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Synonymies, a new combination, and four new species  
in *Amphicnaeia* Bates (Coleoptera: Cerambycidae: Lamiinae)

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Synonymies, a new combination, and four new species in *Amphicnaeia* Bates (Coleoptera: Cerambycidae: Lamiinae)

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**Abstract.** Four new species in the genus *Amphicnaeia* (Coleoptera: Cerambycidae: Lamiinae) are described: *A. panamensis* Wappes, Santos-Silva and Galileo and *A. fuscofasciata* Wappes, Santos-Silva and Galileo from Panama; *A. bezarki* Wappes, Santos-Silva and Galileo from Venezuela; and *A. rileyi* Wappes, Santos-Silva and Galileo from Costa Rica and Panama. *Amphicnaeia affinis* Breuning, 1940 is placed in synonymy with *A. lineata* Bates, 1866, and the species newly recorded from the Brazilian state of Minas Gerais. *Amphicnaeia cordigera* Aurivillius, 1920 is transferred to *Rosalba* Thomson, 1864, resulting in a **new combination**, and *Rosalba rufescens* Breuning, 1940, is found to be a junior synonym of the former. The holotypes of *A. vitticollis* Breuning, 1940, and *A. villosula* (Thomson, 1868) are illustrated for the first time.

**Key words.** Apomecynini, Central America, South America, taxonomy.

## Introduction

*Amphicnaeia* Bates, 1866 was described for three Brazilian species: *A. lineata* Bates, 1866; *A. lyctoides* Bates, 1866; and *A. pusilla* Bates, 1866. Much later, Breuning (1971) designated the first of the Bates species, *A. lineata*, as the type species. Currently, there are 35 species assigned to the genus (Monné 2018; Tavakilian and Chevillotte 2018) with 14 of these described in the 21<sup>st</sup> century, four by Galileo (2015), seven by Galileo and Martins (2001, 2003, 2011), and three by Martins and Galileo (1999, 2001). Most species (24) are distributed only in South America with seven others only known from Central America, one with an unusually disjunct distribution being known from both southeast Panama and Brazil (Bezark, 2019) but no records in-between, and two occurring in Central America and northern South America. With the four new species described here, another one transferred to *Rosalba* Thomson, 1864, and one placed in synonymy the current number of *Amphicnaeia* species is 37.

## Materials and Methods

Photographs were taken in the MZSP with a Canon EOS Rebel T3i DSLR camera, 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 morphological terminology used in this paper follows that used by Lawrence et al. (2011). The acronyms used in the text are as follows:

<b>ACMT</b>	American Coleoptera Museum (James Wappes), San Antonio, Texas, USA
<b>DZUP</b>	Coleção de Entomologia Pe. Jesus Santiago Moure, Departamento de Zoologia, Universidade Federal do Paraná, Curitiba, Paraná, Brazil
<b>FSCA</b>	Florida State Collection of Arthropods, Gainesville, Florida, USA
<b>LGBC</b>	Larry G. Bezark, collection, Sacramento, California, USA
<b>MNHN</b>	Muséum national d'Histoire naturelle, Paris, France.
<b>MZSP</b>	Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil
<b>NHRS</b>	Naturhistoriska Riksmuseet, Stockholm, Sweden
<b>TAMU</b>	Texas A&M University Insect Collection, College Station, Texas, USA

## Taxonomy

### Lamiinae Latreille, 1825

#### Apomecynini Thomson, 1860

#### *Amphicnaeia* Bates, 1866

*Amphicnaeia* is very similar to *Rosalba*, differing by the presence of long, erect setae on the elytra, which are absent in *Rosalba*. It is also characterized by a slender body, retractile head, slightly elevated antennal tubercles, filiform antennae, antennomere III shorter than IV (rarely very slightly longer), laterally unarmed prothorax (one species with a very small tubercle), and metaventrite not reduced.

#### *Amphicnaeia panamensis* Wappes, Santos-Silva and Galileo, new species

(Fig. 1–4)

**Description. Male.** Head dark-brown; mouthparts yellowish-brown; scape reddish-brown, irregularly interspersed with brown areas; pedicel reddish-brown; antennomeres III–V reddish-brown in basal 2/3, dark-brown in distal third; antennomeres VI–VII reddish-brown in basal half, dark-brown in distal half; antennomeres VIII–XI reddish-brown in basal third, dark-brown in distal 2/3; prothorax mostly dark-brown, with central area of pronotum lighter, and central area of prosternum and prosternal process reddish-brown; sides of ventral surface of meso- and metathorax dark-brown, slightly reddish-brown centrally; basal third of elytra reddish-brown except wide brown band along suture, and dark-brown band in inclined area (not reaching humerus), remaining surface brown, irregularly interspersed with reddish-brown areas; coxae dark reddish-brown; forelegs mostly reddish-brown with some lighter irregular areas; meso- and metafemora yellowish-brown; basal half of mesotibiae yellowish-brown, and distal half brown; basal 2/3 of metatibiae yellowish-brown and distal third brown; meso- and metatarsi mostly reddish-brown; abdominal ventrite I mostly dark-brown, with distal third dark reddish-brown, except narrow yellowish apex; remaining abdominal ventrites mostly dark reddish-brown, with apex of II–IV yellowish.

**Head.** Frons finely, moderately sparsely punctate; with abundant yellowish-white pubescence, not obscuring integument, in anterior area close to clypeus and sides close to eyes, nearly glabrous on transverse central area, with sparse yellowish-white pubescence toward antennal tubercles. Vertex and area behind upper eye lobes with sculpturing as in frons; with yellowish-white pubescence (yellowish depending on light intensity), not obscuring integument, more abundant and longer centrally; with sparse, thick, short, erect setae close to eyes. Area behind lower eye lobes with punctures slightly coarser and denser than in vertex; with abundant pale-yellow pubescence, denser, partially obscuring integument close to eye. Antennal tubercles finely punctate, except smooth distal area; with yellowish-white pubescence, not obscuring integument, more yellowish-brown toward apex. Median groove absent. Genae with abundant yellowish pubescence, partially obscuring integument, except glabrous distal area. Gula with short, bristly yellowish-white pubescence anteriorly, glabrous posteriorly. Distance between upper eye

lobes equal to about 2/3 of maximum width of one upper lobe; in frontal view, distance between lower eye lobes equal to almost 8.0 times distance between upper eye lobes. Antennae about 1.8 times elytral length, reaching elytral apex about base of antennomere VIII. Scape asperous, more distinctly so dorsally near apex; with sparse yellowish pubescence; with long, erect, thick dark setae, longer and more abundant ventrally. Pedicel and antennomeres with sparse yellowish pubescence (darker appearing in some areas due to the darker color of integument), with long, erect, thick dark setae, distinctly longer and more abundant ventrally.

