71°34.335'W, December 13, 2003, D. Perez, R. Bastardo, B. Hierro, (day), RD#193 (1 male, USNM); Dominican Republic, Independencia Prov., 3 km up road from La Descubierta to Los Piños, 15 July 2004, blacklighting, S. W. Lingafelter (1 female, USNM).

The specimen from 2003 is the first known male of this species. It differs from the two known females in lacking apicolateral spines on antennomeres 3–5, which are present in the females. In addition, the prothorax of the male (Fig. 5c) has distinct micropunctation around the sides of the dorsal calli and ventrally on the prosternum in patches anterior to the procoxae. In the females, the punctures are larger and not in defined patches (Fig. 5d). In both sexes the antennae are very short, only reaching the posterior fourth of the elytra at most.

Metaphrenon lucidum (Olivier), new combination

Callidium lucidum Olivier 1795: 59, plate 7, fig. 86

Elaphidion lucidum (Olivier); Monné, *et al.* 2007.

Discussion. This species does not belong to Elaphidiini based on Olivier's (1795) original description and figure. The unspined and very short antennae (shorter than body) along with the clavate femora, rounded elytral apices, shining integument, and other features demonstrate that this species belongs to *Metaphrenon* Martins of the Smodicini. The type could not be located, but further examination may show that the only other species in the formerly monotypic genus, *M. impressicolle* (Lacordaire), is a synonym.

Nesiosphaerion testaceum (Fisher)

(Figs. 4, 5e,f)

Discussion. This species previously was known from only one specimen, collected in Haiti in 1922 (Fisher 1932; AMNH 2008). During our 2004 expedition to the Dominican Republic, six additional specimens were collected. Three of these were taken at blacklight and three in sugar bait traps, all in Pedernales Province in the west.

Fisher (1932) did not determine the gender of the holotype. Based on additional material of both sexes, it is now clear that the holotype is a male. Sexual dimorphism is readily apparent: in males there are large anterolateral patches of distinctly smaller and denser punctation on the pronotum (Fig. 5e), whereas in females (Figs. 4, 5f) the punctures are just as sparse in this region as on the remainder of the pronotum.

Complete collecting data is as follows (all Dominican Republic [new country record], Pedernales Prov.): Parque Nacional Jaragua, Trail to Carlitos, ca. 6 km S. of Hwy 44, 106 m, blacklight, 17°48.932'N, 71°28.271'W, 8 July 2004, D. Perez, S. Lingafelter (3 females, USNM); same data, but sugar bait trap, C. Micheli, S. Lingafelter (3 females, USNM).

Anelaphus praeclarus Lingafelter, new species

(Fig. 6)

Description. Small to moderate sized, 7–10 mm long; 2.5–3.5 mm broad; integument uniformly black. Head with sparse, white pubescence, occasionally with a small, dense patch at vertex between upper eye lobes; interantennal impression weak; antennal tubercles not strongly elevated; antennae of both sexes extending slightly beyond elytral apex by less than two antennomeres; last antennomere of female subequal in length to penultimate antennomere; last antennomere of male slightly longer than penultimate antennomere; antennomere four of both sexes slightly shorter than three and five; antennae conspicuously spined mesally on antennomeres 3–7 or 8; laterally, weakly dentiform on 7–9 in most specimens; antennal spines short and approximately of equal length on 3–6; antennae with moderate, inconspicuous, appressed, white pubescence with scattered longer setae mesally and apically on several antennomeres. **Pronotum** short, broadly rounded at sides, distinctly broader than long in both sexes; slightly narrower at middle than elytral base; inconspicuously pubescent except for bold, narrow, longitudinal fascia of bright white pubescence at middle, extending to anterior and posterior margins (or nearly so), shorter posterolateral longitudinal fascia, and, more laterally, anterolateral longitudinal fascia present. Pronotum with dense, mostly uniformly sized alveolate punctures throughout; no apparent calli present. Sparse punctures in front of procoxae in both males and females (no apparent sexual dimorphism). Prosternal intercoxal process evenly recessed between procoxae, moderately expanded at apex. **Elytron** black, with



Fig. 6. *Anelaphus praeclarus* Lingafelter, new species, male paratype, dorsal habitus photograph.

inconspicuous pubescence except for bold patches of white setae at middle of base, extending to suture posteromedially; interrupted transverse fascia at middle; incomplete or variably developed longitudinal fascia posteriorly. Elytral apices truncate. Elytron with dense, large punctures, but mostly separate (less dense than pronotum), becoming shallower and indistinct at apex. **Scutellum** rounded posteriorly, with very dense, bright white pubescence throughout; glabrous

longitudinally along middle. **Legs** moderate in length; hind femora nearly reaching elytral apex; pubescence white, sparse throughout. Femoral apices without spines. **Venter** with mostly sparse, white pubescence, but with dense patches on mesepisternum, metepisternum, and sides of some abdominal segments. Last ventrite of both sexes broadly rounded apically, without modification.

Etymology. This species of *Anelaphus* is named for its striking appearance. The epithet is a noun in apposition.

Discussion. Nearly all specimens of this species were collected on flowers of button mangrove (*Conocarpus erectus* L.) in Guaraguao of southeastern Dominican Republic (*note*: some labels exclude this information). This species is most similar to *Anelaphus fasciatus* (Fisher), recently transferred from *Elaphidion* by Lingafelter and Ivie (2005). Both species share the distinctive densely alveolate-punctate pronota and the pronounced, mesal spines on at least antennomeres 3–7. *Anelaphus praeclarus* differs from *A. fasciatus* in 1) its black integument; 2) usually having a very distinct narrow longitudinal band of bright white pronotal pubescence at middle of pronotum, extending to anterior and posterior margins; and 3) having elytral apices truncate rather than spinose.

