

2018

New species of Elaphidiini from Central America (Coleoptera: Cerambycidae: Cerambycinae)

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Wappes, James E.; Botero, Juan Pablo; and Santos-Silva, Antonio, "New species of Elaphidiini from Central America (Coleoptera: Cerambycidae: Cerambycinae)" (2018). *Insecta Mundi*. 1167.

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INSECTA MUNDI

A Journal of World Insect Systematics

0657

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Date of issue: September 28, 2018

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Insecta Mundi 0657: 1–12

ZooBank Registered: urn:lsid:zoobank.org:pub:9C8FC37E-9EA2-41CA-95BE-2BD3096C09B4

Published in 2018 by

Center for Systematic Entomology, Inc.
P.O. Box 141874
Gainesville, FL 32614-1874 USA
<http://centerforsystematicentomology.org/>

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Layout Editor for this article: Robert G. Forsyth

New species of Elaphidiini from Central America (Coleoptera: Cerambycidae: Cerambycinae)

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Abstract. Four new species of Elaphidiini (Coleoptera: Cerambycidae: Cerambycinae) are described: *Psyrassa vanderberghei* Wappes, Botero and Santos-Silva, from Nicaragua; *Psyrassa androwi* Wappes, Botero and Santos-Silva, from Belize, Costa Rica, Nicaragua and Panama; *Psyrassa vandevederi* Wappes, Botero and Santos-Silva, from Mexico; and *Aneflomorpha monzoni* Wappes, Botero and Santos-Silva, from Guatemala.

Key words. *Aneflomorpha*, *Psyrassa*, taxonomy.

Introduction

The tribe Elaphidiini is currently composed of 92 genera and 613 species (Tavakilian and Chevillotte 2018) and is distributed globally, especially in the western hemisphere, with only two genera known from other regions: *Cordylomera* Audinet-Serville, 1834 recorded in Africa and the species *Curtomerus flavus* (Fabricius, 1775) which is cosmopolitan.

Psyrassa Pascoe, 1866 currently contains 42 species with most of them distributed from southern United States to Central America (Bezark 2018; Monné 2018; Tavakilian and Chevillotte 2018).

Aneflomorpha Casey, 1912 includes 44 species primarily distributed in southern United States and Mexico (Monné 2018; Tavakilian and Chevillotte 2018). Only one species is known from beyond Mexico: *Aneflomorpha giesberti* Chemsak and Linsley 1975, recorded from Honduras, Mexico and Nicaragua.

In this work four new species are described, three in *Psyrassa* and one in *Aneflomorpha*.

Materials and Methods

Photographs were taken in the MZSP with a Canon EOS Rebel T3i DSLR camera and Canon MP-E 65mm f/2.8 1–5× macro lens, controlled by Zerene Stacker AutoMontage software. Measurements were taken in “mm” using a measuring ocular Hensoldt/Wetzlar - Mess 10 in the Leica MZ6 stereomicroscope, also used in the study of the specimens.

The acronyms used in the text are as follows:

ACMT – American Coleoptera Museum (James Wappes), San Antonio, Texas, USA
ASUHC – Arizona State University, Hasbrouck Insect Collection, Tempe, AZ, USA
EAPZ – Escuela Agrícola Panamericana Zamorano, Honduras
FSCA – Florida State Collection of Arthropods, Gainesville, FL, USA
MZSP – Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil
RAAC – Robert A. Androw personal collection, Gibsonsia, PA, USA
RFMC – Roy F. Morris personal collection, Lakeland, FL, USA
TAMU – Texas A & M University Insect Collection, College Station, TX, USA

Taxonomy

Psyrassa vandenberghae Wappes, Botero and Santos-Silva, new species

(Fig. 1–4)

Description. Female. Head reddish-brown dorsally, dark reddish-brown ventrally between lower eye lobes, gradually lighter toward prothorax; mandibles reddish-brown except margins and apex black; mouthparts mostly reddish-brown with apex of last palpomeres yellowish-brown; scape reddish-brown; pedicel and antennomeres black (slightly dark reddish toward distal antennomeres depending on angle of light source); prothorax mostly reddish-brown with basal and distal margins darker; ventral surface of meso- and metathorax reddish-brown (lighter than on prothorax), with margins of nearly all sternites narrowly darker; elytra reddish-brown in basal half (lighter than on prothorax), gradually darkened in distal half, becoming almost black distally; femora reddish-brown, slightly darkened in distal area and on peduncle of meso- and metafemora; tibiae nearly black; tarsi mostly dark brown; abdominal ventrites I–IV black; abdominal ventrite V primarily dark brown, with some small reddish areas.

Head. Frontal plate smooth; remaining surface of frons nearly smooth centrally, finely, densely punctate laterally; glabrous in smooth areas, with moderately short, decumbent, golden setae laterally (more whitish depending on angle of light source). Vertex with area between antennal tubercles distinctly more elevated than area toward prothorax; finely, abundantly punctate between antennal tubercles, coarsely, shallowly punctate toward prothorax; with short, decumbent, sparse golden setae between antennal tubercles, nearly smooth toward prothorax; with a long, erect golden seta close to upper eye lobes. Area behind eyes smooth close to eye, finely, moderately abundantly punctate close to prothorax; glabrous. Genae short (anterior margin of lower eye lobes almost touching distal margin at middle); finely punctate; with short, decumbent, sparse golden setae. Antennal tubercles finely punctate basally, smooth toward apex; with sparse, decumbent golden setae basally, glabrous toward apex. Last segment of maxillary and labial palpi securiform. Median groove distinct from clypeus to area between antennal tubercles and upper eye lobes. Postclypeus finely, densely punctate on wide central area, smooth laterally; with short, moderately sparse, decumbent golden setae in punctate area, glabrous in smooth area; with a few long, erect setae on each side of punctate area. Labrum almost coplanar with anteclypeus in basal half, inclined in distal half; with minute, decumbent, sparse golden setae centrally and long, erect, thick golden setae laterally. Gula smooth, glabrous between prothoracic margin and distal margin of lower eye lobes; striate-punctate, with sparse, decumbent pale-yellow setae and long, erect, pale-yellow setae interspersed in area between lower eye lobes. Distance between upper eye lobes 0.78 times length of scape; in frontal view distance between lower eye lobes slightly shorter than length of scape; upper eye lobes with three rows of ommatidia (two at apex). Antennae reaching elytral apex. Scape coarsely, abundantly punctate dorsally and laterally, except for smooth distal dorsolateral area; with long erect, sparse setae intermittent throughout; additionally, short, sparse golden setae in punctate area and smooth area glabrous. Antennomeres with short, decumbent yellowish setae, gradually denser toward XI; long, erect, sparse golden setae ventrally on III–X (sparser toward X); III with a few long, erect golden setae dorsally; IV–X with a few long, erect golden setae at apex; antennomeres III–VII dorsally carinate (gradually less distinct toward VII). Apical spine of antennomere III straight,

