



Article

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First record of *Alainites sadati* Thomas, 1994 (Ephemeroptera: Baetidae) in Tunisia, description of the larval stage and ecology

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Abstract

Alainites sadati Thomas, 1994 is recorded for the first time in Tunisia. The first description of the larval stage of *A. sadati* Thomas, 1994 is provided based on material from Algeria, near the type locality, and Tunisia. This species can be separated from the other Palearctic species by the number of gills, the setation of the legs, the prolongation of the paraproct and the reticulation of the tergites. Based on the new data, the ecology of *A. sadati* is discussed.

Key words: Ephemeroptera, Baetidae, *Alainites sadati*, larva, North Africa

Introduction

In her revision of the European species of *Baetis* Leach, 1815, Müller-Liebenau (1969) divided this genus in eleven species groups. *Baetis muticus* Linnaeus, 1758 was first included in the *gracilis* group (two species) (Müller-Liebenau, 1969), and subsequently to the *muticus* group (Müller-Liebenau, 1974). The author considered clearly this classification provisional as far as she wrote (Müller-Liebenau, 1973): “I feel that after many more years of describing and distinguishing species within the Baetidae, our concept of what a genus is in the family and our classification of the genera will be much different that what they are today”. In fact, the concept of *Baetis* as proposed by Müller-Liebenau has been proved to be paraphyletic (Waltz *et al.*, 1994; Waltz & McCafferty, 1997; Fujitani *et al.*, 2003; Fujitani, 2008; Gattolliat *et al.*, 2008; Novikova & Kluge, 1987); new genera were established for part of these species groups (McCafferty & Waltz, 1995; Novikova & Kluge, 1987; Waltz *et al.*, 1994). The species previously assigned to the *muticus* group were reassigned to the genus *Alainites* Waltz & McCafferty, 1994 (Waltz *et al.*, 1994). The villopore is a valuable apomorphy uniting *Baetis* and related genera. As *Alainites* does not possess this character, it can not belong to this complex of genera (Waltz *et al.*, 1994). At the larval stage, the distinctive characters to separate this genus were: the body (and especially the thorax) laterally compressed, the glossae with abundant thin setae on the dorsal side, the prostheca of the right mandible reduced to two bristles-like and feathered appendages, the absence of villopore and the paraproct with prolongation. At the imaginal stage, these characters were: hindwings, when present, with three longitudinal veins, the second being bifurcated, the segment III of the male forceps spherical to slightly elongated and curved (Waltz *et al.*, 1994). In our opinion, these characters, specially the absence of villopore, clearly indicate that *Alainites* does not belong to the *Baetis* complex and the tentative of Jacob (2003) and Bauernfeind & Soldán (2012) gathering again all the species groups in *Baetis sensu lato* is no more tenable (Fujitani, 2003).