

Summary

Vertical migrations of the freshwater jellyfish (*Craspedacusta sowerbii*) in stratified water body

Diel Vertical Migrations (DVM) of the freshwater jellyfish *Craspedacusta sowerbii* (Limnomedusae, Olindiidae) were observed in a thermally stratified water body for the interval of three summer seasons. The medusae spent day in the deeper parts of the water column and swam toward the surface at early evening hours. This pattern is typical among many zooplankton taxa but it is not obvious in *Craspedacusta*. The widely accepted ultimate factor – predator avoidance – is not very probable since medusae (and other gelatinous zooplankton) have only limited number of predators and there is no strong predation pressure for triggering changes in their vertical distribution. We have also observed that the scale of the vertical distribution of the medusae was limited in lower parts of the epilimnion, no jellyfish was found below the thermocline.

A series of the observations showed that diel vertical migration of the freshwater jellyfish was regular activity and that crustaceoplankton (main food source of *Craspedacusta*) performed DVM as well at studied locality, probably due to the presence of fish. Changes in distribution in both groups were significant between day- and nighttime. By analyzing a gut content of the medusae we have learned that they consumed significantly higher amount of the crustaceoplankton at night than during the daytime.

Our results lead us to the following explanations:

- 1.) DVM of the freshwater jellyfish is a feeding behaviour – medusae follow their prey during its movement in the water column
- 2.) Lower temperatures in deeper parts of the water column limit the scale of the medusae vertical distribution, cool water negatively affects a physiological state of the individuals so they try to stay in the epilimnion

Despite the fact that the abundance of *Craspedacusta* was relatively high at studied locality (up to 19 ind. m⁻³), its predation pressure probably did not influence the structure of the zooplankton community. This result is in accordance to other studies on a similar subject.