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Three new species and new records of the orb-weaving spider genus *Philoponella* (Araneae, Uloboridae) from Brazil and Ecuador

BÁRBARA T. FALEIRO & ADALBERTO J. SANTOS

Departamento de Zoologia, Instituto de Ciências Biológicas, Universidade Federal de Minas Gerais. Avenida Antonio Carlos 6627, 31270-901 Belo Horizonte, MG, Brazil. E-mail: btf8@hotmail.com; oxyopes@yahoo.com

Abstract

Three new species of the spider genus *Philoponella* Mello-Leitão, 1917 are described: *Philoponella opelli* n. sp. from Brazil and Ecuador, and *Philoponella fluviidulcificis* n. sp., and *Philoponella duopunctata* n. sp. from Brazil. New records for *Philoponella vittata* (Keyserling, 1881), *P. republicana* (Simon, 1891), *P. fasciata* (Mello-Leitão, 1917) and *P. divisa* Opell, 1979 are provided for Brazil and Ecuador.

Key words: Taxonomy, spider, geographic distribution, Neotropical region

Introduction

The spider family Uloboridae Thorell, 1869 currently includes 266 species belonging to 18 genera (Platnick 2013). This family comprises small to medium sized, cribellate spiders, which build orb or extremely modified orb-webs (Opell 1979, Lubin 1986). Additionally, many uloborid species present social habits, constructing communal webs (Opell 1979). In the genus *Philoponella*, this was reported in several species, such as *P. tingens* (Chamberlin & Ivie, 1936), *P. oweni* (Chamberlin, 1924), *P. arizonica* (Gertsch, 1936), and *P. raffrayi* Simon, 1881 (Opell 1979, Smith 1997, Masumoto, 1998). Members of this family can be recognized by the absence of poison glands and fang openings, by the presence of a ventral row of macrosetae on leg IV, a row of trichobothria in femora II, III and IV and by the calamistrum positioned in a single row (Opell 1979, 2005).

Philoponella Mello-Leitão, 1917 is the third largest uloborid genus in described species richness, with 38 species (Platnick 2013). The males of *Philoponella* can be recognized by the transverse thoracic groove and a well developed conductor spur, females have an atrium and two lateral lobes in the epigynum (Opell 1979). The genus is more diverse in South America, with 13 species, but also occurs in Asia, Africa and Australia (Opell 1979, Platnick 2013). The American species of *Philoponella* were revised by Opell (1979), which presented distribution maps for each species. However, Opell did not mention the specific localities of the material examined, thus limiting the possibilities of accessing each species distribution. Only four new species of *Philoponella* have been described for the Americas after Opell's (1979) revision: *Philoponella subvittata* Opell, 1981, *P. herediae* Opell, 1987, *P. ramirezi* Grismado, 2004 and *P. pomelita* Grismado, 2004 (Opell 1981, 1987, Grismado 2004).

In this study we describe three new species of *Philoponella*, based on specimens collected in Brazil: *Philoponella opelli* n. sp., from the states of Santa Catarina, Acre, and Mato Grosso (also from Napo, Ecuador), *Philoponella fluviidulcificis* n. sp., from Minas Gerais, and *Philoponella duopunctata* n. sp. from Acre. We also provide new records for four species of *Philoponella* in Brazil and Ecuador.

Material and methods

Specimens cited in this study are deposited in arachnid collection of the Coleções Taxonômicas da Universidade Federal de Minas Gerais, Belo Horizonte (UFMG, curator A.J. Santos). Specimens were examined and illustrated

649); ditto, 17.VI.2001, E.S.S. Álvares *leg.*, 1♂ 1♀ (UFMG 1053); Santana do Riacho (Parque Nacional da Serra do Cipó, 19°20'57"S 43°37'10"W, 822 m), 16.X.2009, B.T. Faleiro *et al leg.*, 1♀ (UFMG 7564); 1♀ (UFMG 7566); ditto, 21–27.VII.2002, E.S.S. Álvares & E.O. Machado *leg.*, 1♂ (UFMG 4722); ditto, (Parque Nacional da Serra do Cipó, 19°19'34"S 43°30'21"W, 1215 m), 11.II.2001, E.S.S. Álvares *leg.*, 1♀ (UFMG 646); *Rio de Janeiro: Itatiaia* (Parque Nacional do Itatiaia, 22°27'17"S 44°36'30"W, 802 m), 15–22.II.2011, G.H.F. Azevedo *et al leg.*, 2♀ (UFMG 9742); *Rio de Janeiro* (Parque Nacional da Tijuca, 22°57'7"S 43°26'32"W, 563 m), II.2004, E.S.S. Álvares *leg.*, 1♂ 2♀ (UFMG 1781); Teresópolis (Parque Nacional da Serra dos Órgãos, 22°27'19"S 42°59'20"W), 2.II.2008, M.O. Gonzaga A.J. Santos *leg.*, 1♀ (UFMG 5507); *Rio Grande do Sul: Derrubadas* (Parque Estadual do Turvo, 27°14'51"S 43°57'28"W, 440 m), 21.III.2011, G.H.F. Azevedo & A.J. Santos *leg.*, 1♀ (UFMG 10253).

***Philoponella divisa* Opell, 1979**

Distribution. This species, previously known only for the type locality in Colombia (Platnick 2013, Opell 1979), is here newly recorded for Brazil (Fig. 7C).

Material examined. Brazil, *Goiás*: Serranópolis (Reserva Particular do Patrimônio Natural Pousada das Araras, 18°26'18"S 52°0'14"W, 556 m), 10–12.IV.2011, G.H.F. Azevedo & A.J. Santos *leg.*, 1♂ (UFMG 9890).

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