

## ABSTRACT

Dispersal of freshwater invertebrates is affected by many factors. Recently, human activities played a very important role in their dispersal. Among others, constructions of new shipping canals damages natural boundaries and the species can spread into new areas.

This Master thesis deal with non-indigenous species *P. coxalis* s.l. On the genetic bases assess a possible dispersal routes into the Central Europe (and the Czech Republic), and phylogeography of this species in the Czech Republic. I amplified and sequenced DNA of the mitochondrial cytochrome oxidase subunit I (COI) gene and 28S nuclear rDNA gene. 96 individuals from 27 localities in the Czech Republic were analyzed. I also included 40 sequences of the COI gene and 7 of the 28S gene from the GenBank database.

In the Czech Republic, there are two different genealogic lineages of *P. coxalis* (with 6% genetic distance between sequences of the COI gene). The first lineage comes from recent invasion of this species from Mediterranean area (through Western invasion corridor and other shipping canals). The second lineage is probably indigenous in the area and it can probably be assigned to the subspecies *P. coxalis septentrionalis*. The results are discussed.

**Keywords:** *Proasellus coxalis* s.l., COI, dispersal routes, phylogeography