New Ecuadorian Lamiinae (Coleoptera: Cerambycidae)

Maria Helena M. Galileo,[1] Antonio Santos-Silva, Larry G. Bezark

Abstract—Four new Cerambycidae (Coleoptera) species and two new genera are described from Ecuador: *Blabia alboseta* **new species** (Lamiinae: Desmiphorini); *Alloblabia* **new genus**, type species, *A. praecipua* **new species** (Lamiinae: Desmiphorini); *Alical* **new genus**, type species, *A. tuberculatus* **new species** (Lamiinae: Calliini); and *Piola schiffi* **new species** (Lamiinae: Phacellini). The new species of *Blabia* Thomson, 1864 and *Piola* Marinoni, 1974, and *Alical* are included in modified published keys.

Introduction

Desmiphorini (Coleoptera: Cerambycidae: Lamiinae) is a large tribe with 299 genera distributed across the world (Tavakilian 2016). According to Bezark (2015), 78 genera occur in the New World with 17 genera and 37 species currently recorded from Ecuador.

Thomson (1864) created *Blabia* Thomson, 1864 for his new species *B. colobotheoides* Thomson, 1864 from Colombia. Bates (1866) described *Prymnosis* Bates, 1866 for a single species: *P. bicuspis* Bates, 1866 from Brazil (Pará). Thomson (1868) described *Prymnopteryx* Thomson, 1868 for two new species from Venezuela: *P. piscoides* Thomson, 1868 and *P. glaucina* Thomson, 1868. Breuning (1963) synonymised *Prymnopteryx* with *Blabia*, considering *Prymnosis* as a subgenus of *Blabia*. Martins and Galileo (1995) synonymised *Prymnosis* with *Blabia*, and provided a key to the species in the genus. Currently, *Blabia* includes 25 species primarily distributed in South America, with only *B. costaricensis* Breuning, 1943 occurring in Central America (Monné 2016).

Galileo and Martins (1991) revised the New World Calliini, recognising 33 genera in the tribe. Later, six additional genera were described and added to the tribe: *Amucallia* Galileo and Martins, 2008; *Cicatricallia* Martins and Galileo, 2012; *Colombicallia* Galileo and Martins, 1992; *Lustrocomus* Martins and Galileo, 1996; *Paracallia* Martins and Galileo, 1998; and *Paradrycothaea* Galileo and Martins, 2010. Currently, Calliini includes 40 genera, with only *Neocallia* Fisher, 1933 occurring outside of the New World (India). A new genus, described in this work, brings the total number of Calliini genera to 41.

Marinoni (1974) described *Piola* for a single new species from Brazil and Argentina: *P. quiabentiae* Marinoni, 1974. Martins and Galileo (1999) described three more species from Brazil, Bolivia, and Colombia, and provided a key to the species of the genus. The new species described in this work is the first record of the genus in Ecuador.

Material and methods

Photographs were taken with a Canon EOS Rebel T3i DSLR camera, Canon MP-E 65 mm f/2.8 1–5X macro lens, controlled by Zerene Stacker Auto Montage software (Zerene Systems L.L.C.). Measurements were taken in "mm" using

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M.H.M. Galileo,[1] PPG Biologia Animal, Departamento de Zoologia, Universidade Federal do Rio Grande do Sul, Porto Alegre, Rio Grande do Sul, Brazil; and Fellow of the Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq)
A. Santos-Silva, Museu de Zoologia, Universidade de São Paulo, São Paulo, São Paulo, Brazil
L.G. Bezark, 521 46th Street, Sacramento, California, 95819, United States of America

[1]Corresponding author (e-mail: galileomh@yahoo.com).
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a micrometer ocular Hensoldt/Wetzlar – Mess 10 in the Leica MZ6 stereomicroscope, also used in the study of the specimen. All equipment belongs to the Department of Entomology of the Museum of Zoology of the University of São Paulo (São Paulo, São Paulo, Brazil).

