

Research Article

Eburiini (Coleoptera: Cerambycidae: Cerambycinae) in Paraguay: description of a new species, with new country and geographic records

Eburiini (Coleoptera: Cerambycidae: Cerambycinae) en Paraguay: descripción de una nueva especie, con nuevos registros de país y distribución

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Abstract. Sixteen species of Eburiini are recorded from the colección Invertebrados Para La Tierra-Entomología, IBIS and MNHNP collections in Paraguay, including the description of *Eburodacrys mcgavini* **nov. sp.** from a specimen collected in Presidente Hayes department. Four other species are new records from Paraguay and eight are new departmental records in the country.

Key words: Distribution, *Eburodacrys*, taxonomy.

Resumen. Se registran dieciséis especies de Eburiini de las colecciones de Invertebrados Para La Tierra-Entomología, IBIS y MNHNP en Paraguay, incluida la descripción de *Eburodacrys mcgavini* **sp. nov.** en base a un espécimen recolectado en el departamento de Presidente Hayes. Otras cuatro especies son nuevos registros para Paraguay y ocho son nuevos registros departamentales dentro del país.

Palabras claves: Distribución, *Eburodacrys*, taxonomía.

Introduction

Research on cerambycids in South America has focused on Bolivia (e.g. Wappes *et al.* 2013; Galileo *et al.* 2014, 2015) and Brazil (e.g. Monne *et al.* 2009, 2016; Nascimento *et al.* 2016). The last national, if somewhat preliminary, evaluation of the cerambycid fauna in Paraguay recorded 333 species (Di Iorio 2004), including numerous unfinished efforts (Bosq 1945; Viana 1972). New species have been described from Paraguay in recent years (e.g. Mehl *et al.* 2015) and the international Cerambycidae database (Tavakilian and Chevillotte 2019) currently lists 766 species as present in Paraguay. When compared to more than 1,900 species known from neighbouring Bolivia, the Paraguayan fauna is heavily understudied.

A recent cladistic analysis eluded 268 species of 24 genera within the Cerambycidae tribe Eburiini (Botero and Monné 2018). Monné (2018) notes that *Eburodacrys* and *Eburia* comprise ~75% of species in the tribe, at 89 and 85 species each, respectively. Prior to this study, 31 species of the tribe were registered from Paraguay.

The Colección Científica Para La Tierra (CCPLT) began in 2011 and has opportunistically collected cerambycid beetles since. The IBIS (Instituto de Bioecología e Investigación

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Sub-tropical) collection is the result of sustained fieldwork carried out by professor Julio Contreras, Andres Contreras and Yolanda E. Davies. The IBIS collection is currently housed within the Fundación Para La Tierra Centro IDEAL, CCPLT, Pilar, Paraguay.

This paper is intended as the first in a series of papers examining the Cerambycidae of the CCPLT and IBIS collections. This study focuses on the Eburini tribe in Paraguay, yielding a total of 15 species from both collections. Examining additional material from the Museo Nacional de Historia del Paraguay (MNHNP), an additional species not recorded in the Paraguayan fauna was also found and is included here. Herein, I describe a new species, provide four new country records, eight new departmental records and four new specimen locality records.

Materials and Methods

Field work was carried out between 2011 and 2017 during unstandardized surveying primarily at Rancho Laguna Blanca, San Pedro department, Paraguay. Specimens were collected using a white sheet method, and opportunistically by manual capture. Photographs were taken using a Canon EOS Rebel T7i connected to an Olympus bellow for macrophotography, using a Canon FD 50mm F/3.5 Macro Lens. Five to six images were stacked using the Helicon Focus program. Plates of *E. mcgavini* nov. sp. and *E. nemorivaga* Gounelle, were assembled using the GNU Image Manipulation Program (GIMP version 2.10.14). Specimens of *Eburodacrys* and *Pantomallus* were identified using the works of Botero (2017) and Martins and Galileo (2005), respectively. Photographs of type specimens were examined from the “New World Cerambycidae Catalog” of Bezark (2019). Distributions follow Tavakilian and Chevillotte (2019) and Di Iorio (2004).

