

Expanding knowledge of American Cerambycidae (Coleoptera): new species, new records, and morphological variations

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Abstract. Four new species are described: *Xystochroma luteotarsis* sp. nov. (Cerambycinae, Callichromatini), from Ecuador; *Psyrassa tysoni* sp. nov. (Cerambycinae, Elaphidiini), from Guatemala; *Bisaltes (Bisaltes) lateralis* sp. nov. (Lamiinae, Apomecynini), from Ecuador; and *Nagma hovorei* sp. nov. (Lamiinae, Calliini), from Ecuador. A key to species of *Xystochroma* Schmidt, 1924 is provided and *Psyrassa tysoni* sp. nov. is included in a previous key. Variation in the pubescent pattern of *Rosalba strandi* (Breuning, 1943) is reported and the species is newly recorded for Paraguay. Chromatic variation in *Cyrtinus umbus* Martins & Galileo, 2009 (Lamiinae, Cyrtinini) is provided and the species is redescribed based on a dark specimen; a new province record (Puntarenas, Costa Rica) and a new country record (Panama) are included. Chromatic variation and sexual dimorphism in *Phaea quadrimaculata* Wappes & Santos-Silva, 2021 (Lamiinae, Tetraopini) is reported, and a new Mexican state record (Oaxaca) is provided.

Keywords. Longhorned Beetles; Neotropical region; Taxonomy.

INTRODUCTION

Xystochroma Schmidt, 1924 includes 13 species distributed from Mexico to southern South America; of these, only *X. buprestoides* (Bates, 1885) does not occur in South America and another three occur in Central and South America (Monné, 2023a; Tavakilian & Chevillotte, 2022; Bezark, 2023). We describe a new species from Ecuador.

Psyrassa Pascoe, 1866 is a large genus of Elaphidiini including 58 species distributed from Canada to northern South America, including the Caribbean (Monné, 2023a; Monné & Nearn, 2023a; Tavakilian & Chevillotte, 2022; Bezark, 2023). A new species from Guatemala is described.

Bisaltes (Bisaltes) Thomson, 1868 has 28 known species distributed from Central America to southern South America (Monné, 2023b; Tavakilian & Chevillotte, 2022; Bezark, 2023). We describe a new species from Ecuador.

Currently, *Nagma* Bezark & Santos-Silva, 2020 includes only *N. albofasciatum* (Martins & Galileo, 2006), a species known from Bolivia (Monné, 2023b; Tavakilian & Chevillotte, 2022; Bezark, 2023). We describe a new species from Ecuador.

Rosalba Thomson, 1864 is a large genus of Apomecynini with 60 known species distributed from Central America to southern South

America, including the Caribbean (Monné, 2023b; Tavakilian & Chevillotte, 2022; Bezark, 2023). We report variation in the pubescent pattern of *Rosalba strandi* (Breuning, 1943) and record the species from Paraguay.

Cyrtinus LeConte, 1852 has 30 species distributed from Canada to northern South America, including the Caribbean (Monné, 2023b; Monné & Nearn, 2023b; Tavakilian & Chevillotte, 2022; Bezark, 2023). We report chromatic variation in the species, redescribing it based on dark specimen, and record it for Puntarenas (Costa Rica) and Panama.

Phaea Newman, 1840 is a large genus of Tetraopini with 68 species distributed from the United States of America to northern South America (Monné, 2023b; Monné & Nearn, 2023b; Tavakilian & Chevillotte, 2022; Bezark, 2023). We report chromatic variation and sexual dimorphism in *Phaea quadrimaculata* Wappes & Santos-Silva, 2021, and add a new Mexican state record for the species.

MATERIAL AND METHODS

Photographs were taken at MZSP with a Canon EOS TD Mark II camera, Canon MP-E 65 mm f/2.8 1-5× macro lens, controlled by Zerene Stacker

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AutoMontage software. Measurements were taken in "mm" using an ocular Hensoldt/Wetzlar – Mess 10 in the Leica MZ6 stereomicroscope, which was also used in the study of the specimens.

Under examined material of the known species, only specimens used to establish new records are listed. The collection acronyms used in the text are as follows: **CASC** = California Academy of Sciences, Golden Gate Park, San Francisco, California, USA; **LGBC** = Larry G. Bezark collection, Sacramento, California, USA; **MZSP** = Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil; **WHTC** = William H. Tyson collection, Coarsegold, California, USA.

RESULTS

Cerambycinae Latreille, 1802
Callichromatini Swainson, 1840
***Xystochroma* Schmidt, 1924**
***Xystochroma luteotarsis* sp. nov.**
(Fig. 1)

Description: Holotype male (Fig. 1A-1E): Metallic green and blue areas alternating between them depending on the angle of incidence of light. Head capsule shiny metallic green and blue, except opaque, blackish macula on each side of upper eye lobes and dark brown posterior region of gulamentum; anteclypeus and labrum dark brown, with sides of labrum lighter; apex of sides of postclypeus and of the genae black; ventral mouthparts mostly light brown, except parts of mentum metallic green, maxillary palpomeres I-III mostly light brown with irregular yellowish brown areas, maxillary palpomere IV brown, and labial palpomeres dark brown with apex of I-II yellowish-brown apex. Mandibles shiny metallic green and blue, except black apical third. Antennae black, with slight violaceous reflections on some areas. Wide central area of pronotum blackish blue, from near anterior margin to posterior constriction, except longitudinal, shiny metallic green and blue band centrally; remaining surface shiny metallic green and blue. Most of sides of prothorax and about posterior $\frac{3}{4}$ of prosternum shiny metallic green and blue; anterior quarter of prosternum and part of posterior region of sides of prothorax dark brown. Prosternal process dark brown laterally, slightly shiny and greenish centrally. Ventral surface of mesothorax shiny metallic green and blue except dark brown margins of segments. Ventral surface of metathorax shiny metallic green and blue, except large, subtriangular posterocentral area on metaventricle. Scutellum shiny metallic green. Elytra blackish blue, except shiny metallic green longitudinal band close to suture, vaguely orange on posterior half, shiny metallic green longitudinal band laterally on dorsal surface, from humeri to near apex, irregular, less distinct close to humerus, irregular, less distinct, curved and subfused to sutural band apically, and narrow, shiny metallic green band close to anterior third of epipleural margin. Legs black, except orangish tarsi. Abdominal

ventrites 1-5 shiny metallic green and blue, except dark brown large central area and apex of ventrites 1-3, and apex of ventrite 4; ventrite 6 shiny metallic blue laterally, more blackish blue depending on the angle of incidence of light, dark brown centrally.

Head (Fig. 1D): Inferior region of frons and postclypeus abundantly, finely punctate, except smooth sides of postclypeus; central region of frons slightly tumid, somewhat transversely rugose on each side of median groove; sides longitudinally, widely, somewhat shallowly sulcate from before middle to base of antennal tubercles, carina-shaped from clypeus to antennal tubercles; central region sparsely, finely punctate; lateral sulcate area abundantly, minutely punctate; superior region densely, minutely punctate. Median groove distinct from near clypeus to area between antennal tubercles. Area between antennal tubercles, smooth, glabrous on each side of median groove, and densely, minutely punctate laterally; area between upper eye lobes with smooth, glabrous diamond-shaped area centrally, densely, minutely punctate, with abundant blackish pubescence laterally. Remaining surface with sculpturing and pubescence as sides of area between upper eye lobes, except abundantly, coarsely rugose-punctate, glabrous area close to prothorax. Area behind upper eye lobes with sculpturing and pubescence as on posterior region of vertex close to it, finely, sparsely punctate, glabrous close to eye toward inferior region, rugose-punctate, glabrous close to prothorax toward inferior region. Area behind lower eye lobes coarsely rugose-punctate, glabrous, except finely rugose-punctate, glabrous narrow area close to prothorax. Genae somewhat abundantly, finely punctate, glabrous on wide area close to eye, densely, minutely punctate, glabrous close to smooth apex. Antennal tubercles glabrous, densely, minutely punctate frontally, punctures gradually sparser toward posterior region, except smooth apex. Labrum coplanar with anteclypeus, except inclined anterocentral region; abundantly, finely punctate, except smooth area close to anteclypeus, sides, and anterocentral region; with long, erect brownish setae laterally, short, erect brownish setae anterocentrally, glabrous on remaining surface. Gulamentum (Fig. 1B) smooth, glabrous on center of posterior half, somewhat coarsely rugose, with a few brownish erect setae on sides of posterior half; anterior half coarsely, transversely rugose, with sparse punctures interspersed, and sparse, long, erect brownish setae. Distance between upper eye lobes 0.24 times distance between outer margins of eyes; in frontal view, distance between lower eye lobes 0.38 times distance between outer margins of eyes. Antennae 1.5 times elytral length, reaching elytral apex at base of antennomere XI. Scape (Fig. 1E) gradually widened toward apex; with subtriangular projection on outer apex; outer side of dorsal surface, outer lateral surface, and ventral surface glabrous, sparsely, finely punctate, except smooth apex; inner side of dorsal surface densely, minutely punctate, with minute blackish setae. Pedicel somewhat abundantly, finely punctate; with short

blackish setae, and somewhat long, erect black setae ventrally. Antennomeres III-XI with dense, minute blackish pubescence; antennomeres III-VI whit short, erect black setae on inner margin, and short, thick black setae on apex of ventral surface. Antennal formula (ratio) based on length of antennomere III: scape = 0.50; pedicel = 0.11; IV = 0.63; V = 0.67; VI = 0.67; VII = 0.62; VIII = 0.55; IX = 0.49; X = 0.46; XI = 0.64.

