

Abstract

At the time the Black and Red List of the Vascular Plants of the Krkonoše (Giant) Mountains was being compiled it was found that no information was available about the distribution of eyebright (*Euphrasia*) or other facts concerning this hemiparasite growing in the Krkonoše. The aim of this work was to fill the gap. This was to be done by creating a GIS layer with the current distribution of eyebright in the mountains, by analysing the soils taken in places of eyebright occurrence, in neighbouring places and those closely resembling them but without eyebright. The soils were taken each time from five places in the particular locality and were analysed as a mixed sample. In all, 107 mixed soil samples were taken, of which 53 in places where eyebright occurred and in 54 similar places where eyebright was absent. Eyebright grows in places with a higher pH and it performs better in lower available phosphorus concentration. Management test was used to test the earlier time of mowing meadows containing eyebright, when a larger number of flowering eyebright occurs among the plants in comparison with the number of flowering eyebright on surfaces mown at a later time.;

Management testing was carried out from June to July 2011 in six localities, with five plots in each locality, in the Eastern and Western Krkonoše, at altitudes of from 660 m a.s.l. to 1002 m a.s.l. on south-, south-west-, east- and west-exposed hills with soils showing a pH of from 5.78 to 7.65 and with available phosphorus in concentrations of from nearly zero up to 2.76 mg/kg.

The sooner the meadow with eyebright was mown, the more flowering eyebright individuals were found. To help maintain the numbers of eyebright we recommend to mow the meadows at around mid-June and to remove the biomass.

Key words: eyebright, mowing time, meadow ecosystem management, environmental variables, the Krkonoše (Giant) Mountains