The names and acronyms of the collections consulted are the following: Rancho Laguna Blanca, San Pedro Department, Paraguay, formally known as Reserva Natural Laguna Blanca (RLB); Colección Invertebrados Para La Tierra- Entomología (CIPLT-E); Museo Nacional de Historia Natural del Paraguay (MNHNP-HX).

Results

Eburodacrys mcgavini nov. sp.

(Figs. 1, 3, 4, 5)

Type material. Holotype male. PARAGUAY, Presidente Hayes, Laguna Capitan (-22°54'15.5"S, -59°67'44.8"E), 2.XI.2016, J. Sarvary leg. (CIPLT-E 5965).

Description. Holotype male. Integument mostly orange to orange-tan, prothorax lighter at base and apex. Apex of mandibles black. Prothorax with pronotal, antemedian and lateral tubercles concolorous, short and without contrasting colours. Narrow black band behind anterior eburneous callosity extending to the apex of posterior median callosity, short black band in front and behind posterior lateral callosity, spine of femora, black. Head sparsely and shallowly punctate. Long, fine yellow pubescence at clypeus covering base of mandibles, yellow pubescence from labrum covering base on mandibles. Genae angular and acuminate. Dense yellow pubescence between antennal base lining the entire median ocular lobe margin. Distance between lower eye lobes twice distance between superior eye lobes. Superior eye lobes separated by distance slightly larger than width of an superior eye lobe. Ventrally, gula shallowly and, sparsely punctate. Antenna reaching elytral

apex near apex of antennomere VII. Antennomeres with yellowish pubescence, and long (longer than width of antennomeres) yellowish setae on basal antennomeres, disappearing towards antennomere V. Scape gradually widened distally, coarsely punctate. Pronotum with transverse wrinkles and punctures, punctures shallow but dense, closer than width of a single puncture. First two anterior urosternites with lateral third distinctly darker, nearly black, urosternites with short white pubescence. Metaventrite with short straight white pubescence, dense on lateral margins, sparser and longer towards center. Elytra around three and a half times length of prothorax. Each elytron with three narrow elongate eburneous callosities, one anterior and two posterior, posterior callosities contiguous with the posterior laterals beginning a quarter of the length down the posterior median, callosities roughly the same length. Posterior callosities closer to each other than half the width of one callosity. Elytral surface densely punctate with minute and sparse setae. Elytral apex truncate, with reduced spine, half the length of profemoral spine, concolorous with abdomen. Legs. Coxa with sparse, short white setae. Profemora fusiform, at widest diameter three times the width of basal diameter. Meso- and metafemora slender and elongate, reaching widest point at 2/3 distance toward apex. Apices of meso- and metafemora with relatively short black inner spine. Male genitalia. Apex of parameres with relatively long setae, extending medially and without setae at lateral edges of parameres. Basally, lateral edges of tegmen with acute point, widest part of genitalia, about twice the width of paramere apex. Distal part of tegmen converging. Median lobe triangular at distal end, with rounded lateral edges.