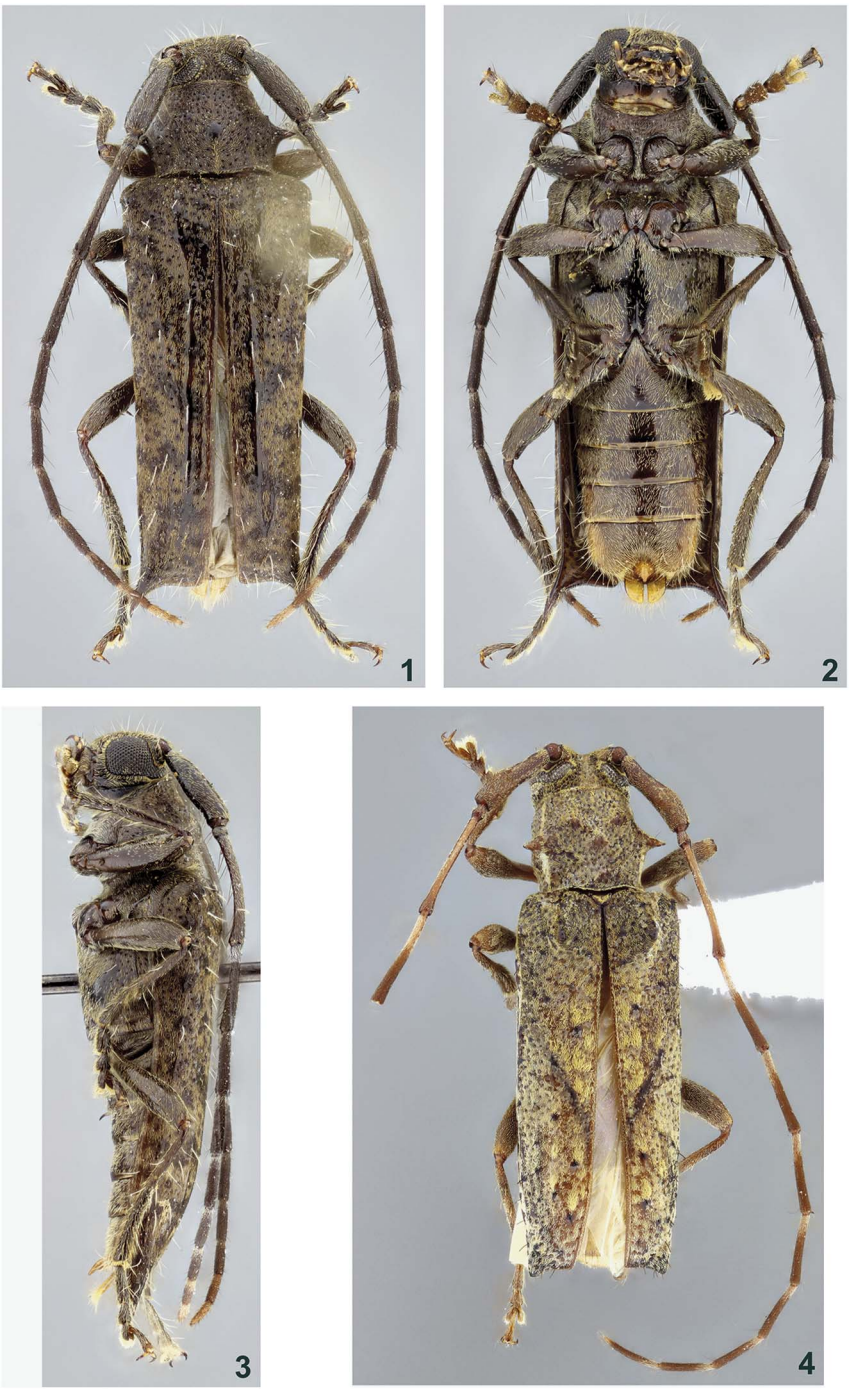
Desmiphorini

Blabia alboseta Galileo, Santos-Silva, and Bezark, new species

(Figs. 1–3)

Description. Holotype male. Integument dark brown, almost black; mouthparts light brown to brown, with apex of palpomeres yellow; base of gula yellowish brown; antennomere X yellowish brown on basal one-third; antennomere XI entirely yellowish brown; apex of ventrites I–IV yellowish brown; sides of ventrites IV–V yellowish brown (more reddish brown on IV). Pubescence yellowish brown with decumbent, short, white setae interspersed ventrally; erect setae white, distinctly thicker on elytron. **Head**. Frons coarsely, sparsely punctate; pubescence abundant, not obscuring integument, with long, erect, sparse setae interspersed (pubescence slightly denser on narrow band close to eyes). Area between antennal tubercles sculptured, pubescence and setae as on frons. Area from antennal tubercles and prothoracic margin coarsely, moderately, abundantly punctate; pubescence as on frons; long, erect setae present only close to eyes. Antennal tubercles very finely, abundantly punctate interspersed with coarse punctures frontally; pubescence as on frons; with some long, erect setae laterally. Longitudinal sulcus slightly distinct from clypeus to anterior margin of prothorax (more conspicuous between antennal tubercles and upper eye lobes). Area behind eyes pubescent close to eyes, almost glabrous towards prothorax behind lower eye lobes. Gena microsculptured close to eyes, smooth close to apex; with sparse pubescence close to eyes, glabrous close to apex. Submentum finely, sparsely punctate laterally, almost smooth centrally; with very short pubescence, not obscuring integument, with some long setae interspersed laterally. Distance between upper eye lobes 0.20 times length of scape; distance between lower eye lobes in frontal view 0.45 times length of scape. Antenna 1.5 times elytral length, reaching elytral apex at base of antennomere IX; scape, pedicel and antennomeres with long, dark, sparse setae ventrally, primarily from scape to antennomere VI (setae sparser, shorter towards distal antennomeres); antennomeres V–X with slightly distinct white pubescence basal ring; antennal formula (ratio) based on antennomere III: scape = 0.82; pedicel = 0.09; IV = 0.75; V = 0.51; VI = 0.45; VII = 0.44; VIII = 0.39; IX = 0.35; X = 0.32; XI = 0.33. **Thorax**. Prothorax 1.8 times wider than long (including lateral tubercles); lateral tubercles large, placed slightly before middle; sides with small, subconical tubercle at anterior half, near base of large tubercle. Pronotum with five gibbosities: one circular, with rounded tip, placed about centre; two subconical, placed on anterior half, near and at each side of central gibbosity; two less distinct, subcircular, placed laterally at each side of centre. Pronotal surface coarsely, moderately abundantly punctate, smooth on central and anterolateral gibbosities; pubescence not obscuring integument, absent on central gibbosity and apex of anterolateral gibbosities, forming a moderately distinct, narrow, longitudinal band centrally, from base to central gibbosity; with a few long, erect setae intermixed. Sides of prothorax coarsely, moderately sparsely punctate; pubescence not obscuring integument. Prosternum coarsely, shallowly punctate; pubescence not obscuring integument, with a few long, erect setae intermixed. Mesosternum and mesepimeron without distinct punctures, pubescent. Mesepisternum and metepisternum coarsely, moderately abundantly punctate, pubescent. Metasternum coarsely, abundantly punctate laterally, gradually finer, sparser towards centre; pubescent, less so centrally, with long setae intermixed. Scutellum pubescent. **Elytra**. Humerus moderately projected, tuberculate. Each elytron with distinct carina from base to near apex, distinctly more elevated near base; coarsely, moderately sparsely punctate on anterior one-third, punctures gradually finer, sparser towards apex; pubescent, but with various somewhat transverse, wide, irregular, glabrous bands; with sparse, thick, erect setae throughout; outer apical spine large, somewhat curved towards suture. **Legs**. Femur pubescent, with long, erect

