



Freshwater leeches (Annelida: Clitellata: Hirudinida) of the Czech Republic (Central Europe): check-list, new records, and remarks on species distributions

JANA SCHENKOVÁ¹, JAN SYCHRA¹, VLADIMÍR KOŠEL², NELA KUBOVÁ¹ & JAKUB HORECKÝ³

¹Department of Botany and Zoology, Faculty of Science, Masaryk University, Kotlářská 2, 611 37 Brno, Czech Republic.

E-mail: schenk@sci.muni.cz; dubovec@seznam.cz; Kubova.Nela@seznam.cz

²Department of Zoology, Faculty of Science, Comenius University, Mlynská dolina B-1, 84215 Bratislava, Slovakia.

E-mail: kosel@fns.uniba.sk

³Povodí Vltavy, s. p., Na Hutmance 5a, 158 00 Praha, Czech Republic. E-mail: horecky@centrum.cz

Abstract

Freshwater leeches (Annelida: Clitellata: Hirudinida) of the Czech Republic were studied on the basis of recent literature, information in selected databases, and results of recent surveys conducted by the authors. The objectives of this study were to summarize recent taxonomic information, and to update the check-list of leeches using records collected during an eleven-year study (1998 through 2008). Altogether, twenty-four species representing 12 genera and five families are reported for the Czech Republic, including the first reports of *Piscicola* cf. *haranti* Jarry, 1960 and *Dina punctata* Johansson, 1927 for the country. A detailed description of the distributions of rare species and characterization of localities from which they are reported are presented. Plausible modes of dispersal and propagation of species in Central Europe are discussed.

According to recent records, leech species are divided into three groups: indigenous species with stable and strong populations (12 species), indigenous species with weak populations known from a limited number of localities (9 species), and species only recently recorded in the Czech Republic (3 species). For scarce or rare species, a category of threat in the Czech Republic according to the International Union for Conservation of Nature is recommended. Most of threatened species are inhabitants of lowland wetlands and lowland larger rivers—habitats that are negatively impacted, often catastrophically, by human activities throughout Central Europe. The protection of suitable habitats is the most effective way to protect extant populations of endangered leech species. Six species of leeches are recommended for permanent addition to the Red list of threatened species in the Czech Republic.

Key words: Annelida, Clitellata, Hirudinida, leeches, Glossiphoniidae, Piscicolidae, Haemopidae, Hirudinidae, Erpobdellidae, Czech Republic, IUCN, Red List, habitat, distribution, *Piscicola* cf. *haranti*, *Dina punctata*, first record

Introduction

A check-list of freshwater leeches (Hirudinida) of the Czech Republic has long been in need of revision. Available information on the distribution, taxonomy, and ecology of leeches in the Czech Republic has been scattered throughout various historical as well as recent papers, but none of these have focused on the country's fauna as a whole.

Based on molecular phylogeny, leeches (Hirudinida), Branchiobdellida, and Acanthobdellida form a monophyletic clade—with its common ancestor being an oligochaetous clitellate related to the family Lumbriculidae (Siddall *et al.* 2001, Erséus 2005). While most leeches in the Czech Republic are thermophilous freshwater species inhabiting stagnant as well as running waters, a few species are considered to be amphibious. Leeches are common in eutrophic waters and often serve as indicators of pollution (e.g., Sládeček & Košel 1984, Košel 1988, Grosser *et al.* 2001, Koperski 2005). Although some of them have been