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Title

A study of the effect of human-induced habitat transformation on plant species diversity in different habitats.

Abstract

Read the abstract

This essay is a description of a research into the correlation between the degree of human-induced transformations and the diversity of plant species present in various habitats. In the past 50 years, changes introduced by human actions to major components of biological diversity were more rapid than ever, and it is projected that this trend will continue to rise in the future. The problem of biodiversity loss becomes increasingly prevalent worldwide, with Poland having almost 125 plant species gone extinct over last two centuries and 1648 species with declining trends.

Over the course of three months (July-September) I have collected data on species richness and evenness from 6 sites of varying human interference level, located in Upper Silesia, Poland: a spoil heap, a lawn in an allotment, a pasture meadow, a beetroot field, a grass field and a lake shore. The sites have been initially chosen for the investigation by observation and subsequently evaluated against specific criteria concerning the level of human-induced transformations (insignificant, little, noticeable or complete) that determined the present conditions of the habitats. Using a quadrat sampling method and two species diversity indices (Simpson & Shannon) I have evaluated species diversity for each of the 6 sites.

The findings of the research suggest that there is a negative correlation between the level of human interference and plant species diversity: the sites with greatest human impact (spoil heap and beetroot field) were indicated as the least diverse, and the sites with lowest degree of human transformations (lake shore, pasture meadow) appeared to be the most diverse.