**Thorax.** Prothorax about as long as wide; sides uniformly rounded. Pronotum coarsely, abundantly punctate; with three longitudinal bands, from base to apex, of dense yellowish pubescence, one on each side, another centrally (pubescence more bristle like than in lateral bands); remaining surface with very sparse yellowish setae; with sparse, long, erect, thick dark setae. Sides of prothorax with sculpturing as in pronotum; with yellowish pubescence, distinctly denser on wide band close to prosternum. Prosternum coarsely, densely punctate; with sparse yellowish-white pubescence. Central area of prosternal process distinctly narrowed, about one-sixth width of procoxal cavity. Ventral surface of mesothorax, and sides of metaventrite coarsely, abundantly punctate; mesoventrite and central area of metaventrite with yellowish-white pubescence not obscuring integument; mesanepisternum, mesepimeron, metanepisternum and sides of metaventrite with yellowish-brown pubescence not obscuring integument (slightly denser in metanepisternum). Scutellum with yellowish-white pubescence not obscuring integument. **Elytra.** Coarsely, abundantly punctate on basal half, gradually sparser in distal half; with two wide longitudinal bands of yellowish-white pubescence dorsally in basal 2/3, fused basally by transverse pubescent band, nearly entirely fused distally (innermost partially interrupted near its base), oblique yellowish-white pubescent macula laterally, about midlength, not reaching epipleural margin, partially fused with outermost longitudinal pubescent band, another longitudinal, wide yellowish-white pubescent band in distal quarter, gradually less distinct toward apex; remaining surface with slightly conspicuous yellowish-white pubescence; with long, erect, thick dark setae throughout; apex nearly rounded. **Legs.** Femora with yellowish-white pubescence not obscuring integument; with a few long, erect, dark setae dorsally near apex. Tibiae with yellowish-white pubescence not obscuring integument, more brownish, bristly ventrally in posterior half; with long, erect, thick, sparse dark setae. Tarsi with yellowish-white pubescence not obscuring integument dorsally, with long, erect, thick dark setae interspersed; ventral surface of tarsomeres I–III with dense white pubescence.

**Abdomen.** Pubescence not obscuring integument, as follows: ventrite I with whitish pubescence centrally, yellowish-white laterally, glabrous in narrow distal area; ventrites II–III with whitish pubescence on centrobasal area, yellowish in remaining surface, glabrous in narrow distal area; ventrites IV–V with yellowish pubescence, except narrow distal area of IV. Apex of ventrite V rounded.

**Dimensions (mm).** Total length 4.80; prothoracic length 0.90; anterior prothoracic width 0.80; posterior prothoracic width 0.75; maximum prothoracic width 0.95; humeral width 1.05; elytral length 2.75.

**Type material.** Holotype male from PANAMA, *Panama*: Cerro Jefe (2200'), 25.V–1.VI.1992, J. E. Wappes col. (FSCA, formerly ACMT).

**Remarks.** During the initial process of description, an unfortunate accident occurred: the pin on which the specimen was fixed fell to the ground. Unfortunately, the head and prothorax were lost. However, since the specimen was already photographed and has characteristics that allow the species to be diagnosed, the description of the new species is still possible. Although it was not possible to describe areas of the lost parts not in the photographs.

The general appearance of *A. panamensis* new species somewhat resembles that of *A. antennata* Galileo and Martins, 2001 (Fig. 15–17), but differs as follows: elytral pubescence forming distinct longitudinal lines in the basal 2/3; elytra without pubescent row along suture (Fig. 1); prothorax longer (Fig. 1); prosternal process (Fig. 2) wider centrally; femora lighter (Fig. 1–3). In *A. antennata*, the elytral pubescence does not form distinct longitudinal lines in the basal 2/3, elytra with distinct pubescent row along suture, from scutellum to apex (Fig. 15), prothorax is shorter (Fig. 15), prosternal process (Fig. 16) is narrower centrally, and the femora (Fig. 15–16) are darker. The new species also resembles *A. quadrifasciata* Nascimento & Santos-Silva, 2018 (see photographs of the holotype at Bezark 2019), but

differs by the frons not densely pubescent throughout (pubescence nearly obscuring entire surface of frons in *A. quadrifasciata*), prothorax longer (shorter in *A. quadrifasciata*), scape stouter (slender in *A. quadrifasciata*), innermost pubescent line of the elytra not continuous from base to apex (continuous in *A. quadrifasciata*), inclined area of the elytra without longitudinal pubescent bands (with two bands in *A. quadrifasciata*), and prosternal process distinctly narrowed centrally (not so in *A. quadrifasciata*). *Amphicnaeia panamensis* differs from *A. lineata* (Bates, 1866) (Fig. 27–28) by the slender body, prothorax proportionally longer, and different elytral pubescent pattern. It can be separated from *A. sexnotata* Melzer, 1933, and *A. lepida* Melzer, 1933 (see photograph of the holotypes at Bezark 2019), by the prothorax proportionally longer, lighter color of legs and antennae, and different elytral pubescent pattern.

**Etymology.** The species name refers to Panama, the country where the holotype was collected.

### *Amphicnaeia bezarki* Wappes, Santos-Silva and Galileo, new species

(Fig. 5–12)

**Description. Male** (Fig. 5–8). Head dark-brown; apex of last palpomeres yellowish-brown; sides of postclypeus, parts of anteclypeus, and wide posterior area of labrum dark reddish-brown; apex of labrum pale-yellow; scape and pedicel mostly brownish, slightly lighter toward apex; antennomere III dark reddish-brown basally, gradually brown toward apex; antennomere III yellowish-brown in basal half, gradually brownish toward apex; remaining antennomeres with narrow yellowish ring basally, reddish-brown about basal third, gradually brownish toward apex (gradually darker toward distal segments); prothorax mostly dark-brown, with anterior and posterior area of pronotum, anterosuperior area of sides of prothorax, and parts of prosternum orangish; ventral surface of meso- and metathorax mostly reddish-brown, with punctures dark-brown; femora light reddish-brown (more yellowish-brown depending on light intensity) basally and posteriorly, dark-brown in remaining surface; tibiae yellowish-brown basally, dark-brown toward apex (this latter area gradually smaller from pro- to metatibiae); tarsi brownish, with basal area of tarsomere I lighter; abdominal ventrites I–III dark-brown; abdominal ventrite IV dark reddish-brown; abdominal ventrite V mostly light reddish-brown; elytra dark-brown except the following orangish areas: narrow basal area, not involving humeri, surrounding scutellum; wide band starting close to humerus, fused with basal orangish area, following obliquely in basal quarter, then following longitudinally close to suture (this latter area wider); oblique band laterally, fused with the former band before its apex, following upward toward epipleural margin, then following backward along epipleural margin toward apex (partially reddish-brown in some areas; narrowed close to apex); nearly V-shaped macula in distal quarter, following along suture toward anterior longitudinal band (reddish-brown in area of connection); narrow, somewhat irregular area in apex.

**Head.** Frons finely, moderately sparsely punctate; with pale-yellow pubescence not obscuring integument (white depending on light intensity). Vertex and area behind eyes with sculpturing as on frons; pubescence denser, yellower than on frons. Antennal tubercles with sparse punctures, finer than on frons; pubescence as on frons. Genae finely, sparsely punctate close to eye, smooth in remaining surface; with sparse yellowish pubescence close to eye, glabrous in remaining surface. Postclypeus with sculpturing and pubescence as on frons; with one long dark seta on each side. Distance between upper eye lobes 0.15 times length of scape; in frontal view, distance between lower eye lobes 0.70 times length of scape. Antennae 1.9 times elytral length, reaching elytral apex at posterior third of antennomere VIII. Scape asperous, more distinctly dorsally near apex; with pale-yellow pubescence not obscuring integument. Pedicel and antennomeres III–X with long, erect, thick, dark setae ventrally; antennomeres IV–XI with sparse, short, erect, whitish setae throughout. Antennal formula (ratio) based on length of antennomere III: scape = 1.56; pedicel = 0.37; IV = 1.75; V = 1.56; VI = 1.50; VII = 1.50; VIII = 1.31; IX = 1.25; X = 1.19; XI = 1.19.

