

Abstract

The aim of the thesis was to find the most complete register of recent and history localities of the specie *Eriophorum gracile*, to made the maps of expansion and to try to find the causes of decrease of the specie.

The methodology is divided into several basic parts – collection of published data (literature, herbarium, etc.), terrain work, analyzing of soil samples collected during a terrain work and processing of collected data.

The data are processed by multi-dimensional analyses in the program CANOCO for Windows (phytocenological data by terrain work, their comparison with each other and with historical data from Czech Republic and Slovakia, analyses of dependence on soil characteristics), soil characteristics in recent and historical localities are compared by analysis of variance. Four maps of expansion in history and in present were made. Through the expert system of vegetation of the Czech Republic were made the surveys of vegetation (by the programs TURBOVEG and JUICE).

The purpose of this ways of processing the data was to describe the differences between vegetational and ecological characteristic of historical and recent localities.

There was find 48 localities of the specie during the collecting of published data, 10 of them is recent (the specie is still there, the last confirmation is at least in 2004). Some differences between the soil characteristics were find. The changes in phytocenological structure on historical localities were recognized compared the time the specie was find here.

It is possible to say, that the specie is occurred in localities, which are less overshadowed, have less amount of the nitrogen and higher volume of ammonium in the soil.

The work is made in terms of project The Priorities of species protection of vasculars plant.