Type Material. *Holotype*, female: “Dominican Republic: La Altagracia Province, PN del Este, Guaraguao, 18°19.568’N, 68°48.500’W, 0–5 m, 28 June 2005, Norman E. Woodley” (USNM). *Paratypes*, 8 (all Dominican Republic, La Altagracia Prov., Guaraguao, except for last one listed): same data as holotype except 3 July 2006, sweeping mangrove flowers (1 female, USNM); same data as holotype except A. Konstantinov, coll. (1 female, USNM); same data as holotype except ex: *Conocarpus erectus* (1 male, 1 female, USNM); same data as holotype except 8 July 2006, sweeping mangrove flowers (1 male, USNM); 4.4 km SE Bayahibe, 18°19’59’N, 68°48’42’W, 3 m, 26–27 May 2004, C. Young, J. Rawlins, J. Fetzner, C. Nunez; semihumid forest near sea; limestone, hand collected, sample 51144 (1 male, 1 female, CMNH); San Juan Prov., 17 km N. E. Vallejuelo, 28 May 1986, R. B. Miller and L. Stange (1 female, FSCA).

Nesiosphaerion charynae Lingafelter, new species

(Figs. 7, 8)

Description. Small to moderate sized, 7–10 mm long; 2.5–3.0 mm broad; integument pale testaceous, with head darker reddish-brown. Head with very sparse, translucent pubescence, most dense at inner eye margins; interantennal impression weak; antennal tubercles not strongly elevated; antennae of males extending beyond elytral apex by about two antennomeres, antennae of females extending by less than one; last antennomere of female subequal in length to penultimate antennomere; last antennomere of male about 1.25 × longer than penultimate antennomere; antennomere four of both sexes distinctly shorter than three and five; antennae strongly mesally carinate and conspicuously spined mesally on antennomeres 3–6 or 7; laterally most antennomeres expanded at apex and weakly dentiform on 7–9 in most specimens; antennal spines short and approximately of equal length on 3–5; antennae with moderate, inconspicuous, appressed, translucent pubescence with scattered longer setae mesally and apically on most antennomeres. **Pronotum** distinctly longer than broad, slightly rounded at sides; distinctly narrower at middle than elytral base; conspicuously pubescent with fine, translucent setae, except for wide longitudinal central callus and vaguely defined anterolateral calli (pubescence less dense in females). Males with pronotum covered in dense punctures throughout (except on calli); females have

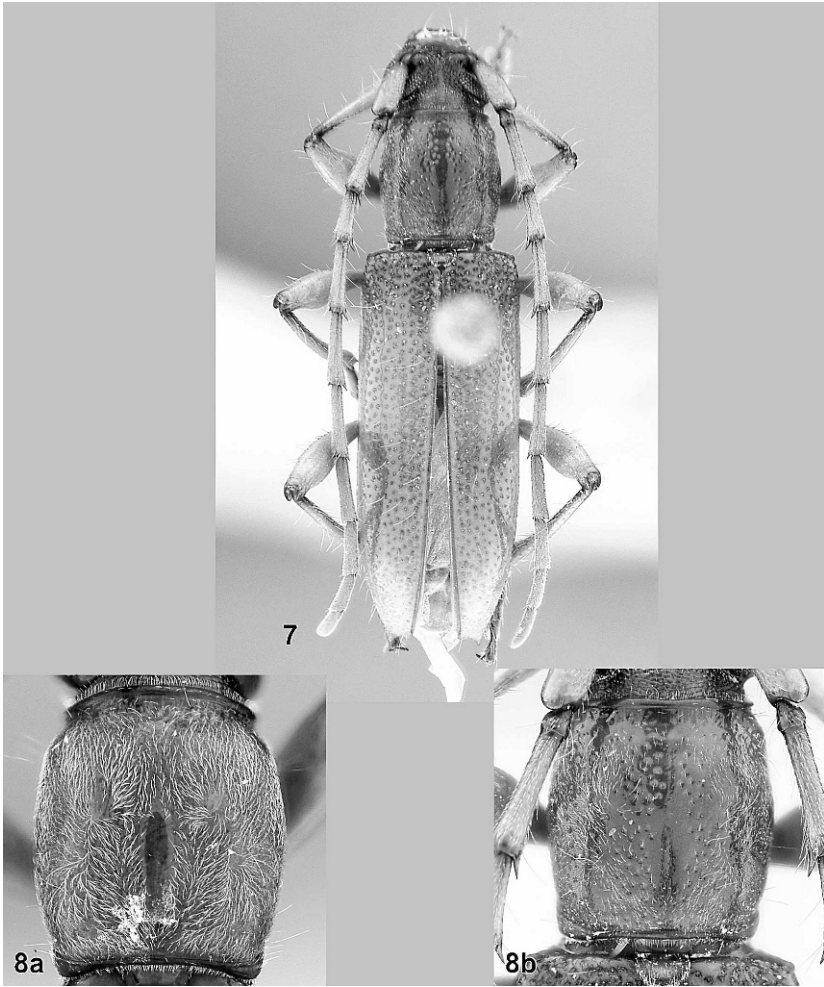


Fig. 7–8. *Nesiosphaerion charynae* Lingafelter, **new species.** **7)** dorsal habitus photograph, female paratype; **8a)** detail of pronotum, male; **8b)** detail of pronotum, female.

punctures less dense, but more visible due to reduced pubescence. Minute, dense punctures present in front of procoxae in males (sparse, shallow, and indistinct in females). Prosternal intercoxal process evenly recessed between procoxae, weakly expanded at apex; procoxal cavities open posteriorly. **Elytron** pale testaceous, mostly glabrous except for sparse, long, erect setae. Elytral apices truncate or with very slight outer apical spine. Elytron with dense, large punctures, but mostly separate (larger and less dense than pronotum), becoming much shallower toward apex. **Scutellum** truncate posteriorly, with very sparse, white pubescence concentrated on posterior margin. **Legs** moderate in length; hind femora reaching last abdominal ventrite; pale testaceous except for extreme apex of femora and extreme base of tibiae which are darker brown; pubescence translucent, sparse

throughout. Femoral apices without spines. **Venter** nearly glabrous with some concentrations of translucent pubescence on mesepisternum, metepisternum, and metasternum at sides. Last ventrite of males broadly rounded at apex; that of female subtruncate.

Etymology. This species of *Nesiosphaerion* is named for Charyn Micheli who participated in several expeditions and collected many related species, including the first known Dominican Republic specimens of its congener, *N. testaceum* (Fisher). The epithet is a noun in apposition.

