

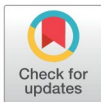
RESEARCH ARTICLE

A further study on *Franciscobasis* Machado & Bedê, 2016 (Odonata: Coenagrionidae), a newly described genus from Minas Gerais, Brazil

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Abstract

The genus *Franciscobasis* Machado & Bedê, 2016 is endemic to the Serra da Canastra National Park in Minas Gerais state, Brazil. Two species of *Franciscobasis* were described simultaneously with the genus description: *F. franciscoi* and *F. sonia*, the latter described only from females. Through morphological and molecular analysis, we investigated if *F. sonia* may represent the young female of *F. franciscoi*. Resulting data did not present adequate differences between females to characterize them as different species. Therefore, we suggest that *F. sonia* is a junior synonym of *F. franciscoi*, and the female of *F. franciscoi* goes through a complex ontogenetic color change.

Introduction

Franciscobasis Machado & Bedê comprises a small Coenagrionid genus, which was described in 2015 to include two species: *F. franciscoi* and *F. sonia*, collected in the headsprings of the São Francisco River. On that occasion, seven other species were reported as new (five of them described in the same study); all of them were found in a 600 m transect, within Serra da Canastra National Park (SCNP, [1]). *Franciscobasis sonia* was an exception among the newly found species, having only females described, with males unknown. Furthermore, the separation between females of *F. sonia* and *F. franciscoi* was based mainly on coloration [1].

Delimitating species based solely on morphological methods may result in identification mistakes which can lead to the description of new species [2], especially in polymorphic taxa, which are very common in the family Coenagrionidae. Therefore, several authors advocate for the urgent need to apply integrative approaches to taxonomy and systematics [3]. Integrating different approaches and disciplines (such as molecular, external and internal morphology, and animal coloration) may provide useful data for biological reasoning behind descriptions of diverse life [4,5].