



## Redescription of *Culex (Culex) dolosus* (Lynch Arribálzaga) (Diptera: Culicidae), based on specimens from Pico do Itapeva, Serra da Mantiqueira, São Paulo, Brazil

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### Abstract

*Culex (Culex) dolosus* (Lynch Arribálzaga, 1891) is re-described and compared with *Cx. eduardoi* Casal & Garcia (1968) based on morphological characteristics. Both species are morphologically similar, and they have been largely misidentified throughout Brazil. Adult male and female, fourth instar larvae, and pupae of *Cx. dolosus* were examined, based on specimens from Pico do Itapeva, Pindamonhangaba Municipality, Serra da Mantiqueira, São Paulo State, southern Brazil. Male genitalia, larvae and pupae are illustrated. Geographical distribution is summarized from published records, and information on bionomics is based on the literature and field data.

**Key words:** Mosquito, Culicidae, *Culex dolosus*, taxonomy, morphology

### Introduction

*Culex (Culex) dolosus* (Lynch Arribálzaga) was described, in the genus *Heteronycha*, from adults collected in Buenos Aires, Argentina. Howard *et al.* (1917) proposed that the female adults used in the description of *Heteronycha dolosa* belonged to the genus *Aedes* Meigen. Dyar (1919) noted that Lynch Arribálzaga (1891) made an incorrect gender association when he described an adult male of *Culex* and an adult female of *Aedes* to name the genus *Heteronycha*. Additionally, he considered that the adult female belonged to *Aedes lynchii* Brèthes, currently in the synonymy of *Aedes crinifer* (Theobald). Consequently, the genus *Heteronycha* was synonymized with *Culex*. The lectotype of *Cx. dolosus* is an adult male deposited in the collection of the Museo Argentino de Ciencias Naturales “Bernardino Rivadavia” (MACN), Buenos Aires, Argentina (Belkin *et al.* 1968; Rossi *et al.* 2002). Two species currently in the synonymy of *Cx. dolosus* are *Culex bilineatus* Theobald and *Culex bonariensis* Brèthes. *Culex bilineatus* was described by Theobald (1903) based on adult males and females collected in São Paulo municipality, São Paulo State, Brazil, and synonymized with *Cx. dolosus* by Lane (1951). *Culex bonariensis* was described by Brèthes (1916) from adult males and females collected in San Isidro, Buenos Aires, Argentina, and transferred to the synonymy of *Cx. dolosus* by Dyar (1928).

The bionomics, ecology and geographical distribution of *Cx. dolosus s.s.* are poorly known, partly because the species has been misidentified as *Culex eduardoi* Casal & García. Duret & Barreto (1956) and Forattini & Rabello (1965) noted morphological variations in the size and shape of the dorsal process and the size of the lateral arm teeth on the lateral plate of phallosome of *Cx. dolosus s.l.* from Ribeirão Preto and Cotia municipalities, São Paulo State, Brazil. Considering that specimens of *Cx. dolosus* and *Cx. eduardoi* have