

## New records of Diapriidae (Hymenoptera: Diaprioidea) from Brazil

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### Abstract

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The present study extends the known geographic distribution of six species of Diapriidae (Hymenoptera: Diaprioidea). *Propsilomma columbianum* (Ashmead, 1893) is reported for the first time from Brazil (São Paulo State), *Szelenyiopria coriaceae* (Loiácono, 2000) from Espírito Santo State, and *S. clavata* (Loiácono, 2000), *S. distinguenda* (Loiácono, 2000), *S. coriacea* (Loiácono, 2000), *S. pilosa* (Loiácono, 2000) and *Omopria brevipalpis* Masner & Garcia, 2002 from São Paulo State.

**Additional key words:** Ambositrinae, Diapriinae, faunistics, *Omopria*, *Propsilomma*, *Szelenyiopria*.

### Resumen

COMÉRIO EF, PERIOTO NW, LARA RIR. 2016. Nuevos registros de Diapriidae (Hymenoptera: Diaprioidea) de Brasil. ENTOMOTROPICA 31(32): 256-259.

Este estudio amplía el conocimiento de la distribución geográfica de seis especies de Diapriidae (Hymenoptera: Diaprioidea). *Propsilomma columbianum* (Ashmead, 1893) se registra por primera vez en Brasil (São Paulo), *Szelenyiopria coriaceae* (Loiácono, 2000) se registra por primera vez en el Estado de Espírito Santo y *S. clavata* (Loiácono, 2000), *S. distinguenda* (Loiácono 2000), *S. coriacea* (Loiácono 2000), *S. pilosa* (Loiácono, 2000) y *Omopria brevipalpis* Masner y García, 2002 se registran por primera vez en São Paulo.

**Palabras clave adicionales:** Ambositrinae, Diapriinae, faunística, *Omopria*, *Propsilomma*, *Szelenyiopria*.

### Introduction

Diapriidae is a cosmopolitan family with 2 080 described species distributed in 192 genera and three subfamilies: Diapriinae (116 genera: 1 284 species), Belytinae (55: 699) and Ambositrinae (21: 99). All of them represented in Neotropical region (Johnson 1992, Cora and Johnson 2015)

where 78 genera have been reported (Arias-Penna 2003), 30 of them in Brazil (Loiácono and Margaría 2002).

Belytinae and Ambositrinae are parasitoids of larvae and pupae of Mycetophilidae and Sciaridae (Diptera) (Naumann 1982).

The Diapriinae are mostly parasitoids of Brachycera and Cyclorrhapha (Diptera), some species parasitize larvae of Staphylinidae and Scarabaeidae (Coleoptera) (Masner 1995), and others are associated with Formicidae (Masner and Garcia 2002, Lachaud and Pérez-Lachaud 2012) or parasitize flies associated with ants (Huggert and Masner 1983, Paulson and Akre 1991).

The aim of this study is to report new records of diapiids from Brazil.

## Materials and Methods

Hymenoptera were collected with Malaise traps (model Townes 1972) between October 2009 and March 2011 in three areas of the Atlantic Rainforest of São Paulo State, Brazil: Parque Estadual Intervales (PEI) (lat 24° 16' 27,7" S, long 48° 25' 19,3" W), 880 m above sea level, Ribeirão Grande municipality; Parque Estadual da Serra do Mar, Núcleo Santa Virgínia (PESM/NSV) (lat 23° 19' 24,8" S, long 45° 05' 40,1" W), 1 030 m above sea level, São Luiz do Paraitinga municipality and Núcleo Picinguaba (PESM/NP) (lat 23° 19' 59,3" S, long 44° 49' 57,8" W), 215 m above sea level, Ubatuba municipality. Species identifications were made based on Ashmead (1893), Brues (1916), Masner (1964), Loiácono and Margaría (2000) and Masner and García (2002).

Specimens were dried in a Leica EM CPD030 critical point dryer, mounted on cards, labeled, and examined using a Leica MZ 7.5 APO stereomicroscope.

The material examined was deposited in the Coleção Entomológica do Laboratório de Sistemática e Bioecologia de Parasitoides e Predadores (LRRP), Agência Paulista de Tecnologia dos Agronegócios, Ribeirão Preto, São Paulo, Brazil (N. W. Perioto, curator).

Specimens of *Szelenyopria* Fabritius deposited in the Entomological Collection of the Department of Biological Sciences

of Universidade Federal do Espírito Santo (UFES), Vitória, Brazil (M. T. Tavares, curator) were included in this study.

## Results

### SUBFAMILY AMBOSITRINAE MASNER, 1961

*Propsilomma columbianum* Ashmead, 1893

*Psilomma columbianum* (Ashmead 1893: 379).

*Aclista columbiana* (Kieffer 1910: 24).

*Propsilomma columbianum* (Kieffer 1916: 423; Masner 1964: 130; Masner and Muesebeck 1968: 20).