Thorax: Prothorax wider than long (including lateral tubercles); anterior and posterior constrictions well marked; lateral tubercles large, conical, with blunt apex, located centrally. Pronotum (Fig. 1A) with large, transverse gibbosity on each side of anterior half, somewhat transversely elevated close to posterior constriction, forming distinct plate laterally; with longitudinal, narrow sulcus centrally, from anterior margin to posterior

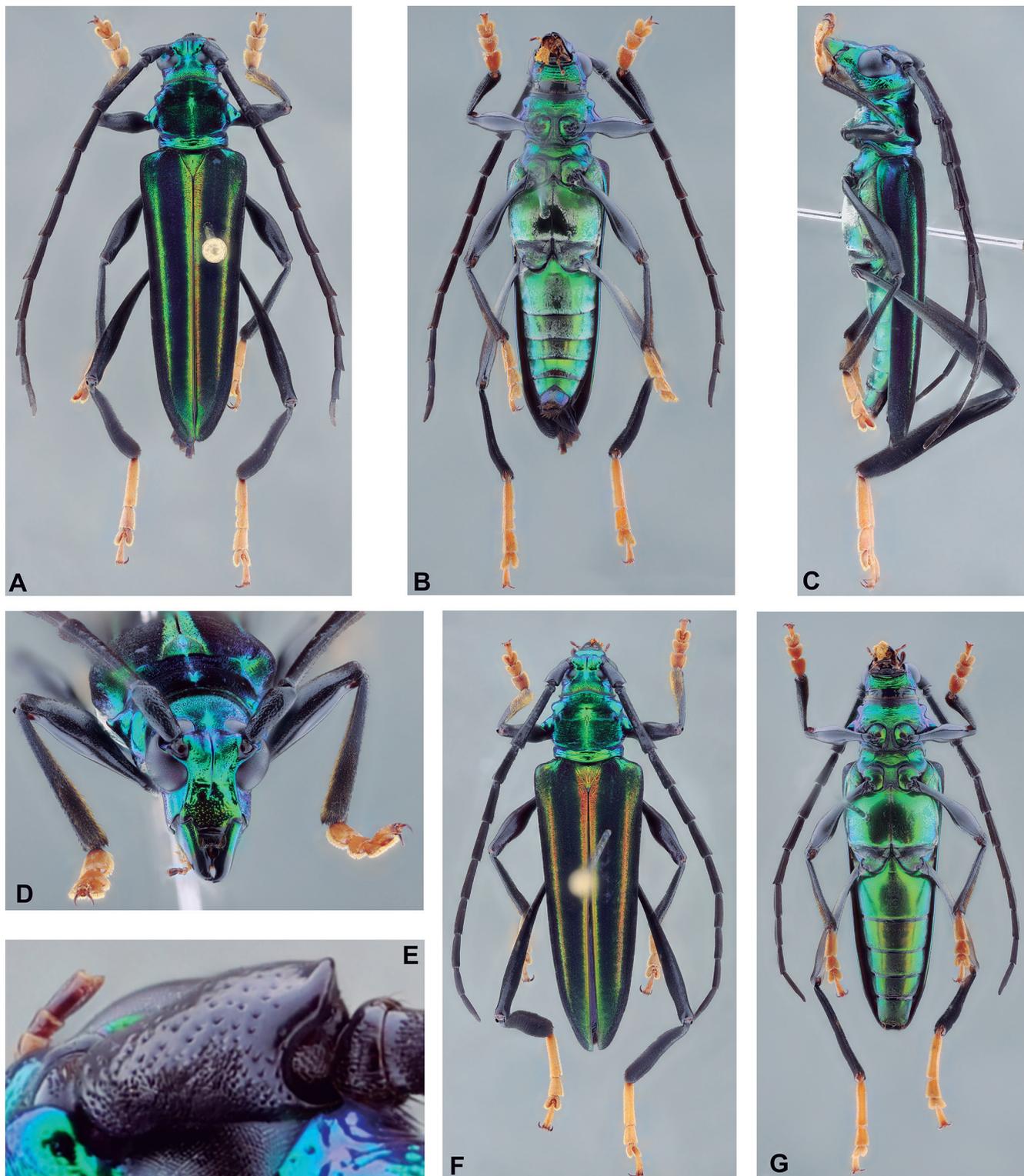


Figure 1. *Xystochroma luteotarsis* sp. nov. (A-E) Holotype male: (A) Dorsal habitus; (B) Ventral habitus; (C) Lateral habitus; (D) Head, frontal view; (E) Scape. (F-G) Paratype female: (F) Dorsal habitus; (G) Ventral habitus.

constriction, more distinct after anterior constriction, very finely rugose-punctate, except smooth area close to middle of pronotum; blackish-blue area densely, minutely punctate, with dense, short blackish pubescence partially obscuring integument, except on longitudinal central sulcus; sides and posterior regions with a few minute punctures and a few minute dark setae. Sides of prothorax (Fig. 1C) with longitudinal gibbosity between anterior constriction and lateral tubercles; glabrous, sparsely, minutely punctate, except finely rugose-punctate area close to posterior margin. Prosternum densely, finely punctate, with dense grayish-white pubescence on posterior $\frac{3}{4}$, except somewhat rugose, glabrous antero-central region; anterior quarter glabrous, transversely striate, except smooth area close to anterior margin. Prosternal process widely, longitudinal sulcate centrally on basal $\frac{3}{4}$; with dense grayish-white pubescence; narrowest area 0.3 times procoxal width. Mesoventrite, mesanepisternum, and mesepimeron densely, minutely punctate, punctures slightly sparser laterally; with abundant grayish-white pubescence not obscuring integument. Mesoventral process widely, longitudinally elevated centrally; parallel-sided; apex distinctly emarginate centrally; with abundant grayish-white pubescence; apex 0.77 times mesocoxal width. Metanepisternum and metaventrite with dense grayish-white pubescence, except glabrous dark-brown area. Scutellum longitudinally sulcate centrally; basal half densely, minutely punctate; posterior half somewhat rugose. **Elytra:** Densely, minutely punctate, with dense, minute dark pubescence, except longitudinal sutural green band glabrous, finely, transversely striate, outermost longitudinal green band on dorsal surface finely rugose-punctate, almost glabrous, and epipleural green band with abundant grayish-white pubescence. **Legs:** Profemora abundantly, minutely punctate dorsally, minutely, sparsely punctate on remaining surface; with somewhat abundant grayish-white pubescence dorsally, glabrous on remaining surface. Mesofemora densely, minutely punctate dorsally, slightly sparser, minutely punctate laterally, mostly smooth ventrally; with somewhat abundant grayish-white pubescence dorsally, pubescence sparser on remaining surface. Metafemora densely, minutely punctate, except finely, slightly sparsely punctate on posterior $\frac{2}{3}$ of ventral surface, and apex of dorsal surface; with abundant grayish-white pubescence except sparse pubescence on areas with sparser punctures. Protibiae with sparse blackish pubescence on basal half of dorsal and lateral surfaces, and dense, bristly yellowish-brown pubescence on ventral surface and basal half of dorsal and lateral surfaces (yellowish-brown pubescence appearing to be blackish depending on angle of light source). Mesotibiae with sparse blackish pubescence basally, pubescence gradually denser, bristly, dark yellowish-brown toward apex, especially on apical third. Protibiae distinctly widened from basal quarter, laterally flattened; with abundant dark pubescence, blackish bristly dorsally and ventrally. Dorsal surface of tarsi with abundant yellowish-white pubescence not obscuring integument; metatarsomere I 1.4 times longer than II-III together.

Abdomen: Ventrites 1-5 with dense grayish-white pubescence except glabrous apex on ventrites 1-4, glabrous area distinctly wider on ventrite 4. Apex of ventrite 5 widely emarginate centrally. Ventrite 6 with sparse grayish-white pubescence laterally, pubescence denser on center of posterior $\frac{3}{4}$; apex distinctly emarginate centrally.

Female (Fig. 1F-G): Similar to male, differing by the antennae (Fig. 1F) slightly shorter, 1.35 times elytral length, reaching elytral apex at posterior sixth of antennomere XI, and apex of ventrite 5 (Fig. 1G) slightly emarginate centrally. The longitudinal green central band on the pronotum (1F) is wider than in the holotype male, and the longitudinal shiny bands on the elytra are more orangish.

Dimensions in mm (holotype male/paratype female): Total length, 22.30/26.80; prothoracic length, 3.90/4.35; anterior prothoracic width, 3.25/3.70; posterior prothoracic width, 3.80/4.40; maximum prothoracic width, 5.35/6.00; humeral width, 5.85/6.70; elytral length, 16.10/18.60.

Type material: Holotype male from ECUADOR, *Napo*: Misahualli, nr. Tena, 06-19.X.2001, C. Brammer leg. (CASC). Paratype female, same data as holotype (LGBC).

Etymology: The specific epithet *luteotarsis* refers to the striking coloration of the tarsi which separate this species from others in the genus.