Discussion. There are only three other species in this somewhat heterogenous genus: *N. testaceum* (Fisher) from Hispaniola; *N. insulare* (White) from Jamaica; and *N. caymanensis* (Fisher) from the Cayman Islands (Monné *et al.* 2007). This species (Figs. 7, 8) is easily distinguished from the others in that the pronotum is covered with fine, translucent pubescence and small dense punctures, except for longitudinal calli at the middle and sides. This species lacks the pronotal sexual dimorphism described above for *N. testaceum*: in males the punctation and pubescence are somewhat denser, giving the pronotum a more matte-opaque appearance (Fig. 8a). In females the punctation and pubescence are reduced, leaving the pronotum shinier (Fig. 8b). In males there are dense patches of punctures anterior to the procoxae, but these are inconspicuous or very reduced in females.

Type Material. *Holotype*, male: “Dominican Republic: 150 m N. bridge on road Cabo Rojo – Aceitillar, Pedernales Prov., 16 m. 17°58.530'N, 71°39.034'W; 7.iv.2004. D. Perez, B. Hierro, R. Bastardo. RD#212” (USNM). *Paratypes*, 2 (all Dominican Republic, Pedernales Prov.): same data as holotype (1 male, USNM); Cabo Rojo, 10 m, 17°55'N, 71°39'W, 26–27 September 1991, C. Young, S. Thompson, R. Davidson, J. Rawlins; coastal desert (1 female, CMNH).

Psyrassa woodleyi Lingafelter, new species

(Fig. 9)

Description. Small sized, 6–7 mm long; 1.6–1.9 mm broad; integument metallic cyaneus on elytra, with head, legs, and antennae darker cyaneus and less metallic; prothorax dark reddish-brown ventrally, dark cyaneus dorsally. Head with very sparse, translucent pubescence; dense, large, contiguous punctures throughout, except on smooth antennal tubercles; interantennal impression weak; antennal tubercles not strongly elevated; antennae of male extending beyond elytral apex by about two antennomeres, antennae of female just reaching apex; last antennomere of male about 1.25 × longer than penultimate antennomere and constricted at apical fourth; last antennomere of female subequal in length to penultimate antennomere and not constricted at apex; antennomere four of both sexes distinctly shorter than three and five; antennae moderately spined mesally on antennomeres 3–6 in males and 3–8 in females; most antennomeres expanded with some dentiform apicolaterally; antennal spines short, approximately equal in length on 3–5; antennae with moderate, inconspicuous, appressed, translucent pubescence with scattered longer setae mesally and apically on most antennomeres. **Pronotum** much longer than broad, nearly cylindrical; distinctly narrower at middle than elytral base; mostly glabrous except for sparse, fine, erect, translucent setae. Pronotum with distinct, but sparse, unevenly sized, dense punctures; without calli. Prosternum impunctate in both sexes; weakly rugose anterior to procoxae in males; unmodified in females. Prosternal intercoxal process evenly recessed between procoxae, weakly expanded at apex; procoxal cavities open posteriorly. **Elytron** metallic cyaneous, mostly glabrous except for



Fig. 9. *Psyrassa woodleyi* Lingafelter, new species, dorsal habitus photograph (holotype male).



Fig. 10. *Elaphidion auricoma* Lingafelter, **new species**, dorsal habitus photo-illustration, female.

long, erect setae, each arising from a separate puncture. Elytral apices truncate, bidentate, or weakly bispinose. Elytron with uniformly distributed, dense, large punctures throughout. **Scutellum** moderately acute posteriorly, with moderately dense, white-translucent pubescence not completely concealing integument. **Legs** moderate in length; hind femora reaching last abdominal ventrite; very dark cyaneous; pubescence translucent, sparse throughout. Femoral apices without spines. **Venter** with moderately dense, white-translucent pubescence throughout, not concealing integument. Last ventrite of both sexes broadly rounded at apex.

Etymology. This striking species of *Psyrassa* is named after Norman Woodley who collected all the specimens. The epithet is a noun in apposition.

Discussion. *Psyrassa* is a large North and Central American genus that is absent from the Caribbean, except for this species and the Cuban and Bahaman *P. jaumei* Fisher (Monné 2005; Monné *et al.* 2007; Turnbow and Thomas 2008). This species (Fig. 9) is easily recognized from all other *Psyrassa* by its completely uniform, metallic cyaneous coloration, very small size, and short mesal antennal spines.

Superficially, primarily due to the uniform metallic cyaneous coloration, *P. woodleyi* resembles the recently described *Hormathus giesberti* Lingafelter and Nearn and *Tropimerus cyaneus* Giesbert. From *H. giesberti*, it is easily recognized by the presence of mesal antennal spines, unmodified basal antennomeres (swollen in males of *H. giesberti*), distinctly punctate pronotum (smooth and impunctate in *H. giesberti*), and gradually enlarged femora (clavate in *H. giesberti*). From *T. cyaneus*, it is distinguished by having the elytral apices truncate or bispinose (not abruptly attenuate) and conspicuously punctate pronotum (punctures sparse or absent in *T. cyaneus*).

Type Material. *Holotype*, male: “Dominican Republic: Independencia Province, Road 47 between Los Pinos and Angel Félix, 760 meters, 18°36.986’N, 71°46.556’W, 20 June 2005, N. E. Woodley” (USNM); *Paratypes* (same data as holotype): (2 females, USNM).

Elaphidion auricoma Lingafelter, new species

(Figs. 10, 14a, 15a)

Description. Moderate sized, 12–16 mm long; 3–4 mm broad; integument uniformly reddish-brown, pronotum and head slightly darker than rest of body.

Head densely clothed with short, appressed, golden pubescence, most dense around eye margins; interantennal impression weak; antennal tubercles not strongly elevated; antennae of females not reaching elytral apex; antennae of male extending beyond elytral apex by less than two antennomeres; last antennomere of female subequal in length to penultimate antennomere; last antennomere of male distinctly longer than penultimate antennomere; antennomere four of both sexes shorter than five; antennae spined mesally on antennomeres 3–6 and laterally dentiform on 7–9 in males (in females mesally spined on 3–7 and laterally dentiform on 6, 7, and/or 8); antennal spines pronounced mesally on 3–5, with spine of third as long as entire fourth antennomere; antenna with moderate, appressed, golden pubescence and sparse, erect hairs, especially mesally.

