



A new species of *Araucnephia* (Diptera: Simuliidae) from the Northeast Region of Brazil

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Abstract

We describe and illustrate the pupa, larva, and both adults of a new species in the genus *Araucnephia* Wygodzinsky & Coscarón, 1973 (*A. cearensis* **nov. sp.**). The species was found in a highland area in Ceará State, Northeast Brazil. The pupa can be separated from those of other *Araucnephia* pupae based on the number of gill filaments, which range from 25 to 35 branches (versus 9 or 14), and by it being completely encased by the cocoon. The larva can be separated from those of other *Araucnephia* based on the presence of a median accessory anal sclerite. Adults are typical of the genus. This species extends the northern range of the genus *Araucnephia*, which is postulated to be Gondwanan in origin.

Key words: Atlantic forest, Neotropical black fly, Semi-arid area

Introduction

The genus *Araucnephia* was created as a monotypic genus restricted to the Andean mountains of Chile by Wygodzinsky and Coscarón (1973) to accommodate the single species *A. montana* Philippi. Later, Coscarón and Coscarón-Arias (1995) proposed that this genus might be restricted to southern South America due to their high degree of endemism and because of the strong biogeographic barrier that separates the Chilean and Argentinean Andean regions from the Argentinean Eastern Lowlands. However, another species in this genus, *A. iberaensis* Coscarón and Coscarón-Arias, was subsequently described outside the Andean region in the Argentinean lowland (Coscarón & Coscarón-Arias 2002). Coscarón and Coscarón-Arias (2007) also recorded *A. iberaensis* in Paraná State, Southwestern Brazil. This is significant because no Chilean Simuliidae genera have been recorded west of the Andean area, suggesting that species in this genus may have a common Gondwanan ancestor. During a survey of simuliid fauna in Ceará State, Northeast Brazil, we identified a new species of *Araucnephia*. Thus, we describe the larvae, pupae, adult males, and adult females of a novel species of *Araucnephia*, which is named here as *Araucnephia cearensis*. The systematic position of this species is also discussed.

Materials and methods

Larvae and pupae were captured by manual collection from a small tributary of the Gavião River, Mount Maranguape, which is approximately 750 masl and located in Maranguape Municipality, Ceará State (3°53'27"S, 34°41'08"W). The field site was described in detail by Pessoa *et al.* (2005). A single male and a single female were obtained by rearing pupae, while some pharate males and females were obtained by dissection. Larvae and pupae were slide mounted in Berlese fluid and images were captured using a digital camera attached to a light microscope. Images were obtained using a Synoptics Digital System at Instituto Leônidas e Maria Deane. Several larvae were mounted and photographed using a scanning electron microscopy (SEM). For SEM, larvae were fixed in