Remarks: *Xystochroma luteotarsis* **sp. nov.** can be separated from the other species of the genus using the key adapted from Napp & Martins (2009):

1. Tarsi orangish. Ecuador.....*X. luteotarsis* **sp. nov.**
- Tarsi black or at most basal area of tarsomere I lighter 2
- 2(1). Pro- and mesofemora entirely black or with metallic color..... 3
- Pro- and mesofemora orangish or bicolorous 5
- 3(2). Sutural band on the elytra wide, distinct, with golden pubescence. Colombia*X. setigerum* (Schmidt, 1924)
- Sutural band on the elytra narrow and glabrous 4
- 4(3). Metafemora with shiny metallic, green or blue; antennae in male surpassing elytral apex by 1.5 antennomeres; basal half of the pronotum with small shiny triangular area and remaining surface finely and uniformly punctate. Costa Rica, Panama, Colombia, Venezuela*X. chloropus* (Bates, 1979)
- Femora black; antennae slightly surpassing elytral apex in both sexes; pronotum with shiny longitudinal central band, with or without transverse striae. Costa Rica, Panama, Venezuela*X. clypeatum* (Schwarzer, 1923)
- 5(2). Metafemora entirely orangish or orangish with the apex narrowly black..... 6
- Metafemora orangish with, at least, the apical third black or shiny metallic..... 11
- 6(5). Scape reddish. Mexico (Veracruz), Panama.....*X. buprestoides* (Bates, 1885)
- Scape dark, often black 7
- 7(6). Metafemora with carina on outer apical quarter 8
- Metafemora without carina..... 9

- 8(7). Sutural band on the elytra narrow; apex of the lateral tubercles of the prothorax acute; disc of the pronotum not rugose; antennomere III without carina. Brazil (Minas Gerais, Rio Grande do Sul).....
.....*X. femoratum* Napp & Martins, 2005
- Sutural band on the elytra wide; apex of the lateral tubercles of the prothorax blunt; disc of the pronotum transversely rugous; antennomere III carinate. Venezuela, French Guiana.....
.....*X. incomptum* Napp & Martins, 2005
- 9(7). Sutural band on the elytra mostly glabrous. Panama, Colombia, Brazil (Distrito Federal, Rio de Janeiro, São Paulo, Paraná, Santa Catarina), Paraguay*X. bouvieri* (Gounelle, 1911)
- Sutural band on the elytra pubescent..... 10
- 10(9). Ventral surface of meso- and metafemora abruptly narrowed near apex. French Guiana..... *X. touroulti* Juhel & Dalens, 2017
- Ventral surface of meso- and metafemora not abruptly narrowed near apex. Brazil (Distrito Federal, Goiás, Minas Gerais, Espírito Santo, Rio de Janeiro, São Paulo, Paraná, Santa Catarina, Rio Grande do Sul)*X. neglectum* (Gounelle, 1911)
- 11(5). Inner side of apical third of the metafemora with arched spicules. Brazil (Rio de Janeiro, São Paulo)
.....*X. echinatum* Napp & Martins, 2005
- Metafemora without arched spicules 12
- 12(11). Scape with apical projection dorsally; antennomere III carinate, sparsely pubescent. Brazil (Rio de Janeiro, São Paulo)
.....*X. zikani* (Zajciw, 1965)
- Scape without apical projection; antennomere III not carinate, densely pubescent 13
- 13(12). Sutural band on the elytra often indistinct; metafemora slender, flattened, shiny metallic apically. Brazil (Goiás, Minas Gerais, Rio de Janeiro, São Paulo, Paraná)*X. gracilipes* (Bates, 1879)
- Sutural band on the elytra, narrow, distinct; metafemora cylindrical, black apically. Brazil (Minas Gerais, Rio de Janeiro, Santa Catarina).....*X. minutum* (Zajciw, 1965)

Note: the differences pointed out in the key to separate *X. chloropus* from *X. clypeatum* are questionable. Photographs of the holotypes of the two species suggest they are probably synonyms.

Elaphidiini Thomson, 1864
***Psyrassa* Pascoe, 1866**
***Psyrassa tysoni* sp. nov.**
(Fig. 2A-F)

Description: Holotype female: Head capsule dark reddish brown with irregular dark brown areas; ventral mouthparts mostly brown, except brownish maxillary and labial palpomere I and light yellowish-brown remaining palpomeres; antennae light yellowish brown. Prothorax dark reddish brown, except dark brown anterior margin and with irregular areas. Ventral surface of meso- and metathorax mostly brown, lighter than on prothorax. Scutellum dark brown close to margins, light brown anterocentrally. Elytra dark orangish brown basally, gradually lighter toward apex on remaining surface. Abdominal ventrites mostly dark orangish brown. Legs yellowish brown.

Head: Frontal plate (Fig. 2D) longer than basal diameter of scape, smooth, glabrous; remaining surface of

frons abundantly, coarsely punctate centrally, punctures finer close to genae; nearly all punctures with a short white seta. Area between antennal tubercles and upper eye lobes abundantly, coarsely punctate, punctures with short whitish seta; with narrow well-marked sulcus close to eyes; remaining surface of vertex glabrous, transversely, somewhat shallowly reticulate-punctate close to prothorax, subsmooth anteriorly. Antennal tubercles smooth, glabrous, except posterior region with a few somewhat fine punctures with short white seta. Area behind upper eye lobes partially smooth close to eye, transversely, somewhat shallowly reticulate-punctate on remaining surface; with one long, erect yellowish seta superiorly close to eye, and a few short, erect yellowish setae near eye. Area behind lower eye lobes smooth, glabrous. Genae proportionally long (Fig. 2E), with the anterior margin of lower eye lobes distinctly away from the anterior margin of the gena; abundantly, somewhat coarsely punctate, except smooth apex; punctures with short, decumbent yellowish seta. Maxillary palpomere IV and labial palpomere III elongate, gradually widened from base to apex. Median groove distinct from clypeus to area between upper eye lobes. Wide central area of postclypeus coarsely, confluent punctate; with a few short whitish setae, and one long, erect yellowish seta on each side. Sides of postclypeus smooth, glabrous. Labrum somewhat sparsely, coarsely punctate posterocentrally, abundantly somewhat coarsely punctate centrally near anterior margin, smooth on remaining surface; with sparse, somewhat short yellowish setae on posterior punctate area, tuft of long, erect yellowish-brown setae on sides of anterior half, and dense, somewhat short, yellowish-brown setae on anterior punctate area. Gulamentum (Fig. 2B) smooth, glabrous on posterior half; anterior half sparsely, coarsely punctate, sulcate close to eyes, punctures with long, erect yellowish seta, and sulcate area with sparse, short, erect yellowish-white setae. Outer side of mandibles densely, coarsely punctate on basal $\frac{3}{4}$, smooth on apical quarter; with sparse, somewhat long, decumbent yellowish setae on basal $\frac{3}{4}$, except long, erect, thick yellowish-brown seta close to smooth area, glabrous on apical quarter. Upper eye lobes with four rows of ommatidia (only two or three apically); distance between upper eye lobes 0.29 times distance between outer margins of eyes; in frontal view, distance between lower eye lobes 0.50 times distance between outer margins of eyes. Antennae 1.55 times elytral length, reaching elytral apex at posterior quarter of antennomere X. Scape sparsely, finely punctate; with sparse, short, decumbent yellowish-white setae, slightly more abundant basally, and long, erect setae of same color interspersed. Pedicel sparsely, finely punctate, with sparse, short, decumbent yellowish-white setae and long, erect setae of same color interspersed; antennomeres with somewhat abundant, decumbent white pubescence not obscuring integument, pubescence denser from V; III-IX with long, erect yellow setae ventrally, setae sparser and shorter on VII, and present only apically on VIII-IX; dorsal apex of III-VIII with a few long, erect yellowish setae; antennomeres III-IV not carinate dorsally;

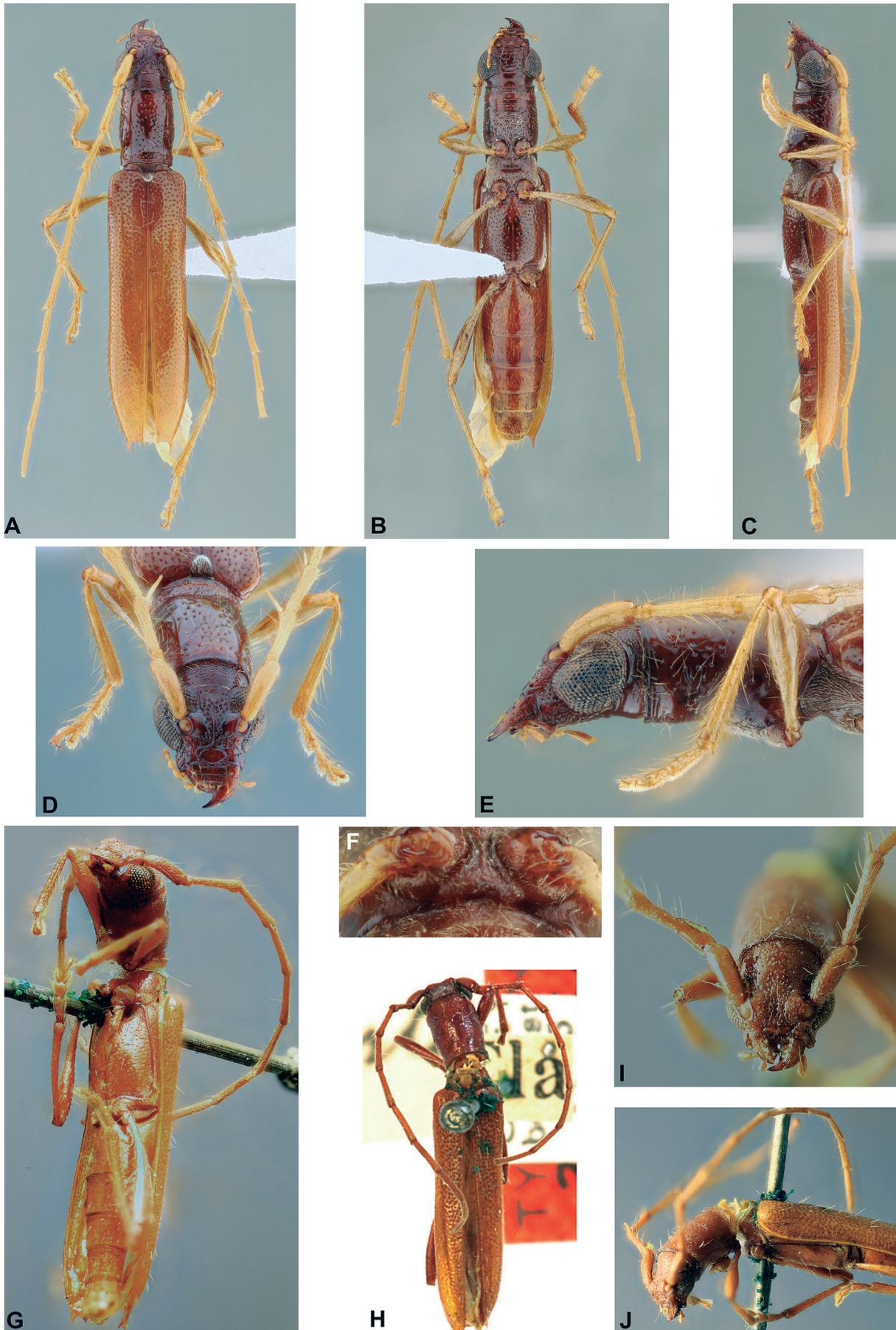


Figure 2. *Psyrassa* spp. (A-F) *P. tysoni* sp. nov., holotype female: (A) Dorsal habitus; (B) Ventral habitus; (C) Lateral habitus; (D) Head, frontal view; (E) Head, lateral view; (F) Procoxal cavities. (G-J) *P. pertenuis* (Casey, 1924), holotype: (G) Lateroventral view; (H) Dorsal habitus; (I) Head, frontal view; (J) Partial lateral habitus. Figures G, I, and J by Eugenio H. Nearn; figure H from Lingafelter *et al.* (2023).

