44TH IAD CONFERENCE

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KREMS, AUSTRIA

Tackling Present & Future Environmental Challenges of a European Riverscape

CONFERENCE BOOK

Austrian Committee Danube Research

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CONFERENCE MISSION

The 44th IAD conference* is held under the patronage of the Austrian committee of the IAD at the Karl Landsteiner University of Health Sciences in Krems, situated in the beautiful landscape of the Wachau, next to the Danube River. This young university (founded in 2013) has a strong research focus on water quality and health, being a key player in this research field in the Danube River Basin. Here, health is considered in a holistic, transdisciplinary way under the "One Health" concept of the WHO, combining human, animal and environmental health in an ecological context. Thus the conference shall bring together scientists and experts from different disciplines for discussing the present and future environmental challenges of our Danube riverscape.

*This conference was originally planned to be organized by our Ukrainian colleagues at the Institute of Hydrobiology of the National Academy of Sciences in Kyiv, but due to the Russian aggression this became unfortunately impossible. We wish our esteemed colleagues all the best for their future.

TOPICS

- Pollution and health under the "One Health" concept
- Climate change and land-use change impacts on aquatic ecosystems
- Integrated water management – from environmental monitoring to sustainable solutions
- Status and future trends of aquatic species and habitats
- Protected areas and biodiversity conservation
- Floodplain ecology and restoration – constraints and perspectives
- The Human Dimension – rivers as socio-ecological systems
- Riverine landscapes and wetlands
- The Danube River delta and coastal ecosystems

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COMPARATIVE EVALUATION OF LIVER ENZYMES ACTIVITIES IN VIMBA BREAM AND COMMON NASE LIVING UNDER THE SAME ECOTOXICOLOGICAL CONDITIONS

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The present study was carried out to investigate the differences in some enzymatic components of liver in vimba bream (*Vimba vimba)* and common nase (*Chondrostoma nasus)*. For this purpose, 33 healthy vimba bream and 20 common nase were collected from commercial catches on the Danube River, near Belgrade (1172-1173 rkm), in 2016. The blood samples were taken and after separation of serum, the values of Aspartate aminotransferase (AST) and Alanine aminotransferase (ALT) enzymes activities were measured. Based on obtained results, the values of AST and ALT enzymes activities were slightly lower in the common nase compared to vimba bream, which is a possible indicator of better health and physiological status, and greater resistance to environmental pollutants present in the habitat. This difference was, however, not statistically confirmed. Considering that the selected fish were captured by the same method, having a similar ecology, living in similar habitats and under similar ecotoxicological conditions, it is not surprising that the differences in the activity of the measured liver enzymes were minimal. Since common nase is important bioindicator species, similar results could indicate that vimba bream could be considered as replacement species for this types of research, if future studies indicate the decline or endangerment of common nase populations.