

FIRST RECORD OF A LARVAL PARASITOID PERILAMPIDAE (HYMENOPTERA) LIVING ON AN ADULT CHIRONOMIDAE FROM THE ATLANTIC FOREST, BRAZIL

Fabio de Oliveira Roque¹ & Susana Trivinho-Strixino²

¹ *Laboratório de Entomologia Aquática, Depto de Biologia, FFCLRP, USP, Brazil*

E-mail: chironomidae2005@yahoo.com.br

² *Depto de Hidrobiologia, Universidade Federal de São Carlos, Brazil*

Although chironomids are known to be parasitized by a variety of taxa including mermithid nematodes, water mites, fungi and microsporidians (Steffan, 1967; Tokeshi, 1995), until now they have not been reported as potential hosts for Hymenoptera parasitoids.

Here we report the occurrence of a Perilampidae larva (Hymenoptera: Chalcidoidea) living on the head of a male adult *Chironomus* (Diptera: Chironomidae) for the first time. The specimens were collected using a Malaise trap in the Brazilian Atlantic forest, in the State of São Paulo, Cananéia, (S 24°53'03" W 47°51'22"). The organisms are deposited in the collection of the Laboratório de Entomologia Aquática da Universidade Federal de São Carlos, SP, Brazil.

Perilampidae larvae are encountered mainly as hyperparasites of Lepidoptera, Diptera and Hymenoptera species (Smith, 1912; Clausen, 1940; Heraty and Darling, 1984). In addition to the records as a hyperparasite, several species of the genus *Perilampus* are listed as primary parasites of Lepidoptera, Coleoptera, Hymenoptera, and Neuroptera. In general, females of Perilampidae deposit their eggs away from the host in or on leaves or buds, in cracks in the bark, or under lichens on trees. An egg hatches into a planidium type larva that attempts to attach itself to almost any moving object. Thus, attachment to an appropriate host, or to an intermediate carrier that will transport the planidium into a gallery or nest where there are appropriate hosts, is serendipitous. A planidium that attaches itself to a secondary host burrows into the body and searches for a tachinid (Diptera) or ichneumonoid primary host, which if found will also be entered. A planidium that attaches itself to a primary host may remain external, but in both instances the planidium becomes dormant until the primary host pupates.

More research is necessary to affirm if the Chironomidae are accidental, secondary or primary hosts of Perilampidae larvae.

Acknowledgements

We would like to thank Dr. Magda V. Yamada for the parasitoid identification and Dr. Leny C. S. Correia for the *Chironomus* identification. The State of São Paulo Research Foundation sponsored this work within the BIOTA/FAPESP – The Biodiversity Virtual Institute Program (www.biotasp.org.br).

References

- Steffan, A.W. 1967. Ectosymbiosis in aquatic insects. In Henry S.M (Ed.) *Symbiosis*. Academic Press, New York and London, pp 207-289.
- Clausen, C.P. 1940. *Entomophagous Insects*. McGraw Hill, New York, London.
- Heraty, J.M. and Darling, D.C. 1984. Comparative morphology of the planidial larvae of Eucharitidae and Perilampidae (Hymenoptera: Chalcidoidea). - *Syst. Entomol.* 9(3): 309-328.
- Smith, H.S. 1912. The chalcidoid genus *Perilampus* and its relation to the problem of parasite introduction. - *U. S. Bur. Ent. Tech. Ser.* 19 (4): 33-69.
- Tokeshi, M. 1995. Species interactions and community structure. In Armitage, P.D, Cranston, P.S and Pinder, L.C.V (Eds.) *Biology and ecology of non-biting midges*. Chapman & Hall, London. pp 297-335.