Figs. 1–4. *Blabia alboseta* **new species**, holotype male (**1–3**) and *Alloblabia praecipua* **new species**, holotype male (**4**). **1**. *Blabia alboseta*, dorsal habitus. **2**. *Blabia alboseta*, ventral habitus. **3**. *Blabia alboseta*, lateral habitus. **4**. *Alloblabia praecipua*, dorsal habitus.



setae intermixed near apex; apex of metafemur without spine. Metatarsomere I slightly longer than II + III. **Abdomen**. Ventrites pubescent, with long, erect setae intermixed, except for glabrous yellowish-brown apical band on ventrites I–IV, and subglabrous central-distal area on ventrites

I–III; apex of ventrite V widely, deeply emarginate centrally.

Female. Differs from male mainly by apex of ventrite V widely emarginate centrally, but not deeply. Antenna similar in length as male.

Variability. Base of gula reddish brown; sides of ventrites entirely dark brown; prothorax from about 1.6 to 1.8 times wider than long; ventrite V entirely brown; pronotal pubescence almost obscuring integument, including central and anterolateral gibbosities.

Dimensions (mm). Holotype male/paratype males/paratype females. Total length (including mandibles), 9.60/8.50–10.00/9.40–10.20; prothoracic length, 1.60/1.40–1.80/1.60–1.70; anterior prothoracic width, 1.50/1.35–1.65/1.70–1.75; basal prothoracic width, 1.95/1.65–2.10/1.80–1.95; widest prothoracic width (between apices of lateral tubercles), 2.80/2.30–2.90/2.60–2.85; humeral width, 3.10/2.65–3.20/2.80–3.30; elytral length, 7.30/6.45–7.50/7.05–7.50.

Type material. Holotype male with verbatim label data: ECUADOR, *Napo*: 3–5 km E Cosanga [0° 34′ 33′′S/77° 52′ 3], 21-22.II.2004, Frank T. Hovore col. (California Academy of Sciences (CASC), San Francisco, California, United States of America). Paratypes – three males, two females, same data as holotype (one male, one female (Museu de Zoologia, Universidade de São Paulo (MZSP), São Paulo, Brazil); two males, one female (Larry G. Bezark, collection, Sacramento, California (LGBC), United States of America)); two females with verbatim label data: 1 km W Cosanga, 4.IX.1998, F. T. Hovore col. (CASC).

Etymology. *Blabia alboseta* is named for the long, white setae on the elytron.

Remarks. *Blabia alboseta* differs from *B. costaricensis* Breuning, 1943, and *B. similis* (Breuning, 1940) as follows: antenna shorter, surpassing elytral apex by about three antennomeres; basal antennomeres not ringed with light colour. In *B. costaricensis* and *B. similis* the antenna are longer, surpassing elytral apex, by at least four antennomeres, the basal antennomeres are ringed with light colour, and the apical spine of the elytron is distinctly shorter.

Blabia alboseta can be included in the alternative of couplet 10 from Martins and Galileo (1995) (translated; modified):

10(9).	Outer spine of elytral apex as long as antennomere XI	10′
—	Outer spine of elytral apex shorter than antennomere XI.	11
10′(10).	Lateral tubercles of prothorax narrow, clearly spiniform; elytral apex narrower than length of the outer spine. Colombia	*B. masoni* (Aurivillius, 1927)
—	Lateral tubercles of prothorax wide, conical; elytral apex wider than length of the outer spine. Ecuador	*B. alboseta* new species

Alloblabia Galileo, Santos-Silva, and Bezark, new genus

Type species. *Alloblabia praecipua* new pecies, current designation.

Etymology. *Allo*, Greek prefix = different. In reference to the different shape of the scape when compared with species of the genus *Blabia*. Feminine gender.