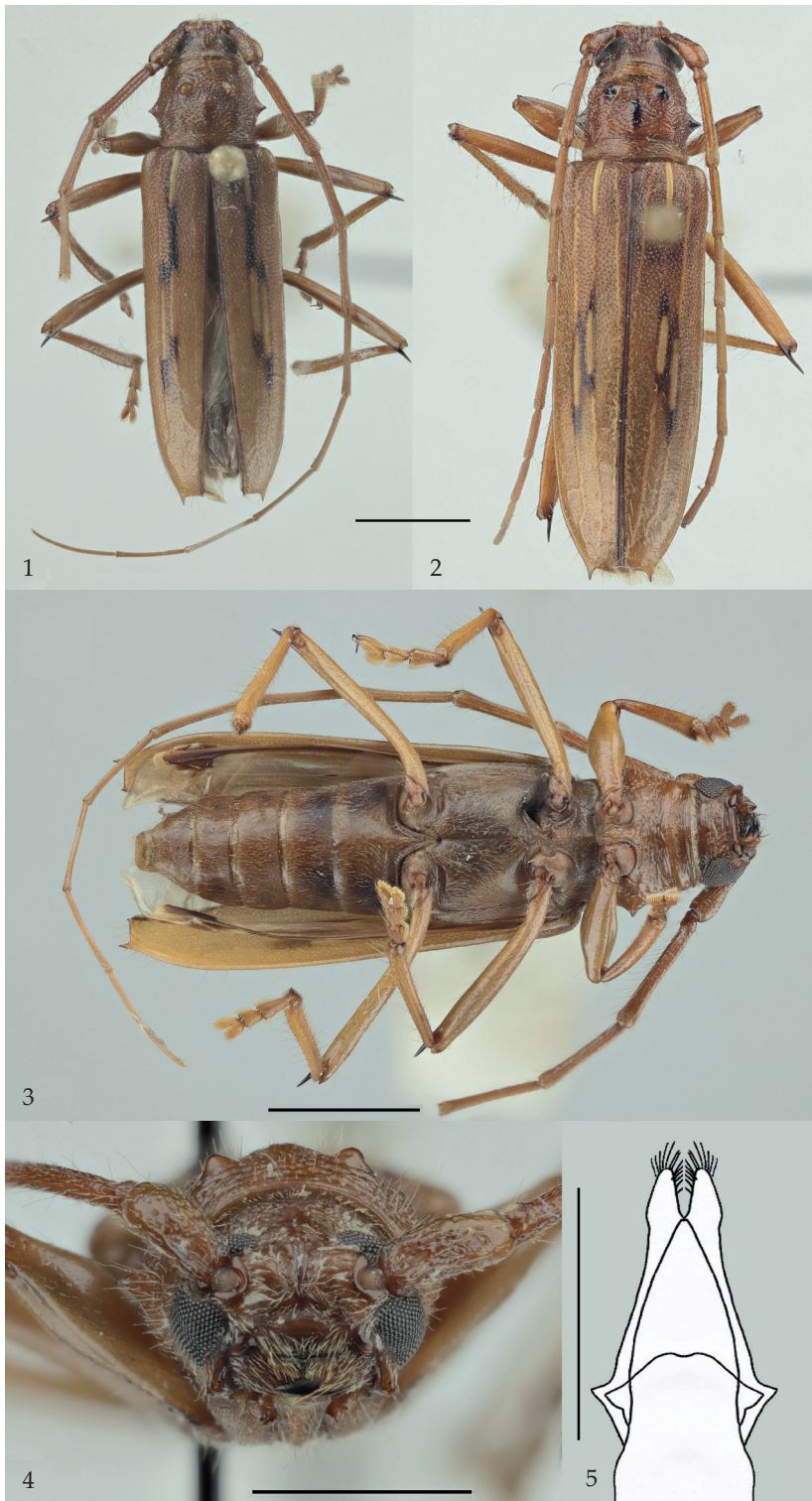
Measurements (mm). Holotype, total length: 17.3, prothorax length: 3.5, prothorax width at widest point: 3.6, elytral length: 12.0, humeral width: 4.9.

Diagnosis. *Eburodacrys mcgavini* **nov. sp.** is similar to *E. nemorivaga*, differing by pronotal tubercles, antemedian pronotal tubercles and central gibbosity concolorous with the remaining surface of the prothorax, these are all black in *E. nemorivaga* (Fig. 1). The new species also lacks very thin white to yellow costae that extend from the elytral base through the callosities to the elytral apices. Posterior callosities are also much closer together in *E. mcgavini*. Facial pubescence much denser in the new species and covering at least partially, most of the mouthparts. Martins (1999) additionally diagnosed *E. nemorivaga* as “distinguishing itself from all other South American species by the presence of a black spot in the center of the pronotum”. *E. mcgavini* also separates itself having pronotal and antemedian tubercles shorter than other possibly similar species, as well as having dense white pubescence laterally on metaventrite. The new species has an obtuse, broad epipleural tooth as opposed to an acute prominent tooth in *E. nemorivaga*.

Etymology. The specific name is a genitive patronym in honour of Scottish entomologist and natural history presenter Dr. George McGavin, a source of great inspiration to me.

Distribution. Known only from type locality. Laguna Capitán is a xerophytic thorny forest within the dry Chaco ecoregion.

