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Description of immature stages and adult diagnosis of *Stilobezzia coquilletti* Kieffer 1917 (Diptera: Ceratopogonidae)

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Abstract

The pupa and larva of *Stilobezzia* (*Stilobezzia*) *coquilletti* Kieffer are described, and a diagnosis of the adult is given. All described stages were photomicrographed and illustrated by using phase-contrast microscope, plus Scanning Electron Microscope in the case of the larva. Immature stages were collected in a shallow stream of sandy bottom nearby Manaus, Brazil. The pupa is compared with *S.* (*S.*) *fiebrigi* Kieffer, and the larva with *S.* (*S.*) *antennalis* Coquillett.

Key words: immatures, description, *Stilobezzia coquilletti*, Ceratopogonidae, Manaus, Brazil

Introduction

Stilobezzia Kieffer is a large and diverse genus of Ceratopogonidae, worldwide in distribution. The adult females are important predators on other small insects, and the immatures stages are found in a wide variety of aquatic and semiaquatic habitats, including streams, lakes and ponds margins, puddles, swamps, rice fields, rock pools, and tree holes (De Meillon & Wirth, 1991; Cazorla *et al.*, 2006).

Despite the great importance of knowing the ontogeny, immatures of *Stilobezzia* have been poorly studied. Of the 65 species of the genus recorded from the Neotropical region the larvae of only two species and the pupae of 10 species are known (Borkent & Spinelli, 2007).

During recent field sampling by DSC in the vicinity of Manaus, Brazil, immatures of *Stilobezzia* sp. were collected. They were isolated and observed in the laboratory until the adult emergence, and then identified as *S. coquilletti* Kieffer. The larva of this species is unknown and the pupa was poorly described by Lane and Forattini (1961) and Wirth & Grogan (1981). The purpose of this paper is to describe and illustrate the fourth instar larva and the pupa of this species, providing as well the adult diagnosis.

Material and methods

Larvae and pupae were collected associated to the sand at the bottom of a very shallow human disturbed stream (Fig. 6). The sandy sediment was collected with an aquatic net (Fig. 7) and transported to the laboratory with water from the natural environment containing Oligochaeta, Copepoda and detritus. They were placed individually in small test tubes with 50 ml of water and checked daily in the laboratory until emergence of adults.

For observation with phase-contrast microscope with oil immersion, larvae and pupae were slide mounted

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