**Thorax.** Prothorax slightly wider than long; parallel-sided from anterolateral angles to behind mid-length, then abruptly narrowed. Pronotum coarsely, abundantly punctate; with yellowish pubescence not obscuring integument, along central area bristly pubescence denser, slightly denser laterally. Sides of prothorax with sculpturing as on pronotum; with yellowish-white pubescence, abundant but not obscuring integument toward pronotum, slightly denser toward prosternum. Ventral surface of thorax

with yellowish-white pubescence, distinctly denser laterally, especially on metanepisternum and sides of metaventricle. Narrowest area of prosternal process about one-third width of procoxal cavity. Narrowest area of mesoventral process about 0.3 times width of mesocoxal cavity. Scutellum with yellowish pubescence nearly obscuring integument. **Elytra.** Coarsely, abundantly punctate in basal 2/3, slightly finer, sparser in distal third; with yellowish pubescence not obscuring integument on light areas, brownish on dark areas; with long, erect, thick, dark setae throughout; apex nearly truncate. **Legs.** Femora with yellowish-white pubescence not obscuring integument. Tibiae with yellowish-white pubescence not obscuring integument, bristly from midlength, especially on metatibiae; dorsal surface of mesotibiae with brownish, bristly pubescence in distal third.

**Abdomen.** Ventrites I–IV with whitish pubescence centrally, not obscuring integument, yellower, slightly denser laterally; ventrite V with sparse yellowish-white pubescence; distal margin of ventrite V nearly truncate.

**Female** (Fig. 9–12). Antennae mostly brown; prothorax, and ventral surface of meso- and metathorax entirely dark brown; pubescence in basal 2/3 of the elytra forming distinct longitudinal rows.

**Dimensions (mm) holotype male/paratype female.** Total length 3.80/4.05; prothoracic length 0.75/0.75; anterior prothoracic width 0.75/0.80; posterior prothoracic width 0.70/0.75; maximum prothoracic width 0.80/0.85; humeral width 1.15/1.20; elytral length 2.70/2.90.

**Type material.** Holotype male from VENEZUELA, *Trujillo*: Old road (7360', 43 km E Trujillo), 06.VIII.1988, C. and L. O'Brien, and G. Wibmer col. (FSCA, formerly ACMT). Paratype female, same data as holotype except 05.VIII.1988 (ACMT).

**Remarks.** *Amphicnaeia bezarki* new species differs from *A. antennata* as follows: prothorax parallel-sided anteriorly (Fig. 7, 9); elytra with distinct contrasting light areas (Fig. 7, 9); basal area of the elytra, on sides of scutellum, with distinct, longitudinal, sparsely pubescent bands (Fig. 7, 9); prosternal process and mesoventral process (Fig. 8, 10) wider centrally. In *A. antennata*, the prothorax is not parallel-sided anteriorly (Fig. 15), elytra without distinctly contrasting light areas (Fig. 15), basal area of the elytra, on sides of scutellum, without longitudinal sparsely pubescent bands (Fig. 15), prosternal process and mesoventral process (Fig. 16) narrower centrally. *Amphicnaeia bezarki* differs from *A. lineata* (Fig. 27–28) and *A. martinsi* Galileo, 2015 (see photograph of the holotype at Bezark 2019) by the elytra with wide, oblique orangish band anteriorly, from humerus to middle of dorsal surface (absent in *A. lineata* and *A. martinsi*).

**Etymology.** It is a pleasure to name this species for Larry Bezark, Sacramento, California, who through his websites illustrating the adult habitus of Cerambycidae species, his Checklist of the Oxypeltidae, Vesperidae, Disteniidae and Cerambycidae of the Western Hemisphere and his taxonomic publications contributes immeasurably to taxonomists, collectors and other workers studying New World Cerambycidae.

### ***Amphicnaeia fuscofasciata* Wappes, Santos-Silva and Galileo, new species**

(Fig. 18–21)

**Description. Male.** Integument mostly dark-brown; mouthparts yellowish-brown; distal area of labrum yellowish-brown; scape, pedicel, and antennomeres III–V reddish-brown, except dark brown apex of III–V; antennomeres VI–VIII reddish-brown basally, gradually and irregularly darker toward apex; antennomeres IX–XI with narrow reddish-brown basal ring, dark-brown on remaining surface; basal half of elytra with wide reddish-brown band, longitudinal on basal sixth, then curved inward and following longitudinally close to suture, and projected toward epipleural margin at same point of the curvature; femora mostly dark reddish-brown, more dark-brown in some irregular areas.

**Head.** Frons moderately coarsely and abundantly punctate; with yellowish-brown pubescence not obscuring integument, sparser in transverse area close to clypeus; with a few long, erect, brownish setae close to eyes. Vertex and area behind upper eye lobes with sculpturing as on frons; with light yellowish-brown pubescence nearly obscuring integument between antennal tubercles and upper eye lobes, following as pubescent band in each side of median groove, sparser close to superior area of upper eye lobes, denser,

nearly obscuring integument close to lower eye lobes; remaining surface with brownish pubescence not obscuring integument; with a few long, erect brownish setae between antennal tubercles and close to upper eye lobes. Area behind lower eye lobes moderately coarsely, abundantly punctate (punctures coarser than behind upper eye lobes); with light yellowish-brown pubescence obscuring integument. Antennal tubercles coarsely, sparsely punctate basally, gradually finer, sparser toward smooth apex; pubescence as on frons. Genae finely, sparsely punctate except narrow apex smooth; with light yellowish-brown pubescence partially obscuring integument, except apex glabrous; with a few long, erect brownish setae. Postclypeus with light yellowish-brown pubescence in wide central area, partially obscuring integument, glabrous laterally. Labrum with sparse, long, erect yellowish setae. Distance between upper eye lobes 0.14 times length of scape; in frontal view, distance between lower eye lobes 0.83 times length of scape. Antennae 1.9 times elytral length, reaching elytral apex at distal third of antennomere VIII. Scape asperate dorsally, more distinctly so toward apex; with yellowish pubescence not obscuring integument; with long, erect, thick dark setae ventrally on distal third. Pedicel and antennomeres with long, erect dark setae ventrally, gradually shorter, sparser toward XI (interspersed with shorter, finer dark setae from V); dorsal surface of antennomeres with sparse, short, erect, brownish setae. Antennal formula (ratio) based on length of antennomere III: scape = 1.38; pedicel = 0.29; IV = 1.38; V = 1.33; VI = 1.33; VII = 1.33; VIII = 1.14; IX = 1.09; X = 0.90; XI = 1.00.

