ADAPTATION STRATEGIES OF BOLIVIAN LICHENS: BIODIVERSITY AND ECOLOGY OF *Trebouxia* PHOTOBIONTS

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*Trebouxia* is one of the most common genera of green, coccoid photobionts found in lichens. Representatives of this genus associate with lichen forming fungi of different growth forms and from different habitats. In the past few years, new phylogenetic lineages in *Trebouxia* were detected as a result of molecular analyses of ITS rDNA region. It shows that still numerous undiscovered *Trebouxia* lineages can be hidden in lichens from unexplored areas (e.g. tropics). The links between lichen symbiosis partners are still poorly understood. Especially in the light of the hypothesis that the abiotic environment may act as a filter for both partners of the symbiosis and that demographic processes in the host population may additionally shape algal association patterns. In order to determine the species composition of photobionts of Bolivian lichens from two habitat types, i.e. natural and transformed by human activity, a phylogenetic analysis of newly obtained ITS rDNA sequences of *Trebouxia* photobionts was performed. We identified new lineages of *Trebouxia* in the studied lichens. Furthermore, we observed that with the change of environmental conditions, dominant taxa in natural habitat are gradually displaced by better adapted species. Moreover, individual habitat types differ in the composition of mycobionts that can also be related to photobionts available at those localities. The research was carried out as part of a project financed by the National Science Center (No. 2015/17/B/NZ8/02441).