RESEARCH ARTICLE



A new genus and species of Callipogonini, description of the male of Strongylaspis boliviana Monné & Santos-Silva, 2003, and a new distributional record for Chorenta reticulata (Dalman, 1817) (Coleoptera, Cerambycidae)

Robert Perger^{1,†}, Antonio Santos-Silva^{2,‡}

I Escuela de Biología & Centro de Investigación en Ciencias del Mar y Limnología (CIMAR), Universidad de Costa Rica, 2060 San José, Costa Rica 2 Museu de Zoologia, Universidade de São Paulo, CP 42.494, 04218-970, São Paulo, SP, Brazil

turn:lsid:zoobank.org:author:E11F3EE3-C93F-40EB-AC68-AD1B7C954E5E urn:lsid:zoobank.org:author:E71CB0BE-4876-4B0B-ACAF-5AE13BA81E7E

Corresponding authors: *Robert Perger* (robertperger@hotmail.com), Antonio Santos-Silva (toncriss@uol. com.br)

Academic editor: Al. Konstantinov | Received 25 February 2010 | Accepted 27 May2010 | Published 09 June 2010 urn:lsid:zoobank.org:pub:36EB3C45-3CB5-46E6-9D2A-7E02E5FF8786

Citation: Perger R, Santos-Silva A (2010) A new genus and species of Callipogonini, description of the male of *Strongylaspis boliviana* Monné & Santos-Silva, 2003, and a new distributional record for *Chorenta reticulata* (Dalman, 1817) (Coleoptera, Cerambycidae). ZooKeys 48: 29–38. doi: 10.3897/zooKeys.48.417

Abstract

Seticeros gen. n. and Seticeros tunupai sp. n. of the tribe Callipogonini (Coleoptera, Cerambycidae) from Yungas, Bolivia and the male of Strongylaspis boliviana Monné & Santos-Silva, 2003 are described and illustrated. Chorenta aquilus (Thomson, 1865) is transferred to Seticeros gen. n. A new distributional record for Chorenta reticulata (Dalman, 1817) is given.

Keywords

Bolivia, Callipogonini, Macrotomini, Neotropical, Prioninae, taxonomy, Yungas

Introduction

The Bolivian Yungas, a mountain forest area mainly located in the departments of La Paz and Cochabamba, is one of the world's biodiversity hotspots and is characterized by high levels of endemism (Barthlott and Winiger 1998). Wappes et al. (2006) cited records for six species of Prioninae for the departments of La Paz and Cochabamba and 15 for the department of Santa Cruz, which is mainly covered by lowland forests. Nine species were cited with country record only. Of the listed prionine species from the department of La Paz, *Strongylaspis boliviana* Monné & Santos-Silva, 2003 is the only known endemic representative, while the female holotype is the only known specimen (Monné and Santos-Silva 2003).

Wappes et al. (2006) affirm that the higher level of knowledge about the fauna of the department of Santa Cruz – as a result of the collection bias – is one of the reasons for the difference found between the Cerambycidae diversity in Santa Cruz and the remaining departments.

This paper contributes to the knowledge of the cerambycid diversity of the Bolivian Yungas, while it proposes a new species of the tribe Callipogonini possibly endemic to this area.

A new genus for the newly described species is proposed and, based on the similarities from important characteristics, *Chorenta aquilus* (Thomson, 1865) from Colombia is also transferred to the new genus.

The male of *Strongylaspis boliviana* is described and a new distributional record for *Chorenta reticulata* (Dalman, 1817) for the Bolivian Yungas is given.

Materials and methods

Specimens examined for this study are from the following institutions / private collections:

| MNHN | Muséum National d'Histoire Naturelle, Paris, France; |
|------|---|
| MZSP | Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil; |
| NDC | Norbert Delahaye, Private Collection, Plaisir, France; |
| RPC | Robert Perger, Private Collection, San José, Costa Rica; |
| UCR | Museo de Insectos, Escuela de Agronomía, Universidad de Costa Rica, San |
| | José, Costa Rica |

CALLIPOGONINI

Seticeros gen. n.

urn:lsid:zoobank.org:act:40B98954-E133-4084-8A1B-F7B5510DC740

Etymology. The name refers to the hairs/bristles (setae) on the ventral surface of the antennae (*ceros*, Greek for horn). Masculine gender.

Type species. Anacanthus aquilus Thomson, 1865: 577.

Size moderately large (21–47.4 mm). Integument brown to dark-brown, lighter on elytra and parts of ventral surface.