obliquely truncate at apex, 0.63 times length of antennomere; apical spine of antennomere IV 0.42 times length of antennomere; apical spine of antennomere V 0.2 times length of antennomere; apical spine of antennomere VI 0.16 times length of antennomere; apical spine of antennomere VII 0.09 times length of antennomere; remaining antennomeres with unarmed apex. Antennal formula (ratio) based on length of antennomere III (excluding spine): scape = 1.12; pedicel = 0.27; IV = 0.94; V = 1.06; VI = 1.09; VII = 1.15; VIII = 1.03; IX = 1.03; X = 1.00; XI = 1.21.

Thorax. Prothorax 1.32 times longer than wide, nearly parallel-sided between basal and distal constrictions. Pronotum with slightly elevated central gibbosity from basal constriction to middle; coarsely densely punctate except on smooth gibbosity; with short, decumbent, golden setae basally, denser in small area at sides; with long, erect, sparse golden setae except on glabrous gibbosity. Sides of prothorax coarsely, confluent punctate except finely striate distal area (this area widened toward prosternum), with long, erect, sparse golden setae throughout. Prosternum coarsely, shallowly punctate in basal half, transversely striate in distal half, with yellowish-white pubescence in basal half and long, erect golden setae interspersed; with sparse, decumbent yellowish-white pubescence in center of distal half, and long, erect, sparse, golden setae; prosternal process parallel-sided between coxae, triangularly expanded distally. Procoxal cavities closed posteriorly. Mesoventrite with sparse yellowish-white pubescence (more grayish-white depending on angle of light source) centrally, denser laterally. Mesepisternum, mesepimeron and metepisternum with yellowish-white pubescence (more grayish-white depending on angle of light source) denser than on mesoventrite. Metaventrite coarsely, moderately sparsely punctate in wide central area; with yellowish-white pubescence (more grayish-white depending on angle of light source) laterally and close to metacoxae, with short and long, erect, sparse golden setae on remaining surface. Scutellum with abundant golden setae, partially obscuring integument in distal area.

Elytra. Parallel-sided at basal 2/3, gradually narrowed toward apex at distal third; apex truncate, with rounded outer angle and short triangular projection at sutural angle; coarsely, abundantly punctate in basal half, gradually finer, sparser, in distal half; with long, erect, sparse golden setae throughout (some punctures with minute seta).

Legs. Femora coarsely, abundantly punctate, gradually coarser, confluent punctate toward apex; with long, erect, sparse golden setae. Tibiae with both short and long, erect golden setae, gradually more abundant toward apex, especially ventrally.

Abdomen. Ventrites finely, sparsely punctate (denser on ventrite V); sides with yellowish-white pubescence (more grayish-white depending on angle of light source); remaining surface with short and long, sparse golden setae. Apex of ventrite V nearly truncate.

Dimensions in mm (holotype female). Total length 9.85; prothoracic length 1.85; basal prothoracic width 1.25; distal prothoracic width 1.30; widest prothoracic width 1.40; humeral width 1.85; elytral length 6.10.

Type material. Holotype female from NICARAGUA, *Rivas*: vicinity of Rancho Santana, 27.V.2003, E. van den Berghe col. (FSCA). No other specimens known.

Etymology. Named for Eric van den Berghe, collector of the holotype.

Remarks. *Psyrassa vandenberghiei* sp. nov. differs from *P. nigripes* Linsley, 1935 by the spine of antennomere III straight and obliquely truncate at apex (curved and rounded in *P. nigripes*), prothorax nearly parallel-sided (rounded in *P. nigripes*), elytra gradually, distinctly darkened toward apex (unicolorous in *P. nigripes*), and femora mostly reddish (blackish in *P. nigripes*). The new species differs from *P. nigricornis* Bates, 1872 by the spine of antennomere III straight and obliquely truncate at apex (curved and rounded in *P. nigricornis*), elytra darkened toward apex (light in *P. nigricornis*), and elytral apex truncate, with rounded outer angle (emarginate with triangular projection at outer angle in *P. nigricornis*). *Psyrassa vandenberghiei* differs from *P. rufofemorata* Linsley, 1935 by the head, prothorax and basal area of the elytra reddish-brown (from dark-brown to black in *P. rufofemorata*), and spine of antennomere III obliquely truncate at apex (acute in *P. rufofemorata*). *Psyrassa vandenberghiei* can be separated from *P. chemsaki* Toledo, 2002 by the reddish femora (black in *P. chemsaki*), and spine of

antennomere III obliquely truncate at apex (acute in *P. chemsaki*).

In the couplet “21” of Toledo (2005) *P. vandenberghai* can be included in both options, because the spine of antennomere III is straight and about twice the length of pedicel.

***Psyrassa androwi* Wappes, Botero and Santos-Silva, new species**

(Fig. 5–9)

Description. Male. Head dorsally mostly reddish-brown, darkened along median groove, apex of antennal tubercles, parts of anteclypeus and most of labrum; central area behind eyes dark brown, almost black, gradually lighter toward ventral side; ventral side dark reddish-brown laterally, reddish-brown centrally, lighter toward prothorax; antennae light reddish-brown, darkened at apex of antennomeres III–VI. Prothorax mostly chestnut irregularly darkened in some areas, darker in narrow area close to head, around procoxal cavities and margins of prosternal process; mesoventrite chestnut centrally, somewhat darkened laterally, darker around mesocoxal cavities and margins of mesoventral process; mesepisternum and mesepimeron dark reddish-brown; metepisternum dark reddish-brown; metaventrite dark brown with irregular reddish areas, except light reddish-brown central area close to mesocoxae; elytra reddish-brown, gradually slightly lighter toward apex, except darker punctures and areas surrounding them in basal third; legs reddish-brown, slightly darker in some areas. Abdominal ventrites dark reddish-brown, except narrow yellowish-brown apex of ventrites III–IV. All areas can be slightly lighter or darker depending on the intensity of the light.

