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The larva of *Alpopsyche ucenorum* (McLachlan 1876) (Trichoptera: Limnephilidae) with notes on its systematic position and ecology

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Abstract

The paper gives a description of the hitherto unknown larva of *Alpopsyche ucenorum* (McLachlan 1876). Information on the morphology of this larva is given and the most important diagnostic features are illustrated. In the context of already available keys, the larva of *Alpopsyche* keys together with *Allogamus uncatus* (Brauer). The 2 species may be separated by the larger head width of *A. uncatus* and the position for the beginning of the lateral fringe (*A. ucenorum*: 3rd abdominal segment, *A. uncatus*: 2nd segment). With respect to zoogeography, *A. uncatus* is widely distributed in Europe whereas *A. ucenorum* is restricted to the western Alps. In addition, ecological facts are summarized and the systematic position within Limnephilidae is discussed.

Key words: Trichoptera, *Alpopsyche ucenorum*, 5th instar larva, description, identification, distribution, ecology

Introduction

Alpopsyche ucenorum (McLachlan 1876), originally placed in the genus *Stenophylax* by McLachlan (1876), was transferred to *Rhadicoleptus* Wallengren 1891 by Schmid in 1955, and, finally to a new monotypic genus, *Alpopsyche* created especially for this species by Botosaneanu & Giudicelli (2004).

In his "Atlas of European Trichoptera," 2 species of *Rhadicoleptus* Wallengren, 1891, were listed by Malicky (2004): *R. alpestris* Kolenati with 4 subspecies (*R. a. macedonicus* Botosaneanu & Riedel, *R. a. meridiocarpathicus* Botosaneanu & Riedel, *R. a. spinifer* McLachlan, *R. a. sylvanocarpathicus* Botosaneanu & Riedel) and *R. ucenorum* McLachlan. Further research revealed substantial morphological differences between the 2 species, and in 2004 the new genus *Alpopsyche* has been established by Botosaneanu & Giudicelli, using *Rhadicoleptus ucenorum* as generotype. Based on larval morphology, *R. alpestris* has been included in a number of larval keys (e.g., Hiley 1976; Waringer & Graf 1997, 2004; Wallace *et al.* 2003; Higler 2005), whereas *Alpopsyche ucenorum* is still unknown in the larval stage. Recently, however, we managed to get from France larval specimens of *A. ucenorum*, whose association with the collected adults was made possible by larval sclerites enclosed in the case of a mature pupa. This material enabled us to investigate reliable diagnostic characters, permitting integration of *A. ucenorum* in the key of Waringer & Graf (1997, 2004).

Material and methods

Two larvae which obviously were not yet included in existing Limnephilinae keys were collected in a marshy spot irrigated by a helocrene spring of the Torrent du Sellar in the Massif du Queyras at 2380 m a.s.l. (Département des Hautes Alpes, France) by G. Le Guellec on 21 July 2006. In addition, 1 female pupa with larval sclerites and several males and females of *Alpopsyche ucenorum* were sampled at the same time and location. The association

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