

Abstract

This thesis is composed of two parts – research part, focused on field research of occurrence and abundance of the Stone Crayfish and the Noble Crayfish in the basin of Zákolanský stream, and a pedagogical part, project *Crayfish in the Czech Republic and their protection*, aimed for grammar school students.

The literature outline summarizes contemporary knowledge about all five species of crayfish in the Czech Republic. Our native species are the Stone Crayfish (*Austropotamobius torrentium*) and Noble Crayfish (*Astacus astacus*). The non-native are Narrow-clawed Crayfish (*Astacus leptodactylus*), Spiny-cheek Crayfish (*Orconectes limosus*) and Signal Crayfish (*Pacifastacus leniusculus*). Aside from the chapters concerning the particular species and their determination, the literature outline also contains general information about the life and endangerment of crayfish.

I have conducted the field research from April to September 2009. I also noted and evaluated the environmental conditions of the crayfish habitats. Based on the adjusted AOPK ČR methodology, I selected eight 100-meter long brook-sections of the Europe-important locality of Zákolanský stream, with the previously confirmed occurrence of crayfish. From the eight sections, I found crayfish only in three. All the captured specimens were of the Stone Crayfish species. In the summer of 2009, in the time of my research, there was a major mortality rate increase in the lower part of EVL Zákolanský stream. Later it was confirmed, that the mortality was caused by the epidemic of the crayfish plague. Because of the potential danger of transmission of the crayfish plague, I then examined the occurrence of the invasive Spiny-cheek Crayfish in the lower part of Zákolanský stream, at the confluence with the Vltava river. However, I did not record the occurrence of this crayfish species in the examined area.

In the pedagogical part of the thesis, I created an educational project *Crayfish in the Czech Republic and their protection*, which I then tested at Gymnázium Elišky Krásnohorské in Prague. The aim of this project was to assess, what the grammar school students, who have already finished this topic, knew about crayfish in our country, and to deepen and widen their knowledge. I also performed an analysis of the coverage of this subject in the course books

for the 6th grade of elementary school, specialized high schools and grammar schools. In all of these I examined the extent and content of the chapters, concerning crustaceans, or more precisely, the group Malacostraca. The educational project itself was composed of a PowerPoint presentation and a practical class with live aquarium Marble Crayfish (*Procambarus aff. fallax*). During the classwork, the students were filling out worksheets, which I then evaluated. These worksheets were concerned with the crayfish morphology, diagnostic characters of different species of crayfish and the current dangers posed to crayfish. The general inference was that the students had only minimum knowledge of different types of crayfish and their legislative protection.

This is in my opinion due to the fact that most of the course books I examined were concerned rather with sea crustaceans, than their Czech – and protected – counterparts.