Head. Frontal plate narrow, transverse, smooth; remaining surface of frons finely, sparsely punctate centrally, denser laterally (punctures finer than in central area); with short, sparse golden setae laterally, glabrous centrally. Vertex with area between upper eye lobes depressed; finely, shallowly, sparsely punctate except coarser, deeper, more abundant punctures close to prothorax; with short, decumbent and erect golden setae between antennal tubercles and laterally, nearly glabrous centrally toward prothorax. Area behind eyes finely, sparsely punctate toward eyes, coarser, more abundant close to prothorax; with a few moderately long, erect golden setae. Genae short, anterior margin of lower eye lobes not touching distal margin at middle; finely, moderately abundantly punctate; with short, sparse golden setae except glabrous distal area. Antennal tubercles finely, sparsely punctate except smooth distal area; with short, decumbent, sparse golden setae. Last segment of maxillary and labial palpi securiform. Median groove distinct from clypeus to area between upper eye lobes. Postclypeus finely, abundantly punctate in wide central area, smooth laterally; with short, moderately abundant golden setae in punctate area, glabrous in smooth area. Labrum coplanar with anteclypeus at basal 2/3, inclined at distal third; with long, erect, moderately sparse golden setae. Gulamentum smooth, glabrous between prothoracic margin and distal margin of lower eye lobe; striate-punctate, with short and long, erect yellowish setae between eyes. Distance between upper eye lobes 0.65 times length of scape; in frontal view distance between lower eye lobes 0.95 times length of scape; upper eye lobes with four rows of ommatidia. Antennae 1.7 times elytral length, reaching elytral apex at basal third of antennomere VIII. Scape coarsely, abundantly punctate in basal 2/3, smooth in distal third (only distal fifth on inner side); with short, decumbent, sparse golden setae interspersed with long, erect golden setae in punctate area, glabrous in smooth area. Antennomere III with short, decumbent, moderately sparse golden setae; remaining antennomeres with short, decumbent, abundant golden setae; antennomeres III–V with long, erect golden setae ventrally; antennomeres VI–X with long, erect golden setae distally; antennomeres III–IX dorsally carinate. Apical spine of antennomere III straight, acute at apex, 0.55 times length of antennomere III; apical spine of antennomere IV 0.33 times length of antennomere IV; apical spine of antennomere V 0.16 times length of antennomere; spine of antennomere VI 0.12 times length of antennomere VI; antennomere VII with spicule at apex; remaining antennomeres with apex unarmed. Antennal formula (ratio) based on length of antennomere III (excluding spine) (only holotype measured): scape = 1.00; pedicel = 0.22; IV = 0.94; V = 1.12; VI = 1.22; VII = 1.28; VIII = 1.28; IX = 1.22; X = 1.15; XI = 1.38.

Thorax. Prothorax 1.4 times longer than wide; sides slightly rounded between basal and distal constrictions, with small rounded protuberance close to distal constriction. Pronotum with central gibbosity nearly elliptical, placed about middle; with transverse, tumid area on each side, close to distal

constriction (tumid areas connected through sides of prothorax and prosternum); coarsely, abundantly punctate between constrictions except in smooth central area from basal constriction to apex of central gibbosity, finely, sparsely punctate basally, smooth distally; with long, erect, sparse pale-yellow setae, except glabrous smooth central area. Sides of prothorax coarsely, shallowly punctate in wide central area close to pronotum, nearly smooth toward prosternum, finely, transversely striate basally, nearly smooth distally; with long, erect, sparse pale-yellow setae, except nearly glabrous area close to prosternum. Prosternum finely, transversely striate, interspersed with a few shallow punctures between procoxae and tumid area close to distal constriction, finely striate near distal margin (striae distinctly finer than in basal area); with yellow pubescence between procoxal cavities and tumid area close to distal constriction, denser laterally, with long, erect yellow setae interspersed; nearly glabrous in tumid area close to distal constrictions and long, erect, sparse yellow setae near distal margin; prosternal process nearly parallel-sided centrally, triangularly expanded distally; margins in central area distinctly elevated. Procoxal cavities nearly closed posteriorly. Mesoventrite with sparse pale-yellow pubescence centrally, slightly denser laterally; mesoventral process deeply emarginate at distal margin, with sides forming distinct tab projected on mesocoxae. Mesepisternum, mesepimeron and metepisternum with dense pale-yellow pubescence partially obscuring integument. Metaventricle finely, sparsely punctate toward central area; with pale-yellow pubescence close to metanepisternum, sparse pale-yellow pubescence close to metacoxal cavities, and long, erect, sparse pale-yellow setae on remaining surface. Scutellum with dense golden pubescence.

Elytra. Slightly, gradually narrowed from base to apex, more markedly in distal quarter; apex concave, with long spine at outer angle and moderately short spine at sutural angle; coarsely, abundantly punctate in basal third, gradually finer, sparser toward apex; with long, erect, moderately sparse pale-yellow setae throughout (more brownish depending on angle of light source).

Legs. Femora finely, sparsely punctate in basal half, then gradually coarsely, confluent punctate toward apex; inner and outer apices of profemora with rounded lobe; inner and outer apices of meso- and metafemora with triangular lobe; with long, erect, moderately abundant golden setae. Metatibiae sinuous.

Abdomen. Ventrites finely, sparsely punctate (slightly coarser and more abundant in distal area of ventrite V); with long, erect, sparse golden setae, more abundant and decumbent laterally. Apex of ventrite V widely emarginate centrally.