inner apex of antennomere III with spine 2.6 times pedicel length, with blunt apex; inner apex of antennomere IV with spine 1.4 times pedicel length, with acute apex; inner apex of antennomere V with spine 0.7 times pedicel length, with acute apex; inner apex of antennomeres VI-VIII without spine. Antennal formula (ratio) based on length of antennomere III (excluding spines): scape = 0.96; pedicel = 0.19; IV = 1.07; V = 1.19; VI = 1.21; VII = 1.15; VIII = 1.11; IX = 1.07; X = 1.05; XI = 1.19.

Thorax: Prothorax distinctly longer than wide, subparallel-sided; anterior and posterior constrictions moderately well marked. Pronotum (Fig. 2A) somewhat sparsely, coarsely punctate, except some areas smooth or almost smooth; nearly all punctures with erect, short or long yellowish seta. Sides of prothorax (Fig. 2E) sparsely, coarsely punctate, except smooth area close to procoxal cavity; punctures with long, erect yellowish seta. Posterior half of prosternum somewhat abundantly, coarsely punctate, posterocentral region transversely rugose, with abundant white pubescence not obscuring integument, and long, erect pale-yellow setae interspersed, pubescence absent laterally; anterior half somewhat transversely rugose, sparsely, coarsely punctate, punctures with long, erect pale-yellow seta, except area close to anterior margin finely, transversely rugose with fine punctures interspersed. Procoxal cavities open posteriorly (Fig. 2F). Prosternal process with abundant white pubescence not obscuring integument, pubescence sparser apically, and a few long, erect pale-yellow setae interspersed on basal half; narrowest area 0.27 times procoxal width. Mesoventrite with sparse yellowish-white pubescence anterocentrally, pubescence distinctly denser laterally and whiter, more abundant centrally close to mesoventral process; area close to mesoventral process sparsely, coarsely punctate, remaining surface sparser and finely punctate; punctures with long, erect pale-yellow setae, more distinctly close to mesoventral process. Mesanepisternum and mesepimeron with abundant yellowish pubescence partially obscuring integument. Mesoventral process gradually narrowed from base to middle, then distinctly widened toward apex; with somewhat abundant whitish pubescence on basal half, almost absent on posterior half; with long, erect pale-yellow setae interspersed on basal half; narrowest area 0.48 times mesocoxal width. Metanepisternum with moderately abundant yellowish-white pubescence not obscuring integument. Metaventrite sparsely, coarsely punctate, except smooth area close to metathoracic discrimen; sides of anterior half with somewhat abundant grayish-white pubescence not obscuring integument; sides of posterior half with dense grayish-white pubescence (more yellowish-white depending on light source); wide central region glabrous and punctures with long, erect yellowish-white seta. Scutellum with abundant white pubescence, distinctly denser close to margins on posterior half. **Elytra:** Abundantly, coarsely punctate on anterior half, punctures gradually finer and sparser toward apex on posterior half; some punctures with long, erect pale-yellow seta; apex truncate, slightly concave centrally, with long spine

on outer angle and short triangular projection on sutural angle. **Legs:** Femora sparsely, finely punctate; with sparse, long, erect pale-yellow setae, more abundant on base of ventral surface, and a few short, decumbent setae of same color interspersed. Protibiae with dense, bristly yellowish-brown pubescence ventrally, apical $\frac{3}{4}$ of lateral surfaces, and apical third of dorsal surface; with long, erect yellowish-brown setae interspersed on pubescent area. Meso- and metatibia dense, bristly yellowish-brown pubescence on apical third of ventral surface, and long, erect yellowish-brown setae throughout, more abundant ventrally. Metatarsomere I about as long as II-III together.

Abdomen: Ventrites (Fig. 2B) moderately sparsely and finely punctate, except smooth apex of ventrites 1-4; with sparse, both short and long yellowish-brown setae, absent on apex of ventrites 1-4; apex of ventrite 5 slightly rounded.

Dimensions in mm: Total length, 12.25; prothoracic length, 2.20; anterior prothoracic width, 1.35; posterior prothoracic width, 1.45; maximum prothoracic width, 1.55; humeral width, 2.15; elytral length, 8.10.

Type material: Holotype female from GUATEMALA, *Suchitepequez*: 11 km N Patulul, 1,100 m, light trap, 14°32.213'N, 91°08.911'W, 06.vi.2013, E. Fuller leg. (CASC, formerly WHTC).

Etymology: This species is dedicated to Bill Tyson, friend of the first author and collector of many interesting Cerambycidae through the years, who provided the holotype for examination.

Remarks: *Psyrassa tysoni* sp. nov. is similar to *P. pertenuis* (Casey, 1924) (Fig. 2G-2J) but differs as follows: frontal plate longer than basal diameter of the scape (Fig. 2D); distance between upper eye lobes 2.5 times basal diameter of the scape, distinctly shorter than twice maximum diameter of the scape (Fig. 2A). In *P. pertenuis*, the frontal plate is distinctly shorter than basal diameter of the scape (Fig. 2I), and the distance between upper eye lobes is equal to 3.0 times the basal diameter of the scape, distinctly wider than twice maximum diameter of the scape (Fig. 2H-2I).

The key by Toledo (2005) encompasses a problem in the alternative of couplet 2, which includes the species with wide genae (translated): "last segment of the maxillary palpi elongate to slightly broadened apically," leading to alternative of couplet 3; "last segment of the maxillary palpi campaniform," leading to the alternative of couplet 5. Actuality, the palpi of females included from the alternative of couplet 5 do not have the maxillary palpomere IV campaniform; they are simply elongate in females of *P. graciliatra* Toledo, 2005, *P. tympanophora* Bates, 1885, *P. angelicae* Toledo, 2005, *P. cerina* Toledo, 2005, *P. proxima* Toledo, 2005, and *P. clavigera* Toledo, 2005. In fact, only males of this group have the maxillary palpomere campaniform (see Toledo, 2005). Therefore, we are including the new species in the both options of

the alternative of couplet 2 from Toledo (2005). Following the first option, the new species can be included in the alternative of couplet 4 modified:

- 4(3). Apex of the spine of the antennomere III acute. Mexico (Guerrero, Jalisco, Querétaro, Quintana Roo, Veracruz, Yucatán)
..... *P. cribricollis* (Bates, 1885)
— Apex of the spine of the antennomere III blunt4'
4'(4). Distance between upper eye lobes 2.5 times basal diameter of the scape, distinctly shorter than twice maximum diameter of the scape (Fig. 2D). Guatemala *P. tysoni* **sp. nov.**
— Distance between upper eye lobes is equal to 3.0 times the basal diameter of the scape, distinctly wider than twice maximum diameter of the scape (Fig. 2I). United States of America (Alabama, Arkansas, Florida, Maryland, Mississippi, New Jersey, Louisiana, New York, North Carolina, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, Washington D.C.
..... *P. pertenuis* (Casey, 1924)

Following the second option, the new species can be included in the alternative of couplet 5 modified:

- 5(2). Procoxal cavities open posteriorly5'
— Procoxal cavities closed posteriorly6
5'(5). Integument mostly blackish; apex of the spine of the antennomere III acute. Honduras *P. graciliatra* Toledo, 2005
— Integument most brown; apex of the spine of the antennomere III blunt. Guatemala *P. tysoni* **sp. nov.**

Lamiinae Latreille, 1825
Apomecynini Thomson, 1860
***Bisaltes* Thomson, 1868**
***Bisaltes* (*Bisaltes*) *lateralis* sp. nov.**
(Fig. 3)

Description: Holotype female: Integument mostly dark brown; ventral mouthparts mostly brown, with apex of palpomeres yellowish brown; anteclypeus testaceous, except brown central area and apex; antennomere III dark reddish brown on basal $\frac{3}{4}$, dark brown on apical quarter; antennomeres IV and VI reddish brown on basal $\frac{2}{3}$, dark brown on apical third; antennomeres V and VII reddish brown on basal quarter, dark brown on apical $\frac{3}{4}$; antennomere VIII orangish brown on basal $\frac{3}{4}$, irregularly dark brown on apical quarter; antennomere IX orangish brown on basal $\frac{3}{4}$, dark brown on apical quarter; antennomeres X and XI orangish brown on basal half, dark brown on apical half. Tarsomeres I-II dark brown; III mostly brown; IV reddish brown; V dark brown on basal $\frac{3}{4}$, reddish brown on apical quarter; tarsal claws reddish brown.