**Thorax.** Prothorax slightly wider than long; sides uniformly rounded, slightly narrowed posteriorly. Pronotum moderately coarsely, abundantly punctate; with dense light yellowish-brown pubescence laterally and in wide central band (somewhat wider centrally); remaining surface with light yellowish-brown pubescence not obscuring integument; with a few long, erect, thick brownish setae laterally on anterior and posterior area. Sides of prothorax with sculpturing as on pronotum, and pubescence as on sides of pronotum. Prosternum coarsely, moderately abundantly punctate; with yellowish-white pubescence not obscuring integument, slightly denser laterally. Prosternal process with sparse yellowish-white pubescence anteriorly, nearly glabrous posteriorly except a few long, erect, thick dark setae. Sides of ventral surface of meso- and metathorax with dense light yellowish-brown pubescence partially obscuring integument, and central area with yellowish-white pubescence not obscuring integument. Narrowest area of prosternal process about 4.5 times width of procoxal cavity. Narrowest area of mesoventral process about 3.5 times width of mesocoxal cavity. Scutellum with dense light yellowish-brown pubescence. **Elytra.** Coarsely, abundantly punctate on basal third, gradually sparser toward apex, especially from midlength; light area of anterior half with dense, light yellowish-brown pubescence, not obscuring punctures; with two, longitudinal, light yellowish-brown pubescent bands in anterior sixth, one from base to light area, between humerus and scutellum, another from scutellum to light area; with narrow, longitudinal light yellowish-brown pubescent band in sides of central third; with wide, longitudinal light yellowish-brown pubescent band on distal third, not reaching suture on its anterior area, bifurcated about its midlength, reaching suture near apex, then following laterally along epipleural margin, also only on distal third; remaining surface with brownish pubescence not obscuring integument; with long, erect, thick, dark setae throughout; apex nearly rounded. **Legs.** Femora with yellowish-white pubescence not obscuring integument (whiter depending on light intensity); with a few long, erect dark setae dorsally. Tibiae with light yellowish-white pubescence not obscuring integument on basal half, bristly, yellowish-brown on distal third; with sparse, long, erect dark setae.

**Abdomen.** Ventrites with moderately dense light yellowish-brown pubescence laterally, gradually sparser, yellowish-white toward center; distal margin of ventrite V slightly rounded.

**Dimensions (mm).** Total length 4.30; prothoracic length 0.90; anterior prothoracic width 0.85; posterior prothoracic width 0.80; maximum prothoracic width 0.95; humeral width 1.20; elytral length 2.95.

**Type material.** Holotype male from PANAMA, *Panama*: Cerro Azul (Altos de Pacoras), 4–10.I.1994, J.E.Wappes col. (FSCA, formerly ACMT).

**Remarks.** *Amphicnaeia fuscofasciata* new species, differs from *A. martinsi* Galileo, 2015 (see photograph of the holotype at Bezark 2019) as follows: distance between upper eye lobes shorter than width of one lobe; central pubescence band of pronotum distinctly wider; anterior dense pubescence of the elytra not H-shaped. In *A. martinsi*, the distance between upper eye lobes is equal to width of one lobe,

central pubescent band of pronotum narrow, and anterior dense pubescence of the elytra H-shaped. It differs from *A. birai* Galileo, 2015 (see photograph of the holotype at Bezark 2019) by the dense anterior pubescence of the elytra not forming narrow rows (in *A. birai*, forming three narrow longitudinal rows, interconnected between them by wide transverse band before middle of the elytra). *Amphicnaeia fuscofasciata* differs from *A. flavescens* Martins & Galileo, 1999, by the central pubescent band of the pronotum distinctly wider (narrow in *A. flavescens*), and basal half of the elytra without longitudinal pubescent band (present in *A. flavescens*). The new species differs from *A. lineata* (Fig. 27–28) by the upper eye lobes distinct wider (narrow in *A. lineata*), and by the elytral pubescent pattern. *Amphicnaeia fuscofasciata* can be separated from *A. antennata* (Fig. 15–17) by the upper eye lobes wider (narrower in *A. antennata*), central pubescent band of the pronotum wider (narrow in *A. antennata*), central area of prosternal process distinctly wider (very narrow in *A. antennata*), and by the elytral pubescent pattern. Finally, it differs from *A. bezarki* new species by the upper eye lobes wider (narrow in *A. bezarki*) pronotum not parallel-sided anteriorly (parallel-sided in *A. bezarki*), central pubescent band of the pronotum distinct wider (narrow in *A. bezarki*) and elytral pubescent pattern.

**Etymology.** Named for the broad, dark fascia (resembling the batman shadow) that dominates the distal half of the elytra.

### *Amphicnaeia rileyi* Wappes, Santos-Silva and Galileo, new species

(Fig. 22–26)

**Description. Male** (Fig. 22–25). Integument mostly brown, darker-brown in some areas, especially head and sides of pronotum; mouthparts mostly yellowish-brown, with apex of last palpomeres pale-yellow; antennae light-brown basally, gradually dark reddish-brown toward distal segments, except narrow yellowish-brown basal ring, more distinct ventrally; pronotum dark reddish-brown in wide central band, and transverse anterior area; some areas of ventral surface of thorax irregularly reddish-brown or dark reddish-brown; elytra with wide yellowish-brown band from humerus to apex, widened, reaching suture about apex of anterior third, then following toward apex away from suture; circum-scutellar area brownish, and remaining surface brown except apex narrowly yellowish; legs dark reddish-brown variegated with yellowish-brown; abdominal ventrites dark reddish-brown variegated with yellowish-brown and dark-brown.

**Head.** Frons moderately finely, abundantly punctate; with pale-yellow pubescence not obscuring integument, slightly denser close to eyes. Vertex and area behind upper eye lobes with sculpturing as on frons; with yellowish-brown pubescence obscuring integument between antennal tubercles, following as pubescent band along central area; with moderately sparse yellowish-brown pubescence close to eyes, slightly brownish, not obscuring integument on remaining surface. Area behind lower eye lobes coarsely, abundantly punctate (punctures coarser than behind upper eye lobes); with yellowish-brown pubescence nearly obscuring integument. Antennal tubercles with sculpturing as on frons basally, smooth toward apex; pubescence as on frons. Genae finely, sparsely punctate except smooth apex; with yellowish-brown pubescence obscuring integument, apex glabrous; with a few long, erect dark setae. Postclypeus with sculpturing and pubescence as on frons posteriorly in wide central area, nearly glabrous close to anteclypeus, glabrous laterally; with a few long, erect, thick dark setae in wide central area close to frons. Labrum with short, decumbent, sparse yellowish setae, with long setae of same color interspersed; distal margin with fringe of nearly golden setae. Distance between upper eye lobes 0.15 times length of scape; in frontal view, distance between lower eye lobes 0.92 times length of scape. Antennae 1.9 times elytral length, reaching elytral apex in distal fifth of antennomere VIII. Scape finely asperate, more distinctly so dorsally, near apex; with yellowish-brown pubescence not obscuring integument. Pedicel and antennomeres III–X with long, erect, thick dark setae ventrally. Antennal formula (ratio) based on length of antennomere III: scape = 1.25; pedicel = 0.32; IV = 1.55; V = 1.45; VI = 1.35; VII = 1.35; VIII = 1.22; IX = 1.15; X = 1.05; XI = 1.25.

