



## Description of the immature stages of *Culex (Culex) ameliae* Casal and *Culex (Culex) articularis* Philippi (Diptera: Culicidae)

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### Abstract

The pupa and the fourth-instar larva of *Culex (Culex) ameliae* Casal and *Cx. (Cux.) articularis* Philippi are described and illustrated for the first time. Information is provided on the distribution, bionomics and taxonomy of the species.

**Key words:** *Culex (Culex) ameliae*, *Culex (Culex) articularis*, description, immature stages

### Introduction

*Culex (Culex) ameliae* was described by Casal (1967) based on the male genitalia and a single morphological character of the adults. The specimens were collected between San Pedro and Eldorado, 10 km from San Pedro, Misiones Province, Argentina. Adults were obtained from individual rearing of larvae and Shannon traps. Although the pupal and larval exuviae of 15 male and 7 female paratypes were preserved, neither immature stage was described, and the adult descriptions were limited to few characters.

*Culex (Culex) articularis* was described by Philippi (1865) based also on the male genitalia and a few morphological characters of adults collected in Casa Pangué, Llanquihue, Chile. Nothing was said about the immature stages.

The purpose of this paper is to provide the first descriptions of the pupa and fourth-instar larva of *Cx. ameliae* and *Cx. articularis*.

### Material and methods

Ten pupal and three larval exuviae of paratypes of *Cx. ameliae* were studied. These specimens are deposited in the Administración Nacional de Laboratorios e Instituto de Salud (ANLIS) “Dr. Carlos G. Malbrán”, Buenos Aires, Argentina, but were relocated to the Centro de Estudios Parasitológicos y de Vectores (CEPAVE) La Plata, Argentina, where there were temporarily available. Material used to describe *Cx. articularis* included three pupal and six larval exuviae obtained by G.C. Rossi. Identification of this material was based on male genitalia removed from a dead pupa (the adults died before emergence).

Pupal and larval exuviae were mounted on microscope slides in Canada balsam. Morphological terminology follows Harbach & Knight (1980, 1982). Voucher specimens are deposited in the ANLIS. Life stages are indicated as follows: M (male), F (female), Pe (pupal exuviae), L (fourth-instar larva) and Le (larval exuviae). An asterisk following an abbreviation indicates that the life stage was at least partially illustrated in the publication cited. Mea-