Variation. Antennae from 1.55 to 1.70 times elytral length, reaching elytral apex from basal third to distal third of antennomere X; spine of antennomere III longer than twice length of pedicel (about 0.55 times length of antennomere III – Fig. 9); spine of antennomere III from 0.40 to 0.55 times length of antennomere III; apical spine of antennomere IV from 0.26 to 0.33 times length of antennomere IV; apical spine of antennomere V from 0.11 to 0.16 times length of antennomere V; antennomere VI with minute spine at apex; antennomere VII unarmed at apex; antennomere IV from slightly shorter to slightly longer than III; pubescence on mesepisternum, mesepimeron, metepisternum and sides of metaventricle from golden to silvery; procoxal cavities distinctly closed posteriorly; sutural angle of elytra from triangularly projected to distinctly spiniform (but always shorter than spine at outer angle); apex of abdominal ventrite V widely, slightly emarginate centrally, or not emarginate.

Dimensions in mm (holotype male/paratype males). Total length 15.10/14.60–17.50; prothoracic length 2.75/2.75–3.00; basal prothoracic width 1.80/1.85–2.20; distal prothoracic width 1.90/1.80–2.10; greatest prothoracic width 2.00/2.10–2.35; humeral width 2.85/2.85–3.40; elytral length 9.90/9.65–12.40.

Female. Very similar to male and best differentiated by its slightly shorter antennae which attain the elytral apices in the distal one-half to one-third of antennomere eleven (male antennae attain the elytral apices at end of or distal one-third of antennomere ten).

Type material. Holotype male from PANAMA, *Panama*: Cerro Campana (2800'), 13–14.V.1996, Wappes, Huether and Morris col. (FSCA). Paratypes – PANAMA, *Panama*: Bayano (26 km W Ipeti), 1 male, 20–23.IV.1993, J.E. Wappes col. (ACMT); El Llano Carti Rd, k 8–11 (1100'), 1 female, 21.V–2.VI.1992, J. E. Wappes (ACMT). *Colon*: Ft. Espanar, vic Marg., 1 male, 2.VI.1992, J. E. Wappes (ACMT); Ft. Sherman area, 1 male, 1 female, 19.V.1999, Morris and Wappes (RFMC); Cerro Campana, 1 male, 11–15.V.1980,

E. G. Riley and D. LeDoux col. (ACMT). *Chiriquí*: Hornito, Finca Suiza, 2 males, 9–15.V.1999, Morris and Wappes (RFMC); 1 female, 9–15.V.1999, Wappes and Morris (ACMT); 1 male, 7.VII.1997, Wappes and Morris (ACMT). NICARAGUA, *Nuevo Segovia*: Cerro Jesus 13°58'N / 86°10'W, El 1,300m, @ MV/UV light), 1 female, 14.V.2016, E. van den Berghe Coll. (EAPZ); Cerro Jesus (Ex. blooming tree), 4 males, 7–13.VI.2015, Wappes and Morris (2 males EAPZ, 2 males RFMC); Cerro Jesus (8km N Jalapa), 5 males, 1 female, 12–20.V.2017, Wappes, Kuckartz and E. van den Berghe (4 males, ACMT, 1 male, 1 female RAAC). BELIZE, *Cayo*: Las Cuevas Research Station (580 m; 16°43.971'N / 88°59.196'W), 1 male, 1–4.VI.2008, Ratcliffe, Cave, Jameson & Orozco col. (MZSP). COSTA RICA, *San José*: vicinity of Hortensia (9°28'5"N / 83°41'03"W; 6,100'), 1 male, 09.IV.2007, D. Thomas and D. Robacker col. (ACMT). *Puntarenas*: Monteverde, 1 male, 26.V-3.VI.1984, E. Riley, D. Rider and D. LeDoux col. (TAMU).

Etymology. Named to recognize and thank Robert Androw, Carnegie Museum of Natural History, for assisting the authors during visits to work at the Carnegie Museum and for providing a number of thoughtful manuscript reviews.

Remarks. Considering the procoxal cavities open posteriorly, the key of Toledo (2005) leads to the alternative of couplet “22” and thus to *P. rufofemorata* Linsley, 1935 and *P. chemsaki* Toledo, 2002, two species with different body shape, general color and elytral apex. Considering the procoxal cavities closed posteriorly, the key of Toledo (2005) leads to *P. subglabra* Linsley, 1935, a visibly different appearing species (see photograph of the holotype at Bezark 2018). The general appearance of *Psyrassa androwi* sp. nov. is like that of *P. angelicae* Toledo, 2005, *P. cerina* Toledo, 2005, *P. clavigera* Toledo, 2005, *P. proxima* Toledo, 2005, and *P. tympanophora* Bates, 1885. However, *P. androwi* differs by the noticeably short gena (very long in the other species). *Psyrassa androwi* also resembles *P. testacea* Linsley, 1935, but differs from it by the straight, backward directed spine of antennomere III, while in *P. testacea* it is curved inward; additionally, all specimens of *P. testacea* examined lack the long spine at the outer elytral angle, which is distinct in *P. androwi*.

***Psyrassa vandevederi* Wappes, Botero and Santos-Silva, new species**

(Fig. 10–13)

Description. Female. Head mostly dark brown, antennal tubercles mostly reddish-brown, irregular reddish-brown areas on frons, and yellowish-brown anteclypeus; mouthparts yellowish-brown; scape, pedicel and base of antennomere III light reddish-brown; remaining areas of antennae yellowish-brown; prothorax dark brown except distal half of prosternal process yellowish-brown; ventral side of mesothorax dark brown, more reddish-brown close to mesocoxal cavities, central area and distal tabs of mesoventral process yellowish-brown; ventral side of metathorax dark brown laterally, gradually reddish-brown toward center of metaventre; elytra dark brown in basal quarter, gradually reddish-brown toward apex; femora light reddish-brown basally, gradually dark reddish-brown toward apex; tibiae dark reddish-brown basally, gradually yellowish-brown toward apex; tarsi mostly yellowish-brown; ventral side of abdomen dark brown basally, gradually dark reddish-brown toward apex, except yellowish-brown, narrow distal area of ventrites I–IV.

