Abstract

The family *Pyrolaceae* (pyroloids) includes the group of evergreen herbs or subshrubs growing in coniferous, especially in pine forest of the northern hemisphere. Their typical features are mycoheterotrophy and mixotrophy. In the early stage of development the mycoheterotrophy is used to obtain the necessary resources because the seeds do not contain enough substances to germinate. Adult plants then switch to mixotrophy or autotrophy, except *P. aphylla*. Mixotrophy allows pyroloids to combine inorganic carbon gain obtained from photosyntesis and organic carbon from symbiotic fungi. Mixotrophy of this family can significantly affect other plant species growing in its vicinity through mycelial networks of mycorrhizal fungi and contribute to affecting the structure of the community. At the present, all pyroloids are among the endangered or declining species in our country and in the world. This bachelor project summarizes the knowledge about pyroloids in the field of phylogeny, mycorrhizal symbiosis, ecology, distribution and in vitro cultivation in the form of literature research. In the last chapter I deal with the causes of decline and the possibilities of pyroloid protection.

Key words: *Pyrolaceae*, mixotrophy, mycoheterotrophy, ectomycorrhiza, *Pyrola*, *Chimaphila umbellata*, *Moneses*, *Orthilia*