The evolution of natural floodplain forests in South Moravia between 1973 and 2005

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Since the mid-1970' s, the landscape around the confluence of the Morava and Dyje rivers has undergone substantial changes related to the drop of water table caused by water management measures undertaken on both ri-vers. Periodical spring floods are among the phenomena lost due to ameliorations. In this study, the reaction of forest ecosystems to the decrease in soil moisture is assessed on the basis of changes in species composition of the herb layer as well as of the known requirements of individual recorded taxa and the entire herb synusiae for the water content of soils. The results confirm that the species with the greatest demand for water disappear over time. The tendency of decreasing Ellenberg indicator values of the herb layers within the phytocoenological relevés is obvious also with the consideration of the influence of different numbers of species recorded on the same plots in different years of the survey. The changes are most visible in the dampest habitats, while elevated sites, so-called "hrudy", tend to be most stable. The intensity of vegetation changes increases in direct proportion to the altitude of the sites. The process of changes in some habitats caused by the alteration of the water regime has to be separated from the changes in the vegetation structure, which are easier to observe optically. The limiting factor of their development in the given conditions is the forest wildlife. After the elimination of wildlife' s influence, the woody species synusia differentiates in height. A qualitative shift is represented by the recession of the formerly dominant Quercus robur on the main level, and its gradual replacement by other species. The impact of changes going on in the woody synusia on selected characteristics of the herb layer are included in the analyses.

Keywords:

floodplain forest; phytocoenosis; woody synusia; herb synusia

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