



***Baetis zdenkae* sp. nov., a new representative of the *Baetis buceratus* species-group (Ephemeroptera: Baetidae) from Rhodos (Greece) with notes to species-grouping of the subgenus *Baetis* Leach, 1815 s. str.**

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### Abstract

The male and female imago (subimago of both sexes unknown), and larva of a new species belonging to the *Baetis buceratus* species-group, namely *Baetis (Baetis) zdenkae* sp. nov. from Rhodos Island are described and illustrated in detail. Substantial diagnostic characters of males and larvae of the whole *B. buceratus* species-group are summarized and its position relative to other species groups is discussed. Critical characters distinguishing *B. zdenkae* sp. nov. from all other representatives of the *B. buceratus* species-group are emphasized and a discussion of 22 characters of the remaining 6 European species-groups of the subgenus *Baetis* Leach, 1815 s. str. and their relationships is offered. Available data on the biology of *B. zdenkae* sp. nov. (vertical distribution, habitat, current and substrate preference, abundance and density, possible life cycle type, and mating flight and oviposition patterns) and distribution with respect to possible endemism are given. Basic data on biology and area of distribution of Westpalaeartic species *Baetis (Baetis) buceratus* Eaton, 1870, *B. (B.) nexus* Navás, 1918 and *B. (B.) spei* Thomas & Dia, 1985 known only from Lebanon are summarized and compared to those of *B. zdenkae* sp. nov.

**Key words:** Ephemeroptera, Baetidae, Rhodos, new species, *Baetis buceratus* species-group, taxonomy, biology, distribution

### Introduction

As far as we know, any special data concerning mayfly occurrence on Rhodos Island (Greece) in the East Mediterranean have never been published, and only two species have been mentioned in the literature. Sowa (1985) described a new species of the genus *Pseudocentropitulum* Bogoescu, 1947 (Bogoescu 1947) of the family Baetidae Leach, 1815 (Leach, 1815) on the basis of a rather incidental sample of 11 adults and a single damaged larva collected by Dr. H. Malicky near Kallithia in 1975 and the species was subsequently treated by Belfiore and D'Antonio (1990), and Jacob (1991) from the taxonomical point of view. Besides *Procloeon (Pseudocentropitulum) fascicaudale* (Sowa, 1985), Soldán and Godunko (2008) mentioned the occurrence of *Baetis mirkae* Soldán & Godunko, 2008 from the *B. lutheri* species group recently described from Cyprus also at a single locality on Rhodos.

In May of 2005, a rather incidental but extensive survey of mayflies was conducted at 19 freshwater localities and lenitic habitats of the island. The localities, studied only in the spring-summer seasonal aspect, were selected in order to cover all altitudinal zones, all types of aquatic habitats with regard to as much as possible an even distribution throughout the island. Including *P. fascicaudale* found at several localities in considerable