Description. Male. Frons slightly wider than long. Antennal tubercles elevated. Eyes coarsely faceted; upper eye lobes with four rows of ommatidia. Dorsal surface longitudinally concave from antennal tubercles to anterior margin of prothorax (this area narrowed towards prothorax). Antenna with 11 antennomeres, distinctly longer than body. Scape elongate, sinuous, enlarged towards apex, somewhat projected at outer apex, rounded at inner apex, somewhat flat dorsally on anterior two-thirds; with distinct, conical, tubercle on distal one-third; without dorsal cicatrix at apex. Antennomere III slightly longer than IV. Prothorax, excluding lateral tubercles, about as long as wide; sides with large, acute tubercle about middle; dorsal surface of tubercle with another small, rounded tubercle. Pronotum with five distinct tubercles. Procoxal cavity closed behind. Elytron elongate, somewhat scabrous, with central-basal crest; apex truncate, with outer angle projected; surface with thick, sparse setae.

Femur subclavate. Protibia obliquely sulcate ventrally on distal one-third; mesotibia distinctly obliquely sulcate dorsally at distal one-third. Metatarsomere I about as long as II + III.

Remarks. *Alloblabia* differs from *Blabia* and *Malthonea* Thomson, 1864, primarily by the shape of the scape. In these genera the scape is uniformly elongate towards apex, not sinuous and without a dorsal tubercle. It differs from *Malthonea* by the eyes also being coarsely faceted (finely faceted in *Malthonea*).

Alloblabia praecipua Galileo, Santos-Silva, and Bezark, new species

(Figs. 4–7)

Description. Holotype male. Integument dark brown; mouthparts yellowish brown; antennomere III reddish brown except for brown base and reddish-brown distal one-fifth; basal one-third of antennomere IV yellowish brown and distal two-thirds reddish brown; antennomeres V–X reddish brown, slightly lighter at base; antennomere XI reddish brown except for base slightly lighter and apex yellowish brown; gula partially reddish brown; elytron with irregular areas reddish brown; ventrites reddish brown on distal area (mainly centrally); most of coxa, trochanter, and base of femur reddish brown; basal two-thirds of tibia reddish brown, slightly darker on base. Pubescence mostly pale yellow. **Head**. Frons coarsely, abundantly punctate; pubescence not obscuring integument; with a few dark, long setae close to lower eye lobes. Area between antennal tubercles and prothoracic margin coarsely, abundantly punctate (punctures denser than on frons); pubescence not obscuring integument; with a few dark, long setae close to upper eye lobes. Area behind eyes sculptured with pubescence as on vertex. Antennal tubercles coarsely, sparsely punctate on base, smooth on remaining surface; pubescence not obscuring integument. Longitudinal sulcus from clypeus to anterior margin of prothorax. Gena smooth, opaque except for shiny area close to apex; pubescent except for glabrous shiny area. Submentum smooth, with very short pubescence, not obscuring integument. Distance between upper eye lobes 0.25 times length of scape; distance between lower eye lobes in frontal view 0.45 times length of scape. Antenna 2.3 times elytral length, reaching elytral apex at base of antennomere VII; antennomeres IV–XI with white pubescence basal ring; antennomeres III–V with thick, dark, moderately short, sparse setae ventrally; antennal formula (ratio) based on antennomere III: scape = 0.85; pedicel = 0.13; IV = 0.81; V = 0.66; VI = 0.58; VII = 0.56; VIII = 0.50; IX = 0.45; X = 0.43; XI = 0.50.

Thorax. Pronotum coarsely, abundantly punctate (punctures coarser on basal one-fourth); pubescence not obscuring integument except for narrow, longitudinal, white band from base to apex on each side; with a few short, erect, thick, dark setae; on dorsal surface of lateral tubercles with coarse punctures from which emerge a long, erect seta. Sides of prothorax coarsely, abundantly punctate, with pubescence not obscuring integument. Prosternum coarsely, abundantly punctate (punctures sparser towards middle); pubescence not obscuring integument. Ventral side of mesothorax and metathorax pubescent (not obscuring integument). Metasternum coarsely, abundantly punctate (punctures finer, sparser towards middle); with a few long, erect setae. Scutellum glabrous except for yellow pubescence band on distal one-half (not reaching apex). **Elytra**. Central-basal crest distinctly elevated near middle, forming subtriangular area; surface coarsely, abundantly punctate throughout (mainly on basal one-half); pubescence yellow dorsally on irregular area at basal four-fifths (this area distinctly narrowed after middle), yellowish white on remaining surface, except for subglabrous, oblique, narrow band placed about middle (together V-shaped); with short, erect, thick, dark, sparse setae throughout. **Legs**. Metafemur reaching near apex of ventrite III. Tibia with sparse, erect, thick setae dorsally (sparser on mesotibia and metatibia; lighter on metatibia). **Abdomen**. Ventrites coarsely, abundantly punctate except for smooth, transverse distal area (wider centrally) and laterally (except on ventrite I); apex of ventrite V truncate, widely, slightly emarginate centrally.

Dimensions (mm). Holotype male. Total length (including mandibles), 7.60; prothoracic length, 1.55; anterior prothoracic width, 1.35; basal prothoracic width, 1.50; widest prothoracic width (between apices of lateral tubercles); 2.05; humeral width, 2.30; elytral length, 5.40.

