ABSTRACT

The aim of my study is to determine the influence of historical management practices on the camposition of vascular species in hilly country forests on the Vysoká stráň hill in the Bohemian Karst Protected Landscape Area in the Czech Republic. My thesis is divided into two parts. The first part of my thesis describes influences of forest management on the herb diversity from different scientific studies. There is some information about the influence of herbivorous grazing, pollarding, litter raking and fire. Secondly provides a case study dealing with the influence of historical management on the vascular species composition in the forest understory. My experimental area was divided into 32 treatments, where three different ways of historical management were used – mowing of the understory vegetation, litter raking and the combination of mowing and litter raking. The fourth area was a control treatment. Change in the herb diversity depending on a time is statistically significant but changes in the herb diversity depending on different ways of historical management are statistically insignificant. We detected a distinct decline in the herb diversity during our experiment, also on the control treatments. The main gradient of vegetation points from mesophilous acidophytes to species characteristic for calcareous substrates. We evaluated species per RDA analysis revealed species that notably responded to applied management. The species that responded to litter raking are e.g. *Asperula tinctoria* and *Quercus petraea*. *Trifolium alpinum* and *Euonymus europaea* are species that responded to mowing. The species that had a trend to respond to the combinaton of litter raking and mowing are e.g. *Carex humilis*, *Lychnis viscaria* and *Clinopodium vulgare*. The species that didn't respond to management are *Galeopsis pubescent* and *Polygonatum odoratum*.

Key words: Bohemian Karst Protected Landscape Area, grazing, historical management, litter raking, mowing, vascular plant species