PREFACE TO THE 40th IAD CONFERENCE PAPERS

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The current volume of Geomorphologia Slovaca et Bohemica comprises 7 contributions presented on the 40th Conference of the International Association for Danube Research (IAD) on 2 – 6 July 2018 in the Smolenice castle, Slovakia. The main aim of the conference, entitled *Danube - a lifeline governed by multiple uses, pressures and a multitude of ecosystem services* was provide a forum for the long-term multidisciplinary research activities and discussions on various topics which reveal the importance of different types of watercourses for the Danube Basin, as well as the interlinkage with the marine area, highlighting the need to protect the biodiversity of this unique area. The International Association for Danube Research was founded in 1956 with the aim of promoting and coordinating activities in the fields of limnology, water management, water protection and sustainable development in the Danube River basin.

Key words: IAD, conference, Smolenice, Danube, ecosystem services

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The principles to be applied by water managers and politicians to ensure implementation of measures to prevent or mitigate human impacts to river ecosystems are presented by BLOESH (2018). His article shows key examples in the Danube River basin in more detail, encompassing navigation, hydropower and flood protection in the Lower Danube Major conclusions are: the difficult process of public participation and major infrastructure projects were and still are biased towards users and economic interests, and it is hard to protect aquatic and terrestrial ecosystems.

The example of river assessment based on intercalibrated biological method for macroinvertebrates within different types of the Slovak part of the Danube River is shown by MIŠÍKOVÁ ELEXOVÁ et al. (2018). The first Slovak river basin management plan (2009) comprised evaluated data of years 2007 and 2008, which were used in intercalibration exercise of very large rivers starting from 2009. It was a process of intercomparison of the biological assessment methods within relevant rivers and water bodies.

The ecological restoration of the Şontea-Fortuna zone within the Danube Delta Biosphere Reserve is the topic of the paper of CIOACĂ et al. (2018). As main restoration, three secondary channels have been subject to dredging works. Their channel morphology has been reshaped as the bottom elevation from about + 1.20 m a. s. l., post-restoration reached - 1.50 ÷ - 2.00 m a. s. l. Within the study area, the 7 wetland habitat types and 1,116 wild flora and fauna species they shelters have been studied and their pre- and post-restoration state is presented to emphasize the improvement they got as result of ecological restoration.

The study of CIOBOIU and CISMAŞIU (2018) is dedicated to the investigation of consequences of eutrophication lacustrine ecosystems at the diked sector of the Romanian course of the Danube River as one of the fundamental factors affecting their structure and functionality. Their benthos facies consist of a thick layer of organic silt and vegetal detritus, explaining the clogging tendency of the lakes. The main groups of benthic invertebrates are Oligochaeta, Chironomidae, Plecoptera, Bivalves. Gastropods represent the dominant group of the benthic production with 37 species. Thus, the anthropic impact on indigenous microorganisms demonstrates their involvement into the biogeochemical cycles, by: chemical-bacterial solubilisation of industrial wastes and supply of metal ions from industrial effluents; concentration and removal of heavy metals from industrial waste waters.

KRPO-ĆETKOVIĆ et al. (2018) analysed length-weight relationship and condition of 37 individuals of the monkey goby (*Neogobius fluviatilis*), 115 individuals of the round goby

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(*N. melanostomus*), and 40 individuals of the racer goby (*Babka gym-notrachelus*), caught in July and October 2011 in the Danube River near Slankamen (1,216.02 rkm). The average length (± S.D.) of the sampled individuals was 8.76 ± 2.05 cm for the monkey goby, 7.52 ± 1.50 cm for the round goby, and 7.08 ± 0.94 cm for the racer goby. The average weight (± S.D.) of the sampled individuals was 5.49 ± 4.55 g for the monkey goby, 5.84 ± 3.68 g for the round goby, and 3.62 ± 1.78 g for the racer goby. The highest occurrence of the monkey goby was on the sandy bottom, of the round goby on silty-coarse pebble bottom, and of the racer goby on pebble bottom.

The growth parameters, length-weight relationship, and condition of the common nase (*Chondrostoma nasus*) in the Danube River near Belgrade were investigated by SUBOTIĆ et al. (2018). A sample (n=30) from the commercial catch, caught between March and May 2017 was analyzed. The total body length of the sampled individuals ranged from 268 to 401 mm, and body weight from 195 to 875 g. Age was determined from scales and individuals aged 5+, 6+ and 7+ were present in the sample, in approximately the same percentage. The regression coefficient of the length-weight relationship was $b = 3.28$. The value of $b > 3$ indicates a positive allometry, which denotes that the weight growth rate is greater than the length growth rate. The Fulton's condition factor ranged from 0.90 and 1.36, with the mean value of 1.07. The parameters of the von Bertalanffy growth function were $L\infty = 697.84$, $k = 0.08$, and $t0 = -1.72$. The estimated phi-prime growth performance index (j') was 4.60. The lengths were back-calculated using the method of Monastyrsky, and the greatest relative growth increment was observed in the first and second year of life.

The study of GOGA and MITITELU-IONUŞ (2018) addresses different aspects concerning the main features of the Adunaţii de Geormane Lake natural protected area – diversity of fish species and possibility of monitoring the protected species of national interest, its conservation, identification of reproduction, feeding and resting areas, areas, accessibility to education, tourism and recreation. The research shows that in 1972, the lake was populated with *Ctenopharyngodon idella* in order to capitalize the abundant macrophyte vegetation. This phenomenon led to the excessive multiplication of the species and extension of the phytoplankton that generated *algal blooms*.

The published contributions in this volume show that a great potential of international scientific cooperation exists within the Danube River Basin and IAD is the good example.

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