

## **Abstract**

This Bachelor thesis discusses green subaerial algae of the genus *Trentepohlia* (Ulvophyceae, Chlorophyta). Firstly, I focus on general description of the family Trentepohliaceae and the genus *Trentepohlia*, especially on morphology, ultrastructure and reproduction. Secondly, I summarize the knowledge of the literature available about the species of the genus *Trentepohlia* living in the Czech Republic. I also concern with the symbiotic relationship of these algae with other organisms and with some curiosities of their growth leading to ecological and other important consequences. Finally, in this thesis I introduce the issues of the species delimitation using traditional morphological methods in contrast to molecular approaches.

There are several facts resulting from this thesis. The genus *Trentepohlia* is a green alga of the Chlorophyta lineage curious in some aspects, mostly due to presence of some structures among the cells (such as plasmodesmatas, MLS, carotenoids, etc.). There is also a problem of determination of individual species. For almost two hundred years, this problem has been solved by use of morphological features. However, molecular methods are often in contrast to these traditional methods. Therefore, reorganization on a genus level is essential, based on the discovery of phylogenetically relevant morphological criteria.