



The larvae of *Allogamus antennatus* (McLachlan 1876), *Allogamus mendax* (McLachlan 1876) and *Allogamus pertuli* Malicky 1975 (Trichoptera: Limnephilidae) with notes on ecology and zoogeography

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Abstract

The paper gives a description of the hitherto unknown or poorly known larvae of *Allogamus antennatus* (McLachlan 1876), *Allogamus mendax* (McLachlan 1876) and *Allogamus pertuli* Malicky 1975. Information on the morphology of the larvae is given and the most important diagnostic features are illustrated. In the context of already available keys, the larva of *A. antennatus* keys together with *Annitella obscurata* (McLachlan 1876) and *Annitella thuringica* (Ulmer 1909). The species may be separated by the presence of setal groups between posteromedian and lateral metanotal sclerites in *A. antennatus* and differences in head width, central prosternite proportions and lateral fringe length. *Allogamus mendax* keys together with *Allogamus uncatus* (Brauer 1857); both species are very similar except in head width. Finally, *A. pertuli* keys with *Melampophylax mucoreus* (Hagen 1861) and *M. nepos* (McLachlan 1880). Whereas a setal band anterior of the lateral protuberance on the first abdominal segment is present in *A. pertuli*, such a feature is lacking in the two *Melampophylax* species. With respect to distribution, *A. antennatus* is restricted to the southern Alps and the Appennine peninsula, *A. mendax* to the western Alps and *A. pertuli* is endemic to the Pindos region in Greece. In addition, ecological characteristics are briefly discussed.

Key words: 5th instar larva, description, identification, distribution

Introduction

In his “Atlas of European Trichoptera”, Malicky (2004, 2005a) listed 18 species of *Allogamus* Schmid, 1955: *A. antennatus* (McLachlan 1876) with 2 subspecies other than the nominate subspecies (*A. a. ausoniae* Moretti 1991, *A. a. silanus* Moretti 1991), *A. auricollis* (Pictet 1834), *A. botosaneanui* Moretti 1991, *A. corsicus* (Ris 1897) with 1 subspecies other than the nominate subspecies (*A. c. illiesorum* Botosaneanu 1980), *A. dacicus* Schmid 1951, *A. despaxi* Décamps 1967, *A. fuesunae* Malicky 2004, *A. gibraltarius* González & Ruiz 2001, *A. hilaris* (McLachlan 1876), *A. laureatus* (Navás 1918), *A. ligonifer* (McLachlan 1876), *A. mendax* (McLachlan 1876), *A. mortoni* (Navás 1907), *A. periphetes* Malicky 2004, *A. pertuli* Malicky 1975, *A. stadleri* (Schmid 1951), *A. starmachi* Szczytny 1967 and *A. uncatus* (Brauer 1875).

By now, we are aware of larval descriptions of the following seven taxa: *A. antennatus ausoniae* (Cianficconi & Bicchierai 2007), *A. auricollis* (Moretti 1983, Wallace et al. 2003), *A. gibraltarius* (Ruiz-García et al. 2004), *A. laureatus* (Vieira Lanero et al. 1996), *A. ligonifer* (Frochot 1963, Waringer & Graf 2011), *A. mortoni* (Ruiz-García et al. 2004) and *A. uncatus* (Moretti 1983, Waringer 1987). In addition, a very brief account on *A. antennatus* was given by Moretti (1983). The remaining species are still unknown in the larval stage.

Several years ago co-author Hans Malicky made laboratory rearings of the unknown or poorly-known larvae of *Allogamus antennatus* and *A. mendax*. The eggs for these rearings were obtained from females collected on 11 October 1986 near Muggio (Canton Ticino, Switzerland; 45° 53' N, 09° 02' E) and on 9 October 1986 in Vermala (Canton Valais, Switzerland; 46° 19' N, 07° 30' E, 2000 m a.s.l.), respectively. The larvae of *A. pertuli* were collected by co-author Hans Malicky in the field near Mikro Chorio (Evritanias, Greece; 39° 50' N, 21° 44' E) on 15 October 1991. This material enabled us to work out reliable diagnostic characters permitting integration of the three species in the key of Waringer & Graf (2011).