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The larva of *Rhyacophila balcanica* Radovanovic 1953 (Trichoptera: Rhyacophilidae) with notes on ecology

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Abstract

The previously unknown larva of *Rhyacophila balcanica* Radovanovic 1953 is described. The diagnostic features of the species are listed and illustrated and some information on its ecology and distribution is included. In addition, diagnostic characters for larvae of the known Greek *Rhyacophila* species are provided.

Key words: identification, taxonomy, description, zoogeography, Greece, Balkan Peninsula

Introduction

Rhyacophilidae Stephens 1836 is a large Trichoptera family that occurs in the temperate regions of Asia, North America, and Europe, in India, and in tropical areas of southeastern Asia. Most species of Rhyacophilidae are in the genus *Rhyacophila* Pictet 1834, with more than 700 recognised species (Holzenthal *et al*. 2007).

In Greece, the genus *Rhyacophila* is represented by 20 species and one subspecies (Malicky 1974, 1993, 2005). Four of them are considered endemic: *Rhyacophila fasciata kykladica* Malicky and Sipahiler 1993 (endemic to Cycladic Islands and Euboea); *R. fragariae* Malicky 1976 (endemic to the northwestern part of Greece); *R. gudrunae* Malicky 1972 (endemic of Crete); and *R. pendayica* Malicky 1975 (endemic to central Greece and Peloponnese, Oláh 2010). The larvae of these species, as well as *R. balcanica* Radovanovic 1953*, R. diakoftensis* Malicky 1983 (in Çakin & Malicky 1983)*, R. tsurakiana* Malicky 1984a, *R. armeniaca* Gurin-Méneville 1844, *R. biegelmeieri* Malicky 1984b, *R. denticulifera* Kumanski 1985, and *R. fischeri* Botosaneanu 1957, with broader geographical distributions, remain unknown. Larvae of the remaining ten species (*R. fasciata* Hagen 1859, *R. laevis* Pictet 1834, *R. loxias* Schmid 1970, *R. mocsaryi* Klapálek 1898, *R. nubila* Zetterstedt 1840, *R. obtusa* Klapálek 1894, *R. obliterata* McLachlan 1863, *R. palmeni* McLachlan 1879, *R. polonica* McLachlan 1879, and *R. tristis* Pictet 1834) have been described and are included in various larval keys (Lepneva 1964; Kumanski 1971; Pitsch 1993; Waringer & Graf 2011; Karaouzas 2015).

Rhyacophila balcanica is distributed in mainland Greece, Albania, Bosnia and Herzegovina, Croatia, Republic of Macedonia, Serbia, and the Republic of Kosovo (Živić *et al.* 2002; Malicky 2005; Stanić-Koštroman *et al*. 2012; Oláh & Kovács 2012, 2013; Ibrahimi *et al*. 2012). In this paper, the larva of *R. balcanica* is described for the first time and information on its ecology and distribution is given. The diagnostic features illustrated in this paper will enable the inclusion of this larva in existing larval keys. In addition, diagnostic features for larvae of the known Greek *Rhyacophila* species are provided.

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