Male. Body weakly depressed; head (without mandibles) + prothorax smaller than 2.0 times to almost 2.5 times of the elytral length. Head (Figs 1, 3, 6, 8) proportionally large and wide; punctation of dorsal surface (Figs 6, 8) consistently coarse and deep or confluent. Eyes large; upper ocular lobe slightly narrower than lower ocular lobe; distance between upper ocular lobes (Figs 1, 3) little larger than 2.0 times the width of antennomere III at basal third; distance between lower ocular lobes (Figs 6, 8) equal to approximately 1.5 times distance between posterior tentorial pits. Ocular carina (Figs 1, 2, 3) indistinct or absent. Clypeus wide, strongly depressed centrally, and strongly oblique towards labrum. Labrum horizontal, narrow, concave frontally, and distinctly lower than base of clypeus. Hypostomal area sculptured; pilosity moderately long, sparse; hypostomal carina narrow and slightly distinct. Galea surpassing base of second segment of maxillary palps. Mandibles (Figs 1, 2, 3, 6, 8) longer or approximately as long as half of length of head; inner surface with sparse hairs; lowerinner margin with single, somewhat rounded and wide tooth, near inner apical tooth. Antennae (Figs 1, 2) reach apical fourth of elytra; scape reaching or just surpassing posterior edge of eye; ventral surface of antennal segments (Fig. 2) with somewhat long and abundant hairs, gradually shorter and sparser towards segment XI.

Prothorax transverse; anterior angles rounded or somewhat angulated, not projected forward; lateral angles rounded and indistinct, or with obtuse angled lateral edge; posterior angles well marked, angulate. Pronotal disc (Figs 1, 3) with impunctate and shining protuberances on central area, distinctly punctate towards base and apex, and coarsely, confluently punctate laterally (somewhat rugose); lateral margins serrate in upper 1/3 to 2/3, from distinctly rounded to distinctly convergent apically. Prosternum elevated centrally, glabrous and smooth on this area, coarsely punctate and with or without some hairs laterally. Prosternal process wide, with lateral margins parallel, and apex protruding beyond procoxae. Elytra glabrous, abundantly punctate, with three ridges distinct; apex with spine (sometimes moderately long or slightly distinct). Procoxal cavities widely opened behind. Metepisterna and metasternum with pilosity moderately long and very abundant. Metepisterna wide at base and distinctly narrowed towards apex. Profemura rugose. Tibiae slightly enlarged towards apex, with sides subparallel; protibia shorter and proportionally thicker than others. Tarsomere V in all tarsi shorter than tarsomeres I-II together or, at most, as long as in protarsi.

Female. Eyes proportionally larger than in male. Distance between upper ocular lobes (Figs 4, 5) from as wide as the width of a lobe, to approximately equal, to 1.5 times the width; distance between lower ocular lobes (Figs 7, 9) as in male. Antennae (Fig. 4) from just surpassing the middle of elytra to reaching the posterior third; pilosity of segments less conspicuous than in male. Hypostomal area (Figs 7, 9) glabrous or nearly so. Lateral and posterior angles of pronotum distinct, frequently with lateral or lateral and posterior spine.

Included species: Seticeros aquilus (Thomson, 1865) new combination; Seticeros tunupai sp. n.

Material examined: *Seticeros aquilus*: COLOMBIA, *Cundinamarca*: Fusagasuga, 1 3, 3 9, 1931, P. Apolinar col. (MZSP). We also examined photos of the five syntypes of this species.

Geographical distribution: Colombia and Bolivia.

Comments. *Seticeros* gen. n. differs from *Chorenta* Gistel, 1848 as follows: ventral surface of antennal segments (Fig. 2) with somewhat long and abundant hairs, mainly in segments III-VI, more conspicuous in female; hypostomal area of male without abundant pilosity (Figs 6, 8), and in female more distinctly punctate (Figs 7, 9), metasternum and metepisternum with abundant pilosity. In *Chorenta* the antennal segments are glabrous in both sexes; the hypostomal area of the male (Figs 10, 12) has somewhat long and very abundant pilosity, in the female less punctate (Figs 11, 13) and the metasternum and metepisternum are glabrous.

It differs from *Hephialtes* Thomson, 1864 as follows: labrum narrow and placed distinctly lower than the base of clypeus; antennal segments, metasternum and metepisterna as described in the comparison with *Chorenta*; protibia not distinctly enlarged towards apex; elytral carina very distinct. In *Hephialtes* the labrum is wide and coplanar with the clypeus, the antennal segments, metasternum, and metepisterna are glabrous, the protibia is distinctly enlarged towards apex, and the elytral carinae is not strongly marked.

