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from Bolivia (Coleoptera: Cerambycidae: Prioninae: Macrotomini)

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**Abstract.** A new species of *Allomallodon* Santos-Silva and Galileo, 2010, *A. bolivianus* Wappes and Santos-Silva (Coleoptera: Cerambycidae: Prioninae: Macrotomini), is described from Bolivia and a key is provided to separate the three species now assigned to the genus.

**Key words.** Key, long-horned beetles, Mallodonini, *Physopleurus*, taxonomy.

## Introduction

Inasmuch as only the female of the new species, *Allomallodon bolivianus* Wappes and Santos-Silva is available (as the male is not yet known) it is provisionally included in *Allomallodon* Santos-Silva and Galileo, 2010. The inclusion of the new species in this genus was based primarily on the shape of the labrum as it agrees well with that found in other species assigned to the genus. Other features, such as the pronotal sculpture and the shape of prosternum suggest that it may not belong there. In our view, only the discovery and close examination of the male will allow deciding whether to exclude the new species from *Allomallodon* and describe a new genus for the species or not. Dorsally the new species resembles some species of *Physopleurus* Lacordaire, 1869, but the shape of the prosternum is notably different. Species of *Physopleurus* have the prosternum distinctly tumid and the prothoracic notosternal suture strongly curved from the side of the procoxal cavity (hypomeron notably strongly narrowed laterally, especially centrally), while in the new species the prosternum is not tumid and its prothoracic notosternal suture is straight (hypomeron not narrowed laterally). The rounded apex of the antennal tubercle is also very different from *Physopleurus*, as well as different from other species of *Allomallodon* (where they are projected and angulate).

Monné (2019) included *Allomallodon* in Mallodonini Thomson, 1861. Santos-Silva and Galileo (2010) presented detailed information regarding inconsistency of the Mallodonini concept, which, as accepted, allows species of *Physopleurus* Lacordaire, 1869, to fit into two different tribes (Mallodonini and Macrotomini). Perhaps, Monné (2019) is simply following Bouchard et al. (2011) who considered Mallodonini as valid: “we treat this group as a valid tribe as in Drumont and Komiya (2010: 91).”

## Materials and Methods

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

The collection acronyms used in this study are as follows:

**ACMT** American Coleoptera Museum (James Wappes), San Antonio, Texas, USA

**FWSC** Frederick W. Skillman Collection, Pearce, Arizona, USA

**FSCA** Florida State Collection of Arthropods, Gainesville, Florida, USA

## Results

### Key to females of *Allomalodon* (adapted from Santos-Silva and Galileo 2010)

1. Disc of pronotum closely punctate-rugose without shining callosity (Fig. 1); prosternum (Fig. 2) in front procoxal cavity about as long as procoxa; Bolivia . . . . . *A. bolivianus* Wappes and Santos-Silva, sp. nov.
- Disc of pronotum with shining, mostly impunctate callosity (Fig. 5, 7); prosternum (Fig. 6, 8) in front of procoxal cavity shorter than procoxa . . . . . 2
- 2(1). Mandibles tumid on outer face; prosternal process (Fig. 8) not notably narrowed at middle; shining callosity on pronotal disc divided at middle by distinct or moderately distinct furrow; Peru, Bolivia . . . . . *A. popelairi* (Lameere, 1902)
- Mandibles not tumid on outer face; prosternal process (Fig. 6) notably narrowed at middle; shining callosity on pronotal disc not or barely divided at middle by furrow; Colombia, Ecuador . . . . . *A. hermaphroditus* (Thomson, 1867)

### *Allomalodon bolivianus* Wappes and Santos-Silva, sp. nov.

(Fig. 1–4)

**Description.** Holotype female. General integument dark brown, shining, except for opaque elytra; head, mandibles, scape, and prothorax black; palpi brown; apex of ventrites I–IV reddish-brown.

