

Abstract

Scattered vegetation is an essential part of the landscape in the Czech Republic. It is typical mainly for farm land which has experienced deep changes during the last century, which were probably the deepest changes in the last millennium. The thesis focuses on valuation of the scattered vegetation from the fifties till present. As a result of collectivism, land consolidation into large land units, grassland ploughing and disturbance of scenic elements started. These broke the ecological balance of the landscape. The priority was given to the objective of increasing agricultural production. However, this intense way of farming changed sharply after the year 1989 during the transition to free market economy when the intensity of agricultural production decreased and a lot of less efficient areas were left abandoned. At the same time, modern legislation protecting important scenic elements and scattered vegetation was adopted. At the beginning of the new century the Czech Republic joined the European Union resulting in changes in the environmental and agricultural policy.

My thesis is aiming to analyse all the elements of scattered vegetation on one study area and with the help of this analysis tries to get the response of the scattered vegetation to the factors mentioned above. Specifically, I analyse the number of dotted scattered vegetation, number and length of line scattered vegetation, and number, area and circumference of areic scattered vegetation in the years 1953, 1989, 1998 and 2009, respectively, and I compare these figures among respective years. I assume that the above described processes influencing the landscape should come out in these years. For this research I used aerial photography that I consequently analyse in the programme *Kristýna – GIS*.

The results show that scattered vegetation had completely different landscape pattern in the fifties than all other focal years. In fifties, the study area contained the highest number of dots as well as highest number of lines that were short at the same time. By contrast, there was the lowest number of areal scattered vegetation and its objects were the smallest at average. Towards the present, the scattered vegetation was disappearing in terms of number of objects, probably due to agricultural intensification. However, the scattered vegetation starts to enlarge after the year 1989, but does not get back to the state typical for

the mid of 20th century: although the vegetation covers larger areas, it is more concentrated into a few larger blocks and not scattered in many dot elements like in the past. These observations suggest that although the legislation helped to stop the decrease of number of particular elements of the vegetation, the area of particular places is enlarging. It probably started with the arrival of free market economy which also caused the vacation of less fertile lands and start of secondary succession. However, thus present-day ingrowth of landscape is probably not comparable to the pre-intensification state in terms of landscape-ecological and consequently biological functions.