

## Morphology of the larval mandible and maxilla in the subgenus *Carrollia* Lutz of *Culex* L. (Diptera: Culicidae)

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### Abstract

Larval mouthpart morphology has proven to be an additional taxonomic tool at the subgeneric and generic level in mosquitoes (Diptera: Culicidae) of the genus *Anopheles* and some members of the tribe Sabethini. However, little is known about these characters in genus *Culex*. The present work describes the mouthpart morphology of four species belonging to the recognized groups in the subgenus *Carrollia*. Five mandibular characters are diagnostic in the subgenus, four on the mandible and one on the maxilla: posterior dorsal tooth (PDT), mandibular comb (MnC), mandibular spiculose area (MSA), postartis (Poa) and dorsal maxillary suture (DMxS). The maxilla offers two characters that allow the separation of the groups proposed by Valencia (1973) for this taxon: seta (4-Mx), *Cx. bahaicola* and *Cx. rausseoi* (*bahaicola* group) is large (0.127-0.159 mm), little sclerotized, not branched and located posterior beyond the laciniarastrum one (LR1), in *Cx. iridescens* and *Cx. urichii* (*iridescens* group) it is very large (0.203-0.229 mm), strongly sclerotized, branched on the apex and medial to the maxillary body (MxBo).

**Key words:** Culicini, *Carrollia*, mouthparts, morphology, systematics

### Introduction

The genus *Culex* L. (Diptera: Culicidae) represents close to 800 named species worldwide. According to the most recent catalogs (Knight & Stone 1977; Ward 1992; Harbach & Peyton 1992; Guimarães 1997) and the recent checklist of genera and subgeneric abbreviations Reinert (2001), 24 subgenera are assigned to the genus, ten in the Old World, 11 restricted to the New World and 3 with worldwide distribution (*Culex*, *Lutzia* Theobald and *Neoculex* Dyar).