Book of Abstracts

4. Simpozij o biologiji slatkih voda s međunarodnim sudjelovanjem

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* Photography: The bridge over the River Krupa, Town of Vrlika. Author: Natalija Vučković.

Editors' remarks

The presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Croatian association of freshwater ecologists or of other institutions involved in the organization of the Symposium. The views expressed in this volume are those of the authors of each abstract, while editors preformed technical editing and equalized the form of abstracts. The quality of the English language is the responsibility of the authors, as no substantial language editing of submitted texts was done.

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Which habitat characteristics promote growth of brown trout (*Salmo trutta* L. 1758)?

Fish production is a direct measure of habitat quality. Physical characteristics of the habitat, as well as the quality and quantity of available food, can promote or slow the fish growth. Brown trout populations were monitored from April to October (2015) at three study sites with different habitat characteristics. Brown trout growth parameters (biomass, production, overall growth quality) and environmental parameters (water conductivity, suspended particles, prey biomass, prey diversity, pH, dissolved oxygen, etc.) were correlated to examine their relationship (CCA). One of the sites (Belosavac), the most productive, had high conductivity and was rich in prey, with domination of Gammaridae, but with low prey diversity and evenness. The other two sites (Rasina and Lomnica) had higher prey diversity and evenness but significantly lower prey abundance, with one of the two sites (Lomnica) having very low water conductivity and suspended particles concentration and the lowest prey abundance. High brown trout biomass and production were found to be positively correlated with high water conductivity, amount of suspended particles, prey abundance and diversity. Overall growth quality was negatively correlated with high prey diversity and evenness found at a site with very low prey abundance. According to this study, high water conductivity, as found in calcareous streams, promotes high prey production and consequently high trout production, while high prey diversity does not positively affect trout production when its abundance is low.