

Abstract

Freshwater invertebrates especially species from temporary ponds are suitable model organisms for studying of dispersal mechanisms in their discontinuous habitats. Tadpole shrimp *Lepidurus apus* (Notostraca) is restricted to vernal temporary waters in floodplain areas of big rivers.

This Master's thesis is concentrated on survey of genetic variability and structure of *L. apus* population from Central Europe. Mitochondrial COI analysis of 45 specimens mostly from the Czech Republic indicates that all Central European specimens falls into the subspecies *L. apus apus* and also indicates low level of genetic variability and structure (on average 0,2 %). These results are confronted with other notostracan species, additionally with czech populations of coldstenothermal brine shrimp *Eubbranchipus grubii* (Anostraca) and possible reasons of the low values are discussed.