From *Stictosomus* Audinet-Serville, 1832 it differs in the following characters: mandibles short in both sexes (approximately as long as the half of the head); antennal segments, metasternum and metepisterna as described in the comparison with *Choren-ta*; profemurs rugose; metatarsomere V at most as long as the metatarsomeres I-II together. In *Stictosomus* the mandibles are distinctly longer than the half of the length of head (mainly in the male), the antennal segments, metasternum, and metepisterna are glabrous, in the male the third antennal segment is about as large as antennal segments IV, V, and VI together; the profemurs are smooth, and tarsomere V in all tarsi is longer than I-II together.

Seticeros tunupai sp. n.

urn:lsid:zoobank.org:act:B7D31BDA-279A-4259-B760-123AA98F1511 Figs 1–5

Etymology. Named after Tunupa, a god of the Aymara tribe, which is the largest group of native people living in the Yungas area. Tunupa is believed to be the creator of the Altiplano.

Male (Fig. 1). Size (holotype) 47.4 mm. Head, prothorax, femora, tibia, antennal segment I to IV, and base of elytra dark-brown. Antennal segments V to XI, remainder of elytra, and tarsi brown. Length of elytra 2.2 times as long as length of head (without mandibles) and prothorax. Punctation of dorsal surface of head (Fig. 1, 3) evenly



Figures 1–5. *Seticeros tunupai* sp. n.: 1 holotype male, habitus, dorsal 2 idem, lateral 3 idem, head and pronotum, dorsal 4 paratype female, habitus, dorsal 5 idem, head and pronotum, dorsal.

coarse and deep. Vertex and frons sulcate. Eyes large, finely faceted; distance between upper ocular lobes (Figs 1, 3) 1.4 times narrower than distance between lower ocular lobes (Fig. 6). Ocular carina (Figs 1, 3) absent. Mandibles (Figs 1, 2, 3) approximately 0.65 times length of head (without mandibles) and as wide as scape; inner face between base and rounded tooth with sparse hairs. Palpi (Fig. 6) with long hairs.

Hypostomal area finely and densely punctate, with long light-brown hair, pilosity only visible from lateral view (Fig. 2). Antennae (Figs 1, 2) reaching apical fourth of elytra; scape reaching posterior edge of eye; third antennal segment as long as segments IV-V together; ventral surface of antennal segments with somewhat long and abundant light-brown hairs, gradually shorter and sparser towards segment XI.

Pronotum about 1.4 times as wide as long, broadened towards base up to obtuseangled lateral edge in lower third; posterior angles with lateral, distinct spine, from lateral view coplanar with dorsal surface of elytra, lateral edge positioned lower; lateral margin serrate in upper 2/3, basal margin bordered, well defined. Pronotal dorsum (Figs 1, 3) shining, sparsely punctate, with embossed, red-brown, annular ridge, divided by short longitudinal fissure; coarsely, confluently punctate laterally (somewhat rugosely). Prosternum distinctly elevated centrally, glabrous and smooth. Metasternum and metepisternum with dense light-brown hairs. Elytra glabrous, abundantly punctate, with three ridges distinct, median convergent with outer; apex with distinct, moderately long spine.

Legs robust. Profemur rugose; ventral surface of pro- and mesofemura with longitudinal grooves. Dorsal surface of protibia with depression gradually deeper towards the tibial-femur joint. Tibia and tarsi medial with short light-brown hairs.

Female (Fig. 4). Size 38–42 mm. Coloration of the elytra uniformly brown, pronotum dark brown, or as in elytra. Length of elytra 2.8–2.9 times as long as length of head (without mandibles) and prothorax. Size of mandibles and legs smaller than in male.

Dorsal surface of pronotum (Figs 4, 5) impunctate and shining medially, with lateral protuberances (each protuberance with impressions), distinctly punctate towards base and apex, and coarsely, confluently punctate laterally; lateral spine more distinct. Prosternum as in male, hairs on metasternum somewhat smaller.

Type material: Holotype \mathcal{S} , BOLIVIA, Department of La Paz, Nor Yungas, street from Caranavi to Coroico, 1600–1800 m, XI.2009 (UCR). Allotype \mathcal{Q} , same data (UCR). Paratypes: 3 \mathcal{Q} , same data (RPC); \mathcal{Q} , same data (MZSP), \mathcal{Q} , X.1990, P. Bleuzen col. (MZSP).