Pronotum approximately as broad as long in both sexes, slightly narrower at middle than elytral base; moderate, golden, appressed setae present; narrow, elongate longitudinal callus extending to anterior and posterior margins (or nearly so), with two oval calli posterolaterally (one on each side) and four raised small, circular calli anterolaterally (two on each side); large, dense, mostly non-contiguous punctures present, except on calli; punctures in males present in front

of procoxae (absent in females). Prosternal intercoxal process pronounced, broad, glabrous at apex, protruding posteriorly beyond plane of procoxae, acutely declivous. **Elytron** with moderately dense, but not uniform golden, appressed pubescence; erect or suberect setae very sparse (less than 10 on each elytron); elytral apices strongly bispinose, outer spine thicker, twice as long, angling away from sutural spine; weakly arcuate between spines. Elytron with dense but mostly non-contiguous, large, deep punctures, becoming shallower posteriorly. **Scutellum** acute posteriorly and with moderate golden, appressed pubescence; glabrous longitudinally along middle. **Legs** short; hind femora not extending beyond third ventrite; pubescence of femora fulvous, sparse, patchy; numerous sparse, erect hairs on tibiae and femora. Mesofemoral apices strongly spined mesally, dentiform apicolaterally; metafemoral apices with strong spines mesally; weak spines apicolaterally (apicomeral spine about three times length of apicolateral spine). **Abdomen** with pubescence golden and tawny; last ventrite of female broadly rounded apically, without modification.

Etymology. This species of *Elaphidion* is named for the attractive golden pubescence that covers most of the dorsal surface. The epithet is a noun in apposition.

Discussion. This species (Fig. 10) is most similar to *Elaphidion wappesi* Lingafelter, new species (described herein) but differs by the moderately dense, golden pubescence on the dorsum, the structure of the pronotum with its elongate, narrow middle callus and six peripheral calli (many of which are elevated), and the more stout antennal scape. This species and *E. wappesi* have similarly short antennae that lack outer spines on antennomeres 3–5.

Of the four known specimens, one is a male. The male (lacking the abdomen) differs from the females in 1) having antennae extending beyond elytra by nearly two antennomeres (in females the antennae are shorter than the elytra); 2) having the last antennomere subequal to the penultimate (in females the terminal antennomere is distinctly shorter than the penultimate); and 3) having antennae spined mesally on antennomeres 3–6 and laterally dentiform on 7–9 (in females antennae are mesally spined on 3–7 and laterally dentiform on 6, 7, and/or 8, Fig. 14a).

Type Material. *Holotype*, female: “Dominican Republic: La Altagracia Province, PN del Este, Guaraguao, blacklight, 18°19.568'N, 68°48.500'W, 0–5 m, 20 July 2004, Steven W. Lingafelter” (USNM). *Paratypes*, 3 (all Dominican Republic): Sanchez Ramirez Prov., Casa 10, Mina de Oro Pueblo Viejo, 181 m, Aug. 1–3, 2003, R. H. Bastardo (1 female, DRMC); La Altagracia Prov., Nisibon Finca Papagayo, 4–7 April 2000, blacklight trap, 150', RE Woodruff and RM Baranowski, 16–19 June 1999 (1 female, FSCA); same except: 4–7 April 2000, blacklight trap, 150', RE Woodruff, TJ Henry (1 male, USNM).

Elaphidion iviei Lingafelter, new species

(Figs. 11, 14b, 15b)

Description. Moderate sized, 14–23 mm long; 3–5 mm broad; integument uniformly dark reddish-brown, pronotum and head similar in color to remainder of integument. **Head** moderately clothed with short, appressed, ivory-tawny pubescence, most dense around eye margins; interantennal impression weak; antennal tubercles not strongly elevated; antennae of female surpassing elytral apex by 1–2 antennomeres; antennae of male extending beyond elytral apex by about 3 antennomeres; last antennomere of female thickened, blunt, subequal in length to penultimate antennomere; last antennomere of male flattened, curved, distinctly longer than penultimate antennomere; antennomere four of both sexes



Fig. 11. *Elaphidion iviei* Lingafelter, new species, dorsal habitus photo-illustration, female.

only slightly shorter than five; antennae strongly bispinose: spined mesally on antennomeres 3–8 and laterally on 3–9 or 3–10 in both sexes; antennal spines most pronounced on 3–5; antenna with moderate, appressed, ivory-tawny pubescence and sparse, erect hairs, especially mesally and apically on most antennomeres. **Pronotum** slightly broader than long in both sexes, slightly narrower at middle than elytral base; moderate ivory-tawny, appressed setae present (more abundant on sides); with poorly-delineated narrow, elongate longitudinal callus extending to near anterior and posterior margins, with two small, round, poorly delineated calli posterolaterally (one on each side) and two small, round, poorly delineated calli anterolaterally (one on each side); large, unevenly sized punctures present, except on calli, becoming much smaller at sides in males; larger and sparser at sides in females. Prosternal intercoxal process pronounced, broad, glabrous, protruding posteriorly beyond plane of procoxae, acutely declivous. **Elytron** with moderately dense, symmetrically patchy ivory-tawny, appressed pubescence; very few erect or suberect setae present; elytral apices strongly bispinose, outer spine thicker; twice as long, slightly angling away from sutural spine; weakly arcuate between spines. Elytron with dense but mostly non-contiguous, large, deep punctures, becoming shallower posteriorly. **Scutellum** rounded posteriorly and with moderate to sparse ivory-tawny pubescence; glabrous longitudinally along middle. **Legs** moderate in length; hind femora extending into plane of fourth ventrite; pubescence of femora ivory-tawny, sparse, patchy; few sparse, erect hairs on tibiae and femora. Mesofemoral apices moderately spined mesally, weakly spined laterally; metafemoral apices with moderate spines mesally and laterally (apicomeral spine slightly longer than apicolateral spine). **Abdomen** with ventral pubescence ivory-tawny, more dense at sides, sparse at middle; last ventrite of both sexes broadly rounded apically, without modification.

