



Description of two new species of *Avicularia* Lamarck 1818 and redescription of *Avicularia diversipes* (C.L. Koch 1842) (Araneae, Theraphosidae, Aviculariinae)—three possibly threatened Brazilian species

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Abstract

Avicularia diversipes (C.L. Koch 1842) known previously only from its original description is redescribed along with *Avicularia sooretama* sp. nov. and *Avicularia gamba* sp. nov. The three species are endemic to Brazilian Atlantic rainforest. With other *Avicularia* species, they share a procurved anterior eye row, slender embolus and medially folded spermathecae, whereas they have unusual characters, such as a very long and spiraled embolus (*A. diversipes*) and spermathecae with multilobular apex (*A. sooretama* sp. nov.). Furthermore, the three species lack a tibial apophysis in males and share a distinctive color pattern ontogeny that is not known in any other *Avicularia* species. The conservation status of the three species is discussed, especially with respect to endemism, illegal trafficking and habitat destruction. The creation of protected areas in southern State of Bahia, Brazil, is recommended, as well as the inclusion of these species in IUCN and CITES lists. Appendices with figures and species information are presented to facilitate correct specimen identification by custom officers, in order to limit illegal traffic.

Key words: Tarantula conservation, Pet trade, Brazilian Atlantic Rainforest, Protected areas, Taxonomy, Threatened species

Introduction

The tarantula family Theraphosidae, with 908 described species, comprises more than a third of all species in the infraorder Mygalomorphae (Platnick 2008). Between 1998 and 2008, 57 new species in the Theraphosidae were described (Platnick 2000; 2008). This represents an increase of 6.28% in the number of described species in the Theraphosidae in 10 years. Despite more species being described recently, many theraphosid species were described in the XVIIIth, XIXth and the beginning of the XXth centuries that have never been studied since their formal descriptions and cannot be properly identified. Some recently described new species may be synonymous with those old species. Thus, the examination and redescription of older types is essential before new species are erected (Fukushima *et al.* 2008).

During revisions of some aviculariine genera by the authors all the available old types are being examined in order to resolve taxonomic questions. This work resulted in the rediscovery of some neglected names, including *Mygale diversipes* C.L. Koch 1842. The species was described from a female and a juvenile and originally included in the genus *Mygale* Latreille 1802. After its description, the species name was cited once by the same author (C.L. Koch 1850), who transferred it to *Eurypelma* Koch 1850, making the new combination *Eurypelma diversipes* (C.L. Koch 1842). Other arachnologists, like Simon (1864, 1892) and Ausserer (1871), cited the species under *Eurypelma*. Nevertheless, Pickard-Cambridge (1896) considered it belonged in *Avicularia*.