Description of the unknown stages of *Simulium* (*Aspathia*) *sandyi* Coscarón, Ibáñez-Bernal & Coscarón-Arias (Diptera: Simuliidae)

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Abstract

The pharate male and the larva of *Simulium* (*Aspathia*) *sandyi* Coscarón, Ibáñez-Bernal & Coscarón-Arias, 1999, are described for the first time, and the female and pupa are redescribed. The most important features of the larva, pupa, male, and female are illustrated, and the previously reported type locality is corrected.

Key words: Diptera: Simuliidae, black flies, *Simulium*, *Aspathia*, *Simulium sandyi*, morphology, description, taxonomy

Introduction

Coscarón *et al.* (1999) revised the Neotropical species of the subgenus *Simulium* (*Simulium*) Latreille, treating 25 species from the southwestern United States and northern Mexico to northern Chile; they synonymized two names and described two new species: *Simulium wygoi* Coscarón, Ibáñez-Bernal & Coscarón-Arias and *S. sandyi* Coscarón, Ibáñez-Bernal & Coscarón-Arias, both from central Mexico. *Simulium wygoi* was described based on morphological characteristics of the pharate male and female, pupa, and larva, whereas *S. sandyi* was described based only on the pharate female and pupa.

Coscarón *et al.* (1999), in a cladistic analysis, suggested that the Neotropical species of *Simulium* (*Simulium*) Latreille, 1802, represent a separate group that could be referred to the subgenus *Simulium* (*Aspathia*) Enderlein, 1935; *Aspathia* had been considered a synonym of *Simulium* (the subgenus) for about 50 years (Smart 1945). Adler *et al.* (2004), proposed that Neotropical species formerly placed in the *S. hunteri* and *S. metallicum* species groups, along with several Palearctic species groups, should be placed in *Simulium*