



<http://dx.doi.org/10.11646/zootaxa.3918.4.8>

<http://zoobank.org/urn:lsid:zoobank.org:pub:C6F30101-F65F-44B7-963F-A0F16E017433>

## A new genus and two new species of Araecerini from high elevation in the Andes with a synopsis of the tribe in South America (Coleoptera, Anthribidae, Choraginae)

JOSÉ RICARDO M. MERMUDES

Laboratório de Entomologia, Departamento de Zoologia, Universidade Federal do Rio de Janeiro, Caixa Postal 68044, Rio de Janeiro – RJ, 21941–971, Brazil. E-mail: jrmermudes@gmail.com

### Abstract

A new genus and two new species in the tribe Araecerini are described from South America. The new genus and species *Aurigeripilus andinus* **gen. nov.** et **sp. nov.** from high elevation (2930 m) from Colombia (PNN Chingaza Bosque Palacio) is described and characterized by a conspicuous antebasal carina of the pronotum. *Neoxenus corrugatus* **sp. nov.** is also described from Ecuador (Napo, Baeza). Illustrations are provided of both species. An overview with diagnostic characters of South America genera of the tribe Araecerini Lacordaire is presented.

**Key words:** Fungus weevil, Morphology, Neotropical, taxonomy

### Introduction

Choraginae Kirby, 1819 is the second most diverse subfamily of Anthribidae and includes five tribes, 62 genera, and 630 species (Mermudes & Leschen 2014). They are characterized mainly by antennae inserted into the dorsum of the rostrum or between the base and head, near the ocular margin; asymmetric and arched scape and pedicel, more convex on the outer than on the inner margin (when the antenna is folded back); antennal club not 4-articulated; interscrobial distance usually narrower than interocular distance (variable in *Melanopsacus* Jordan, 1924); pronotum with transverse basal carina contiguous with the posterior margin of prothorax (except in *Neoxenus* Valentine, 1999 and the new genus described herein); female terminalia with ovipositor very thin, with the body (proctiger and paraprocts) continuous with the lateral rods, lacking transverse bar, or baculum (after Holloway 1982; Zimmerman 1994; Mermudes & Leschen 2014).

The tribe Araecerini Lacordaire, 1866 includes 22 genera, with only four Neotropical genera (Alonso-Zarazaga & Lyal 1999; 2002; Valentine 1999, 2002; Mermudes & Leschen 2014), and is characterized mainly by rounded eyes and hind coxae which are elongate-transverse, almost reaching elytral margin (Valentine 2002).

In this study, a new genus and species from Colombia (Cundinamarca, Parque Nacional Natural Chingaza Bosque Palacio) is described and illustrated. The specimen was collected with a Malaise trap at an elevation of 2930 meters, one of the highest elevation records for the family Anthribidae. Additionally, a new species of *Neoxenus* Valentine, 1999 is also described and illustrated from Ecuador. These two species suggest a new arrangement for the South American Choraginae, mainly because they represent genera with an antebasal carina in Araecerini.

### Material and methods

The material from Colombia was sent for identification by the Instituto de Investigaciones de Recursos Biológicos “Alexander von Humboldt”, Villa de Leyva, Colombia (IAVH), via Michael Sharkey (University of Kentucky, U.S.A.), and the material from Ecuador was sent by Museu Lund, Lund Universitat, Sweden (MZLU).

## Comments on diagnosis of Araecerini in South America

Choraginae is a neglected group in South America. Blackwelder's catalogue to the Americas (1947) only cites three species in comparison with 14 Central America species. This largely reflects the valuable contribution of Karl Jordan in the *Biologia Centrali-Americana* (1907) that described ten species. Only recently have some studies also contributed to the revision of the Nearctic and Central America fauna with the works of Valentine (1999, 2002).

On the other hand, Rheinheimer (2004) demonstrated the great diversity of the subfamily in the Old World when he listed at least 98 species in four tribes that do not contain any Neotropical species (classification *sensu* Mermudes & Leschen 2014): Xenorchestini Lacordaire, 1866 (4 genera), Valenfriesiini Alonso-Zarazaga & Lyal, 1999 (1 genus), Cisanthribini Zimmerman, 1994 (2 genera), and Apolectini Lacordaire, 1866 (9 genera). In contrast, Alonso-Zarazaga & Lyal (1999) cited six genera *incertae sedis*, among them *Ambonoderes* Jordan, 1907 with a single species from Central America. The Apolectinae Lacordaire, 1866 as a subfamily is a concept published by Trýzna & Valentine (2011) without any description, diagnosis, or comment, and it is applicable to South America, where the genera listed are not present. Neotropical Choraginae is restricted to only two tribes, Choragini with 15 genera and Araecerini with 22 genera, and each one with only five and four Neotropical species, respectively; however, the number of species up to now is restricted to only two South American species.

The first species of the tribe Araecerini is *Araecerus fasciculatus* (DeGeer, 1775), a cosmopolitan species of the genus *Araecerus* Schoenherr, 1823 that comprises about 70 described Indo Pacific species. The species is clearly introduced in the Americas, as noted by Valentine (2005). A second South American species, but of the tribe Choragini, is *Melanopsacus latifrons* Jordan, 1924 from Bolivia, which belongs to another hyperdiverse genus with 85 species, predominantly Indomalayan, reaching to East Asia. Zimmerman (1994: 224) suggested that the Bolivian species is possibly not congeneric, but although this is likely based upon the distributions, it was not possible to assess as I could not find the type-material in The Natural History Museum (England).

