Abstract

The rock outcrop plants are neglected group of plants, even though they include endangered or endemic species. Despite this fact, there is only a few of studies focusing at this topic. The aim of this thesis is to focus on this group of plants in terms of its population dynamics. Aurinia saxatilis ssp. saxatilis was chosen as a model species. It is a species of the Czech thermophyticum. Three populations were chosen and studied over three years. The population dynamics was compared between the populations by integral projection modelling (IPM) and matrix population modelling (MPM). The results of these two analytical approaches were compared to one another, too. The population growth rate (λ) predicts that one of the populations is stable, whereas the other two populations are declining. The highest elasticity is mostly for the seeds survival in the seed bank. The population growth rate does not differ distinctly between the two statistical approaches, IPM and MPM. In all cases the IPM λ is lower than the MPM λ. Within the IPM analysis, the influence of the substrate type was also studied. The analyses, however, did not indicate any major differences between the substrates. For maintaining the populations, it is necessary to protect the new seeds and seedling recruitment and to create the new space suitable for germination and seed bank survival. In all analysis, the seed bank appears as very important, though it deserves further study, since the information available is still limited. In this study it is also shown that the seeds are able to disperse not only downwards, but also horizontally and upwards.