Additional material examined. *Eburodacrys nemorivaga* Gounelle, 1909. 1 female, RLB, San Pedro, 23.IX.2014, 23:10 h, O. Petko leg. (CIPLT-E 6320); 2 male, Horqueta, Concepción, 30.X.1986, P.M. Mueller leg. (MNHNP-HX 339); 3 female, Horqueta, Concepción, 25.X.1985, P.M. Mueller leg. (MNHNP-HX 338)



Figures 1-5. 1-2. Dorsal comparisons of *Eburidacrys mcgavini* **nov. sp.** (1) and *E. nemorivaga* Gounelle (2). 3. *E. mcgavini*, ventral view. Scale: 4 mm. 4-5. *E. mcgavini*, head in frontal view. Scale: 2 mm. 5. Male genitalia, tegmen and aedeagus, dorsal view. Scale: 1 mm.

New country records

1. *Eburia charmata* Martins, 1981

Distribution. Brazil; **new country record** in PARAGUAY (San Pedro).

Material examined. (1) female, San Pedro, RLB, 17.IX.2015, G. Pozsgai leg. (CIPLT-E 6022).

2. *Pantomallus titinga* Martins & Galileo, 2005

Distribution. Bolivia; **new country record** in PARAGUAY (San Pedro).

Material examined. (1) female, San Pedro, RLB, 24.X.2014, 00: 20 h, O. Petko leg. (CIPLT-E 6321 / #25.525).

3. *Pantomallus tristis* Blanchard, 1847

Distribution. Brazil, Peru, Bolivia; **new country record** in PARAGUAY (San Pedro).

Material examined. (1) male, San Pedro, RLB, 23.IX.2014, 21:10 h, O. Petko leg. (CIPLT-E 6703 / #25.457).

4. *Uncieburia nigricans* (Gounelle, 1909)

Distribution. Brazil, Bolivia; **new country record** in PARAGUAY (Concepción).

Material examined. (1) male, Concepción, Horqueta, 30.X.1986, P.M. Mueller leg. (MNHNP-HX 360).

New departmental records in Paraguay

1. *Cupanoscelis heteroclita* Gounelle, 1909

Distribution. Brazil, Bolivia, Argentina; PARAGUAY (Alto Paraguay, Boquerón, Concepción, Paraguari, **new departmental record** in San Pedro).

Material examined. (1) male, San Pedro, RLB, 18.X.2015 (CIPLT-E 6028); (2) male, RLB, San Pedro, no date, PLT team leg. (CIPLT-E 6041).

2. *Eburodacrys cunusaia* Martins, 1997

Distribution. Brazil, Bolivia, PARAGUAY (Central, **new departmental record** in Ñeembucu).

Material examined. (1) female, Ñeembucu, Barrio San Vicente Pilar, 21.II.2013, JGP leg. (CIPLT-E 3542 / #25.158).

3. *Eburodacrys nemorivaga* Gounelle, 1909

Distribution. Mexico, Honduras, Nicaragua, Colombia, Venezuela, Brazil, Bolivia, PARAGUAY (Concepción, Guairá, **new departmental record** in San Pedro).

Material examined. (1) female, San Pedro, RLB, 23.IX.2014, 23:10 h, O. Petko leg. (CIPLT-E 6320 / #25.526).

4. *Eburodacrys seminigra* Gounelle, 1909

Distribution. Brazil, PARAGUAY (Caaguazú, Paraguari, **new departmental record** in San Pedro).

Material examined. (1) male, San Pedro, RLB, 18.X.2015, unknown leg. light trap (CIPLT-E 6024); (2) female, San Pedro, RLB, 18.X.2015, unknown leg., light trap (CIPLT-E 6025).

5. *Eburodacrys sexguttata* Lameere, 1884

Distribution. Brazil, Bolivia, Argentina, PARAGUAY (Cordillera, **new departmental record** in Ñeembucu).

Material examined. (1) male, Ñeembucu, Barrio General Diaz, Pilar, 15.XII.2012, J. Contreras leg. (CIPLT-E 3543/ #25.038); (2) female, Ñeembucu, Mayor Martinez, 21.I.2013, A. Contreras leg. (CIPLT-E 3544/ #25.040); (3) male, Ñeembucu, Barrio General Diaz, Pilar, 21.XI.2013, J. Contreras leg. (CIPLT-E 6339/ #25.039).