Head. Frontal plate narrow, transverse, smooth; remaining surface of frons finely, abundantly punctate laterally, nearly smooth centrally; with short, decumbent, sparse yellowish-white setae laterally (somewhat bristly under antennal socket), glabrous centrally and on frontal plate. Vertex finely, densely punctate (punctures finer close to prothoracic margin); with short, decumbent, sparse yellowish-white setae between antennal tubercles and upper eye lobes, interposed with long, erect, yellowish-white setae, nearly smooth close to prothorax. Area behind upper eye lobes finely, abundantly punctate (punctures finer, denser close to prothorax); with short, sparse yellowish-white setae. Area behind lower eye lobes nearly smooth, glabrous. Genae short (anterior margin of lower eye lobes not touching middle distal margin); finely, abundantly punctate except smooth distal area; with short, decumbent, moderately sparse yellowish-white setae, except glabrous distal area. Antennal tubercles finely, sparsely punctate (slightly more abundant toward frons); with decumbent, sparse yellowish-white setae. Last segment of maxillary and labial palpi securiform. Median groove distinct from clypeus to area between upper eye lobes. Postclypeus finely, densely punctate in wide central area, smooth laterally; with short, moderately

sparse yellowish-white setae in punctate area, glabrous in smooth area; with long, erect, yellow seta on each side of punctate area. Labrum coplanar with anteclypeus, abruptly inclined at narrow distal area; with sparse yellowish-white setae and long, erect, thick yellow setae interspersed laterally, and fringe of golden setae at central apex of inclined area. Gula smooth, glabrous between prothoracic margin and distal margin of lower eye lobes; striate-punctate, with long, erect, moderately abundant pale-yellow setae between eyes. Distance between upper eye lobes 0.86 times length of scape; in frontal view, distance between lower eye equal to length of scape; upper eye lobes with three rows of ommatidia. Antennae 1.27 times elytral length, reaching about distal ninth of elytra. Scape coarsely, densely punctate except smooth distal area; with short, decumbent, sparse yellow setae and long, erect yellow setae interspersed, except glabrous smooth area. Antennomere III with short, decumbent, sparse yellow setae; remaining antennomeres with short, decumbent, abundant yellow setae; antennomeres III–X with long, erect yellow setae ventrally (gradually shorter, sparser toward X); antennomeres III–VII dorsally carinate (carina gradually less conspicuous toward VI). Apical spine of antennomere III slightly curved, with rounded apex, 0.34 times length of antennomere III; apical spine of antennomere IV 0.15 times length of antennomere IV; antennomere V with spicule at apex; remaining antennomeres with apices unarmed. Antennal formula (ratio) based on length of antennomere III (excluding spine): scape = 0.79; pedicel = 0.21; IV = 0.79; V = 0.77; VI = 0.88; VII = 0.86; VIII = 0.79; IX = 0.79; X = 0.70; XI = 0.88.

Thorax. Prothorax 1.1 times longer than wide; sides slightly rounded between basal and distal constrictions. Pronotum coarsely, densely punctate except smooth drop-shaped central area from basal constriction to middle; with both decumbent and erect, moderately abundant yellow setae except glabrous drop-shaped area. Sides of prothorax with sculpturing and pubescence as in wide central area of pronotum, striate, glabrous basally, smooth, glabrous in oblique tumid area near distal margin, finely, moderately abundantly punctate, with erect yellow setae between tumid area and distal margin. Prosternum somewhat rugose-punctate in basal half, transversely striate in distal half; with yellowish-white pubescence (more whitish depending on angle of light source), not obscuring integument, with long, erect yellow setae interspersed on basal half and long, erect, sparse yellow setae in distal half; distal area of prosternal process expanded, with lateral margins rounded. Procoxal cavities widely open posteriorly. Mesoventrite with sparse pale-yellow (more whitish depending on angle of light source) pubescence centrally, slightly denser laterally. Mesepisternum, mesepimeron and metepisternum with moderately dense pale-yellow pubescence (denser in basal area of metepisternum). Metaventrite coarsely, moderately sparsely punctate laterally (somewhat rugose close to metepisternum), gradually punctures sparser toward center; with pale-yellow pubescence laterally and long, erect yellow setae on remaining surface (nearly glabrous along central area). Scutellum with dense yellowish-white pubescence.

Elytra. Coarsely, densely punctate (finer, sparser punctures in distal area); apex nearly truncate, with outer angle rounded and short triangular projection at sutural angle; with long, erect, moderately abundant yellow setae throughout.

Legs. Femora finely punctate basally, punctures gradually denser, distinctly coarser and confluent toward apex; apices rounded; with long, erect, moderately abundant yellow setae. Metatibiae straight.

Abdomen. Ventrites finely, sparsely punctate; with yellowish-white pubescence laterally and long, erect, sparse yellow setae throughout. Apex of ventrite V almost truncate.

Dimensions in mm (holotype female). Total length 12.65; prothoracic length 2.20; basal prothoracic width 1.60; distal prothoracic width 1.65; greatest prothoracic width 2.00; humeral width 2.50; elytral length 9.00.

Type material. Holotype female from MEXICO, *Sonora*: Rancho La Palmita (N of Mesa del Campanero, 12.8 km W Yécora; 1499 m; 28°37'11"N / 109°06'44"W), 4.VIII.2012, T. van Devender col. (ASUHC). No other specimens known.

Etymology. Named for Tom van Devender, leader of the “Sky Island” project in Sonora, Mexico, and collector of the holotype.

Remarks. The key of Toledo (2005) leads *Psyrassa vandevenderi* sp. nov. to the alternative of couplet “16”. As only antennomere III is distinctly carinate, it is possible to differentiate the new species in the alternatives (translated) as follows: Antennomeres III–VI carinate dorsally [leading to *P. sallaei* Bates, 1885]; antennomere III carinate dorsally and remaining antennomeres not carinate [*P. katsurae* Chemsak and Noguera, 1993 and *P. nigroaenea* Bates, 1892]. *Psyrassa vandevenderi* differs from *P. sallaei* by the prothorax dark brown (reddish in *P. sallaei*), not distinctly contrasting with the color of elytra, especially basally (elytra distinctly dark and contrasting with pronotal color in *P. sallaei*), antennae mostly yellowish-brown (antennae dark brown in *P. sallaei*), and pronotum coarsely and abundantly punctate (more finely and distinctly less punctate in *P. sallaei*). It differs from *P. katsurae* by the antennae mostly yellowish-brown (mostly dark brown in *P. katsurae*), tibiae lighter and yellowish-brown toward apex (dark brown in *P. katsurae*), pronotal punctures coarser and denser (finer and sparser in *P. katsurae*), and elytral apex distinctly wider than the width of the scape and with outer angle rounded (slightly wider than the width of the scape and with outer angle projected in *P. katsurae*). *Psyrassa vandevenderi* sp. nov. is separated from *P. nigroaenea* by antennae mostly yellowish-brown (dark brown in *P. nigroaenea*), pronotal punctures coarser and denser (finer and sparser in *P. nigroaenea*), and elytral apex noticeably wider than the width of the scape (about as wide as the width of the scape in *P. nigroaenea*).