Geographical distribution: Nearctic region (Canada and United States of America) and Neotropical region (Mexico, Panama, Peru and Chile) (Naumann 1982). This is the first record from Brazil (São Paulo State).

Host: Unknown.

Material examined: 3 females, Brazil, São Paulo, Ubatuba, Parque Estadual da Serra do Mar, Núcleo Picinguaba (lat 23° 20' 0,8" S, long 44° 49' 57,2" W), Malaise trap, 18.I.2010, N.W. Perioto and team (LRRP); 3 females, same data except 22.II.2010; 4 females, same data except 22.III.2010; 6 females, same data except 22.VII.2010; 6 females, same data except 21.XII.2010; 4 males, same data except 22.II.2010; 2 males, same data except 22.VII.2010.

### SUBFAMILY DIAPRIINAE HALIDAY, 1833

*Omopria brevivalpis* Masner & García, 2002

*Omopria brevivalpis* (Masner and García 2002: 100).

Geographical distribution: Neotropical region, Brazil (Distrito Federal and States of Mato Grosso, Rio de Janeiro and Paraná) and Argentina (Masner and García 2002). This is the first record from São Paulo State.

Host: Unknown.

Material examined: 2 females, Brazil, São Paulo, Ribeirão Grande, Parque Estadual Intervales (lat 24° 16' 28,7" S, long 48° 25' 17,3" W),

Malaise trap, 22.I.2010, N.W. Perioto and team (LRRP).

*Szelenyiopria distinguenda* (Loiácono, 2000)

*Gymnopria distinguenda* Loiácono, 2000 (Loiácono and Margaría 2000: 193).

*Szelenyiopria* Fabritius, 1974 = *Gymnopria* Loiácono (Masner and García 2002: 105).

Geographical distribution: Neotropical region, Brazil (Espírito Santo State) (Loiácono and Margaría 2000). This is the first record from São Paulo State.

Host: Unknown.

Material examined: 1 female. Brazil, São Paulo, Ribeirão Grande, Parque Estadual Intervales (lat 24° 16' 28,7" S, long 48° 25' 17,3" W), Malaise trap, 22.I.2010, N.W. Perioto and team (LRRP); 2 females, Brazil, Espírito Santo, Domingos Martins, Mata Pico Eldorado (lat 20° 22' 17" S, long 40° 39' 29" W), Malaise trap, 03.XII.2004. M.T. Tavares and team (UFES); 1 female, Brazil, Espírito Santo, Santa Tereza, Estação Ecológica Santa Lúcia (lat 19° 58' 25" S, long 40° 31' 44,6" W), Pitfall trap, 23.X.2007, M.T. Tavares and team (UFES).

Comments: *S. distinguenda* was described from two females collected in Espírito Santo State (Brazil) and deposited at Canadian National Collection of Insects, Eastern Cereal & Oilseed Research Centre (CNCI). The male is unknown.

*Szelenyiopria coriacea* (Loiácono, 2000)

*Gymnopria coriaceae* Loiácono, 2000 (Loiácono and Margaría 2000: 191).

*Szelenyiopria* Fabritius, 1974 = *Gymnopria* Loiácono (Masner and García 2002:105).

Geographical distribution: Neotropical region, Brazil (Santa Catarina State) (Loiácono and Margaría 2000). This is the first record from Espírito Santo and São Paulo States.

Host: Unknown.

Material examined: 3 females, Brazil, São Paulo, São Luiz do Paraitinga, Parque Estadual da Serra do Mar, Núcleo Santa Virgínia (lat 23° 19' 24,8" S, long 45° 05' 40,1" W), Malaise trap,

23.XI.2009. N.W. Perioto and team (LRRP); 1 female, same data except 22.XII.2009; 1 female, Brazil, São Paulo, Ribeirão Grande, Parque Estadual Intervales (lat 24° 16' 28,7" S, long 48° 25' 17,3" W), Malaise trap, 23.XII.2009. N.W. Perioto and team (LRRP); 1 female. Brazil, Espírito Santo, Domingos Martins (lat 20° 22' 17" S, long 40° 39' 29" W), Malaise trap, 3.X.2004. M.T. Tavares and team (UFES).

Comments: *S. coriacea* was described from one female collected in Santa Catarina State (Brazil) and deposited at CNCI. The male is unknown.

*Szelenyiopria pilosa* (Loiácono, 2000)

*Gymnopria pilosa* Loiácono, 2000 (Loiácono and Margaría 2000: 197).

*Szelenyiopria* Fabritius, 1974 = *Gymnopria* Loiácono (Masner and García 2002: 105).

Geographical distribution: Neotropical region, Brazil (Goiás State) (Loiácono and Margaría 2000). This is the first record from São Paulo State.

Hosts: Unknown.

