

Abstract

Military areas are extraordinary biodiversity-rich due to limited economic activities and a specific way of using the areas for military training. Previous research has also revealed their positive influence on bird species diversity, this applies to endangered species in particular. However, the exact biotope characteristics attracting birds are insufficiently known. In this regard, I expected an important role of heterogeneity of the environment. The aim of the thesis was therefore: (I) to find out the difference of environmental heterogeneity between a military area (MA) and the surrounding landscape, both in a forest and a non-forest sites, (II) to find out what biotope characteristics attract birds in open landscape and (III) what characteristics attract birds in forest.

Fieldwork took place in a still active MA of Hradiště and neighboring controls of Bočov and Ostrov. In total, 80 study plots were surveyed for representation of individual biotopes (39 types in total) and the number of fragments of woody vegetation. Data on bird species richness were taken from the thesis of Bušek (2015), surveyed birds at identical study plots and calculated total number of bird species and the number of endangered bird species at each plot.

The open landscape of MA has, compared to the surrounding cultural landscape, a significantly finer landscape grain consisting of scattered woody vegetation. The open landscape also tends to have a higher environmental heterogeneity. MA forests consisted of mostly broadleaved stands, whereas the surrounding forests consisted mostly of coniferous stands.

Generally, environmental heterogeneity in any form increased the total number of bird species. Scattered woody vegetation played an important role for total bird diversity as well. Such trees and bushes in various arrangements most likely represent a birds' food and a nesting biotope, a refuge from predators or an opportunity for migration across homogenous open areas. On the contrary, early successional stages with higher representation of uncultivated grasslands were the key biotope for endangered bird species in open landscape. This type of biotope is preferred by steppe species endangered by intense agricultural production.

In forest environment, total species diversity increased with the proportion mature trees that offer a stable environment with diversified space arrangement and with abundant tree cavities, more food sources and microhabitats. This characteristic can also account for a generally positive effect of forest area on bird diversity.