***Aneflomorpha monzoni* Wappes, Botero and Santos-Silva, new species**
(Fig. 14–17)

Description. Male. Integument mostly dark brown; head with dark reddish-brown areas dorsally; mouthparts yellowish-brown; antennae reddish-brown, gradually lighter toward distal segments; elytra dark brown basally, gradually reddish-brown toward apex; femora reddish-brown basally, gradually darker toward apex; tibiae dark reddish-brown basally, gradually lighter toward apex; tarsi reddish-brown; distal area of abdominal ventrites I–IV narrowly yellowish-brown; distal area of abdominal ventrite V dark reddish-brown.

Head. Frontal plate triangular, smooth, centrally depressed; remaining surface of frons finely, abundantly punctate, especially under antennal sockets; with yellowish-white pubescence not obscuring integument except on glabrous frontal plate. Vertex finely, sparsely punctate, denser, somewhat rugose-punctate near prothoracic margin; with yellowish-white pubescence not obscuring integument, interspersed near eyes with a few long, erect yellowish-white setae, pubescence gradually sparser toward prothoracic margin. Area behind upper eye lobes finely, moderately abundantly punctate, gradually smooth close to eye and rugose-punctate close to prothorax toward lower eye lobe; with sparse pubescence close to vertex, glabrous on remaining surface. Area behind lower eye lobes smooth close to eye, coarsely, abundantly punctate close to prothorax (punctures becoming finer, sparser toward gena); with a few short, bristly, yellowish-white setae near gena. Genae short (anterior margin of lower eye lobe touching middle distal margin); finely, moderately sparsely punctate; with short, sparse, decumbent yellowish-white setae except on glabrous distal area. Antennal tubercles finely, abundantly punctate except smooth distal area; with yellowish-white pubescence not obscuring integument except in glabrous distal area. Last segment of maxillary and labial palpi securiform. Median groove distinct from apex of frontal plate to level of posterior margin of upper eye lobes. Postclypeus finely, densely punctate in wide central area, smooth laterally; with yellowish-white pubescence not obscuring integument in punctate area, glabrous laterally; with a long, erect yellowish-white seta on each side of punctate area. Labrum coplanar with anteclypeus in basal half, inclined in distal half; with minute, sparse yellowish-white setae and long golden setae interspersed laterally in basal half, and fringe of golden setae on distal margin. Gulamentum smooth, glabrous in wide central area between prothoracic margin and distal margin of lower eye lobes, finely, sparsely punctate with sparse, decumbent yellowish-white setae laterally; striate-punctate, with short, moderately sparse yellowish-white setae and long, erect yellowish-white setae interspersed between eyes. Distance between upper eye lobes 0.67 times length of scape; in frontal view distance between lower eye lobes 0.92 times length of scape; upper eye lobes with four rows of ommatidia. Antennae 1.5 times elytral length, reaching elytral apex at base of antennomere XI. Scape coarsely, densely punctate except in smooth distal third of dorsal area (this area widened toward outer side); with short, decumbent yellowish-white setae not obscuring integument in punctate area and long, erect yellowish-white setae

interspersed (more abundant ventrally), glabrous in smooth area. Antennomeres with yellowish-white pubescence not obscuring integument, slightly sparser on III; antennomeres III–X with long, erect, yellowish-white setae ventrally (gradually shorter, sparser toward X); antennomeres III–X with long, erect yellowish-white setae at apex of dorsal side; antennomeres not carinate dorsally. Apical spine of antennomere III slightly curved, with slightly rounded apex, 0.51 times length of antennomere III; apical spine of antennomere IV 0.23 times length of antennomere IV; apical spine of antennomere V 0.06 times length of antennomere V; antennomere VI with spicule at apex; remaining antennomeres with apices unarmed. Antennal formula (ratio) based on length of antennomere III (excluding spine): scape = 0.94; pedicel = 0.22; IV = 0.94; V = 1.18; VI = 1.18; VII = 1.22; VIII = 1.14; IX = 1.18; X = 1.11; XI = 1.23.

Thorax. Prothorax 1.4 times longer than wide; almost parallel-sided between basal and distal constrictions. Pronotum with slightly elevated, subelliptical, central gibbosity; finely, moderately sparsely punctate except on smooth central gibbosity; with yellowish-white pubescence not obscuring integument and long, erect, moderately abundant yellowish-white setae interspersed (more whitish depending on angle of light source), slightly denser on sides of basal third, except on glabrous central gibbosity, and nearly glabrous narrow distal and basal areas. Sides of prothorax coarsely, moderately sparsely punctate in wide central area, transversely striate in basal area, somewhat rugose-punctate in distal area (this area widened toward prosternum); with yellowish-white pubescence (more whitish depending on angle of light source) not obscuring integument, with long, erect, moderately abundant yellowish-white setae interspersed (erect setae slightly yellower than on pronotum). Prosternum coarsely, sparsely punctate in basal half, transversely striate in distal half; with abundant yellowish-white pubescence (more whitish depending on angle of light source) not obscuring integument and long, erect yellowish-white setae interspersed in basal half; with sparse yellowish-white pubescence in distal half (more whitish depending on angle of light source) and long, erect yellowish-white setae interspersed in center of this area; prosternal process narrow centrally, widely expanded distally. Procoxal cavities closed posteriorly. Mesoventrite with sparse yellowish-white pubescence centrally (more whitish depending on angle of light source), denser laterally. Mesepisternum, mesepimeron and metepisternum with dense yellow (more whitish depending on angle of light source) pubescence nearly obscuring integument. Mesoventral process emarginate at distal margin, with distal sides projected as tab on mesocoxae. Metaventrite moderately finely, sparsely punctate (punctures sparser toward central area), slightly rugose laterally; with yellow pubescence, distinctly denser close to metepisternum and sparser toward center and long, erect yellow setae interspersed. Scutellum with dense, nearly golden pubescence obscuring integument.

