

## Summary

The aim of this thesis is to contribute to our knowledge of the real limits of phenotypic plasticity frequently demonstrated by autotrophic microorganisms in natural water biotopes. Focusing on the planktonic coccal green alga, *Pediastrum duplex* MEYEN var. *duplex* (*Hydrodictyaceae*, Sphaeropleales), as a model organism with broad phenoplastic display, and various tools of the landmark geometric morphometrics as an instrument of research, I essayed to identify all the major characteristics of infraspecific morphological variation. Furthermore, the most important ecological factors influencing shape dynamics were revealed and tested for its significance.