ABSTRACT

During the day, changes in the spatial distributions of organisms in the water column occur repeatedly, especially in diurnal vertical migrations, which affect abiotic and biotic components of ecosystems. The migratory behaviour occurs worldwide in the oceans and in fresh water, in different habitats and under different physical conditions. The main migrants are gelatinous zooplankton, which are a heterogeneous group of invertebrate animals, although phytoplankton, nekton and other representatives of zooplankton also migrate. The main focus of the study of diurnal vertical migrations is proximate and ultimate factors that influence the migration. Furthermore, occurrence and density of organisms are examined. To study vertical migrations of gelatinous zooplankton, it is the easiest to study jellyfish because of their size. The distribution behaviour might also be observed in freshwater zooplankton. Two university studies of diurnal vertical migration of freshwater jellyfish were executed in previous years. This work aims to: summarise the current knowledge about spatial distribution – especially of diurnal vertical migration, describe in detail proximate and ultimate factors and compare them between freshwater jellyfish, gelatinous zooplankton and jellyfish.

Key words: gelatinous zooplankton, jellyfish, diurnal vertical migration, prey distribution, predator avoidance hypothesis, horizontal migration, freshwater jellyfish *Craspedacusta sowerbii*.