Elytra. Coarsely, abundantly punctate in basal third, gradually finer, sparser toward apex; apex concave with triangular projection at outer and sutural angles (more rounded at outer angle); with abundant, decumbent yellowish-white setae (more whitish depending on angle of light source) and long, erect yellowish-white setae interspersed.

Legs. Basal half of profemora nearly smooth, gradually finely, densely punctate in distal half; peduncle of meso- and metafemora finely, sparsely punctate, and club gradually coarsely, densely punctate toward apex (punctures coarser than on profemora); profemora with long, erect yellowish-white setae in basal half and decumbent yellowish-white setae interspersed, and long, erect yellowish-white setae in distal half; meso- and metafemora with decumbent yellowish-white setae and long, erect yellowish-white setae interspersed (both kind of setae denser on club). Metatibiae straight.

Abdomen. Ventrites finely, sparsely punctate; with yellowish-white pubescence (more whitish depending on angle of light source) not obscuring integument, denser laterally, and long, erect yellowish-white setae interspersed. Apex of ventrite V truncate.

Dimensions in mm (holotype male). Total length 13.95; prothoracic length 2.65; basal prothoracic width 1.65; distal prothoracic width 1.75; greatest prothoracic width 1.90; humeral width 2.65; elytral length 9.95.

Type material. Holotype male from GUATEMALA, *Baja Verapaz*: 19–24 km N Salama (4500'), 25–31.V.1989, J. E. Wappes col. (FSCA). No other specimens known.

Etymology. Named to recognize José Monzón, Guatemala City, Guatemala for his many entomological accomplishments including his beautiful photography displayed in several books and papers on the flora and fauna of Guatemala.

Remarks. In the key of Chemsak and Noguera (2005) to Mexican species, *Aneflomorpha monzoni* sp. nov. goes to the alternative of couplet “26” with *M. tenuis* (LeConte, 1854) and *M. martini* Chemsak and Linsley, 1968. It differs from *M. tenuis* (see photograph of a syntype at Bezark 2018) by the slender body (wider in *M. tenuis*), body less pubescent dorsally, especially on elytra (pubescence denser in *M. tenuis*), and antennae lighter in color (dark in *M. tenuis*). It differs from *M. martini* (see photograph of the holotype at Bezark 2018) by the slender body (wider in *M. martini*), pronotal punctures finer and sparser (denser and coarser in *M. martini*). *Aneflomorpha monzoni* sp. nov. also resembles *A. longitundinis* Chemsak and Noguera, 2005, but differs by the pubescence sparser dorsally, antennae in male reaching elytral apex after apex of antennomere X (before apex of X in *A. longitundinis*), spine of antennomere III slightly rounded at apex (acute in *A. longitundinis*), pronotal length slightly greater than humeral width (shorter than humeral width in *A. longitundinis*), and pronotal surface with large glabrous central area (with vague glabrous area in *A. longitundinis*). It can be separated from *A. mexicana* (Linsley, 1935) and *A. modica* Chemsak and Noguera, 2005 by the long, erect elytral setae (absent in *A. modica* and *A. mexicana*).

Acknowledgments

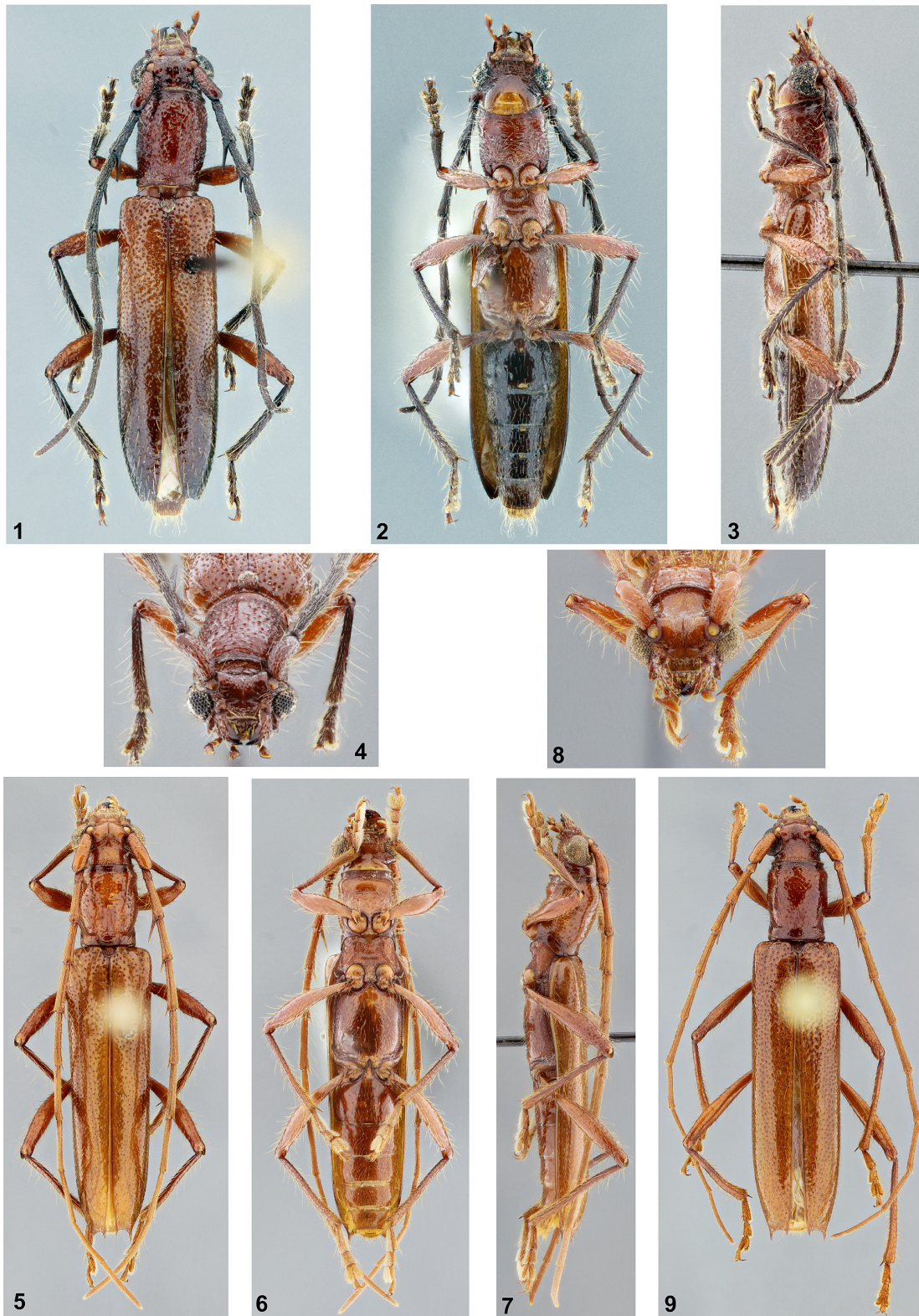
Special thanks to Eric van den Berghe, Zamorano, Honduras and Tom van Devender, Phoenix, Arizona, USA, for providing specimens they collected and included in this paper. The detailed reviews by Robert Androw, Pittsburgh, PA and Don Thomas, Weslaco, TX were very helpful and much appreciated.

