

PRELIMINARY RESULTS OF A STUDY OF FACTORS INFLUENCING SPONTANEOUS REGENERATION OF STREAMSIDE ALDER FOREST IN AN URBAN STRETCH

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Woody vegetation along watercourses has, or would have, a significant role in the municipal green infrastructure network in mitigating the adverse effects of climate change. However, the beds of urban streams are often narrow, the banks are steep, often paved, and utilities pass through the soil and air, making it difficult for the woody vegetation to develop and regenerate. In many cases, flood protection considerations do not even allow trees to grow in the riverbed. Nevertheless, there are urban stream sections where spontaneous regeneration does occur, and it is therefore necessary to study, understand, and control the process itself. I studied the regeneration of the alder grove in Hungary along the Bükkös stream, which flows into the Danube at Szentendre. The landscape-scale study of the woodland along the 18 km long stream was mainly based on historical maps. The focus of the study is on the 4 km urban section, of which a 700 m long section is treeless. According to the original habitat, alder is the dominant tree species. The majority of the alder population is made up of older specimens, and natural regeneration has been lacking for a long time and has been replaced by planting. Spontaneously released young specimens are present in small areas, despite the high seed yield. Urban trampling, the effects of flooding, the strong shading provided by mature trees, the presence of a continuous grass cover on mown areas, which prevents the trees from maturing, and mowing itself, among other factors, make it difficult for this species, which germinates on mineral soils with adequate water supply, to establish. The persistent flooding of the Danube is also unfavorable for the species in the lowest section. However, cracks in the fragmented concrete pavements provide a suitable surface for colonization, but the pavements need to be removed to restore the dynamics of the stream.