Abstract

Canopy gaps created by falling or the death of one or more trees in the closed canopy forests are a natural part of the temperate forests in temperate zones. There are studies that describe this disturbing mechanism helpful in forest restoration and regeneration of primary virgin forests. Much more frequent in the forests of the Central European country, however, are secondary forests, which originated in the area after the previous human impact in places that were gradually abandoned and successively overgrown up to the stage of forest communities. And in this type of forest, I tried to capture the effect and impact on vegetation clearings in the undergrowth.

The results, presented in this paper come from the area Doupovské mountains, of the military area Hradiště, where there are fragments of pioneer forests established after the displacement of the population in the 50s of the last century.

The goal of this thesis was to find out how these canopy gaps affect species composition and diversity of undergrowth pioneer forests and how important are selected environmental conditions on the composition and diversity of undergrowth vegetation.

I was able to show that gaps in pioneer forests create an environment for species that normally don´t occur under the closed canopy. Light has a significant impact on vegetation, but there is one more powerful nutrient effect, which doesn´t correlate with the distribution of gaps in the stand.

In terms of diversity of the alpha / gamma diversity is higher in gaps, while higher beta diversity occurs under the closed canopy. Vegetation below the closed canopy is more diverse than in clearings and has greater species turnover. Diffuse radiation has significant impact on the diversity of plant.

I failed to prove that the orientation within gaps or microhabitats formed by uprooted trees had a significant influence on the composition and diversity.

Overall, pioneer forests in this area are characterized by high heterogeneity and gap dynamics only highlights this character.