Figs. 5–8. *Alloblabia praecipua* new species, holotype male (**5–7**) and *Alical tuberculatus* new species, holotype male (**8**). **5**. *Alloblabia praecipua*, ventral habitus. **6**. *Alloblabia praecipua*, lateral habitus. **7**. *Alloblabia praecipua*, head, frontal view. **8**. *Alical tuberculatus*, lateral habitus.

Type material. Holotype male with verbatim label data: ECUADOR, *Pichincha*: Maquipucuna Biological Reserve (00°08′N/78°35′W; 1350 m), 2-3.VIII.1998, Fred G. Andrews col. (CASC).

Etymology. *Alloblabia praecipua* is named for the peculiar shape of the scape (Fig. 7).

Calliini

Alical Galileo, Santos-Silva, and Bezark, new genus

Type species. *Alical tuberculatus* new species, current designation.

Etymology. *Alical*, anagram of the genus-group name *Callia*. Masculine gender.

Description. Eyes finely faceted; lower eye lobes large, about 1.5 times genal length. Antenna surpassing elytral apex in male, reaching elytral apex in female. Scape gradually enlarged towards apex; with apical cicatrix. Antennomeres III–VIII cylindrical, moderately thick; antennomeres IX–XI gradually narrowed towards apex (together, uniformly narrowed); antennomere III about as long as scape and antennomere IV; antennomeres without dense fringe of setae. Prothorax transverse, with small, acute tubercle laterally. Mesosternal process with single, longitudinal tubercle. Elytron convex, without carinae, not depressed along suture, parallel-sided, pubescent; humerus slightly projected forward; elytral length about 2.5 times humeral width; apex rounded; with thick, erect setae throughout. Apex of metafemur slightly surpassing apex of ventrite II. Metatarsomere I shorter than II + III; basal tooth of claws developed.

Remarks. *Alical* differs from *Callisema* Martins and Galileo, 1990, by the elytron not being depressed along the suture, and by the antennomeres being thicker. In *Callisema* the elytron are depressed along the suture and the antennomeres are slender. It differs from *Anapsicomus* Galileo and Martins, 1988, primarily by the scape with a cicatrix at apex, and the mesosternal process being tuberculate (without cicatrix and not tuberculate in *Anapsicomus*). It can be separated from *Ardecomus* Galileo and Martins, 1988, by the mesosternal process being tuberculate (not so in *Ardecomus*), and by ventrite V in male being truncate (rounded in *Ardecomus*). It differs from *Zenicomus* Thomson, 1868, by the scape not being tumid at the apex (tumid in *Zenicomus*); by the basal antennomeres being cylindrical (enlarged towards the apex in *Zenicomus*); by the pronotum not being tuberculate (tuberculate in *Zenicomus*), and by the mesosternal process being tuberculate (not tuberculate in *Zenicomus*). It can be separated from *Micatocomus* Galileo and Martins, 1988, primarily by the rounded elytral apex (distinctly truncate in *Micatocomus*). Finally, it differs from *Callia* Audinet-Serville, 1835, by the scape having an apical cicatrix (absent in *Callia*), and the mesosternal process being tuberculate (not so in *Callia*). It differs from the genera with an apical cicatrix on the scape by the mesosternal process being tuberculate (not tuberculate in *Mimolaia* Bates, 1885, *Ardeocomus* Galileo and Martins, 1988, *Graminea* Thomson 1864, and *Cicatricallia* Martins and Galileo, 2012).

Alical can be included in the alternative of couplet 16 from Galileo and Martins (1991) (translated):