Comments: Seticeros tunupai sp. n. differs from Seticeros aquilus (Thomson, 1865) as follows: hypostomal area less coarsely punctate, more pilose. Pronotum in S. aquilus about 1.7 times as wide as long, anterior and lateral angles rounded and not clearly distinct, posterior angles without spine. Protuberances in central area of pronotum in S. aquilus without impressions, median elytral ridge convergent with the inner. Apical spine of elytra in S. tunupai sp. n. considerably longer than in S. aquilus.

Chorenta reticulata (Dalman, 1817) Figs 10–11

Prionus reticulatus Dalman, 1817: 147.Chorenta reticulata Monné, 2006: 34 (cat.; comb. n.).Chorenta reticulatus Monné & Hovore, 2006: 9 (cat.); Monné & Bezark, 2008: 10.

Also collected with *Seticeros tunupai* sp. n. were specimens of *Chorenta reticulata*, which is a new distributional record for Bolivia. This species was known to be distributed in southeastern Brazil (Bahia to Rio Grande do Sul) and Argentina (Misiones) (Monné 2006; Monné & Bezark 2008). Those regions are somewhat distant from La Paz in Bolivia, which suggests that the species may also occur in central Brazil (Mato Grosso and Mato Grosso do Sul). In recent years there has been extensive collecting in the Department of Santa Cruz in Bolivia, but no specimen of that species has been found.



Figures 6–13. Head, ventral view: 6 *Seticeros tunupai* sp. n., holotype male 7 idem, paratype female 8 *S. aquilus*, male 9 idem, female 10 *Chorenta reticulata*, male 11 idem, female 12 *C. biramiguelus* (Santos-Silva, 2004), male 13 idem, female.

Despite the absence of specimens in southeastern Brazil and middle-eastern Argentina, the specimens collected in Bolivia are consistent with the specimens examined by us (more than 100 specimens from Brazil).

Material examined. BOLIVIA: 1 \Diamond , Department of La Paz, Nor Yungas, street from Caranavi to Coroico, 1600–1800 m, XI.2009 (NDC); 1 \Diamond , 1 \bigcirc , same data (RPC).

MACROTOMINI

Strongylaspis boliviana Monné & Santos-Silva, 2003

Figs 14–15

Strongylaspis bolivianus Monné & Santos-Silva, 2003: 36; Monné, 2006: 60 (cat.); Monné & Hovore, 2006: 14 (cat.); Wappes et al., 2006: 4 (cat.); Monné & Bezark, 2008: 15 (cat.).
Strongylaspis boliviana; Santos-Silva & Esteban-Durán, 2009: 353 (in key).

Male (Fig. 14). Integument dark-brown. Elytra as in female, yellowish-brown, with circum-scutellar area slightly darker; narrow band blackish along the suture and epip-leura. General pilosity yellowish.



Figures 14–15. Strongylaspis boliviana, male habitus: 14 dorsal 15 lateral.

Head longitudinally deeply sulcated between upper ocular lobes; punctation coarse, very abundant, confluent between upper ocular lobes and occiput; sparser on antennal tubercles near clypeus, and confluent near upper ocular lobes. Frons and clypeus coarsely, confluently punctate. Antennal tubercles closer at base; apex rounded. Mandible short (ca. 1/3 of length of head); dorsal carina low, wide, not well marked; latero-outer face with projection near median region (boundary between dorsal punctate and smooth areas); pilosity moderately long and abundant on dorsal face. Hypostomal area coarsely, confluently punctate; pilosity moderately sparse. Gula coarsely punctate (punctures closer near hypostomal area, sparser towards prothorax). Antennae (Figs 14, 15) reaching posterior third of elytra. Scape slightly longer than antennomere III; coarsely, abundantly punctate on dorsal face (punctures confluent on basal 2/3). Antennomere III slightly shorter than IV-V together; coarsely, confluently punctate on basal half, sparser in remaining portion.

Prothorax transverse, convex with disc almost flat; anterior angles not projected forward; posterior angles with spine, directed upward and backward. Pronotal surface densely rugosely punctate; disc with "M"-like depression at anterio-central portion; posterio-central region with transversal depression at each side of longitudinal depression that begins at base and reaches almost to middle; pilosity long, moderately abundant. Prosternum strongly elevated at central area; pilosity on prosternum, proepisterna, and proepimera moderately long and abundant. Prosternal process somewhat wide, longitudinally, slightly sulcated on basal half; finely, abundantly punctate on basal half; coarsely, confluently punctate on apical half; pilosity long and abundant; apex rounded, projecting slightly beyond apex of procoxae. Mesosternum (Fig. 15) with long and abundant hairs. Mesosternal process longitudinally, strongly, sulcate; apex strongly emarginate. Metasternum and metepisternae (Fig. 15) with pilosity long and very abundant. Central area of mestasternum, around metasternal suture, with triangular region separated from remaining surface by narrow band almost smooth (base of triangle near metacoxae). Scutellum strongly convex, slightly longitudinally sulcate; asperities small and abundant. Circum-scutellar area of elytra (Fig. 14) with blackish granules, abundant, well marked, and gradually smaller towards apex, punctures becoming piliferous; elytral apex rounded.