Head: Frons (Fig. 3D) somewhat abundantly, coarsely punctate; pubescence yellow, different on left side and right side (apparently, not lost, but due to ill-formation – only left side described), short, thick, mostly with truncate apex, with sparse, distinctly long yellow setae interspersed centrally, and dense, distinctly long yellow setae interspersed on most lateral area; area close to eye

with a few long, erect white setae. Area between antennal tubercles and upper eye lobes sparsely, coarsely punctate, punctures slightly sparser centrally; with moderately sparse, minute, thick, decumbent yellow setae, slightly more abundant laterally, and dense, longer yellow pubescence close to base of antennal tubercles and eyes (this pubescence longer close to antennal tubercles, and mostly absent on left side); with a few long, erect brown setae laterally between antennal tubercles. Remaining surface of vertex sparsely, coarsely punctate; with abundant, thick, decumbent, short yellow setae not obscuring integument, and longer, abundant yellow pubescence interspersed centrally, longer pubescence not reaching prothorax; with a few long, erect brown setae interspersed. Area behind upper eye lobes with abundant yellow pubescence close to eye and entire area close to lower eye lobe, sparse, minute, yellowish on remaining surface. Area behind lower eye lobes with abundant yellow pubescence partially obscuring integument, and long, erect white setae interspersed. Genae about as long as lower eye lobe; somewhat abundantly, finely punctate, except smooth apex; with abundant yellow pubescence close to eye and close to smooth area, this pubescence almost absent on right side, and abundant, short, thick, minute, decumbent yellow setae on remaining surface, except glabrous smooth apex; with sparse, long, erect white setae interspersed. Wide central area of postclypeus with abundant pale-yellow pubescence close to frons, and abundant, moderately long pale-yellow setae directed forward close to anteclypeus; with long, erect white setae interspersed close to frons. Sides of postclypeus almost glabrous. Labrum coplanar with anteclypeus at posterior third, inclined at anterior $\frac{2}{3}$; with sparse yellowish-white pubescence on posterior third, somewhat abundant, long, erect, both yellow and whitish setae laterally on sides of anterior $\frac{2}{3}$, and glabrous on remaining surface. Gula (Fig. 3B) somewhat sparsely, finely punctate, glabrous, except intermaxillary process with abundant yellowish-white pubescence not obscuring integument. Distance between upper eye lobes (Fig. 3A) 0.48 times distance between outer margins of eyes; in frontal view, distance between lower eye lobes 0.72 times distance between outer margins of eyes. Antennae as long as elytra, almost reaching posterior quarter of elytra. Scape (Fig. 3E) with abundant, both pale-yellow and white pubescence not obscuring integument, dorsally and laterally, pubescence denser on apical cicatrix, and abundant yellowish-white pubescence ventrally; with long, erect whitish setae interspersed ventrally. Pedicel and light areas of antennomeres III-XI with abundant white pubescence almost obscuring integument on some distal segments; dark-brown apical region of antennomeres III-XI mostly with brown pubescence not obscuring integument; pedicel and antennomeres III-XI with long, erect dark-brown setae interspersed ventrally, erect setae gradually sparser from III to X; antennomeres IV-V with a few moderately long, yellowish setae on apex of dorsal surface; antennomeres VI-XI with moderately long, erect white setae interspersed throughout. Antennal formula (ratio) based on

length of antennomere III: scape = 1.00; pedicel = 0.25; IV = 1.05; V = 0.83; VI = 0.67; VII = 0.58; VIII = 0.53; IX = 0.44; X = 0.39; XI = 0.30.

Thorax: Prothorax wider than long; lateral tubercles subconical, located centrally; sides slightly divergent from anterolateral angles to lateral tubercles, convergent toward posterolateral angles. Pronotum (Fig. 3A) transversely sulcate close to posterior margin; somewhat sparsely, coarsely punctate; sides with wide yellow pubescent band from anterior to posterior margin, pubescence minute, thick, except distinctly longer and denser yellow pubescence on inner side of anterior third of right band, sparse, moderately long, decumbent yellow pubescence interspersed on middle of left band, short, thick white setae interspersed on posterior half of

both bands, white setae more abundant near lateral tubercles of prothorax, and denser and longer yellow pubescence close to posterior margin; central region with sparse brown pubescence, except both pale-yellow and yellowish-brown setae interspersed on part of anterior third, and a few short, both pale-yellow and white setae near posterior sulcus; central area of posterior sulcus with abundant, both yellow and white pubescence no obscuring integument, yellow pubescence longer; with long, erect brown setae interspersed, especially on anterior $\frac{2}{3}$. Sides of prothorax (Fig. 3C) with dense, both yellow and yellowish-white pubescence. Prosternum somewhat sparsely and coarsely punctate; sides of posterior $\frac{3}{4}$ and area close to procoxal cavities with dense, both pale-yellow and white pubescence; remaining surface with moderately sparse, both pale-yellow and



Figure 3. *Bisaltes (Bisaltes) lateralis* sp. nov., holotype female: (A) Dorsal habitus; (B) Ventral habitus; (C) Lateral habitus; (D) Head, frontal view; (E) Scape.

white pubescence; with long, erect white setae interspersed throughout. Prosternal process with abundant, both pale-yellow and white pubescence not obscuring integument, except sides of apex almost glabrous; narrowest area 0.31 times procoxal width. Mesoventrite with somewhat sparse whitish pubescence, except minute yellowish pubescence close to mesoventral process, somewhat abundant, minute white pubescence laterally close to mesanepisternum, and somewhat abundant pale-yellow pubescence laterally close to procoxal cavities. Mesanepisternum and mesepimeron with somewhat abundant, minute, both yellow and white pubescence. Mesoventral process slightly, gradually narrowed toward truncate apex; apex 0.53 times mesocoxal width; with somewhat abundant, both yellowish and white pubescence not obscuring integument. Metanepisternum with abundant, both pale-yellow and white pubescence partially obscuring integument. Metaventrite sparsely, coarsely punctate laterally, punctures slightly finer centrally; sides with dense, both yellow and white pubescence, except mostly of posterior half of left side with minute, both pale-yellow and white pubescence not obscuring integument; central region with abundant, both yellow and white pubescence partially obscuring integument, pubescence longer than on sides, except metaventral process and center of posterior third with shorter and sparse, both yellow and white pubescence; with long, erect white setae interspersed centrally. Scutellum with abundant, both yellow and white pubescence laterally and basal half, sparse, minute yellowish pubescence on remaining surface, except apex with somewhat abundant, both yellow and white pubescence. **Elytra:** Sparsely, coarsely punctate on anterior quarter, punctures gradually finer and sparser on remaining surface toward apex; apex obliquely truncate, with outer angle triangularly projected; with abundant, brown, yellowish-brown, and white pubescence not obscuring integument, except posterior sixth with dense white pubescence, with pale-yellow pubescence interspersed, and a moderately large pale-yellow macula on center of dorsal surface; with long, erect dark brown setae throughout, more abundant on posterior quarter. **Legs:** Procoxae with erect projection close to anterior margin of trochanter; all coxae with abundant, both yellow and white pubescence not obscuring integument. Trochanters with abundant, long, erect white setae ventrally. Profemora with abundant yellowish pubescence basally, with long, erect white setae interspersed, erect setae distinctly more abundant ventrally; remaining surface with yellow pubescence, denser on some areas, sparser and shorter on others, with sparse, long, erect white setae interspersed. Mesofemora with dense yellow pubescence dorsally and ventrally, and abundant, both pale-yellow and white pubescence not obscuring integument laterally; with long, erect white setae interspersed, slightly more abundant on basal region of ventral surface. Metafemora with somewhat abundant, both yellow and white pubescence basally, abundant, mostly white pubescence with yellow pubescence interspersed on

remaining surface, except sides of central region mostly with brown pubescence; with long, erect, sparse white setae interspersed, and a few long, erect dark brown setae interspersed on apical half. Protibiae with somewhat abundant yellowish-brown pubescence not obscuring integument, denser and bristly on apical third of ventral surface; with long, erect white setae interspersed. Mesotibiae with abundant white pubescence not obscuring integument on basal third, abundant, both pale-yellow and white pubescence on sides of apical $\frac{2}{3}$, and dense, bristly pale-yellow pubescence on dorsal and ventral surfaces of apical $\frac{2}{3}$; with long, erect white setae interspersed on basal half. Metatibiae with somewhat abundant, both pale-yellow and white pubescence not obscuring integument, except mostly pale-yellow bristly pubescence on apical half of ventral surface and apical third of ventral surface; with long, erect both dark-brown and white setae interspersed. Dorsal surface of tarsi with abundant white pubescence not obscuring integument, and long, erect brown setae interspersed; metatarsomere I slightly shorter than II-III together.

Abdomen: Ventrites 1-4 (Fig. 3B) with both yellow and white pubescence, more abundant laterally, except short fringe of yellow pubescence on sides of apex; with a few long, erect white setae interspersed. Ventrite 5 depressed posterocentrally; with both yellow and white pubescence, longer and more abundant laterally and depressed apical region; with sparse, both white and yellow setae interspersed, except apical region with somewhat abundant dark-brown setae interspersed.

Dimensions in mm (holotype female): Total length, 7.05; prothoracic length, 1.30; anterior prothoracic width, 1.25; posterior prothoracic width, 1.30; maximum prothoracic width, 1.60; humeral width, 1.75; elytral length, 5.15.

Type material: Holotype female from ECUADOR, *Manabi*: 5 km S Montecristi, 10.III.2006, F.T. Hovore & I. Swift leg. (CASC).

Etymology: The specific epithet *lateralis* in Latin refers to the lateral longitudinal pubescent bands on the pronotum.

Remarks: *Bisaltus (Bisaltus) lateralis* **sp. nov.** is similar to *B. (B.) flaviceps* Breuning, 1940 but differs by the pronotum with wide yellow longitudinal pubescent band laterally (entirely covered with yellowish pubescence in *B. (B.) flaviceps*). The original description of *B. (B.) flaviceps* (Breuning, 1940) and redescription (Breuning, 1971) do not provide important information. Therefore, we are using mostly the photograph of the holotype taken by Jesus Santiago Moure (see Bezark, 2023 and Santos-Silva & Bezark, 2022) to find more differences to separate the two species. The antennomeres III-XI appear to be much more slender in *B. (B.) flaviceps*. However, we do not know if it is due to the angle of the photograph.

