Vegetacija prodišč v odvisnosti od strukture in višine prodišč na primeru srednje Drave

Vegetation of the river gravel bars in the relation to bar structure and height on the case of middle Drava river stream

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In the present study we studied species composition in relation to selected environmental variables (height, soil structure (proportions of mud, sand, gravel)) and age of the gravel bar on the gravel bars of the middle Drava River. The research included 29 selected gravel bars in the section Markovci - Zavrč and section Obrež - Središče ob Dravi. We determined the relative height of the gravel bars and estimated proportion of mud, sand and gravel (in percentage). We sampled the vegetation on 154 plots using the Braun-Blanquet method.

Using multivariate analyses (methods of classification and ordination) we compared the floristic composition of the relevés. 155 plant species were found which indicates high species richness and vegetation variability of researched gravel bars. DCA ordination of the relevés on the basis of species composition showed a continuous variation of species composition along the moisture gradient. With TWINSPAN classification three groups of relevés were separated. CCA ordination demonstrated that size of the particles in sediment and bar elevation (cm) were environmental variables that mostly correlated with the species composition of the gravel bars. Namely, both factors could affect the soil moisture; lower areas with fine sediment (mud) are wetter (and probably very fertile), while larger particles sediments (gravel) on higher places are dryer. The vegetation coverage increases with the content of mud and is as expected in positive correlation with the height and maximal height of the vegetation. Gravel on the other hand was in negative correlation with the height of the vegetation – lower pioneer plants, xerophile species, which are more resistant to drought and do not grow high, prevail on the soil with major proportion of gravel. The age of the gravel bar was not correlated with any of the variables.