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## The larvae of the Aegean endemic caddisflies *Hydropsyche debirasi* Malicky 1974 and *Hydropsyche kleobis* Malicky 2001 (Trichoptera: Hydropsychidae) with notes on their ecology and zoogeography

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### Abstract

The larvae of *Hydropsyche debirasi* Malicky 1974 and *Hydropsyche kleobis* Malicky 2001, endemics of the Aegean Islands, Greece, are described for the first time. The diagnostic features of the species are described and illustrated and some information regarding their ecology and zoogeography are included.

**Key words:** Description, identification, larva, island, endemic, Greece

### Introduction

The genus *Hydropsyche* in Greece is represented by 26 species, eight of which are endemic (Malicky 2005). These include *Hydropsyche debirasi* Malicky 1974 endemic to the islands of Icaria and Naxos, *H. kleobis* Malicky 2001 presumably endemic to the Aegean islands, *H. machaon* Malicky 2001 endemic to Rhodes Is., *H. perseus* Malicky 2001 endemic to Corfu Is., *H. pygmalion* Malicky 2001 endemic to Serifos Is., *H. pylades* Malicky 2001 endemic to Rhodes Is. and *H. rhadamanthys* Malicky 2001 and *H. sarpedon* Malicky 2001 which are endemic to the island of Crete.

Most systematic and biogeographical studies of the *Hydropsyche* of Greece have been based on adult males and females (Malicky 1974, 1993, 2004, 2005), thus the knowledge and identification of *Hydropsyche* larvae, as with many other Trichoptera species, remains unknown. The larvae of two Balkan Peninsula *Hydropsyche* species have been described recently: *Hydropsyche tabacarui* Botosaneanu 1960 (Kumanski et al. 2004) and *Hydropsyche peristerica* Botosaneanu & Marinković-Gospodnetić 1968 (Karaouzas 2009), however none of the larvae of the endemic Aegean *Hydropsyche* species are known.

The larvae of *Hydropsyche debirasi* and *H. kleobis* have never been previously described. Mature pupae of these species, with fully developed genitalia and retaining larval sclerites in the pupal cocoon, were collected from two perennial streams of Naxos Island, Aegean Sea, Greece. Larvae of *Hydropsyche* species from the same streams were also collected. The diagnostic features of the larvae of these two species are described and illustrated in this paper. This will enable the inclusion of the hitherto unknown larvae in the framework of eventual larval identification keys.

### Material and methods

#### Material examined

*Hydropsyche kleobis*. Naxos Island: Potamia, 37°04'N, 25°26'E, 6 fifth-instar larvae, 2 ♂ pupae, 29.viii.2011. Koronida, 37°08'N, 22°31'E, 8 fifth-instar larvae, 1 ♂ pupae, 29.viii.2011.