In addition to these two species we can now add *Aurigeripilus andinus* Mermudes **gen. nov.** et **sp. nov.** from Colombia, and *Neoxenus corrugatus* Mermudes **sp. nov.** from Ecuador, described herein.

*Neoxenus* comprises four species in Central America and only one reaching USA (TX). It has a distinct antebasal carina as discussed by Valentine (1999) that placed the genus in the tribe Araecerini (no assignment to tribe was given by Rheinheimer (2004)). The distribution is stated as from Brazil to Texas; Greater Antilles according to Valentine (1999), however there was no assigned material or species from Brazil.

Finally, the remaining genera of Araecerini (lacking South American species to date) with a basal or sub-basal carina, such as *Araecerus* Schoenherr, 1823 can be distinguished, based on Valentine (1999, 2002) by: lateral prothoracic carina double, not upturned at apex, and elytra with 12-14 rows of punctures, which are exclusive characters of *Habroxenus* Valentine, 1999 (three species, from United States, Hispaniola and Guatemala), and distinctive as well of *Acaromimus* Jordan, 1907 (one flightless species from Florida U.S.A. and Bahamas) that have the lateral prothoracic carina single, apex usually upturned; elytra with 19-21 rows of punctures.

## Acknowledgments

The material used in this study was very kindly made available by Michael Sharkey (NSF Grant DEB-0205982, additional information on the project can be found at <http://www.sharkeylab.org/biodiversity/static.php?app=colombia&page=index>, and Roy Danielsson (Curator of the insect collection, Museum of Zoology, Lund University). This study was supported by FAPERJ (process 110.040/2014, 101.476/2010) and CNPq (process 470980/2011-7).

## References

- Alonso-Zarazaga, M.A. & Lyal, C.H.C. (1999) *A World Catalogue of Families and Genera of Curculionoidea (Insecta: Coleoptera) (Excepting Scolytidae and Platypodidae)*. Entomopraxis, Barcelona, 315 pp.
- Alonso-Zarazaga, M.A. & Lyal, C.H.C. (2002) Addenda and Corrigenda to 'A World Catalogue of Families and Genera of Curculionoidea (Insecta: Coleoptera)'. *Zootaxa*, 63, 1-37.
- Blackwelder, R.E. (1947) Checklist of the coleopterous insects of Mexico, Central America, the West Indies, and South

- America. *Bulletin of United States National Museum*, 185 (5), 765–925.  
<http://dx.doi.org/10.5479/si.03629236.185.765>
- Holloway, B.A. (1982) Anthribidae (Insecta: Coleoptera). *Fauna of New Zealand*, 3, 1–269.
- Jordan, K. (1907) Insecta. Coleoptera. Rhynchophora. Anthribidae. In: Sharp, D., Blandford, F.Z.S. & Jordan, K. (Eds.), *Biologia Centrali-Americana*, 4 (part. 6), pp. 229–314 + plates 1–14.
- Mermudes, J.R.M. & Leschen, R.A.B. (2014) Anthribidae Billberg, 1820. In: Leschen, R.A.B. & Beutel, R.G. (Eds.), *Handbuch der Zoologie / Handbook of Zoology, Arthropoda, Insecta, Coleoptera. Vol. III. Curculionoidea*. Walter De Gruyter, Berlin, xii + 675 pp.
- Rheinheimer, J. (2004) Illustrierter Katalog und Bibliographie der Anthribidae der Welt (Insecta: Coleoptera). *Mitteilungen des Entomologischen Vereins Stuttgart*, 39 (1/2), 1–243.
- Trýzna, M. & Valentine, B.D. (2011) Family Anthribidae Billberg, 1820. In: Löbl I., Smetana, A., (eds.). *Catalogue of Palaearctic Coleoptera. Vol. 7. Curculionoidea*. Apollo Books, Stenstrup, pp. 90–109.
- Valentine, B.D. (1999) A Review of Nearctic and some related Anthribidae (Coleoptera). *Insecta Mundi*, 12, 251–296.
- Valentine, B.D. (2002) 126. Anthribidae Billberg, 1820. In: Arnett, R.H. Jr., Thomas, M.C., Skelley, P.E. & Frank, J.H. (Eds.), *American Beetles. Vol. 2. Polyphaga: Scarabaeoidea through Curculionoidea*. CRC Press LLC, Boca Raton, FL, xiv + 861 pp.
- Valentine, B.D. (2005) The scientific name of the coffee bean weevil and some additional bibliography (Coleoptera: Anthribidae: *Araecerus* Schoenherr). *Insecta Mundi*, 19 (4), 247–253.
- Zimmerman, E.C. (1994) *Australian Weevils (Coleoptera: Curculionoidea). Vol. I. Orthoceri. Anthribidae to Attelabidae. The Primitive Weevils*. CSIRO, East Melbourne, xxxii + 741 pp.