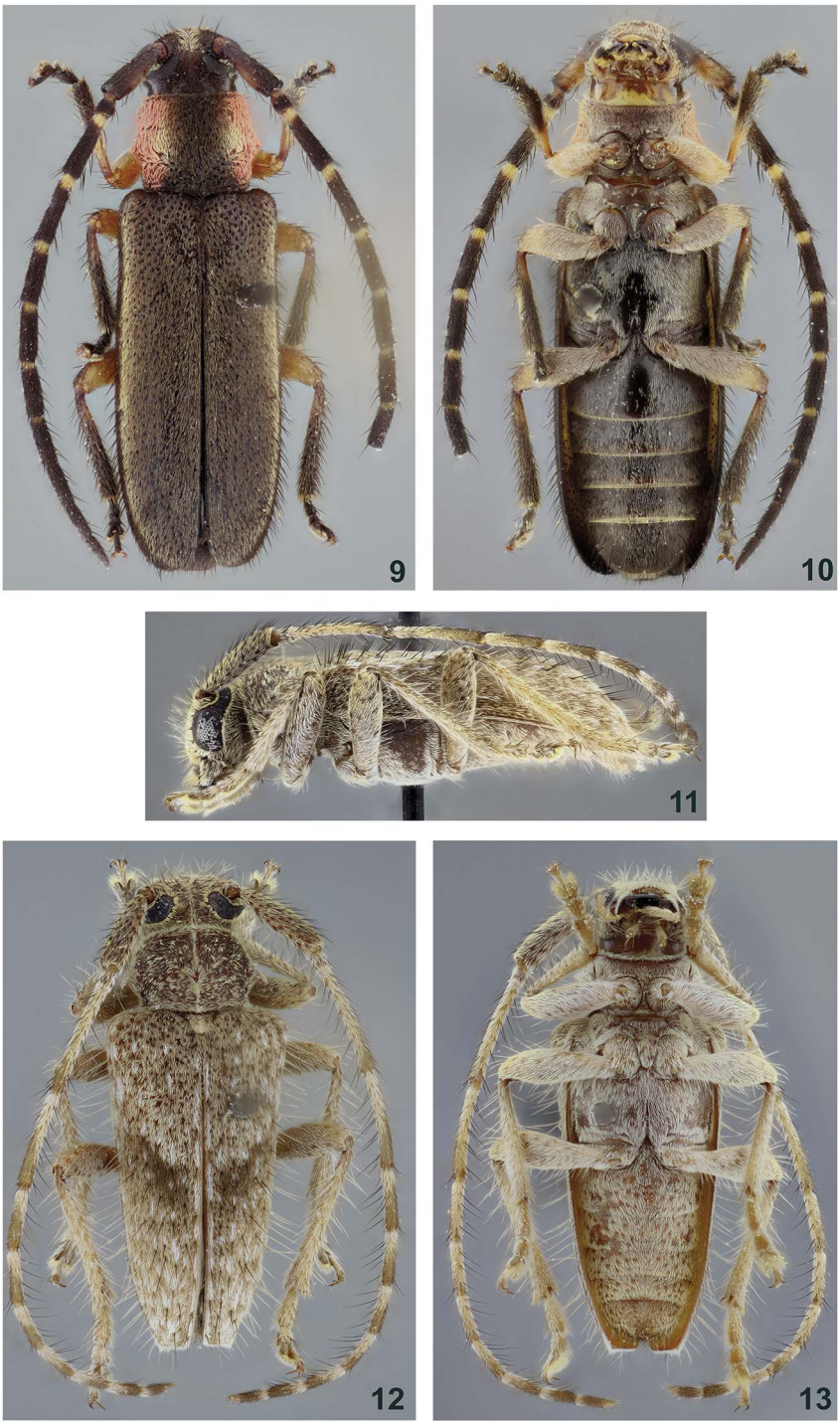
16(12).	Scape with apical cicatrix	16′
—	Scape without apical cicatrix	17
16′(16).	Elytron depressed along suture	*Callisema* Martins and Galileo, 1990
—	Elytron not depressed along suture	*Alical* new genus

Alical tuberculatus Galileo, Santos-Silva, and Bezark, new species

(Figs. 8–10)

Description. Holotype male. Integument dark brown; mouthparts yellowish brown except for terminal maxillary and labial palpomeres black (only extreme apex yellow); frons and most of area between antennal tubercles and upper eye lobes reddish brown; gula yellow near centre of basal one-half, reddish brown on remaining surface; gena mostly reddish brown with apex black;

Figs. 9–13. *Alical tuberculatus* new species, holotype male (**9–10**) and *Piola schiffi* new species, holotype male (**11–13**). **9**. *Alical tuberculatus*, dorsal habitus. **10**. *Alical tuberculatus*, ventral habitus. **11**. *Piola schiffi*, lateral habitus. **12**. *Piola schiffi*, dorsal habitus. **13**. *Piola schiffi*, ventral habitus.



scape black dorsally, sides with base and apex black and central region light reddish brown, ventral region mostly light reddish brown; scape and antennomeres III–VIII black with a narrow yellow ring at base; antennomeres IX–XI entirely black; ventral side of profemur reddish brown on basal one-third, yellowish brown on remaining surface; ventral side of mesofemur and metafemur reddish brown on basal two-thirds, yellowish brown on distal one-third; dorsal side of femur mostly yellowish brown; protibia yellow on almost entire basal one-half; narrow distal band of ventrites I–IV yellow; outer margin of elytron yellowish brown on basal one-third. **Head**. Frons minutely, abundantly punctate, with fine, sparse punctures interspersed; with yellowish white, sparse pubescence with long, dark setae intermixed. Area between antennal tubercles with yellowish-white pubescence obscuring integument. Vertex finely, moderately abundantly punctate; with yellowish-brown pubescence, not obscuring integument, with long, erect setae intermixed. Area behind upper eye lobes with sculpture and pubescence as on vertex, gradually microsculptured, impunctate towards lower eye lobe. Area behind lower eye lobes tumid close to eye; tumid area with sparse, yellowish-white pubescence with long, dark, erect setae interspersed close to eye; remaining surface glabrous, smooth. Gena with yellowish-white pubescence, not obscuring integument, except for narrow, glabrous distal area. Submentum with very short, yellowish-white pubescence. Antennal tubercles minutely, densely, finely punctate; pubescence brown, not obscuring integument, with long, erect setae intermixed. Longitudinal sulcus distinct from clypeus to anterior margin of prothorax. Distance between upper eye lobes 0.35 times length of scape; distance between lower eye lobes in frontal view 0.80 times length of scape. Antenna 1.5 times elytral length, reaching elytral apex near middle of antennomere X; scape, pedicel and antennomeres with thick, erect, dark, sparse setae; antennal formula (ratio) based on antennomere III: scape = 1.05; pedicel = 0.29; IV = 1.00; V = 0.86; VI = 0.86; VII = 0.81; VIII = 0.75; IX = 0.67; X = 0.59; XI = 0.62. **Thorax**. Prothorax 1.35 times wider than long (including lateral tubercles); lateral tubercles small, conical, placed about middle. Pronotum coarsely, confluently, abundantly punctate; with yellowish-brown pubescence centrally, not obscuring integument; with pale pink pubescence laterally, distinctly obscuring integument; with moderately sparse, erect setae throughout. Sides of prothorax with pubescence as laterally on pronotum. Prosternum and mesosternum finely, moderately sparsely punctate; with short, yellowish-white pubescence, not obscuring integument. Mesepisternum and mesepimeron with yellowish-white pubescence, distinctly longer than on mesosternum, almost obscuring integument. Metepisternum pubescent. Metasternum coarsely, sparsely punctate laterally, smooth centrally; with short, yellowish-white pubescence, distinctly not obscuring integument, almost glabrous centrally on distal two-thirds. Scutellum pubescent. **Elytra**. Coarsely, abundantly punctate throughout; without carinae, sides moderately abruptly vertical; with yellowish-brown pubescence dorsally, partially obscuring integument, except for moderately wide, longitudinal, dense, yellowish-white band laterally, from humerus to apex; sides with brown, slightly conspicuous pubescence, distinctly not obscuring integument; with thick, dark, erect, abundant setae throughout. **Legs**. Femur finely pubescent; with thick, erect setae on distal one-third, primarily ventrally. Metatarsomere I 0.7 times as long as II–III together. **Abdomen**. Ventrites abundantly minutely punctate; pubescent except for almost glabrous central area of ventrite I; with long, erect setae laterally, more abundant, thick, dark on ventrites III–V; ventrite V almost flat on central-distal region; apex of ventrite V truncate, slightly emarginate centrally.

