

Revision of the genus *Minagrion* Santos, 1965 (Odonata: Coenagrionidae)

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Abstract

Endemic to Brazil, the genus *Minagrion* Santos, 1965 is revised for the first time. The genus contains five species, and here we establish diagnostic characters, keys and drawings for both sexes. Furthermore, we propose the synonymy of *M. franciscoi* Machado & Bedê, 2015 new syn. with *M. caldense* Santos, 1965.

Key words: Neotropical, Brazil, Damselfly, Zygoptera, synonymy

Introduction

The genus *Minagrion* was proposed by Santos (1965b), for the following four taxa: *Telagrion mecistogastrum* Selys, 1876, *Agrion waltheri* Selys, 1876, *Telagrion ribeiroi* Santos, 1962 and *Minagrion caldense* Santos, 1965 (described in the same study). The first taxon was selected as the type species for the genus. In a study published the same year but shortly before the genus proposition, Santos (1965a) suggested that *A. waltheri* should be considered as a senior synonym of *Telagrion serrapicoensis* Santos, 1956 and therefore transferred it to *Minagrion* in Santos (1965b). Those four taxa were therefore placed into the newly erected genus due to the peculiar characteristic of a projection of the S1 sternum (here called the tubercle; see Fig. 2), a unique character among Neotropical coenagrionids (Garrison *et al.* 2010). One more species has been described till the end of the XXth century: *M. canaanense* Santos (1967), based on specimens collected in the Canaã valley, in Espírito Santo State. Only 48 years after the last species addition, Machado & Bedê (2015) described *M. franciscoi*, collected in the historical springs of the Rio São Francisco (one of the largest rivers in Brazil), within the Serra da Canastra National Park (SCNP).

During expeditions to the SCNP (May and October 2017, March and November 2018 and April 2019), we never found a mating pair of *M. caldense*. However, we collected several females flying in the same area or perched near males. After comparing the captured females with the known females of *Minagrion*, we began to think that these females could be the hitherto unknown female of ‘*M. franciscoi*’, although they strongly resemble *M. caldense* females. To test this hypothesis, the whole genomic DNA of nine specimens was taken, so we could determine their identity.

The taxonomic status of *Minagrion* was considered well established by Garrison *et al.* (2010), with males being easily separated from each other by cercus and tubercle morphology. However, the morphology of two species (*M. caldense* and *M. franciscoi*) was found to be remarkably similar despite the coloration differences, and the syn-