6. *Eburodacrys truncata* Fuchs, 1956

Distribution. Brazil, Bolivia, PARAGUAY (Canindeyú, Concepción, Guairá, Presidente Hayes, **new departmental record** in Ñeembucu).

Material examined. (1) male, Ñeembucu, Barrio General Diaz, Pilar, 12.XI.2012, J. Contreras leg. (CIPLT-E 6338/ #25.042); (2) male, Ñeembucu, Barrio General Diaz, Pilar, 07.XII.2013, J. Contreras leg. (CIPLT-E 6697/ #25.460).

7. *Susuacanga octoguttata* (Germar, 1821)

Distribution. Venezuela, Colombia, Peru, Brazil, Bolivia, Argentina, PARAGUAY (Alto Paraguay, Central, Concepción, Cordillera, Guairá, Itapúa, Paraguari, San Pedro, **new departmental record** in Presidente Hayes).

Material examined. (1) female, Presidente Hayes, Laguna Capitan, 02.VII.2016, unknown leg. (CIPLT-E 5945); (2) male, San Pedro, RLB, 12.X.2014, 23:00 h, O. Petko leg. (CIPLT-E 6700/ #25.286).

8. *Uncieburia quadrilineata* (Burmeister, 1865)

Distribution. Brazil, Argentina, Uruguay, PARAGUAY (Alto Paraguay, Canindeyú, Concepción, **new departmental record** in San Pedro).

Material examined. (1) male, San Pedro, RLB, 27.X.2014, O. Petko leg. (CIPLT-E 6031/ #25.466); (2) male, San Pedro, RLB, 24.X.2014, O. Petko leg. (6032/ #25.467); (3) female, San Pedro, RLB, 8.XI.2014, O. Petko leg. (CIPLT-E 6701/ #25.456); (4) male, San Pedro, RLB, 11.X.2014, 22:45 h, O. Petko leg. (CIPLT-E 7241/ #25.482).

Additional specimen records

1. *Eburodacrys crassimana* Gounelle, 1909

Distribution. Venezuela, Surinam, Brazil, Colombia, Bolivia, Argentina, PARAGUAY (Departmental data could not be retrieved, San Pedro).

Material examined. (1) male, San Pedro, RLB, 20.IX.2014, K. Atkinson leg. (CIPLT-E 6029); (2) female, San Pedro, RLB, 20.IX.2014, K. Atkinson leg. (CIPLT-E 6030); (3) male, San Pedro, RLB, 30.XII.2014, O. Petko leg. (CIPLT-E 6699/ #25.472).

2. *Eburodacrys dubitata* White, 1853

Distribution. Brazil, Bolivia, Argentina, PARAGUAY (Alto Paraná, Caaguazú, Itapúa, San Pedro).

Material examined. (1) male, San Pedro, RLB, 13.IX.2014, 01:10 h, O. Petko leg. (CIPLT-E 6698/ #25.351); (2) male, San Pedro, RLB, 14.XI.2014, O. Petko leg. (CIPLT-E 6702/ #25.416).

3. *Erosida gratiosa* (Blanchard, 1847)

Distribution. Brazil, Bolivia, Uruguay, Argentina, PARAGUAY (Caaguazú, Canindeyú, Central, Concepción, Itapúa, Paraguari, San Pedro).

Material examined. (1) female, San Pedro, RLB, 16.V.2015, S. Harrison leg. (CIPLT-E 6047)

Discussion and Conclusion

The description of the new species, and the addition of four other species to the Paraguayan Eburiini fauna, takes the total number of known species from the tribe in Paraguay from 31 to 36. This study also adds the 90th species of *Eburodacrys* known, and the second Paraguayan specimens of *E. cunusaia* and *E. sexguttata*. Eight species have their departmental distributions increased within Paraguay. Evidently, collecting efforts in Paraguay can yield exceptionally interesting results from limited efforts. I advocate for greater research attention on the Paraguayan cerambycid fauna. This is intended as the first in a series of works examining cerambycid collections within the CCPLT and IBIS collections.

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