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Small scale endemism in Brazil's Atlantic Forest: 14 new species of *Mesabolivar* (Araneae, Pholcidae), each known from a single locality

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Abstract

In an ongoing mega-transect project that aims at analyzing pholcid spider diversity and distribution in the Atlantic Forest of Brazil, many species appear restricted to small geographic ranges. Of the 84 species collected between 2003 and 2011 at 17 sites between Bahia and Santa Catarina, 51 species (61%) were found at only one locality. The present paper focuses on such species in the genus *Mesabolivar*, and compares diversity and distribution patterns of this genus within and outside the Atlantic Forest. The percentage of species known from single localities is higher in the Atlantic Forest (34 of 52 species; 65%) than outside the Atlantic Forest (10 of 25; 40%). Distribution ranges of species in the Atlantic Forest are significantly smaller than of species outside the Atlantic Forest (mean maximum distances between localities: 184 versus 541 km; medians: 10 km versus 220 km). The following species are newly described (arranged from north to south), each currently known from the respective type locality only: *M. caipora*; *M. kathrinae*; *M. bonita*; *M. pau* (Bahia); *M. monteverde*; *M. perezi* (Espírito Santo); *M. giupponii*; *M. goitaca*; *M. sai* (Rio de Janeiro); *M. tamoio*; *M. unicornis*; *M. gabettiae*; *M. inornatus* (São Paulo); *M. itapoa* (Santa Catarina).

Key words: Atlantic Forest, Brazil, *Mesabolivar*, taxonomy, distribution ranges, endemism

Introduction

The Atlantic Forest along the eastern coast of Brazil is widely recognized as one of the World's richest ecosystems. However, it combines not only unusually high levels of biodiversity and endemism, but also of fragmentation and deforestation (Galindo-Leal & Câmara 2003, Tabarelli *et al.* 2005, Carnaval & Moritz 2008, M. C. Ribeiro *et al.* 2009, 2011). The combination of these characteristics has earned the Atlantic Forest the clouded honor of being ranked among the Earth's "hottest hotspots" (Myers *et al.* 2000).

Pholcid spiders are among the most diverse spider families anywhere in tropical regions (Huber 2011), but the Atlantic Forest seems to stand out. Few localities worldwide are known to count more than ten species of Pholcidae; the majority of these localities are situated in the Atlantic Forest (Huber & Rheims 2011; B.A. Huber, unpublished data). In addition, the Atlantic Forest is characterized by a high species turnover, with many species known from only one locality or from a very limited area. This is in stark contrast to the Amazon Forest, where

PALPS. As in Figs. 193–194; coxa with retrolateral apophysis; trochanter barely modified; femur with retrolateral process proximally, strongly widened distally; tarsus with small dorsal process; procurus with distinctive distal elements (Fig. 196); bulb with long sclerotized embolar division, with long membranous side branch set with small tubercles (Fig. 195).

LEGS. Without spines and curved hairs, few vertical hairs; retrolateral trichobothrium on tibia 1 at 5%; prolateral trichobothrium present on tibia 1; tarsus 1 with ~20 pseudosegments, distally distinct.

Male (variation)

Tibia 1 missing in other male.

Female

In general similar to male but sternum with unique pair of processes at posterior margin. Tibia 1 in 4 females: 3.2, 3.2, 3.4, 3.4. Anterior epigynal plate strongly protruding, with two pairs of short processes, one lateral and one anterior, with pocket on frontal side (Figs. 199–200, 207–209); posterior plate narrow and weakly developed, with row of 3–4 spines on each side. Internal genitalia as in Figs. 51 and 201, very small relative to epigynum, with tiny elongate pore plates embedded in sclerite. ALS with one widened and one pointed spigot each.

Natural history

This species was found in tiny webs under leaves on the ground and in small holes. When disturbed, it vibrated rapidly with small amplitude.

Distribution

Known from type locality only (Fig. 2).

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