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Neotype designation and redescription of adult male and immature stages of *Anopheles* (*Nyssorhynchus*) *pictipennis* (Philippi) (Diptera: Culicidae)

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Abstract

A neotype is designated for *Anopheles (Nyssorhynchus) pictipennis* (Philippi) and morphological redescriptions are provided for the adult male, male genitalia, fourth-instar larva and pupa. All specimens, including the neotype were collected in Río Mapocho, Santiago, Chile in 1945 / 1946, and were deposited in the Entomological Collection of Faculdade de Saúde Pública, Universidade de São Paulo (FSP-USP), Brazil. The neotype was previously invalidly designated the allotype of *An. pictipennis* by Lane and Neghme (1946). Illustrations are provided for diagnostic characteristics of the male genitalia, and larval stage.

Key words: Neotype, *Nyssorhynchus*, distribution, morphology, Chile

Introduction

The genus *Anopheles* Meigen has a cosmopolitan distribution. In the Neotropical Region approximately 82 species are known (Harbach 2004). The genus is currently divided into six subgenera, *Anopheles*, *Cellia*, *Lophopodomyia*, *Nyssorhynchus*, *Stethomyia* (Harbach 1994, 2004), and *Baimaia* (Harbach *et al*. 2005). Except for *Anopheles albimanus* Blanchard, which occurs in the southern Nearctic Region, the subgenus *Nyssorhynchus* Blanchard has a neotropical distribution, and includes some of the most important vector species that transmit parasites of the genus *Plasmodium*, which cause human malaria. *Nyssorhynchus* includes 33 nominal species, which are divided into three sections, and several groups and subgroups. The Argyritarsis Section includes eight species (Linthicum 1988), the Albimanus 19 species (Faran 1980) and the Myzorhynchella four species (Harbach 2004). The presence or absence of a basal dark band on the hindtarsomere 5 (TaIII5) of the adult is used to distinguish species of the Albimanus and Argyritarsis Sections (Linthicum 1988). The Myzorhynchella Section differs from the other two sections by the absence of small caudolateral patches of scales on abdominal terga III–VII (Linthicum 1988; Peyton *et al.* 1992), however it is similar to the Argyritarsis Section in having hindtarsomere 5 entirely white scaled (Peyton *et al.* 1992).

Anopheles (*Anopheles*) *pseudopunctipennis* Theobald and *Anopheles (Nyssorhynchus) pictipennis* (Philippi) are the only *Anopheles* species that have been recorded in Chile. *Anopheles pictipennis* was described by Philippi (1865) as a member of the genus *Culex* L. from a male collected in Santiago, and transferred to the genus *Anopheles* by Knab (1913). Later, Edwards (1932) included *An. pictipennis* in the subgenus *Myzorhynchella*, but Forattini (1962) considered *An. pictipennis* to be a member on an uncertain subgenus of *Anopheles* and Linthicum (1988) included *An. pictipennis* in the Pictipennis Subgroup of the Argyritarsis Group of *Nyssorhynchus*. Considering that the type specimen of *An. pictipennis* does not exist (Belkin *et al*. 1968), the original description of the adult is incomplete, the fourth-instar larva and pupa were

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