**Thorax.** Prothorax slightly wider than long; uniformly rounded laterally, slightly narrowed posteriorly. Pronotum coarsely, abundantly punctate; sides and central band with dense yellowish pubescence nearly obscuring integument; remaining surface with brownish pubescence not obscuring integument; with a

few long, erect, thick, dark setae close to center of posterior margin. Sides of prothorax with sculpturing as on sides of pronotum. Prosternum and prosternal process coarsely, abundantly punctate; with yellowish-white pubescence not obscuring integument, slightly denser on sides of prosternum; narrowest area of prosternal process about 0.2 times width of procoxal cavity. Ventral surface of meso- and metathorax with yellowish-white pubescence, denser laterally; narrowest area of mesoventral process about 0.3 times width of mesocoxal cavity. Scutellum with yellowish pubescence obscuring integument. **Elytra.** Coarsely, abundantly punctate in basal half, gradually sparser toward apex; with abundant yellowish pubescence not obscuring integument in light areas and along suture near scutellum; with yellowish-brown pubescence not obscuring integument in remaining surface; with long, erect, thick, dark setae throughout; apex slightly truncate. **Legs.** Femora with yellowish-white pubescence not obscuring integument. Tibiae with yellowish-white pubescence on basal half, more yellowish-brown pubescent and bristly on distal half (only ventrally in protibiae).

**Abdomen.** Ventrites with abundant yellowish-white pubescence not obscuring integument; distal fourth of ventrite V gradually inclined; apex of ventrite V truncate.

**Female** (Fig. 26). Pronotum entirely dark-brown; circum-scutellar area brown; antennae mostly dark-brown; antennae 1.6 times elytral length, reaching elytral apex at middle of antennomere X; apex of abdominal ventrite V rounded.

**Dimensions (mm). holotype male/paratype female.** Total length 4.30/3.45; prothoracic length 0.80/0.65; anterior prothoracic width 0.85/0.65; posterior prothoracic width 0.80/0.65; maximum prothoracic width 0.90/0.70; humeral width 1.25/1.15; elytral length 3.05/2.35.

**Type material.** Holotype male from COSTA RICA, *Heredia*: 16 km SSE La Virgen (1050–1150 m; 10°16'N / 84°05'W; primary forest; MV light), 9–14.III.2001, E. G. Riley col. (TAMU). Paratype female from PANAMA, *Panama*: Cerro Campana, 2.VI.1993, F. Andrews and A. Gilbert col. (LGBC).

**Remarks.** *Amphicnaeia rileyi* new species is similar to *A. bivittata* Melzer, 1933 (see photograph of the holotype at Bezark 2019) but differs as follows: body more robust; prothorax not parallel-sided anteriorly; pronotum with wide central pubescent band; longitudinal pubescent bands of the elytra fused in basal third. In *A. bivittata*, the body is slender, prothorax parallel-sided anteriorly, pronotum without wide central pubescent band, and the longitudinal pubescent bands of the elytra are not fused. It differs from *A. quinquevittata* Bates, 1885 (see photograph of the holotype at Bezark 2019), by the elytra with only two longitudinal pubescent bands, fused in basal third (elytra with 5 longitudinal pubescent bands, not fused in *A. quinquevittata*). *Amphicnaeia rileyi* can be separated from *A. interrupta* Galileo and Martins, 2003 (see photograph of the holotype at Bezark 2019) by the pubescent bands of the dorsal surface of the elytra wide, and absence of lateral pubescent band (respectively, narrow, and present in *A. interrupta*). It differs from *A. lineolata* Galileo and Martins, 2011 (see photograph of the holotype at Bezark 2019) by the slender antennomeres, and longitudinal pubescent bands of the elytra fused in anterior third (respectively, thicker and not fused in *A. lineolata*). The new species also differs from *A. piriana* Martins and Galileo, 2001 (see photograph of the holotype at Bezark 2019) by the elytra without longitudinal pubescent band laterally (present in *A. piriana*). Finally, the new species differs from *A. flavescens* Martins and Galileo, 1999 by the longitudinal pubescent band of the elytra not interrupted after midlength (interrupted in *A. flavescens*).

**Etymology.** It is a pleasure to name this species after notable beetle collector and coleopterist, Ed Riley (TAMU) who collected the holotype.

## Synonymies

### *Amphicnaeia lineata* Bates, 1866

(Fig. 27–28)

*Amphicnaeia lineata* Bates 1866: 33; Lacordaire 1872: 708; Gemminger 1873: 3133 (cat.); Aurivillius 1922: 293 (cat.); Blackwelder 1946: 598 (checklist); Breuning 1960: 173 (cat.); 1971: 218; Monné 1994: 4 (cat., syn.); Monné and Giesbert 1994: 185 (checklist); Monné 2005: 288 (cat.); Wappes et al. 2006: 24 (distr.); Morvan and Roguet

2013: 21 (distr.); Lagos and Barrios 2014: 20 (distr.); Martins et al. 2015: 103 (distr.); Monné 2018: 392 (cat.). *Amphicnaeia plurivittis* Belon 1903: 65; Aurivillius 1922: 293 (cat.). *Amphicnaeia lineata* m. *plurivittis*; Breuning 1960: 173 (cat.); 1971: 219; Blackwelder 1946: 598 (checklist). *Amphicnaeia affinis* Breuning 1940a: 41; Blackwelder 1946: 598 (checklist); Breuning 1960: 173 (cat.); Galileo and Martins 2001: 39 (reval.); 2006: 222; Monné 2005: 286 (cat.); Rodrigues et al. 2010: 317 (distr.); Wappes et al. 2011: 5 (distr.); Monné 2018: 390 (cat.). **New synonym.**

Bates (1866) described *Amphicnaeia lineata* from Brazil (Amazonas), based on a single specimen (Fig. 28). Subsequently, Belon (1903) described *A. plurivittis* based on a series of specimens from Bolivia. Finally, Breuning (1940a) described *A. affinis* from Brazil (São Paulo), based on a single specimen (Fig. 27).

Breuning (1960) listed *A. plurivittis* as a morph of *A. lineata*; Breuning (1971) considered *A. affinis* a junior synonym of *A. sexnotata* Melzer, 1933; and Monné (1994) synonymized *A. plurivittis* with *A. lineata*. Later, Galileo and Martins (2001) revalidated *A. affinis*.

The study of a considerable number of specimens of *A. lineata* in the MZSP indicates that *A. affinis* is a junior synonym of this species. As occurs in other species of the genus, the elytral pubescent pattern is somewhat variable, as is the body width. Unfortunately, lacking access to photographs of the types of *Amphicnaeia plurivittis* it is not possible to confirm or deny its synonymy with *A. lineata*.

The type locality of *A. affinis* was originally described as being Santos city (Santo Amaro Island). However, the insular area of Santos is located in São Vicente Island, which is separated from Santo Amaro Island by less than 500 meters. It is Guarujá city that is located on Santo Amaro Island, which was already incorporated into the city of Santos. Thus, it is not possible to know if the specimen was collected in the insular area of Santos (São Vicente Island), or if it was collected in the Santo Amaro Island, in the city of Guarujá.