**Head.** Dorsal surface coarsely, deeply, confluent punctate (punctures smaller, less distinctly separated close to anterior edge of prothorax); area between clypeus and posterior edge of eyes subtriangularly depressed, on each side of coronal suture with suboblique elevation; with short, sparse setae. Area behind upper eye lobes rugose-punctate, with very small, sparse, shiny tubercles; with short, sparse setae (denser than on dorsal surface). Superior half of area behind lower eye lobe with same sculpture as behind upper eye lobe; inferior half, coarsely, confluent punctate close to eyes; remaining surface transversely striate; with short, sparse setae, slightly denser close to eye. Antennal tubercles distinctly rounded dorsally; distance between tubercles nearly equal to width of one tubercle; coarsely, deeply, confluent punctate on basal inner side, gradually sparsely punctate toward dorsal side; finely, densely punctate on frontal and outer sides; with short, sparse setae, distinctly longer, more abundant on frontal side. Clypeus flattened laterally on area close to antennal tubercles and frons, centrally oblique, concave toward labrum, tubercle-shaped projections on sides close to base of mandible; flattened and central areas coarsely, shallowly punctate; lateral tubercle-shaped projections coarsely, abundantly punctate (punctures notably smaller and deeper than on remaining areas); with short, sparse setae on base, distinctly longer, more abundant toward labrum, especially laterally. Labrum coarsely, sparsely punctate; with very long, sparse setae. Genae coarsely, abundantly punctate toward ventral surface, punctures toward antennal socket, with smooth area close to eye; apex acute, projected forward; nearly glabrous, except inferior area close to eye with short, distinct setae. Gulaementum coarsely vermiculate-punctate, gradually less so toward anterior margin; area close to gena and anterior margin moderately opaque, distinctly more finely, densely, confluent punctate; somewhat depressed near anterior margin on central region; anterior margin not distinctly elevated; with short, sparse setae, more abundant laterally. Eyes large; greatest width of lower eye lobe equal to about 0.4 times length; distance between upper eye lobes equal to length of scape; in frontal view, distance between lower eye lobes slightly shorter than length of scape. Outer side of mandibles tumid, base coarsely, sparsely punctate, with short, sparse setae (punctures gradually shorter, and setae shorter and sparser toward apex); inner side of dorsal carina coarsely,

sparsely punctate, with long, sparse setae; inner side flattened, finely, abundantly punctate, with long, abundant setae (dorsal side of teeth glabrous, shining); inner margin with two large, triangular teeth. Antennae 2.4 times mid-length of pronotum, slightly surpassing apex of basal quarter of elytra; scape, shining, coarsely, abundantly punctate on base (especially on outer surface), gradually sparsely punctate toward apex; pedicel, antennomeres III–VII dorsally shining, finely, sparsely punctate; antennomere VII subopaque, partially longitudinally striated; antennomeres IX–XI opaque, longitudinally striated; antennal formula (ratio) based on antennomere III: scape = 3.14; pedicel = 0.60; IV = 1.14; V = 1.18; VI = 1.18; VII = 1.32; VIII = 1.39; IX = 1.28; X = 1.36; XI = 1.86.

**Thorax.** Prothorax distinctly transverse. Pronotum coarsely, abundantly punctate (some punctures confluent, especially laterally and anteriorly); disc distinctly depressed, more so between middle and anterior third; on each side of depression, between anterior margin and apex of anterior third, with wide, oblique carina; near apex of each carina with large, moderately elevated tubercle; centrally, from anterior margin to about anterior third, with opaque inverted Y-shaped low carina; with long, sparse setae along lateral sides; anterior margin distinctly sinuous; posterior margin sinuous, but less than anterior margin; anterolateral angles rounded, distinctly projected forward; lateral margin with prominent teeth; posterolateral angles obtuse, slightly distinct; lateral margins crenulate. Hypomeron coarsely, confluent punctate from lateral angle of procoxal cavity to anterior margin, smooth, opaque on remaining surface. Prosternum about as long as greatest width of procoxa; coarsely, densely, confluent punctate; with long, sparse setae close to anterior margin. Prosternal process with lateral sides subparallel; central area flat, elevated; with distinct sulcus between central area and lateral margin; central area coarsely, abundantly punctate on base, gradually sparsely punctate toward apex; apex truncate. Metanepisternum finely, densely punctate; with long, abundant setae. Metaventricle finely, densely punctate laterally, distinctly sparsely punctate toward central sulcus, but with coarse, sparse punctures close to the sulcus; area densely punctate with long, abundant setae; remaining surface (forming a large triangle) with short, sparse setae, with long, abundant setae close to metacoxae. Scutellum sulcate centrally; with sparse, fine punctures on base. **Elytra.** Finely coriaceous; sutural angle with short, acute projection. **Legs.** Femora finely, sparsely punctate. Tibiae coarsely, abundantly punctate; tarsomere V, excluding claws about 0.8 times as long as I–III together.

