

Caddis flies (Trichoptera) of the Bílé Karpaty Protected Landscape Area and Biosphere Reserve (Czech Republic)

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KOMZÁK P. & CHVOJKA P. 2012: Caddis flies (Trichoptera) of the Bílé Karpaty Protected Landscape Area and Biosphere Reserve (Czech Republic). In: MALENOVSKÝ I., KMENT P. & KONVIČKA O. (eds.): Species inventories of selected insect groups in the Bílé Karpaty Protected Landscape Area and Biosphere Reserve (Czech Republic). *Acta Musei Moraviae, Scientiae biologicae* (Brno) **96(2)** (2011): 697–761. – An extensive survey of caddis flies (Trichoptera) was carried out in the Bílé Karpaty Protected Landscape Area and Biosphere Reserve (south-eastern Moravia, Czech Republic) in 2004–2010. A total of 121 species were found, including several species recorded for the first time for the Czech Republic (*Synagapetus armatus* (McLachlan, 1879), *S. dubitans* McLachlan, 1879, *Hydroptila lotensis* Mosely, 1930, and *H. vichtaspa* Schmid, 1959) or Moravia (*Rhyacophila pubescens* Pictet, 1834, *Hydroptila angulata* Mosely, 1922, *H. angustata* Mosely, 1939, *Hydropsyche fulvipes* (Curtis, 1834), *Agrypnia varia* (Fabricius, 1793), and *Ernodes vicinus* (McLachlan, 1879)). Altogether, with two species collected only in the 1950s, 123 species (48% of the fauna of the Czech Republic) were documented from the area, including many species rare or threatened at national level (seven of them are classified as critically endangered, three as endangered, and 11 as vulnerable species in the Red List of threatened invertebrates of the Czech Republic). Abundant populations of calciphilous species *Rhyacophila pubescens* and *Tinodes unicolor* (Pictet, 1834) in calcareous spring areas and brooks and many crenophilous species in springs, including some rare Glossosomatidae and Beraeidae, are particularly significant from the viewpoint of nature conservation. From the biogeographical viewpoint, the occurrences of several Carpathian species (*Synagapetus armatus*, *Chaetopteryx polonica* Dziędzielewicz, 1889, and *Potamophylax carpathicus* (Dziędzielewicz, 1912)) that reach their westernmost limits of distribution in the Bílé Karpaty Mts. and of the Ponto-Mediterranean species *Hydroptila vichtaspa* are the most noteworthy.

Key words. Trichoptera, faunistics, biogeography, species conservation, aquatic habitats, White Carpathians, Moravia, Czech Republic

Introduction

The Trichoptera (caddis flies) constitute the largest order of semi-aquatic insects, with more than 13,500 valid species known worldwide. Immature stages generally develop in freshwater habitats (springs and spring areas, streams, lakes, peat bogs, temporary pools, etc.), while adults are terrestrial. The larvae and pupae make up, especially in running waters, a considerable proportion of the benthic biomass and they have an important role in food webs in aquatic ecosystems.

The caddis fly fauna of the Czech Republic is quite well documented (*cf.* CHVOJKA & KOMZÁK 2008). However, extensive surveys in eastern Moravia have recently resulted in additional new records for the country (CHVOJKA *et al.* 2009, KOMZÁK & KROČA 2011). A total of 258 species of Trichoptera is currently known from the Czech Republic (KOMZÁK & KROČA 2011), of which 244 occur in Bohemia and 224 in Moravia. Altogether 84 species are included in the Red List of threatened Czech invertebrates, nine