Etymology. Michael Ivie (WIBF) recognized this as a potential new species in 1989 (based on a label notation). Due to this and the fact that he collected some of the type series, I am pleased to dedicate this species to him. The epithet is a noun in apposition.

Discussion. The strongly bispinose antennomeres combined with the brown integument with symmetrical patches of ivory-tawny pubescence on the elytra distinguish this species (Fig. 11) from all other *Elaphidion* in Hispaniola. Sexual dimorphism is pronounced with regard to the antennae: in males they extend beyond the elytral apices by approximately 3 antennomeres; in females they extend beyond the elytral apices by 1–2 antennomeres; the last antennomere in males is flattened, curved, and distinctly longer than the penultimate; in females the last antennomere is thickened, straight, blunt at apex, and subequal in length to penultimate. In males the prothorax is densely, confluent micropunctate at sides and ventrally in front of procoxae; in females punctures are large and sparse at the sides of the pronotum and absent in front of the procoxae. There is no apparent sexual dimorphism in antennal spines; both sexes are strongly bispinose on most antennomeres (Fig. 14b).

One specimen in CMNH was collected in Cuba, however, examination of the Zayas collection by E. H. Nearn (Nearn *et al.* 2006) turned up no additional specimens from that island. The remaining eight specimens are from the Dominican Republic.

Type Material. *Holotype*, male: “Dominican Republic, Prov. Barahona, Vic. Filipinas, 1700’, May 5–6, 1985, E. Giesbert, Coll.” (FSCA, long term loan to USNM). *Paratypes*, 9 (all Dominican Republic unless otherwise noted):

Barahona Prov., near Filipinas Larimar Mine, 1–6 July 1992, F. W. Skillman, Jr. (2 females, FSPC); Pedernales Prov., Pedernales, P. N. Sierra de Baoruco, 1,240 m, 18°09.023'N 71°37.387'W, Las Abejas, 9 August 1999, light, M. A. Ivie and K. A. Guerrero (1 male, WIBF); La Vega Prov., 12 km NE Jarabacoa, 550 m, 1 September 1988, at light, M. A. Ivie, T. K. Philips, and K. A. Johnson (1 female, WIBF); Independencia, Sierra de Neiba, just south of crest, 5 km NNW Angel Feliz, 1,780 m., 18°41'N, 71°47'W, 13–15 October 1991, J. Rawlins, R. Davidson, C. Young, S. Thompson, in cloud forest (1 male, 1 female, CMNH); La Vega Prov., 15 km N. Jarabacoa, 240 m, 21 July 1987, J. Rawlins, R. Davidson (1 female, USNM); Barahona Prov., 5 km SW Polo, slopes of Loma La Torre, 18°03'N, 71°16'W, 980 m, 18 July 1992, disturbed forest with coffee, C. Young, R. Davidson, S. Thompson, J. Rawlins (1 male, DRMC); CUBA, Sierra Maestra, 1000', O. Querci, 5 May 1930 (1 female, CMNH).

Elaphidion nearnsi Lingafelter, new species

(Figs. 12, 14c, 15c)

Description. Moderate sized, 10–13 mm long; 2.5–3.5 mm broad; integument uniformly reddish-brown, pronotum and head of similar tint to rest of integument. **Head** densely clothed with short, appressed, ivory-tawny pubescence, most dense around eye margins; interantennal impression weak; antennal tubercles not strongly elevated; antennae of female surpassing elytral apex by less than 2 antennomeres; antennae of male extending beyond elytral apex by at least 3 antennomeres; last antennomere of female slightly curved, barely longer than penultimate; last antennomere of male flattened, curved, with a pseudosegmental constriction at apical third, distinctly longer than penultimate antennomere; antennomere four of both sexes much shorter than five; antennae spined mesally on antennomeres 3–6 (strongly so on 3–5, 6 sometimes dentiform); lacking lateral apical spines; antennae with moderate, appressed, ivory-tawny pubescence and sparse, erect hairs mesally and apically on most antennomeres. **Pronotum** distinctly broader than long in both sexes; about as wide at middle as elytral base; moderate ivory-tawny appressed setae present, becoming denser at sides; moderately wide, elongate longitudinal callus extending to anterior and posterior margins (or nearly so). Two large, slightly raised oval calli posterolaterally (one on each side), rugose in both sexes (more so in female), and four raised small, circular calli anterolaterally (two on each side); one additional raised, smaller, round callus laterad to large ovoid one on each side (not very distinct due to heavy punctation and reticulation at side of pronotum); large, dense, mostly non-contiguous punctures and reticulation present, especially at sides, but absent from middle longitudinal callus. Prosternal intercoxal process pronounced, broad, glabrous at apex, slightly protruding posteriorly beyond plane of procoxae, acutely declivous. **Elytron** short (about 3 × length of pronotum), with moderately dense, patchy, ivory-tawny appressed pubescence vaguely forming broken, poorly defined longitudinal rows; with few erect or suberect setae; elytral apices strongly bispinose, outer spine thicker; twice as long, but parallel to sutural spine; weakly arcuate between spines. Elytron with dense but mostly non-contiguous, large, deep punctures, becoming shallower and sparser posteriorly. **Scutellum** acute posteriorly and with moderate ivory-tawny pubescence; sparse at base and along middle. **Legs** moderate in length; hind femora extending into plane of fourth ventrite; pubescence of femora ivory-tawny, sparse, patchy; sparse, erect hairs on tibiae and femora. Meso- and metafemoral apices moderately spined mesally but without spines apicolaterally.

Abdomen with moderately dense ivory-tawny pubescence; last ventrite of both sexes truncate or very broadly rounded apically, without modification.

Etymology. I am pleased to name this species of *Elaphidion* in honor of Eugenio Nearnas for his many contributions to the study of Cerambycidae and his masterful dissemination of beetle information over the internet. The epithet is a noun in apposition.