**Material examined** (all from the MZSP collection, nearly all glued to a card). BRAZIL, *Minas Gerais*: Mar de Espanha, 1 specimen, 19.XI.1909, J.F. Zikán col. *São Paulo*: Amparo, 1 specimen, no date and collector indicated; São Sebastião, 1 specimen, IX.1920, name of the collector illegible; Guarujá, 1 specimen, 11.XII.1920, name of the collector illegible; Ubatuba, 11.VI.1955, F. Lane col.; São Paulo, 1 specimen, 12.X.1919, no collector indicated; São Paulo (Saúde), 1 specimen, 15.XI.1921, no collector indicated; 1 specimen, 28.XI.1915, no collector indicated; 1 specimen, I.1916, no collector indicated; 1 specimen, 25.XII.1943, no collector indicated; 1 specimen, 2.XI.1921, no collector indicated; 4 specimens, 11.XII.1921, no collector indicated; 1 specimen, 7.XII.1918, no collector indicated; São Paulo (Jabaquara), 1 specimen, 6.X.1946, Nick col.; São Paulo (Jabaquara), 1 specimen, 18.XI.1945, Nick col.; São Paulo (Cantareira), 1 specimen, 12.I.1947, Nick col.; São Paulo (Morumbi), 1 specimen, 1.XI.1942, Nick col.; Itú (Fazenda pau d'alho), 2 specimens, 27.XII.1958, Martins col.; 1 specimen, 1.XI.1960, Martins col.; Ferraz de Vasconcelos, 1 specimen, 28.X.1976, Ferracioli col.; Ilha dos Búzios, 1 specimen, 16.X–4.XI.1963, Expedição Departamento de Zoologia col. *Santa Catarina*: Nova Teutônia, 2 specimens, 14.XII.1937, F. Plaumann col.; 1 specimen, data illegible, F. Plaumann col.; BR 470 (Navegantes-Indaial), 1 specimen, 3.V.2009, A. Ulysséa col. *Rio Grande do Sul*: Triunfo (Parque Copesul), 1 specimen, 24.XI.1999, Galileo col.

**Geographical distribution** (Monné 2018): Panama (Panama), Peru (Loreto), French Guiana, Brazil (Amazonas, Pará, Rondônia, Minas Gerais (**New state record**), Espírito Santo, Rio de Janeiro, São Paulo, Santa Catarina, Rio Grande do Sul), Bolivia (Cochabamba, Santa Cruz).

### ***Rosalba cordigera* (Aurivillius, 1920), new combination**

(Fig. 29–32)

*Amphicnaeia cordigera* Aurivillius 1920: 386; 1922: 293 (cat.); Melzer 1934: 90; Saalas 1936: 149 (morphol.); Zikán & Zikán 1944: 25 (distr.); Blackwelder 1946: 598 (checklist); Monte 1954: 736; Zajciw 1958: 15 (distr.); Buck 1959: 597 (distr.); Galileo & Martins 2001: 38 (reval.); Monné 2005: 287 (cat.); Monné et al. 2010: 247 (distr.); Monné et al. 2012: 54 (distr.); Monné et al. 2016: 23 (distr.); Monné 2018: 391 (cat.). *Amphicnaeia lineata* m. *cordigera*; Breuning 1960: 173 (cat.); 1971: 219; Zajciw 1972: 59 (distr.). *Aletretia rufescens* Breuning 1940b: 42; Blackwelder 1946: 598 (checklist). **New synonym.** *Rosalba rufescens*; Breuning 1960: 174 (cat.); 1971: 232; Monné & Giesbert 1994: 7 (checklist); Monné 2005: 311 (cat.); Monné & Hovore 2006: 229 (checklist); Monné et al. 2010: 247 (distr.); Bezark 2013: 50 (distr.); Monné 2018: 422 (cat.); Santos-Silva et al. 2018: 234, 240.

Aurivillius (1920) described *Amphicnaeia cordigera* (Fig. 29) from Brazil (Rio de Janeiro), based on multiple specimens (exact number not specified). Although Aurivillius described the general pubescence of the elytra, he did not mention the presence or absence of erect setae. Breuning (1960) considered *A. cordigera* as a form of *A. lineata*, but subsequently Galileo & Martins 2001 revalidated the species.

Breuning (1940b) described *Aletretia rufescens*, based on a single specimen from Brazil (Rio de Janeiro). Later, Breuning (1960) transferred the species to *Rosalba* Thomson, 1864. After this, the species was mentioned only in catalogues and checklists, until Santos-Silva et al. (2018), who redescribed, provided new state records, and illustrated the species. According to them: “Breuning (1971) reported (translated): “Perhaps this is just a poorly preserved specimen of *malleri* MELZ.” Actually, the description (Breuning 1940[b]) and redescription (Breuning 1971) of *R. rufescens* do not allow us to be sure about the differences regarding to *R. malleri*. However, from what it is possible to see, the holotype of *R. rufescens* has the elytral apex less narrowed toward apex than in *R. malleri*. Furthermore, examination of the pubescence that remained on the elytron of the holotype (Fig. 32) suggests that the arrangement is most similar to the specimens studied by us (Fig. 30–31), rather than to *R. malleri*.”

Validation that the *R. rufescens sensu* Santos-Silva et al. (2018) corresponds to the true *R. rufescens* then it is certain this species is a junior synonym of *Amphicnaeia cordigera* and belongs in the genus *Rosalba* (the main difference between *Rosalba* and *Amphicnaeia* is the absence (*Rosalba*) or presence (*Amphicnaeia*) of erect setae on elytra).

It is not possible to be sure about *Amphicnaeia cordigera sensu auctorum*, without examination of the specimens studied by them. Accordingly, no changes can be made simply based on the literature pertaining to *A. cordigera*.

### ***Amphicnaeia villosula* (Thomson, 1868)**

(Fig. 13)

*Aesylacris villosula* Thomson 1868: 143; Lacordaire 1872: 611; Gemminger 1873: 3103 (cat.); Thomson 1878: 12 (type); Aurivillius 1922: 297 (cat.); Blackwelder 1946: 599 (checklist).

*Amphicnaeia villosula*; Breuning 1960: 173 (cat.); 1971: 220; Monné 1994: 5 (cat.); Monné & Giesbert 1994: 186 (checklist); Martínez 2000: 95 (distr.); Monné 2005: 289 (cat.); Monné 2018: 393 (cat.).

*Amphicnaeia villosula* was described by Thomson (1868) based on a single specimen from Colombia, currently deposited in the MNHN collection. After this, the species had only been mentioned in catalogs and checklists, except by Breuning (1971), who provided a short redescription of the species. Analyzing the redescription indicates Breuning (1971) provided some details not mentioned in the original description (e.g. size of eyes). As he provided the same measurements as Thomson (1868), it suggests that he likely examined the holotype. Based on the holotype photograph (Fig. 13), the redescription by Breuning (1971), at least dorsally, agrees very well with Thomson’s description of the species. A photograph of the holotype is provided for the first time here.

