



A new species of *Alipumilio* Shannon (Diptera, Syrphidae) found in association with the exudate resin of *Schinus terebinthifolius* Raddi (Anacardiaceae)

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Abstract

The adult stage of a new species of flower fly, *Alipumilio athesphatus* Thompson (Diptera, Syrphidae) is described. The gross morphology and external integumentary features of the egg, third-instar larva and pupa are also presented. All immature stages were found in association with the exudate resin of *Schinus terebinthifolius* Raddi (Anacardiaceae) in Porto Alegre, Rio Grande do Sul State, Brazil.

Key words. insect taxonomy, insect morphology, insect fine structure, neotropics, flower flies, brazilian peppertree, tree resins

Introduction

The genus *Alipumilio* Shannon, 1927 (Diptera, Syrphidae) is restricted to the Neotropical region, and was described on the basis of a single female collected by H. W. Bates on Amazon, which was named as *Alipumilio femoratus* Shannon (1927: 12).

Vockeroth (1964) revised the genus and described three new species based on single females from Peru and Mexico. Thompson (1972) redescribed the genus and described the first male, placing *Alipumilio* in the tribe Eumerini with *Nausigaster* Williston, 1883 and *Psilota* Meigen, 1822. Rotheray *et al.* (2000) described the larval stage of the type species and suggested based on cladistic analysis that *Alipumilio* is closely related to *Eumerus*, but distant of *Nausigaster*. He also pointed out the presence of a hook-bearing cephalo-pharyngeal skeleton, also found in the larvae of some species of *Cheilosia* Meigen, 1822. Later a more comprehensive analysis was made (Ståhls *et al.* 2003) where the relationship of *Alipumilio* to other syrphids varied greatly depending on the character set used (adult, larval, or DNA), but the combined analysis always included *Alipumilio* in the tribe Eumerini (Ståhls *et al.* 2003).

Alipumilio comprises six recognized species, including the new species described herein. The immature stages live in association with trees that produce resin. Some *Alipumilio* larvae were reared from pine trees in southern Brazil (Thompson 1972); larvae of *A. femoratus* were reared from the sap of *Psychotria* sp. (Rubiaceae) in Ecuador (Rotheray *et al.* 2000); and Plowden *et al.* (2004) found an *Alipumilio* species in the exuded resin of *Protium* species (Burseraceae) in the Eastern Brazilian Amazon.

Alipumilio athesphatus **sp. n.** eggs are laid on small crevices of *Schinus terebinthifolius* Raddi (Anacardiaceae) stem surface. Soon after eclosion, the first instar larva digs a gallery, burying itself into the