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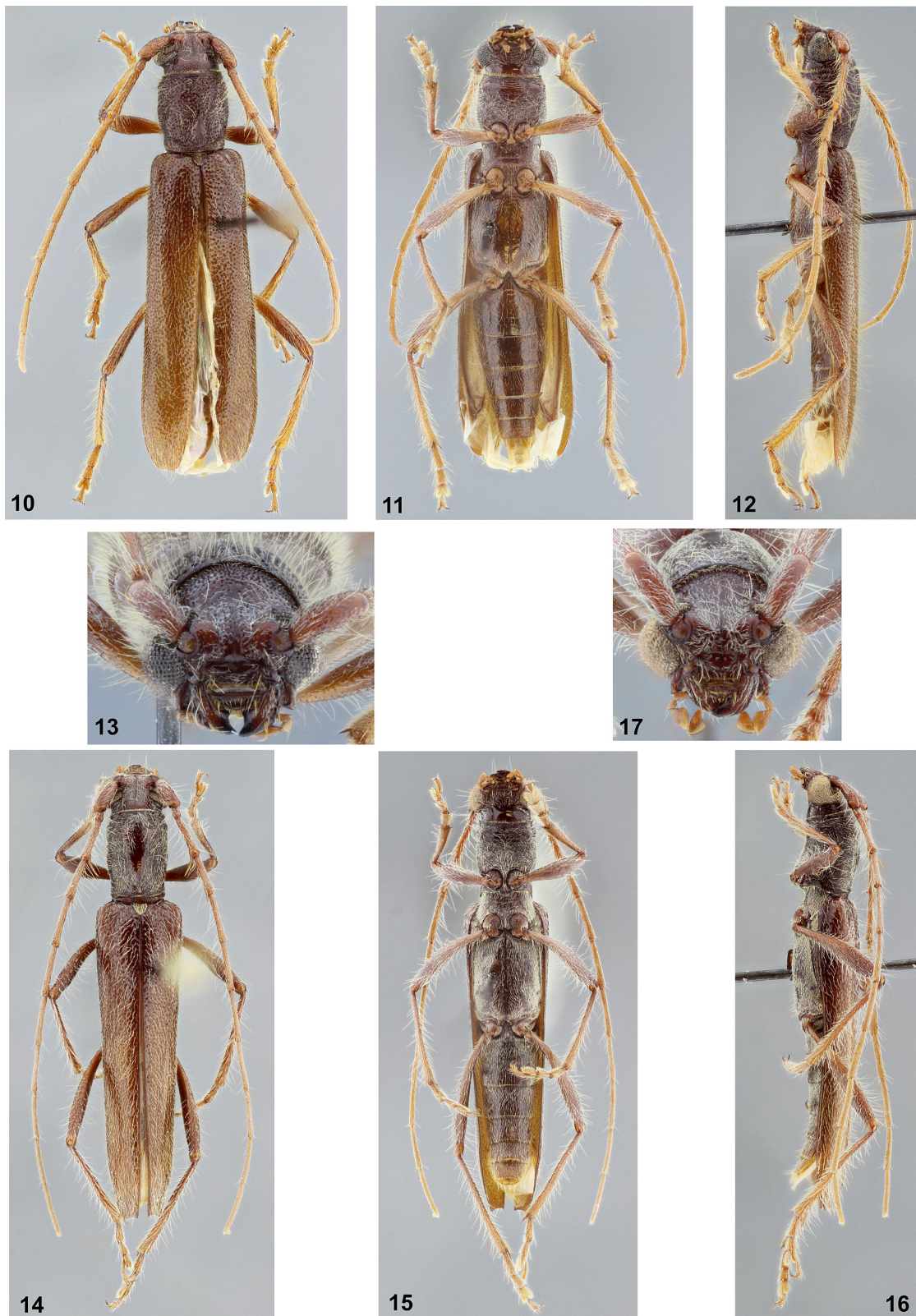
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Received August 1, 2018; accepted August 16, 2018.

Review editor Jiri Zidek.



Figures 1–9. New Elaphidiini. 1–4) *Psyrassa vandenberghiei* new species, holotype female. 1) Dorsal habitus. 2) Ventral habitus. 3) Lateral habitus. 4) Head, frontal view. 5–8) *Psyrassa androwi* new species, holotype male: 5) Dorsal habitus. 6) Ventral habitus. 7) lateral habitus. 8) head, frontal view. 9) *Psyrassa androwi* new species, paratype male, dorsal habitus.



Figures 10–17. New Elaphidiini. **10–13)** *Psyrassa vandevederi* new species, holotype female. **10)** Dorsal habitus. **11)** Ventral habitus. **12)** Lateral habitus. **13)** Head, frontal view. **14–17)** *Aneflomorpha monzoni* new species, holotype male. **14)** Dorsal habitus. **15)** Ventral habitus. **16)** Lateral habitus. **17)** Head, frontal view.