Sternites finely, abundantly punctate; pilosity of sternites I-IV abundant laterally, sparser medially; sternite V strongly emarginate at apex, and with pilosity sub-equally distributed throughout. Profemora and protibiae scabrous, with coarse, small, spines on ventral face; mesofemora and mesotibiae less scabrous, and with spines of ventral face smaller and sparser; metafemora not scabrous, abundantly punctate on ventral face, sub-smooth in remaining areas, without spines on ventral face; metatibiae distinctly less scabrous than pro- and meso-tibiae, and with spines of ventral face less distinct and sparser. Metatarsomere I as long as II-III together.

Dimension in mm (\mathcal{O}). Total length (including mandibles), 34.0; prothorax length, 5.0; prothorax width (apices of spines of posterior angles), 9.0; elytral length, 25.0; humeral width, 10.0.

Material examined. BOLIVIA: 1 ♂, Department of La Paz, Nor Yungas, street from Caranavi to Coroico, 1600–1800 m, XI.2009 (MZSP).

Comments. Monné & Santos-Silva (2003) described *Strongylaspis boliviana* based on a single female from Nor Yungas (Bolivia). The specimen mentioned above is the first collected after the original description. The male can be included in the key presented by Monné & Santos-Silva (2003) together with the female.

Acknowledgements

We are very grateful to Dr. Stéphane Boucher (MNHN) for his effort to locate the syntypes of *Anacanthus aquilus* in the MNHN (ex-Collection Thomson), to Dr. Gérard Luc Tavakilian for providing photos of *Anacanthus aquilus* and to Humberto Lezama (UCR) for taking photos of the type specimens of *Seticeros tunupai* sp. n. Special thanks to Gino Nearns, Diego Martinez-Schütt and the anonymous reviewer for their comments and corrections of the English text.

References

- Barthlott W, Winiger M (Eds) (1998) Biodiversity: a challenge for development research and policy. Springer, Berlin, Heidelberg, 429pp.
- Dalman JW (1817) Descriptiones novarum specierum insectorum. In: Schönherr CJ. Synonymia insectorum, oder: Versuch einer Synonymie aller bisher bekannten Insecten; nach

Fabricii Systema Eleutheratorum & c. geordnet. Eleutherata oder Käfer. Lewerentzischen Buch., Skara, 1(3), 506 pp.

- Monné MA (2006) Catalogue of the Cerambycidae (Coleoptera) of the Neotropical Region. Part III. Subfamilies Parandrinae, Prioninae, Anoplodermatinae, Aseminae, Spondylinae, Lepturinae, Oxypeltinae, and addenda to the Cerambycinae and Lamiinae. Zootaxa 1212: 1–244.
- Monné MA, Bezark, LG (2008) Checklist of the Cerambycidae, or longhorned beetles (Coleoptera) of the Western Hemisphere 2008 Version (updated through 31 December 2007), 424 pp. http://plant.cdfa.ca.gov/byciddb. [accessed 02.VII.2010]
- Monné MA, Hovore FT (2006) Checklist of the Cerambycidae, or longhorned wood-boring beetles, of the Western Hemisphere. Bio Quip Publications, Rancho Dominguez, California, 394 pp.
- Monné ML, Santos-Silva A (2003) Sinopse do gênero *Strongylaspis* Thomson, 1860 (Coleoptera, Cerambycidae, Prioninae, Macrotomini). Revista Brasileira de Entomologia 47: 31–47
- Santos-Silva A, Esteban-Durán, JR (2009) Description of the female of *Strongylaspis granigera* Bates, 1884 (Coleoptera, Cerambycidae, Prioninae). Spanish Journal of Agricultural Research 7: 349–354
- Wappes JE, Morris RF, II, Nearns EH, Thomas MC (2006) Preliminary checklist of Bolivian Cerambycidae (Coleoptera). Insecta Mundi 20: 1–46. http://digitalcommons.unl.edu/cgi/ viewcontent.cgi?article=1112&context=insectamundi [accessed 02.VII.2010]