Rosalba Thomson, 1864
***Rosalba strandi* (Breuning, 1943)**
(Fig. 4)

Aletretia strandi Breuning, 1943: 38.

Remarks: *Aletretia strandi* was described based on a single specimen from Brazil (Minas Gerais). Currently, this species is known from the Brazilian states Minas Gerais, São Paulo, Paraná and Santa Catarina (Monné 2023; Tavakilian & Chevillotte, 2022; Bezark, 2023).

The following variations, not related to geographical distribution, were found in the species: longitudinal pubescent band closer to the sutural pubescent band of the elytra entire (Fig. 4F), reaching the pubescent macula on the posterior quarter, or fragmented anteriorly (Fig. 4J); longitudinal pubescent band on middle of the dorsal surface of the elytra entire (Fig. 4F), reaching the pubescent macula on the posterior quarter, fragmented (Fig. 4J) on the posterior half of the elytra, or almost absent (Fig. 4A) on the posterior quarter of the elytra; outermost longitudinal pubescent band on the elytra entire (Fig. 4E) or interrupted about middle (Fig. 4A, 4C, 4F, 4H-J).

Material examined: PARAGUAY (new country record), *Itapúa* (Fig. 4A-4D, 4F-I): Encarnación, Hotel Tirol, beating vegetation, 820 ft. -27.183437 -55.777372, 4 males, 1 female, 24-29.X.2018, L.G. Bezark leg. (3 males, 1 female, LGBC; 1 male, MZSP).

Calliini Thomson, 1864
***Nagma* Bezark & Santos-Silva, 2020**
***Nagma hovorei* sp. nov.**
(Fig. 5)

Description: Holotype male (Figs. 5A-5D). Integument mostly brown; ventral mouthparts yellowish-brown (more orangish brown depending on light intensity); gulamentum yellowish-brown on posterior $\frac{3}{4}$; postclypeus mostly dark brown; sides of anteclypeus pale; posterior $\frac{2}{3}$ of postclypeus dark orangish-brown and anterior third yellowish; scape light brown; pedicel brown basally, light brown on remaining surface; antennomere III dark orangish brown on basal third and apical sixth, brown on remaining surface; antennomere IV orangish on basal half, dark orangish brown on apical seventh, dark brown on remaining surface; antennomeres V and VII dark orangish brown on basal quarter, dark brown on remaining surface; antennomere V orangish on basal half, dark brown on apical half; antennomeres VIII and X light orange on basal $\frac{2}{3}$, dark brown on apical third; antennomere IX reddish brown basally, dark brown on remaining surface; antennomere XI dark brown on basal $\frac{2}{3}$, orangish brown on apical third. Ventral surface of mesothorax with irregular dark brown areas. Ventral surface of metathorax mostly blackish with irregular brown areas. Elytra mostly dark orangish-brown, gradually lighter toward apex, with irregular dark brown areas, most punctures dark brown, and blackish area of centrobasal crest. Basal half

of profemoral club dark brown, more distinctly ventrally, and remaining surface of profemora light brown; basal $\frac{2}{3}$ of ventral mesofemoral club blackish ventrally, and remaining surface of mesofemora brown, slightly darker dorsally on basal half of club; basal half of ventral surface of metafemoral club blackish, and remaining surface of metafemora brown. Tibiae brown basally, orangish brown on remaining basal half, with wide dark ring on base of apical half, ring dark brown dorsally and laterally, brown ventrally, and remaining surface orangish. Tarsi orangish, slightly lighter toward apex. Abdominal ventrite 1 somewhat dark brown basally, gradually slightly lighter toward posterior region, except blackish margins of intercoxal process, and yellowish apex; ventrites 2-4 reddish-brown, gradually slightly lighter toward apex, except yellowish apex; ventrite 5 dark reddish brown on basal half, orangish brown on apical half, slightly lighter toward apex.

Head: Frons (Fig. 5D) abundantly, coarsely punctate; with somewhat sparse yellowish-brown pubescence, distinctly denser close to eyes. Vertex somewhat abundantly, coarsely punctate; with abundant yellowish-brown pubescence not obscuring integument, pubescence shorter and sparser centrally. Area behind upper eye lobe with sculpturing as on vertex; with abundant yellowish-brown pubescence partially obscuring integument, except subglabrous narrow area close to prothorax. Area behind lower eye lobes with dense yellowish-brown pubescence close to eye, glabrous close to prothorax. Genae with abundant yellowish pubescence not obscuring integument toward ventral surface, pubescence sparser toward frons and clypeus. Wide central area of postclypeus finely rugose-punctate; with somewhat abundant yellowish-brown pubescence not obscuring integument laterally close to frons, pubescence absent centrally and close to anteclypeus; area close to anteclypeus with sparse, moderately long yellowish-white setae directed forward; with long, erect yellowish-white setae interspersed. Sides of postclypeus glabrous. Labrum with long, erect yellowish-white setae on posterior half, more abundant, slightly yellower laterally; anterior margin with fringe of yellowish-brown setae. Gulamentum (Fig. 5B) smooth, glabrous, except intermaxillary process with finely rugose-punctate and with sparse, short yellowish-brown setae. Distance between upper eye lobes 0.40 times distance between outer margins of eyes; in frontal view, distance between lower eye lobes 0.62 times distance between outer margins of eyes. Antennae (Fig. 5C) 1.4 times elytral length, reaching elytral apex at middle of antennomere XI. Scape with abundant yellowish pubescence not obscuring integument. Pedicel with abundant yellowish pubescence dorsally and laterally, whitish ventrally; with one long, erect yellowish seta ventrally. Antennomeres III-IV with somewhat sparse yellowish-white pubescence on basal light region; dark area of III with sparse brownish pubescence; light apical area of III with abundant yellowish-white pubescence not obscuring integument; dark area of IV with abundant brown pubescence not obscuring integument; light apical area of



Figure 4. *Rosalba strandi* (Breuning, 1943). (A-D) Male, specimen 1, from Paraguay: (A) Dorsal habitus; (B) Ventral habitus; (C) Lateral habitus; (D) Head, frontal view. (E) Male from Brazil (Minas Gerais, Serra do Caraça), dorsal habitus. (F-G) Female from Paraguay: (F) Dorsal habitus; (G) Ventral habitus. (H-J) Males from Paraguay, dorsal habitus: (H) specimen 2; (I) specimen 3; (J) specimen 4.



Figure 5. *Nagma hovorei* sp. nov. (A-D) Holotype male: (A) Dorsal habitus; (B) Ventral habitus; (C) Lateral habitus; (D) Head, frontal view. (E-F) Paratype female: (E) Dorsal habitus; (F) Ventral habitus.

IV with dense white pubescence; ventral surface of III-IV with sparse long, erect setae, setae yellowish on light areas, dark brown on dark area. Antennomeres V-XI with dense white pubescence on light area, brownish on dark area; with abundant, short whitish setae interspersed on dark pubescence, setae denser from VIII; erect setae of ventral surface as on antennomere III. Antennal formula (ratio) based on length of antennomere III: scape = 0.79; pedicel = 0.26; IV = 0.79; V = 0.52; VI = 0.47; VII = 0.42; VIII = 0.37; IX = 0.34; X = 0.32; XI = 0.37.

Thorax: Prothorax wider than long; sides with large, rounded tubercle centrally. Pronotum (Fig. 5A) abundantly, coarsely punctate; with large gibbosity on each side of middle, from anterior third to after middle, more elevated anteriorly; with somewhat dense yellowish-brown pubescence laterally, sparser on wide central area, partially yellowish-white on anterior half, except glabrous anterior area of gibbosities. Sides of prothorax (Fig. 5C) abundantly coarsely punctate, except mostly smooth area close to anterior margin; with abundant yellowish pubescence not obscuring integument, pubescence partially absent close to anterior margin. Prosternum somewhat abundantly, coarsely punctate; with somewhat sparse yellowish pubescence. Prosternal process with sculpturing and pubescence as on prosternum, except apex with sparser pubescence; narrowest area 0.45 times procoxal width. Ventral surface of mesothorax abundantly, coarsely punctate, except smooth apex of mesoventrite; mesoventrite with sparse yellowish pubescence, except glabrous smooth area; mesanepisternum and mesepimeron with abundant yellowish-brown close to elytra, pubescence sparser toward mesoventrite. Mesoventral process abruptly elevated anteriorly; densely, coarsely punctate; with sparse yellowish pubescence centrally, whitish laterally; apex truncate, slightly emarginate centrally; apex 0.69 times mesocoxal width. Metanepisternum abundantly, coarsely punctate; with abundant yellowish-brown pubescence not obscuring integument. Metaventrite densely, coarsely punctate; with abundant yellowish-brown pubescence on sides of posterior half and sparse yellowish-white pubescence on remaining surface. Scutellum with dense yellowish-brown pubescence, except glabrous antero-central region. **Elytra:** Centrobasal crest slightly elevated, gibbosity-shaped, with abundant long, decumbent dark brown setae. Surface abundantly, coarsely punctate, punctures finer and sparser on posterior third; with abundant yellowish-brown pubescence not obscuring integument, except: wide white pubescent band dorsally on anterior half, sub-straight laterally near humeri, oblique, reaching suture on remaining area; irregular white pubescent macula dorsally on posterior quarter, reaching suture, denser than anterior white pubescent band; and sides with abundant white pubescence not obscuring integument, except yellowish-brown pubescence close to humeri. With sparse, short, decumbent, thick dark brown setae interspersed throughout. **Legs:** Femora with abundant yellowish-brown pubescence not obscuring integument, except sparse brown

pubescence ventrally on dark area. Tibiae with sparse yellowish pubescence, denser, bristly on apical third of ventral surface, except sparse dark brown pubescence dorsally and laterally on dark ring; dark ring with short, erect, thick black setae dorsally, more abundant on mesotibiae. Dorsal surface of tarsomeres with sparse white pubescence, sparser on III-V; metatarsomere I shorter than II-III together.