**Abdomen.** Ventricle I finely, sparsely punctate centrally, with sparse setae near apex of abdominal process, wide triangular central area glabrous, with very small asperities laterally, with short, abundant setae; ventrites II–IV finely, sparsely punctate centrally, on superior half, distinctly more abundantly punctate laterally (punctures somewhat coarser than on central region); ventrites II–III with short, sparse setae laterally; ventrite IV with short sparse setae, and with row of long, abundant setae near apex laterally (setae longer and denser laterally); ventrite V finely, sparsely punctate (punctures somewhat coarser near margins), with short, sparse setae (slightly longer near apex), apex truncate, slightly emarginate centrally.

**Variation (female paratype).** Scape dark-brown; suboblique elevation on frons slightly conspicuous; gulamentum depressed throughout between eyes, not opaque and with fine, densely, confluent punctures close to genae and anterior margin, with anterior margin wide, distinctly elevated; inverted Y-shaped carina on pronotum obscure; posterolateral angles of pronotum distinct, acute, projected backward; lateral angles of pronotum distinctly spined; lateral margins of pronotum crenulate; sparse row of setae present near apex of abdominal ventrite IV.

**Dimensions (mm).** Holotype–paratype. Total length (including mandibles), 47.6–45.9; prothoracic length, 7.5–6.9; prothoracic width between apices of anterior angles, 10.0–9.0; prothoracic width between apices of lateral angles, 13.2–11.2; humeral width, 14.3–12.5; elytral length, 32.5–28.0.

**Type material.** Holotype female from BOLIVIA, *Santa Cruz*: 20 km N Camiri (Road to Eyti; 1250 m; 6–8 km E highway 9; 19°52'S / 63°29'W), 5–10.XII.2012, Wappes, Bonaso, Skillman col. (FSCA). Paratype female from BOLIVIA, *Santa Cruz*: 66 km S Camiri, 27.XI.2013, Skillman & Wappes col. (FWSC).

**Diagnosis.** *Allomallodon bolivianus* Wappes and Santos-Silva differs from the other females of the genus as follows: eyes narrower; scape attaining posterior ocular edge; antennal tubercles rounded at

apex; pronotum without shining callosities on disc (Fig. 1); prosternum about as long as greatest width of procoxa; prosternum mostly glabrous; prosternal process (Fig. 2) with lateral sides subparallel, apex truncate. In *A. hermaphroditus* and *A. popelairi* the eyes are wider (Fig. 5-8), scape does not attain the posterior ocular edge, antennal tubercles are narrowed and projected at apex, pronotum has shining callosities on disc, prosternum is shorter than procoxa, distinctly setose, and the prosternal process is notably narrowed about middle with apex rounded (*A. hermaphroditum*) (Fig. 6) or centrally acute and projected (*A. popelairi*) (Fig. 8). From *A. hermaphroditus* it also differs by the outer side of mandibles tumid (not so in *A. hermaphroditus*).

**Etymology.** The new species is named (*bolivianus*) for the country (Bolivia) where it is found.

**Observation.** *Allomallodon* is masculine gender, as originally pointed out. Thus, *A. hermaphroditus* is correct, not *A. hermaphroditum*.

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Figures 1–4. *Allomallodon bolivianus* sp. nov., holotype female. 1) Dorsal habitus. 2) Ventral habitus. 3) Head and prothorax, lateral view. 4) Labrum.





Figures 5–8. *Allomallodon* spp. 5–6) *Allomallodon hermaphroditus*, female. 5) Pronotum. 6) Prothorax, ventral view. 7–8) *Allomallodon popelairei*, female. 7) Pronotum. 8) Prothorax, ventral view.