Discussion. Only two specimens are known, both from eastern Dominican Republic. This species is superficially similar to the Puerto Rican *Elaphidion mayesae* Ivie, recently treated and diagnosed in Ivie and Schwengel-Regala (2007), but differs by the relatively short, broad body, and large, broad pronotum with distinctly raised and sculptured calli (Fig. 12). These features combined with the lack of bispinose antennomeres (Fig. 14c) and absence of apicolateral spines on the femoral apices (Fig. 15c) also help to distinguish it.

Sexual dimorphism is present in the antennae: in the male the antennae extend beyond the elytral apices by 3 antennomeres; in the female they extend by less than 2; in the male the last antennomere is flattened and curved, with a pseudosegmental constriction at the apical third and is much longer than the penultimate; in the female the last antennomere is barely longer than the penultimate, not flattened, and only weakly curved. Both sexes have the pronotum with distinctly raised calli, especially anterolateral to the middle callus. The large, ovoid posterolateral callus is slightly more rugose in the female than the male. The male has more abundant punctures on the pronotum than the female, whose punctures are larger, but sparser. In males the punctures are smaller around the sides of the pronotum and extend to patches in front of the procoxae. In females the punctures are sparser at the sides of the pronotum and are absent in front of the procoxae.

Type Material. *Holotype*, male: "Dominican Republic, La Altagracia Province, Punta Cana near Ecological Reserve, 0–5 meters, 18°30.477'N, 68°22.499'W, 12–14 June 2005, S. Lingafelter, attracted to lights" (USNM). *Paratype*: Dominican Republic: La Altagracia Province, Parque Nacional del Este, Guaraguao, 0–5 m, 18°19.568'N, 68°48.500'W, 19 July 2004, blacklight, S. Lingafelter (1 female, USNM).

Elaphidion wappesi Lingafelter, new species

(Figs. 13, 14d, 15d)

Description. Small to moderate sized, 9–12 mm long; 2.5–3.0 mm broad; integument uniformly reddish-brown, pronotum and head slightly darker than rest of body. **Head** moderately clothed with short, appressed, golden pubescence, most dense around inner eye margins; interantennal impression weak; antennal tubercles not strongly elevated; antennae of female not reaching elytral apex; antennae of male barely extending beyond elytral apex by about 1 antennomere; last antennomere in both sexes slightly longer than penultimate antennomere; more swollen and blunt in females than males; antennomere four of both sexes shorter than five; antennae spined mesally on antennomeres 3–6 and laterally dentiform on 6–8 (females) and 7–10 (males); antennal spines pronounced mesally on 3–5 with spine of third a little shorter than entire fourth antennomere. Spines of antennomeres 4–5 often rotated on somewhat more dorsal axis than spine of third. Antennae with moderate, appressed, pale golden pubescence and sparse, erect hairs, mesally and apically on most antennomeres. **Pronotum** approximately as broad as long in both sexes, somewhat angulate at middle, slightly narrower there than elytral base; moderate, golden, appressed setae present; narrow,

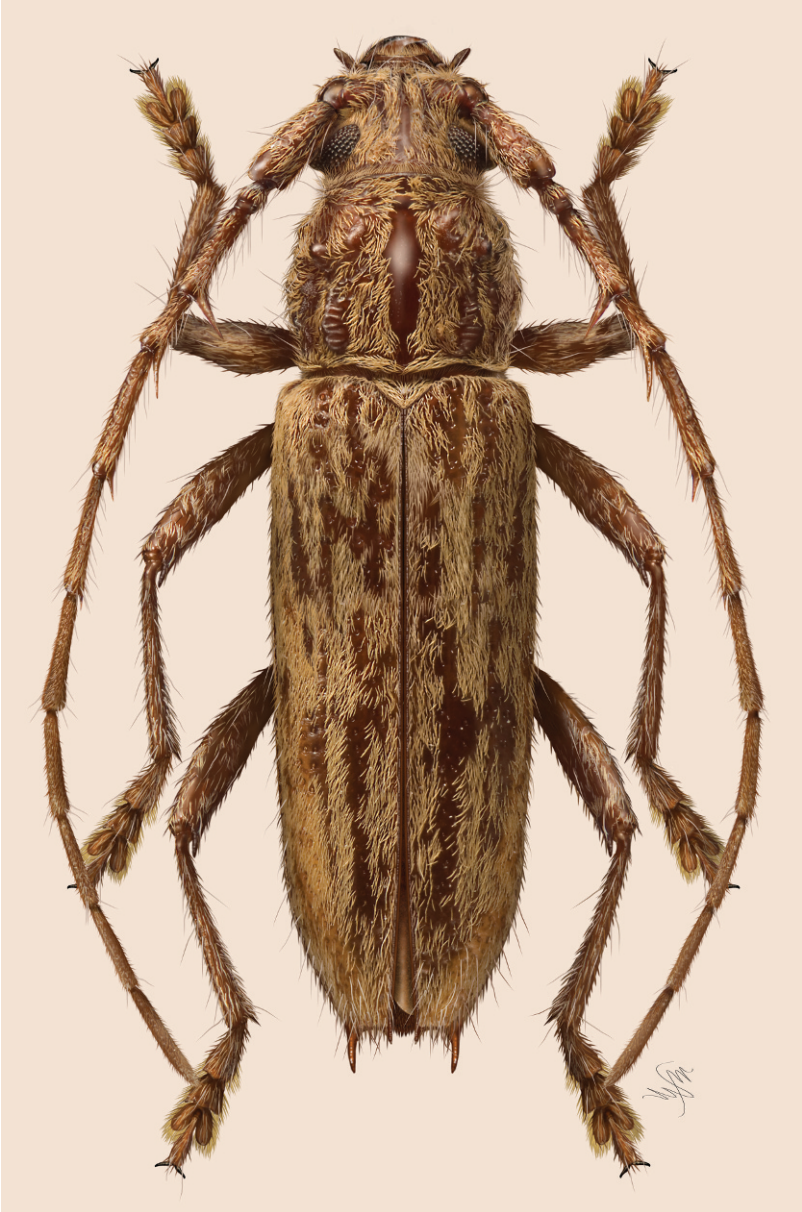


Fig. 12. *Elaphidion nearnsi* Lingafelter, new species, dorsal habitus photo-illustration, female.