Female. Differs from male by the shorter antenna, reaching elytral apex, and by ventrite V distinctly sloping on central-distal region.

Dimensions (mm). Holotype male/paratype female. Total length (including mandibles), 6.80/7.35; prothoracic length, 1.25/1.25; anterior prothoracic width, 1.25/1.30; basal prothoracic width, 1.30/1.40; widest prothoracic width (between apices of lateral tubercles), 1.65/1.75; humeral width, 1.90/2.00; elytral length, 4.70/5.20.

Type material. Holotype male (CASC), paratype female (LGBC) with verbatim label data: ECUADOR, *Orellana*: 16 km W Coca [0° 27′ 59″S/76° 59′ 14″W], 20.II.2004, Frank T. Hovore col.

Etymology. *Alical tuberculatus* is named for the tubercle on the mesosternal process.

Phacellini

Piola schiffi Galileo, Santos-Silva, and Bezark, new species

(Figs. 11–13)

Description. Holotype male. Dorsal surface of head, scape, pedicel, and pronotum brown; mouthparts yellowish brown; head mostly reddish brown ventrally; basal three-fourths of antennomere III yellow with distal one-fourth light reddish brown; antennomere IV yellow on base, gradually light reddish brown towards apex; antennomeres V–X yellow on base, reddish brown on remaining surface (darker towards antennomere X); antennomere XI yellow on base and apex, reddish brown on remaining surface; ventral side of thorax and abdomen reddish brown; elytron brown on basal one-half, gradually light reddish brown towards apex; femur reddish brown, lighter on some areas; tibia yellowish brown, somewhat darker on base; protarsi reddish brown; mesotarsomeres and metatarsomeres I–II yellowish brown, and III reddish brown. **Head**. Frons with dense, yellowish-white pubescence, almost totally obscuring integument, with long, erect, moderately abundant setae intermixed (darker towards antennal tubercles). Area close to upper eye lobes with narrow band of yellow pubescence. Vertex with yellowish-white pubescence (more red centrally), shorter, sparser than on frons, with long, erect setae intermixed. Area behind eyes with yellowish-white pubescence (except for glabrous area behind lower eye lobes and close to prothorax), almost obscuring integument, near lower eye lobe; with a few long, erect setae, close to eye. Antennal tubercles with pubescence and setae as on frons. Longitudinal sulcus distinct from clypeus to anterior margin of prothorax. Gena with yellowish-white pubescence, not entirely obscuring integument. Submentum with sparse, yellowish-white pubescence. Distance between upper eye lobes 0.35 times length of scape; distance between lower eye lobes in frontal view 0.60 times length of scape. Antenna 1.95 times elytral length, reaching elytral apex at basal one-third of antennomere VII; scape with dense, yellowish-brown pubescence except for various small glabrous areas, with dark, thick, erect setae interspersed throughout; dorsal light area of antennomeres with yellowish-white pubescence; dorsal dark area of antennomere III with sparse yellowish-white pubescence; dorsal dark area of remaining antennomeres with sparse, short, decumbent yellowish-white setae (practically disappearing towards distal antennomeres) interspersed with brown, short, decumbent setae; ventral side of antennomeres III–VIII with yellowish-white pubescence; light area of antennomeres IX–XI with yellowish-white pubescence, and dark area with sparse yellowish-white pubescence interspersed with brown, decumbent setae; antennomeres III–X with long, thick, erect setae, longer ventrally; antennal formula (ratio) based on antennomere III: scape = 0.85; pedicel = 0.16; IV = 0.88; V = 0.55; VI = 0.49; VII = 0.43; VIII = 0.42; IX = 0.36; X = 0.32; XI = 0.36. **Thorax**. Prothorax 1.6 times wider than long (including lateral tubercles); lateral tubercles spined, long, distinctly curved posteriorly and upward, placed near middle. Pronotum finely, densely punctate; with yellowish-brown pubescence interspersed with small white pubescent tufts, not obscuring integument, except for dense, central longitudinal band from base to apex, notably enlarged from apex of basal one-fifth to apex of basal three-fifths; with long, erect, sparse setae. Sides of prothorax with yellowish-brown pubescence, denser than on pronotum. Ventral surface of thorax with yellowish-white pubescence, not totally obscuring integument, with sparse, long, erect, yellowish-white setae interspersed. Scutellum with yellowish-brown pubescence obscuring integument. **Elytra**. With distinct, oblique depression from near humerus to suture at basal one-third; coarsely, abundantly punctate on most of basal one-half, punctures distinctly finer, sparser on distal one-half; with moderately dense yellowish-white pubescence with various small, elongate spots of white pubescence intermixed, except for oblique, wide band with brown pubescence about middle; with long, erect, thick, dark setae dorsally, yellow laterally; humerus rounded, not notably projected; apex truncate with outer angle obtuse and sutural angle rounded. **Legs**. Femur yellowish-white pubescent with long, erect setae of same colour interspersed, with small, glabrous, sparse, subcircular areas ventrally. Tibia with long, erect, sparse, yellowish-white setae throughout.