### ***Amphicnaeia vitticollis* Breuning, 1940**

(Fig. 14)

*Amphicnaeia vitticollis* Breuning 1940c: 427; 1942: 139; Blackwelder 1946: 598 (checklist); Breuning 1960: 173 (cat.); 1971: 223; Monné & Giesbert 1994: 186 (checklist), Monné 1994: 5 (cat.); 2005: 289 (cat.); 2018: 393 (cat.).

*Amphicnaeia vitticollis* Breuning, 1940 was described based on a single specimen from Brazil, currently deposited in the NHRS collection. Breuning (1942) examined a second specimen also from Brazil, and later Breuning (1971) provided a redescription of the species. A photograph of the holotype is provided for the first time here.

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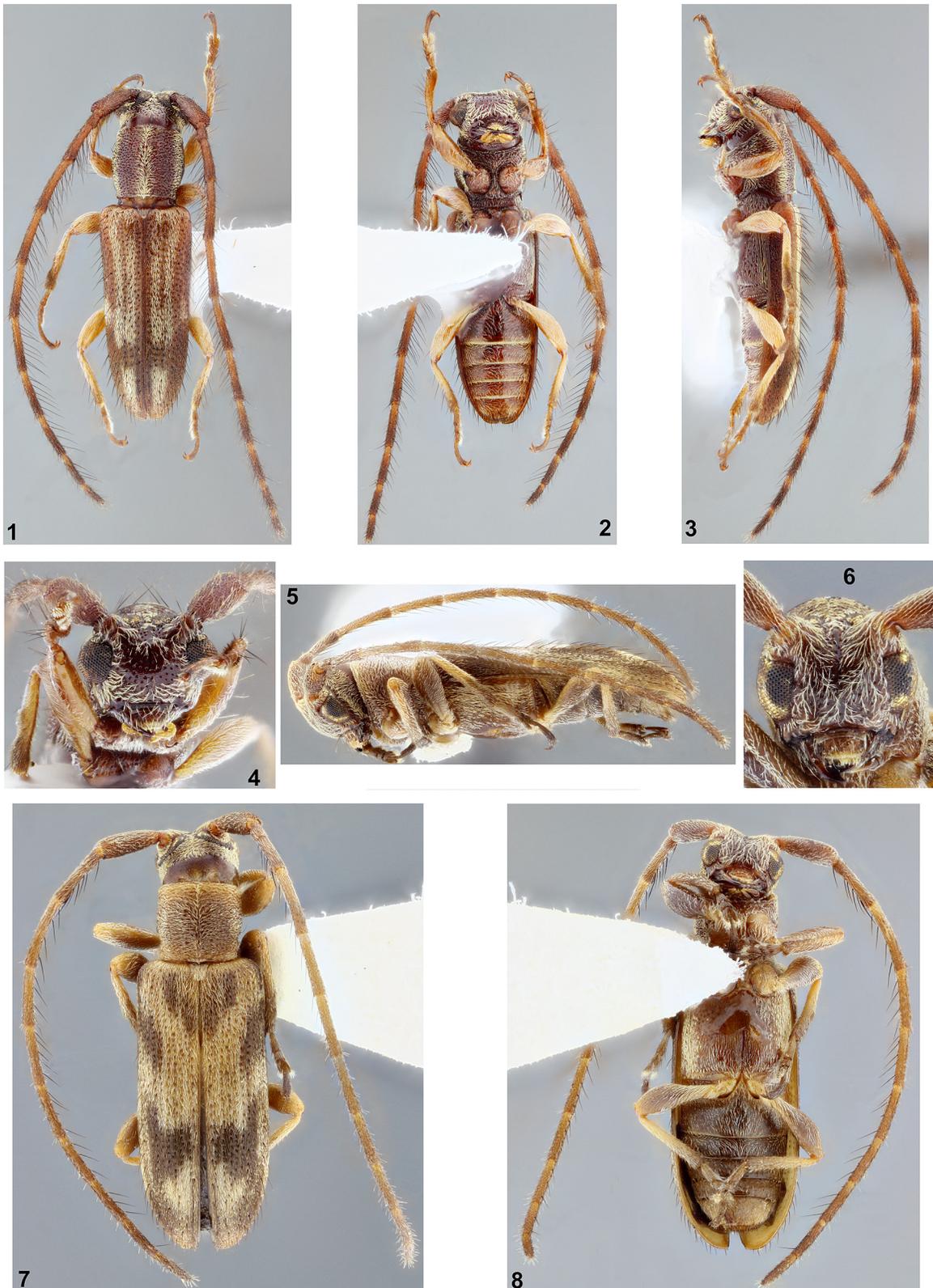
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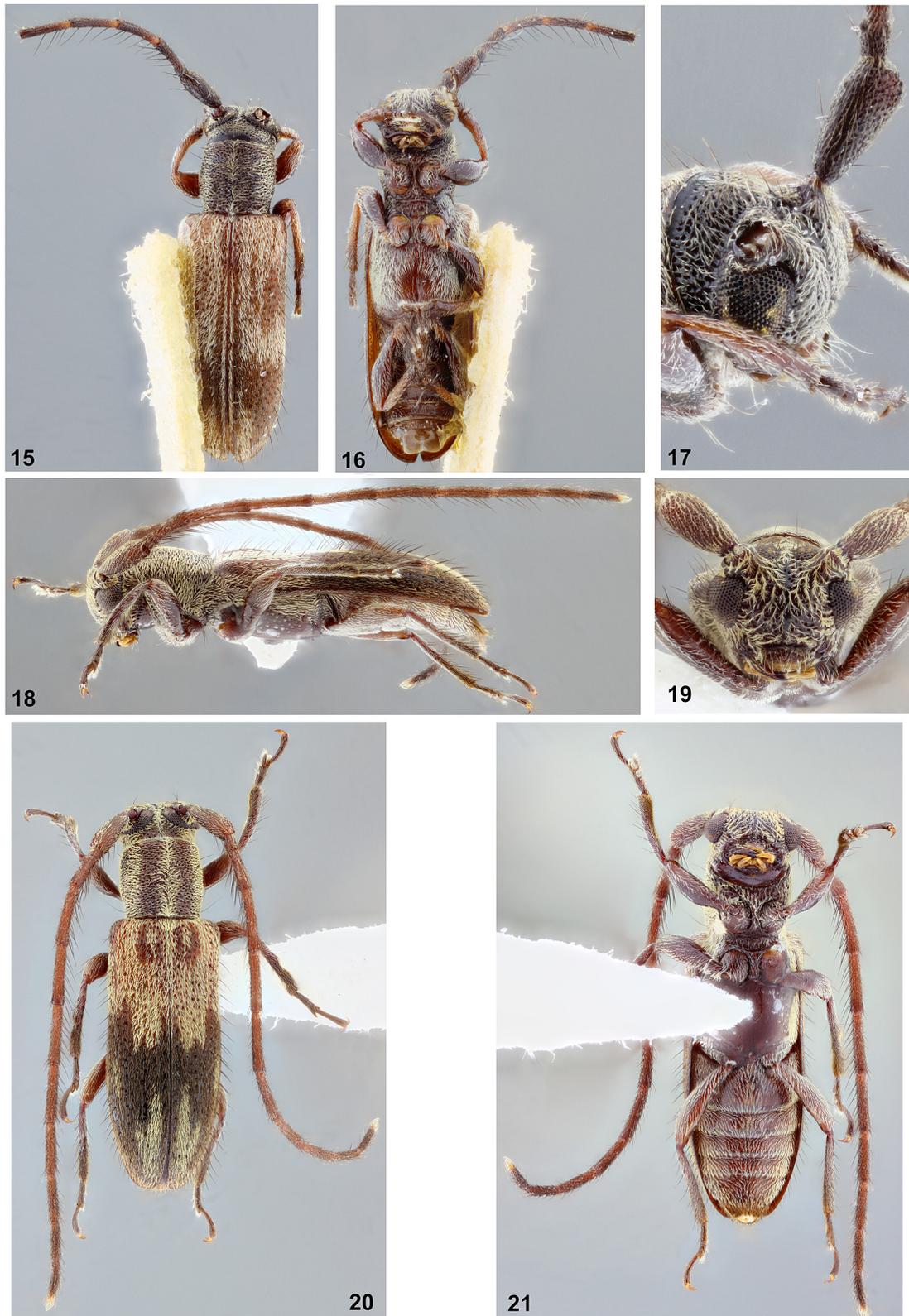
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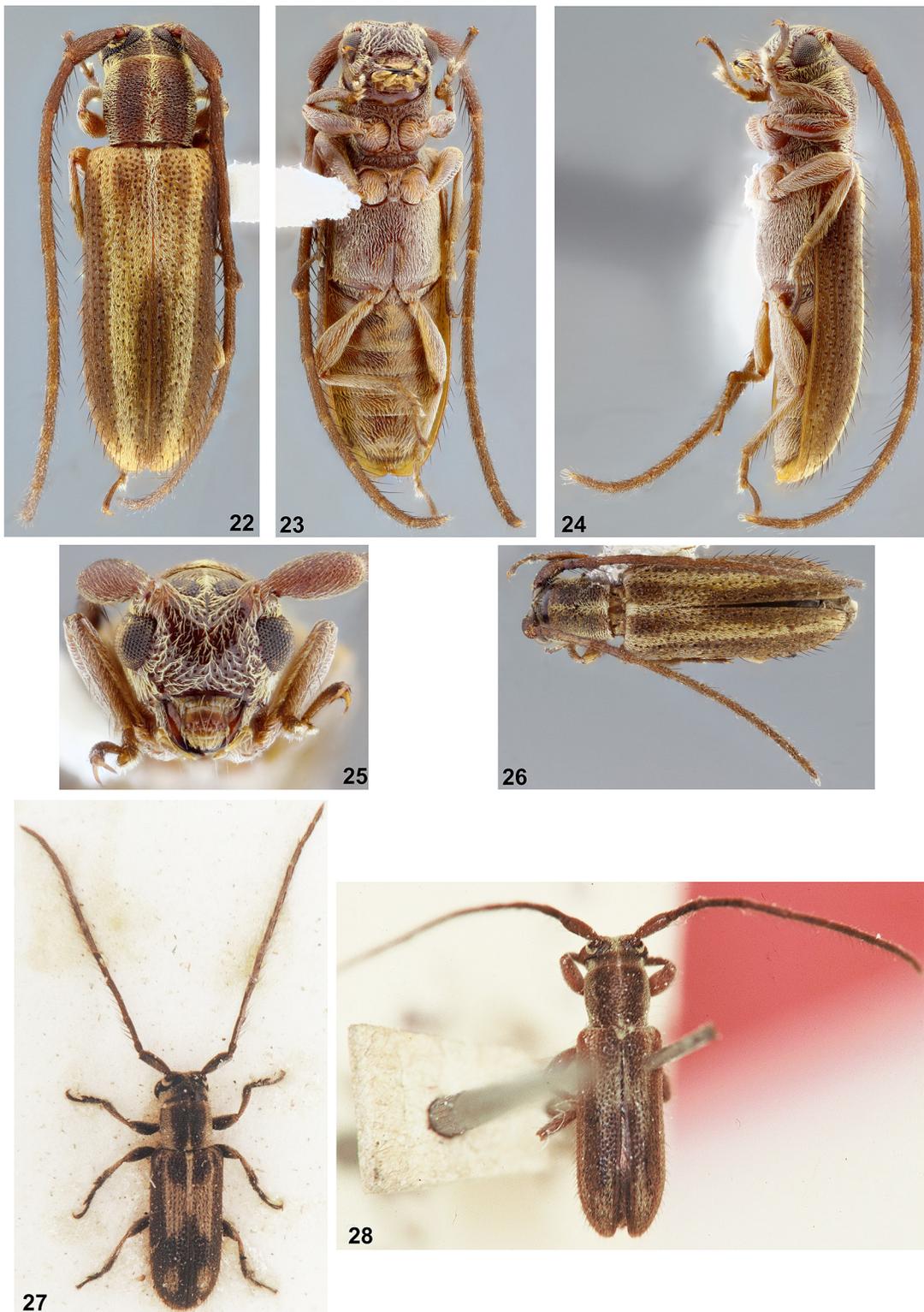
**Figures 1–8.** *Amphicnaeia* spp. 1–4) *Amphicnaeia panamensis*, holotype male. 1) Dorsal habitus. 2) Ventral habitus. 3) Lateral habitus. 4) Head, frontal view. 5–8) *Amphicnaeia bezarki*, holotype male. 5) Lateral habitus. 6) Head, frontal view. 7) Dorsal habitus. 8) Ventral habitus.