Fig. 13. *Elaphidion wappesi* Lingafelter, new species, dorsal habitus photo-illustration, male.

elongate longitudinal callus extending to near anterior and posterior margins, surrounded by 4 vaguely defined and non-elevated calli (1 posterolateral and 1 anterolateral on each side); large, dense, mostly confluent punctures present, except on calli; punctures in male present in front of procoxae; absent in female.

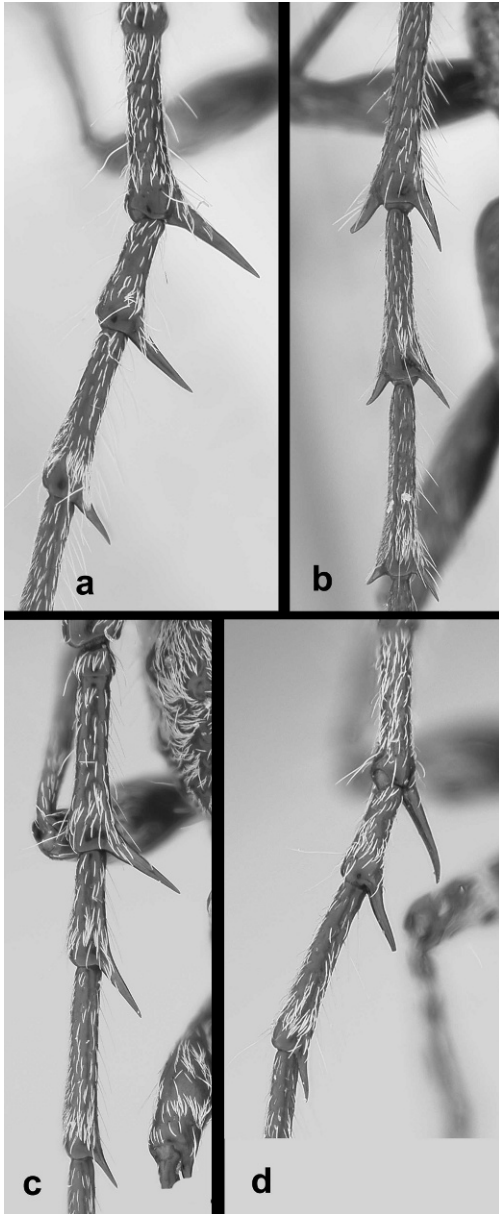


Fig. 14. Detail of antennal spines on antennomeres 3–6 in Dominican Republic *Elaphidion*. **a)** *E. auricoma* (female); **b)** *E. iviei* (female); **c)** *E. nearnsi* (female); **d)** *E. wappesi* (female).

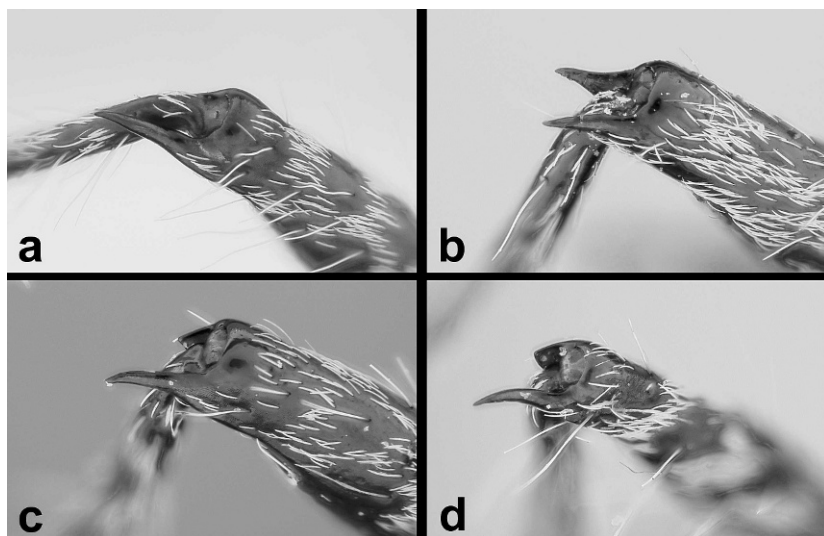


Fig. 15. Detail of metafemoral apices in Dominican Republic *Elaphidion*. **a)** *E. auricoma* (male); **b)** *E. iviei* (male); **c)** *E. nearnsi* (male); **d)** *E. wappesi* (male).

Prosternal intercoxal process pronounced, broad, glabrous at apex, protruding only slightly posteriorly beyond plane of procoxae, acutely declivous. **Elytron** with sparse, patchy golden, appressed pubescence; very long erect or suberect setae present but sparse (more than 10 present on each elytron); elytral apices strongly bispinose, outer spine at least twice as long as sutural spine, parallel or slightly angled away from it; weakly arcuate between spines. Elytron with dense but mostly non-contiguous, large, deep punctures, shallower posteriorly. **Scutellum** acute posteriorly and with moderate, golden, appressed pubescence; glabrous longitudinally along middle. **Legs** moderate in length; hind femora extending into plane of fourth ventrite; pubescence of femora tawny, sparse, patchy; erect hairs present on tibiae and femora. Meso- and metafemoral apices strongly spined mesally, unspined or dentiform apicolaterally. **Abdomen** with tawny pubescence more dense laterally (very sparse medially); last ventrite of both sexes broadly rounded apically, without modification.

Etymology. This species is named in honor of James Wappes for his superb entomological collections and his overall contributions to the study of Cerambycidae. Jim also collected some of the type series of this species. The epithet is a noun in apposition.

Discussion. This species (Fig. 13) is most similar to *Elaphidion auricoma*, but differs in its more slender proportions, smaller size, relatively elongate and narrow scape, longer apicolateral spines on elytra, absence of raised anterolateral pronotal calli, and less dense golden pubescence.

Sexual dimorphism in this species is reduced: in females the antennae do not extend beyond the elytral apex; in males they just exceed the apex; the last antennomere in both sexes is slightly longer than the penultimate, but in females the terminal antennomere is somewhat more swollen and blunt than in males. There is no difference in antennal spination between the sexes (Fig. 14d). The pronotum

shows little differentiation between males and females. Males have coarse punctures anterior to the procoxae, whereas females lack punctation in this region.