Abdomen: Ventrites (Fig. 5B) abundantly, coarsely punctate, punctures coarser, deeper on ventrite 1; ventrite 1 with abundant yellowish-white pubescence not obscuring integument laterally, sparse, whiter centrally; ventrites 2-4 with abundant yellowish-white pubescence not obscuring integument; ventrite 5 with abundant yellowish-white pubescence not obscuring integument on basal half, and abundant pale-yellow pubescence not obscuring integument on posterior half.

Female (Fig. 5E-F): Similar to male, differing by the antennae (Fig. 5E) slightly shorter, 1.25 times elytral length, reaching elytral apex at apex of antennomere XI, and abdominal ventrite 5 (Fig. 5F) longer, with longitudinal sulcus centrally on basal third.

Variation: Pubescence on abdominal ventrites denser and yellowish-brown, except on center of ventrite 1.

Dimensions in mm (holotype male/paratype male/paratype female): Total length, 4.70/4.00/4.55-5.15; prothoracic length, 0.95/0.90/0.85-1.05; anterior prothoracic width, 1.15/1.05/1.10-1.35; posterior prothoracic width, 1.20/1.10/1.10-1.35; maximum prothoracic width, 1.45/1.35/1.40-1.60; humeral width, 1.80/1.70/1.65-2.00; elytral length, 3.30/2.85/3.35-3.90.

Type material: Holotype male from ECUADOR, *Loja*: 18.5 km N Gonzanamá, 04°08'08.5"S, 79°23'36.4"W, 22.II.2006, F.T. Hovore & I. Swift leg. (CASC). Paratypes – Same data as holotype, 1 male, 3 females (1 female, MZSP; 2 females, 1 male, LGBC).

Etymology: This species is named after Frank T. Hovore, who collected the holotype and so many more cerambycids during his many years of field work. Frank was very generous with his duplicate specimens and provided many of them to the first author which inspired me to pursue the development of the New World Cerambycidae catalog website.

Remarks: The new species, *Nagma hovorei*, differs from the only known species currently in the genus by the presence of a slightly elevated centrobasal elytral crest with long and decumbent setae. In *N. albofasciatum* (Martins & Galileo, 2006), there is no centrobasal crest on the elytra. However, we prefer not to describe a new genus for the new species until, eventually, more species are found. *Nagma hovorei* **sp. nov.** also differs from *N. albofasciatum* by the elytra without nearly scale-shaped setae (present in *N. albofasciatum*).

Cyrtinini Thomson, 1864
Cyrtinus LeConte, 1852
***Cyrtinus umbus* Martins & Galileo, 2009**
(Fig. 6)

Cyrtinus umbus Martins & Galileo, 2009: 66.

Redescription: Male (based on a dark specimen). Head capsule black dorsally and laterally, dark-brown on frons and ventrally; ventral mouthparts reddish brown, except yellowish-brown apex of last palpomeres; anteclypeus dark brown posteriorly, testaceous anteriorly; labrum dark reddish brown posteriorly, yellowish-brown anteriorly; scape reddish brown on basal $\frac{2}{3}$, brown on apical third; pedicel and antennomeres III-VII orangish brown; antennomere VIII orangish brown on basal $\frac{2}{3}$, brown on apical third; antennomere IX orangish brown basally, dark brown on remaining surface; antennomeres X-XI dark brown. Pronotum and sides of prothorax black; ventral surface of prothorax dark brown except black margins. Ventral surface of meso- and metathorax dark brown, with some areas blacker. Scutellum black. Elytra black, except transverse dark reddish-brown macula on anterior third, almost reaching suture and epipleural margin, gradually narrowed toward suture dorsally and distinctly narrowed laterally toward epipleural margin. Coxae reddish brown. Femoral peduncle orangish brown and femoral club dark brown. Tibiae reddish brown, more orangish brown depending on light intensity. Tarsi mostly brown, except dark brown tarsomere V. Abdominal ventrites blackish, except brown apex of ventrites 1-4.

Head: Frons (Fig. 6D) densely, very finely rugose-punctate; with sparse, bristly white pubescence; with one long, erect dark brown seta close to superior area of eyes. Area between antennal tubercles and upper eye lobes sparsely, finely punctate; with sparse white pubescence, absent centrally between antennal tubercles, and a few long, erect dark-brown setae interspersed laterally. Remaining surface of vertex with very sparse, minute punctures, except some coarser and deeper punctures centrally close to pronotum; glabrous. Area behind upper eye lobes with a few short, decumbent white setae close to eye, glabrous on remaining surface. Area between eye lobes and behind superior region of lower eye lobes glabrous; inferior region of lower eye lobes with a few long, erect white setae and one long, erect dark seta near eye, glabrous on remaining surface. Genae (Fig. 6D) about 1.5 times longer than lower eye lobe; finely, transversely striate, with a few fine punctures interspersed toward ventral surface, obliquely striate-punctate toward frons and clypeus, except smooth apex; with a few moderately short, erect white setae and one long, erect dark-brown seta about middle, except glabrous apex. Wide central area of postclypeus with sculpturing as on frons close to it, smooth close to anteclypeus; with sparse, erect, both long and dark brown and moderately short and white setae. Sides of postclypeus smooth, glabrous. Labrum coplanar with anteclypeus at posterior half, inclined at anterior half; densely, somewhat coarsely, shallowly punctate on

posterior half, smooth on anterior half; with a few short, decumbent white setae and long, erect dark-brown setae on posterior third, erect setae forming transverse row, sparse, long whitish setae directed forward about middle and laterally, and fringe of short yellowish-white setae on anterior margin. Gulamentum smooth, glabrous. Distance between upper eye lobes 0.30 times distance between outer margins of eyes; in frontal view, distance between lower eye lobes 0.67 times distance between outer margins of eyes. Antennae 2.0 times elytral length (Fig. 6A), reaching elytral apex at middle of antennomere IX. Scape (Fig. 6A-B) arched, gradually widened toward apex, especially from middle; sparsely, finely punctate, almost smooth ventrally; with sparse, both white and yellowish pubescence dorsally, almost absent laterally, absent ventrally; with long, erect yellowish setae interspersed dorsally, and sparse, long, erect brown setae ventrally, longer than dorsal setae. Pedicel and antennomeres III-VIII with sparse white pubescence; with moderately, long, erect white setae interspersed dorsally; pedicel and antennomere III with sparse, long, erect brown setae ventrally; ventral apex with tuft of very long, both brown and yellowish-brown setae directed backward. Antennomeres IX-XI with abundant dark-brown pubescence, sparser ventrally on IX; with short, abundant, bristly white setae interspersed; with somewhat long, erect white setae interspersed, more abundant apically on XI; apex of IX-X with tuft of very long dark brown setae directed backward. Antennal formula (ratio) based on length of antennomere III: scape = 2.33; pedicel = 0.47; IV = 1.27; V = 1.13; VI = 1.13; VII = 1.07; VIII = 1.00; IX = 0.93; X = 0.93; XI = 1.00.

Thorax: Prothorax distinctly longer than wide; posterior constrictions well marked; sides slightly, gradually narrowed and sinuous from anterolateral angles to posterior constriction. In lateral view (Fig. 6C), pronotum distinctly lower on posterior quarter; sides of anterior seventh microsculptured, these areas gradually narrowed toward center, where they are fused; with sparse, coarse punctures from anterior margin to posterior constriction, punctures slightly more abundant anteriorly; each coarse puncture with long, erect dark-brown seta; sides of the rugose anterior region with a few short, decumbent white setae; area of posterior constriction smooth, glabrous; posterior seventh transversely, finely striate, with sparse fine punctures interspersed, with somewhat long, bristly white setae, more abundant laterally, and a few long, erect dark-brown setae interspersed. Sides of prothorax obliquely striate-punctate anteriorly, sub-smooth on wide central area, finely, sparsely punctate close to posterior margin; with a few somewhat short, bristly white setae anteriorly and posteriorly, absent on wide central area; with a few long, erect dark-brown setae on anterior half. Prosternum sparsely, somewhat finely punctate laterally, slightly rugose-punctate centrally on posterior half; with sparse, bristly, both white and yellowish setae laterally and anteriorly, setae somewhat abundant posterocentrally; anterior margin with sparse fringe of short whitish setae. Prosternal process slightly

rugose-punctate; lateral margins slightly elevated on anterior $\frac{2}{3}$; with somewhat abundant whitish pubescence not obscuring integument; with a few long, erect dark-brown setae interspersed; narrowest area 0.31 times procoxal width. Mesoventrite with sparse whitish pubescence centrally, glabrous laterally. Mesanepisternum with dense white pubescence; mesepimeron with abundant whitish pubescence not obscuring integument, pubescence almost absent close to elytron, whiter toward procoxal cavity. Mesoventral process gradually, slightly

narrowed toward truncate apex; with somewhat sparse whitish pubescence; apex 0.55 times mesocoxal width. Metanepisternum mostly glabrous. Sides of metaventricle with somewhat abundant white pubescence posteriorly; remaining surface with sparse, decumbent white setae. Scutellum with dense white pubescence. **Elytra:** Anterior third, sparsely, coarsely punctate; posterior $\frac{2}{3}$ very sparsely, finely punctate; in lateral view, slightly inclined on anterior third, distinctly convex on posterior $\frac{2}{3}$; centrobasal crest (Fig. 6E) gibbosity-shaped; sides



Figure 6. *Cyrtinus umbus* Martins & Galileo, 2009, male from Costa Rica: (A) Dorsal habitus; (B) Ventral habitus; (C) Lateral habitus; (D) Head, frontal view; (E) Elytral base, lateral view.

of dorsal surface of anterior seventh, with sparse tuft of white setae; anterior quarter of dorsal surface with transverse white pubescent band from middle to near suture; apex of anterior third with transverse, somewhat sinuous white pubescent band, from middle of dorsal surface to epipleural margin; posterior half with sparse white pubescence laterally and apically; with sparse, very long, erect dark-brown setae throughout. **Legs:** Dorsal surface

of femoral club with somewhat dense white pubescence; remaining surface sparse, decumbent white setae. Protibiae with sparse, bristly white setae dorsally and laterally, almost absent on basal third of ventral surface, and dense, bristly yellowish-brown pubescence ventrally on apical $\frac{2}{3}$. Meso- and metatibiae with abundant, somewhat bristly white pubescence ventrally, sparse on apical $\frac{2}{3}$ of sides, almost absent on basal third of sides and



Figure 7. *Phaea quadrimaculata* Wappes & Santos-Silva, 2020. (A-E) Male from Mexico, Oaxaca: (A) Dorsal habitus; (B) Ventral habitus; (C) Abdominal ventrites; (D) Lateral habitus; (E) Head, frontal view. (F) Holotype female, abdominal ventrites.

ventral surface, and abundant, bristly yellowish pubescence on posterior $\frac{2}{3}$ of ventral surface. Dorsal surface of tarsi with sparse white pubescence.