Figures 9–14. *Amphicnaeia* spp. 9–12) *Amphicnaeia bezarki*, paratype female. 9) Dorsal habitus. 10) Ventral habitus. 11) Lateral habitus. 12) Head, frontal view. 13) *Amphicnaeia villosula*, holotype, dorsal habitus. 14) *Amphicnaeia vitticollis*, holotype, dorsal habitus.



**Figures 15–21.** *Amphicnaeia* spp. 15–17) *Amphicnaeia antennata*, holotype male. 15) Dorsal habitus. 16) Ventral habitus. 17) Head, side view. 18–21) *Amphicnaeia fuscofasciata*, holotype male. 18) Lateral habitus. 19) Head, frontal view. 20) Dorsal habitus. 21) Ventral habitus.



**Figures 22–28.** *Amphicnaeia* spp. **22–26)** *Amphicnaeia rileyi*. **22)** Dorsal habitus, holotype male. **23)** Ventral habitus, holotype male. **24)** Lateral habitus, holotype male. **25)** Head, frontal view, holotype male. **26)** Dorsal habitus, paratype female. **27)** *Amphicnaeia affinis*, holotype, dorsal habitus. **28)** *Amphicnaeia lineata*, holotype, dorsal habitus.



**Figures 29–32.** *Rosalba cordigera*. **29**) Syntype of *Amphicnaeia cordigera*, dorsal habitus. **30–31**) *Rosalba rufescens*, from Santos-Silva et al. (2018). **30**) Dorsal habitus. **31**) Lateral habitus. **32**) *Rosalba rufescens*, holotype, from Santos-Silva et al. (2018).