

PHYTOCENOSES OF THE SUTURLIJA GORGE NEAR BANJA LUKA

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Introduction: Well-preserved natural areas near large cities are rare in Europe and around the world today, and they are under growing pressure. One of these areas is the Suturlija River gorge, a left tributary of the Vrbas River in Banja Luka city. Although understanding vegetation is a fundamental prerequisite for the protection of ecosystems and areas, there are no scientific studies that focus on the vegetation of this region.

The Aim: To define the dominant primary and secondary plant communities and conduct their ecological and floristic characterization within the study area.

Materials and Methods: Vegetation research was conducted according to the principles of the standard Central European phytosociological school (Braun-Blanquet 1964). The area of the relevés ranged from 50 to 400 m². For the identification of plant species, Rotmähler (2000) and Flora Europaea (2001) were used. Species nomenclature follows Euro+Med (2006). Raunkiaer (1934) was used for life form analysis, Gajić (1980) and Pignatti et al. (2005) for chorological spectrum analysis. Average values of ecological factors were calculated according to Dengler et al. (2023).

Results: The classification of 34 collected phytosociological relevés in the JUICE 7.0 program grouped them into six clusters: (1) oriental hornbeam shrubs; (2) silver linden forests; (3) sessile oak and common hornbeam forests; (4) beech forests; (5) black alder forests, and (6) river terraces with butterbur. Groups 5 and 6 are distinctly hygrophilous, while group 1 is xerothermic. Groups 2, 3 and 4 are mesophilic. Phanerophytes are dominant in all groups according to the climate. Southern European species dominate and have their optimum in thermophilic communities. Alien species are most abundant along the watercourse.

Conclusion: Ecologically, groups 2, 3, 4 and 5 should be considered stable. Group 1 represents a degradation stage. The existence of group 6 is conditioned by circannual changes in hydrological conditions, and maintaining the natural flooding regime is necessary for its preservation. Although this area is small in surface, it possesses a significantly high habitat diversity.

Keywords: Phytosociological analysis; Braun-Blanquet; Plant communities; Bio-spectrum