Abdomen: Ventrites 1–4 (Fig. 6B) with sparse, somewhat long, suberect yellowish-white setae, except glabrous apex. Ventrite 5 with somewhat abundant white setae not obscuring integument, except yellowish-brown setae laterally and apically, and long, erect dark brown setae interspersed on posterior half; apex rounded.

Variation in dark specimens: Antennomere VIII orangish brown on basal half, dark brown on apical half; ventral surface of pro- and mesothorax orangish brown; light area of the elytra with variable shape and size, from reddish brown to orangish brown; basal area of the elytra dark brown; tibiae brown.

Dimensions in mm (3 males): Total length, 4.00/2.90/3.35/4.00; prothoracic length, 0.65/0.80/1.00; anterior prothoracic width, 0.60/0.65/0.85; posterior prothoracic width, 0.55/0.60/0.75; maximum prothoracic width, 0.65/0.70/0.90; humeral width, 0.80/0.95/1.20; elytral length, 1.80/1.90/2.45.

Material examined (only dark specimens listed): COSTA RICA, *Puntarenas* (**new province record**): 11–18 km N Pavones, 2 males, 14.I.1989, F.T. Hovore leg. (LGBC). PANAMA (**new country record**), *Panama*: 12 km N El Llano, 1 male, 24.I.1993, F.T. Hovore leg. (MZSP).

Remarks: Martins & Galileo (2009) described *C. umbus* based on two specimens (unknown sex) from Costa Rica. The two specimens have the prothorax and entire anterior third of the elytra orangish brown. The three specimens examined have the prothorax entirely dark in two specimens, black dorsally, dark brown ventrally, and black dorsally and laterally, and orangish brown in the third specimen. However, these specimens have the other morphological features identical to that of the holotype and paratype.

Cyrtinus umbus is similar to *C. howdeni* Wappes, Santos-Silva & Nascimento, 2020, but differs as follows: posterior third of antennomeres III–IV slightly widened; centrobasal crest of the elytra slightly elevated, gibbous; sides of the area of the centrobasal crest with white setae. In *C. howdeni*, the basal third of the antennomeres III–IV are distinctly widened, centrobasal crest of the elytra is elevated, subtriangular, and sides of the area of the centrobasal crest without white setae. The studied species differs from *C. melzeri* Martins & Galileo, 2009 by the shape of the centrobasal crest (conical in *C. melzeri*); from *C. mockfordi* Howden, 1959 by the pronotum shiny, microsculptured only close to anterior margin (opaque, almost entirely microsculptured in *C. mockfordi*), almost without decumbent setae on basal half (with somewhat abundant whitish setae in *C. mockfordi*), and elytra subparallel-sided on anterior $\frac{2}{3}$ (rounded from humerus to apex in *C. mockfordi*); from *C. opacicollis* (Bates, 1885) by pronotum mostly smooth and shiny (opaque and

entirely microsculptured in *C. opacicollis*), and shape of the centrobasal crest of the elytra (elevated and conical in *C. opacicollis*); from *C. hispidus* Martins & Galileo, 2009 and *C. penicillatus* (Bates, 1885) by the shape of the centrobasal crest of the elytra (elevated, with dense tuft of long and erect setae apically in *C. hispidus* and *C. penicillatus*); from *C. bordoni* Joly & Rosales, 1990 and *C. fisheri* Wappes, Santos-Silva & Nascimento, 2020 by the shape of the centrobasal crest of the elytra (conical and elevated in *C. bordoni* and *C. fisheri*); from *C. farri* Howden, 1960, by the elytra not pubescent basally (pubescent in *C. farri*), and with transverse white pubescent band close to suture (absent in *C. farri*); from *C. meridialis* Martins & Galileo, 2010, *C. peruviansis* Audureau, 2017, and *C. mussoi* Joly & Rosales, 1990 by the elytra with three white pubescent areas on the anterior third (only one transverse pubescent band in *C. meridialis*, *C. peruviansis*, and *C. mussoi*).

TETRAOPINI Thomson, 1860

Phaea Newman, 1840

Phaea quadrimaculata Wappes & Santos-Silva, 2021 (Fig. 7)

Phaea quadrimaculata Wappes & Santos-Silva, 2021: 2.

Remarks: This species was described based on a single female (Fig. 7F) from Mexico (Chiapas). We examined a male of the species, which is quite similar to the female in general appearance. It differs from the holotype by the head and most of prothorax (Fig. 7-E) yellower (orangish-brown in the holotype), and scape (Fig. 7-E) black only apically (entirely black in the holotype). Furthermore, the abdominal ventrites 1–4 in male (Fig. 7C) are distinctly elevated toward the apex, while they are flattened in the holotype (Fig. 7F). Such sexual dimorphism, apparently, has never been reported in *Phaea*. However, it also occurs in some other species such as in *P. lingafelteri* Heffern, Santos-Silva & Nascimento, 2018. The chromatic variation, especially of the scape, also occurs in *P. lingafelteri*.

Material examined: MEXICO, *Oaxaca* (**new state record**): 16 mi. NW Tehuantepec, 1 male, 22.VI.1966, J.B. Karren leg. (LGBC).

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REFERENCES

- Bezark, L.G. 2023. *Checklist of the Oxypeltidae, Vesperidae, Disteniidae and Cerambycidae, (Coleoptera) of the Western Hemisphere. 2023 Edition (updated through 31 December 2022)*. Available: <http://bezbycids.com/byciddb/wdefault.asp?w=n>. Access: 25/05/2023.
- Breuning, S. 1943. Novae species Cerambycidae. XII. *Folia Zoologica et Hydrobiologica*, 12: 12-66.
- Lingafelter, S.W.; Monné, M.A. & Nearn, E.H. 2023. *Online Image Database of Cerambycid Primary Types of Smithsonian Institution*. Available: <http://SmithsonianCerambycidae.com>. Access: 14/03/2023.
- Martins, U.R. & Galileo, M.H.M. 2009. Nota e espécies novas de *Cyrtinus* LeConte (Coleoptera, Cerambycidae, Lamiinae, Cyrtinini) da Região Neotropical. *Revista Brasileira de Entomologia*, 53(1): 65-68.
- Monné, M.A. 2023a. *Catalogue of the Cerambycidae (Coleoptera) of the Neotropical region. Part I. Subfamily Cerambycinae*. Available: <https://cerambycids.com/catalog>. Access: 14/03/2023.
- Monné, M.A. 2023b. *Catalogue of the Cerambycidae (Coleoptera) of the Neotropical region. Part II. Subfamily Lamiinae*. Available: <https://cerambycids.com/catalog>. Access: 14/03/2023.
- Monné, M.A. & Nearn, E.H. 2023a. *Catalogue of the Cerambycidae (Coleoptera) of Canada and United States of America. Part III. Subfamily Cerambycinae*. Available: <https://cerambycids.com/catalog>. Access: 14/03/2023.
- Monné, M.A. & Nearn, E.H. 2023b. *Catalogue of the Cerambycidae (Coleoptera) of Canada and United States of America. Part IV. Subfamily Lamiinae*. Available: <https://cerambycids.com/catalog>. Access: 14/03/2023.
- Napp, D.S. & Martins, U.R. 2009. Tribo Callichromatini. In: Martins, U.R. (Org.). *Cerambycidae sul-americanas*. Curitiba, Sociedade Brasileira de Entomologia. v. 10, p. 223-353.
- Santos-Silva, A. & Bezark, L.G. 2022. The primary types of *Bisaltes* (*Bisaltes*) Thomson of the Museu de Zoologia, Universidade de São Paulo, with notes and synonymies regarding other species of this subgenus and *Bisaltes* (*Craspedocerus*) Aurivillius (Coleoptera, Cerambycidae, Lamiinae). *Zootaxa*, 5165(1): 95-106.
- Tavakilian, G.L. & Chevillotte, H. 2022. *Titan: base de données internationales sur les Cerambycidae ou Longicornes*. Available: <http://titan.gbif.fr>. Access: 14/03/2023.
- Toledo, V.H. 2005. Revisión taxonómica del género *Psyrrassa* Pascoe (Coleoptera: Cerambycidae). *Acta Zoológica Mexicana*, (n.s.), 21(3): 1-64.
- Wappes, J.E. & Santos-Silva, A. 2021. Three new species of *Phaea* Newman (Coleoptera: Cerambycidae), with discussion of the need for and designation of a lectotype for *Phaea rufiventris* Bates. *Insecta Mundi*, 845: 1-13.