Metatarsomere I 1.25 times II + III. **Abdomen**. Ventrites with yellowish-white pubescence, not obscuring integument, with small, glabrous, sparse, subcircular areas intermixed with long, erect, sparse, yellowish-white setae; apex of ventrite V truncate, slightly emarginate centrally; distal area of ventrite V slightly depressed centrally.

Female. Differs from male primarily by the shorter antenna, reaching the elytral apex at the apex of antennomere VIII.

Variability. Elytron mostly brown or reddish brown; side of thorax and abdomen entirely brown ventrally; mesotarsomeres and metatarsomeres I–II partially reddish brown.

Dimensions (mm). Holotype male/paratype males/paratype females. Total length (including mandibles), 6.75/6.40–6.80/5.75–6.20; prothoracic length, 1.20/1.05–1.15/0.95–1.00; anterior prothoracic width, 1.35/1.25–1.35/1.20–1.25; basal prothoracic width, 1.40/1.45–1.50/1.35–1.45; widest prothoracic width (between apices of lateral tubercles), 2.05/2.10–2.10/2.35–2.40; humeral width, 2.40/2.45–2.50/2.25–2.30; elytral length, 4.85/4.20–4.40/4.20–4.70.

Type material. Holotype male with verbatim label data: ECUADOR, *Manabi*: 5 km S Monticristi [1° 2′ 45″S/80° 39′ 32″W], 10.III.2006, Frank T. Hovore and I. Swift col. (CASC). Paratypes – two paratype males (MZSP, LGBC), and three paratype females (one MZSP, two LGBC) with verbatim label data: ECUADOR, *Manabi*: vicinity of La Pila (200 m; 01.11198/80.58068), 18–27.II.2006, F.T. Hovore and I. Swift col.

Etymology. *Piola schiffi* is named after Nathan M. Schiff, who has accompanied the third author on trips to both the New World and Old World tropics for over 25 years.

Remarks. *Piola schiffi* differs from *P. rubra* Martins and Galileo 1999 as follows: pronotal longitudinal band with pale yellow pubescence; elytron without large glabrous areas; elytron without large, dense areas of white pubescence. In *P. rubra* the pronotal band has yellow pubescence, the elytron have large glabrous areas and white pubescence covers large areas.

The key to species of *Piola* by Martins and Galileo (1999) is problematic, because in the first alternative of couplet 1, the scutellum was described as glabrous, leading to *P. rubra*, or pubescent, leading to the other species. However, the pubescence in the holotype of *P. rubra* was lost, because the typical form has the scutellum distinctly pubescent (see Bezark 2016). Hence, we provide a new key to include both the old and the new species.

1. Basal one-fourth of elytron glabrous. Bolivia . . . . . *P. rubra* Martins and Galileo, 1999
— Basal one-fourth of elytron pubescent. 2

2. Elytral pubescence white, uniform; with short, sparse, white setae. Brazil (Pará) . . . . . *P. unicolor* Martins and Galileo, 1999
— Elytral pubescence variegated with more than one colour; with long, abundant, dark setae. 3

3. Elytron twice as long as humeral width. Ecuador . . . . . *P. schiffi* new species
— Elytron shorter than twice humeral width 4

4. Antennomeres brown with apex darker; distance between upper eye lobes (female) subequal to width of one lobe. Colombia. . . . . *P. colombica* Martins and Galileo, 1999
— Antennomeres with single colour; distance between upper eye lobes (female) almost twice width of one lobe. Bolivia, Brazil (Maranhão, Mato Grosso, Mato Grosso do Sul, São Paulo), Argentina, Paraguay . . . . . *P. quiabentiae* Marinoni, 1974

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