Material examined: 1 female, Brazil, São Paulo, Ubatuba, Parque Estadual da Serra do Mar, Núcleo Picinguaba (lat 23° 20' 0,8" S, long 44° 49' 57,2" W), Malaise trap, 18.I.2010, N. W. Perioto and team (LRRP).

Comments: *S. pilosa* was described from three females collected in the Goiás State and deposited at CNCI. The male is unknown.

*Szelenyiopria clavata* (Loiácono, 2000)

*Gymnopria clavata* Loiácono, 2000 (Loiácono and Margaría 2000: 197).

*Szelenyiopria* Fabritius, 1974 = *Gymnopria* Loiácono (Masner and García 2002: 105).

Geographical distribution: Neotropical region, Brazil (Santa Catarina State) (Loiácono and Margaría 2000). This is the first record from São Paulo State.

Host: Unknown.

Material examined: 5 females. Brazil, São Paulo, São Luiz do Paraitinga, Parque Estadual da Serra do Mar, Núcleo Santa Virgínia (lat 23°

19° 24,8" S, long 45° 05' 40,1" W), Malaise trap, 21.XII.2010. N.W. Perioto and team (LRRP).

Comments: *S. clavata* was described from two females collected in the Santa Catarina State (Brazil) and deposited at CNCI. The male is unknown.

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### References

- ARIAS-PENNA TM. 2003. Lista de los géneros y especies de la superfamilia Proctotrupeoidea (Hymenoptera) de la región Neotropical. *Biota Colombiana* 4: 3-32.
- ASHMEAD WH. 1893. Monograph of the North American Proctotrypidae. *Bulletin of the United States National Museum* 45: 1-472.
- BRUES CT. 1916. Serphoidea Proctotrypoidea. In: Viereck HL. The Hymenoptera, or wasp-like insects, of Connecticut. Guide to the Insects of Connecticut. Part III. Hartford (Connecticut): Bulletin State Geological and Natural History Survey of Connecticut. pp. 529-576.
- CORA JR, JOHNSON NF. 2015. Hymenoptera Online (HOL). [Internet], September 2015. Available from <http://hol.osu.edu/>.
- HUGGERT L, MASNER L. 1983. A review of myrmecophilic-symphilic diapriid wasps in the Holarctic realm, with descriptions of new taxa and a key to genera (Hymenoptera: Proctotrupeoidea: Diapriidae). *Contributions of the American Entomological Institute* 20: 63-89.
- JOHNSON NF. 1992. Catalog of world species of Proctotrupeoidea, exclusive of Platygasteridae (Hymenoptera). *Memoirs of the American Entomological Institute* 51: 1-825.
- KIEFFER JJ. 1910. Hymenoptera. Fam. Belytidae. *Genera Insectorum* 107: 1-47.
- KIEFFER JJ. 1916. Diapriidae. Das Tierreich. Berlin: Verlag von R. Friedländer & Sohn. 627 p.
- LACHAUD JP, PÉREZ-LACHAUD G. 2012. Diversity of species and behavior of hymenopteran parasitoids of ants: a review. *Psyche* 2012: 1-24.
- LOIÁCONO MS, MARGARÍA CB. 2000. Systematic and cladistic analysis of the myrmecophilic genus *Gynnopria* Loíacono (Hymenoptera: Diapriidae). *Insect Systematics & Evolution* 31: 187-200.
- LOIÁCONO MS, MARGARÍA CB. 2002. Systematics, morphology and physiology Ceraphronoidea, Platygastroidea and Proctotrupeoidea from Brazil (Hymenoptera). *Neotropical Entomology* 4: 551-560.
- MASNER L. 1964. A comparison of some Nearctic and Palearctic genera of Proctotrupeoidea (Hymenoptera) with revisional notes. *Časopis Československé Společnosti Entomologické* 61: 123-155.
- MASNER L. 1995. The proctotrupoid families. In: Hanson P, Gauld, ID (eds.). The Hymenoptera of Costa Rica. Oxford: University Press. pp. 209-245.
- MASNER L, GARCÍA RJL. 2002. The genera of Diapriinae (Hymenoptera, Diapriidae) in the New World. *Bulletin of the American Museum of Natural History* 268: 1-138.
- MASNER L, MUESEBECK CFW. 1968. The types of Proctotrupeoidea (Hymenoptera) in the United States National Museum. *United States National Museum Bulletin* 270: 1-143.
- NAUMANN ID. 1982. Systematics of the Australian Ambositrinae (Hymenoptera: Diapriidae), with a synopsis of the non-Australian genera of the subfamily. *Australian Journal of Zoology* 85: 1-239.
- PAULSON GS, AKRE RD. 1991. *Trichopria* sp. (Hymenoptera: Diapriidae) reared from *Microdom albicomatus* Novak (Diptera: Syrphidae). *Canadian Entomologist* 123: 719.
- TOWNES HA. 1972. A light-weight Malaise trap. *Entomological News* 83: 239-247.

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