

Abstract

This thesis is focused on green algae, which have been recorded as lichen photobionts. The thesis consists of description of genera from the green algal from classes Ulvophyceae, Trebouxiophyceae and Chlorophyceae. I focused on phylogenetics position of genera, I define their morphology and I summarize their participation in lichen symbiotic relationships. I compare evidences based on the traditional morphological methods and modern molecular data.

The following genera can be stated to uncertainly represent lichen photobionts: *Trentepohlia*, *Cephaleuros*, *Phycopeltis* and *Dilabifilum* from the class Ulvophyceae, and *Dictyochloropsis*, *Chloroidium*, *Elliptochloris*, *Coccomyxa*, *Diplosphaera*, *Auxenochlorella*, *Myrmecia*, *Asterochloris*, *Trebouxia*, *Coccobotrys* and *Leptosira* from the class Trebouxiophyceae. The genera *Chlorella* and *Stichococcus* are morphologically poorly defined, but they are commonly reported as lichen photobionts. *Prasiola* associates with the mycobiont, but the identity of their partnership is not certainly defined. The lichen symbiosis of genera *Parachloroidium*, *Pseudochlorella* and *Gloeocystis* has not been confirmed by molecular methods, so far.

Key words

photobiont, lichen, green algae, Chlorophyta, diversity, phylogeny, Trebouxiophyceae