Type Material. *Holotype*, female: “Dominican Republic: 14 km W Puerto Plata, May 10–11, 1985, E. Giesbert, coll.” (FSCA, long term loan to USNM). *Paratypes*, 5 (all Dominican Republic): same data as holotype (1 female, EFGC); La Cumbre de Puerto Plata, 2000', 8–9 May 1985, E. Giesbert, coll. (2 males, EFGC); Puerto Plata Prov., 2000', La Cumbre Research Station, 8–9 May 1985, J. E. Wappes (1 female, JWPC); La Vega Prov., 10 km NE Jarabacoa, 8–12 May 1985, J. E. Wappes (1 male, USNM).

Key to Species of Hispaniolan *Elaphidion*

The *Elaphidion* of Hispaniola are immediately distinguished from other Hispaniolan Cerambycidae by the following characters (summarized from Lingafelter 1998; Lingafelter and Ivie 2005): prosternal process acutely declivous between and behind procoxae, elytral apices uni- or bispinose (usually strongly so, although *E. rotundipenne* Fisher is an exception with truncate to rounded elytral apex); antennae spinose mesally (often with a prominent spine on third antennomere, and often spined on outer margin of some antennomeres); metafemoral apices (usually) and mesofemoral apices (sometimes) spined mesally and apicolaterally.

There have been 5 keys to *Elaphidion* published for different regions of the Caribbean: Bahamas (Cazier and Lacey 1952), Curaçao, Aruba, and Bonaire (Gilmour 1968); Cuba (Zayas 1975); Lesser Antilles (Chalumeau and Tourout 2005); Puerto Rican Bank (Ivie and Schwengel-Regala 2007). The key below treats the twelve species occurring on Hispaniola.

- 1. Antennomeres 3–5 strongly bispinose (mesal and lateral apical spines nearly the same size) (Fig. 14b) **2**
- Antennomeres 3–5 only mesally spined (no lateral apical spines present on 3–5) (Fig. 14a,c,d) **5**
- 2(1). Elytral apices strongly bispinose, outer spine much longer than sutural spine (e.g., Fig. 11); antennae almost always extending beyond apical third of elytra **3**
- Elytral apices weakly bispinose or bidentiform; outer spine equal to or only slightly longer than sutural spine; antennae extending at most to apical third of elytra *Elaphidion androsensis* Fisher
- 3(2). Elytral integument covered with numerous very small, separate patches of white or tawny pubescence; mesofemora without apicolateral spines (only spined mesally) **4**
- Elytral integument covered with larger connected patches of tawny pubescence; mesofemora with small apicolateral spines (and strongly spined apicomeresally) *Elaphidion iviei* Lingafelter
- 4(3). Integument, particularly legs, antennae, and elytra, pale reddish; pubescence, particularly on venter, white *Elaphidion splendidum* Fisher
- Integument darker reddish-brown; pubescence mostly tawny *Elaphidion conspersum* Newman
- 5(1). Elytral apices rounded to suture, without spines; femoral apices without mesal and lateral spines *Elaphidion rotundipenne* Fisher
- Elytral apices bidentiform, bispinose, or with pronounced outer apical spine; spines of femoral apices variable, usually dentiform or spinose .. **6**

- 6(5). Metafemoral apices (and usually mesofemoral apices) with strong apicolateral spines (Fig. 15b) **9**
 – Metafemoral and mesofemoral apices dentiform or with very short spines (Fig. 2) **7**
- 7(6). Middle pronotal callus teardrop shaped, not extending to posterior margin (and usually not to anterior margin); most of dorsum covered in moderately dense pubescence, uneven in distribution, but without distinct patches *Elaphidion tomentosum* Chevrolat
 – Middle pronotal callus more linear, extending to anterior and posterior pronotal margins (e.g., Fig. 5c,d); elytra with sparse pubescence arranged in distinct patches separated by glabrous regions **8**
- 8(7). Elytral apices bidentate or weakly bispinose; outer spine only slightly longer than sutural spine; integument dark reddish brown; body large, broad, over 6 mm wide *Elaphidion androsensis* Fisher
 – Elytral apices with very strong outer spine; integument pale reddish-brown; moderate sized, more narrow bodied, less than 5 mm wide (Fig. 2) *Elaphidion fullonium* Newman
- 9(6). Elytral integument reddish, mostly glabrous, with several concentrated patches of white or light colored pubescence; punctures mostly exposed, large, deep, and dense, but separated from each other; large sized, broad, usually 5 mm or more in breadth *Elaphidion irroratum* (Linnaeus)
 – Elytral integument reddish-brown, mostly covered in tawny or golden pubescence, without extensive, large glabrous regions; punctation often dense, but many punctures partially concealed under pubescence; moderate sized or small, 4 mm or less in breadth **10**
- 10(9). Elytral apices dentiform or weakly bispinose; elytral surface abruptly flat along suture, not evenly convex to lateral margin (evidenced by reflectivity); apicomesal metafemoral spine usually curved inward (mesally) at apex *Elaphidion costipenne* Fisher
 – Elytra with strong apicolateral spine; elytral surface gradually convex away from suture; apicomesal metafemoral spines typically normal and straight **11**
- 11(10). Scape short and thickened at apex (typical for *Elaphidion*); pronotum with distinctly raised calli, especially anterolaterally and with moderately dense, unevenly distributed punctures (Fig. 12) **12**
 – Scape more slender, long, and weakly expanded at apex; pronotum with flat calli and dense, mostly uniform, contiguous punctures, except on middle callus (Fig. 13) *Elaphidion wappesi* Lingafelter
- 12(11). Moderate, dense, golden pubescence present on head, pronotum, and elytra (although not fully concealing integument); posterolateral calli smooth (Fig. 10) *Elaphidion auricoma* Lingafelter
 – Moderate, dense, tawny pubescence present on head, pronotum, and elytra (not fully concealing integument); posterolateral calli rugose (Fig. 12) *Elaphidion nearnsi* Lingafelter

Acknowledgments

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