

The impact of experimental trampling on the biodiversity of beech forests: basic knowledge for the management of urban forest for recreation

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Abstract — In the last few years forests became an important function as natural recreation sites, especially in the surroundings of urban areas. Nowadays, large numbers of forest visitors can lead to conflicts between recreation and nature conservation. The extent of damage to the forest vegetation depends not only on the kind of recreational activity and frequency of visitors, but also on the type of soil and forest vegetation. The effects of trampling on soil microorganisms and the level of disturbance that will cause changes are mostly unknown. In order to gain a better understanding of these relationships I investigated the effect of different trampling regime – single trampling versus repeated trampling – on the ground vegetation, soil microbial biomass and the activity of dehydrogenase (an indicator for the total metabolic activity of soil micro-organisms), glucosidase and phospho-monoesterase (both key enzymes in the nutrient cycle)

Index Terms — Experimental trampling, soil enzyme activity, outdoor recreation, urban forest, ground vegetation.



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