

Editorial

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Dear Readers,

Currently there is a decisive phase as first calls of Danube specific programmes have been launched, EUSDR flagship projects get into the phase of implementation and the update of the Danube River Basin management Plan has been widely discussed. IAD members have been in the centre of some of these activities and are active in various other fields and topics. In this issue we would like to inform you about selected current activities of IAD such as the IAD summer camp, the initiative to establish a network for more concerted research on invasive species in the Danube River basin (DIAS). First information about the coming IAD conference introduces the conference topic and the conference location in Sibiu, Romania. Furthermore, aspects of historical and social sciences for a sustainable development are presented, highlighting the importance for an intensified interdisciplinary cooperation to safeguard our ecosystems and provide a basis for their future use in a sustainable manner. In line with these topics the White paper on sustainable development, a result of the EUSDR flagship project DanubeFuture is discussed as a major outcome of the first project phase in this issue.

While these activities demonstrate a few examples of current involvement of IAD and introduce coming actions, we



Thomas Hein, President of IAD

have to inform you that we lost two long term members who passed away in the last months, Miklós Puky and Rüdiger Schmid. Both have been outstanding scientists and valuable members of IAD. We will remember them as colleagues, friends and part of our IAD family.

Regarding activities of the Austrian Committee for Danube Research at present 79% of the national members are also members of IAD. They form the basis of 'multipliers' transmitting information on IAD to a greater public, including representatives of the public service on international and national level, as well as students and private persons. In return the Austrian members receive information about the life within IAD, and Danube News (DN) is one of the ways IAD can reach out into the society. At this point we take the opportunity to thank all our authors and contributors of manuscripts, diagrams, graphs and pictures who assist us in making DN a source of interesting and new information on many aspects with regard to the Danube, mirroring the wide scope of Expert Groups and contacts with national and international organisations dealing with this Large River.

Current activities in the Danube Basin

The Transylvanian Water Tower through history, and an invitation to a much-needed conference

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Just a short glance on the Romanian geographical map is more than enough to reveal the fact that Transylvania is bordered like a proud fortress by the Carpathian Mountains,

over seven million native people looking around to this huge amphitheatre to the numerous and dense ongoing flowing streams and rivers, Danube tributaries of different order.

Water is priceless now as it was throughout the history of this unique region. The ancestors of the Romanians, within the Sarmizegetusa Regia capital of Dacian Kingdom, located in Transylvania, were defeated finally by the Roman Empire

more than two millennia ago, not with the force of their arms but by cutting the local stream which supplied the defenders with water.

Christianity mixed with old pagan beliefs brought new values attached to water, but in all the cases related with its primary role in fertility. No wedding can be successful without the presence of holy water. It is said that in a harsh winter a long time ago, in a small and isolated Transylvanian village, a couple of lovers decided to make their wedding before the priest came with the holy water. The nearby lake instantly flooded for ever that church ... and sometimes at Easter you can still here the bells.

A too-long Middle Age with much of the population crowded into fortified settlements to survive hordes of savage migratory peoples entering Transylvania, such as the Huns, Gepids, Avars, Bulgarians, Hungarians, etc., revealed that the people still living with fear outside the walls were certainly healthier due to their direct and continuous access to good quality of water, a situation that later gave to the early Renaissance naturalists of the region a first thought of the need to understand better the interrelations between humans and water.

In the 18th Century all these nature lovers' individual efforts to deepen their knowledge inspired the forma-

tion of some dedicated societies. That was a period when Transylvanian naturalism experienced a spectacular growth; at that time the Transylvanian Society for Natural Sciences of Sibiu (Siebenbürgischer Verein für Naturwissenschaften zu Hermannstadt) was established (8th May, 1849) as the result of the initiative of local intellectuals. They aimed for an organization fit to accommodate the sharing of their passion for nature, and to serve the dissemination of their discoveries in order to educate the younger generation in the spirit of knowledge about nature and of the preservation of natural heritage. In this favourable context, exceptional naturalists appeared (Bielz, Neugeboren, Fuss, Schur, Kayser, Ackner, Reissenberger, etc.) and developed a significant pool of data.

One of the results of these enthusiastic nature lovers work was the construction of the present-day Natural History Museum of Sibiu (http://www.brukenthalmuseum.ro/naturale_en/) in the late 19th Century, an exquisite Italian Renaissance building on three levels which house, conserve and protect natural history collections comprising over one million items of priceless value. The aquatic and semi-aquatic species of plants, invertebrates, amphibians, fish and mammals are very well represented and constitute an important continuous attraction for researchers all over the world.



Figure 1: Transylvanian Watermill (Photo: Angela Bănăduc)



Figure 2: Olt River near the Transylvanian Alps (Photo: Doru Bănăduc)



Figure 3: Capra Lake in the Transylvanian Alps (Photo: Daniel Bălțat).



Figure 4: Danube Delta (Photo: Daniel Bălțaț).

Two very fine, large-scale and ancient libraries, the Baron Samuel von Brukenthal Library (http://www.brukenthalmuseum.ro/biblioteca_en/index.html) and the Library of the Transylvanian Association for Romanian Literature and Culture of the Romanian People (<http://www.bjastrasibiu.ro/>), induced and sustained a favourable environment for culture and science in the area. The importance of the naturalist tradition of the city appeared and grew continuously since 1849 through several series of scientific international periodicals such as: *Verhandlungen und Mitteilungen* – in German, *Studii și Comunicări* - in Romanian, *Acta Oecologica Carpatica* – in English (<http://reviste.ulbsibiu.ro/actaoc/index.html>), *Transylvanian Review of Systematic and Ecological Research* – in English (<http://stiinte.ulbsibiu.ro/trser/index.html>), etc., all of them totally or partially dedicated to the study of the aquatic environment.

As early as 1380, a school was opened serving Sibiu's local and regional intellectual environment, and constituted a landmark for this region. The truth is that the city of Sibiu was permanently motivated by the desire to see its residents



Figure 5: Beușnița Waterfall (Photo: Daniel Bălțaț).

improve their knowledge, as knowledge has always meant power. In 1780 Domenico Sestini, Professor at the University of Pisa, visited the city and said that owing to the local libraries, collections and museums, a university will be a natural step ahead, and that indeed happened, the year 1786 marking the beginning of higher education in Sibiu. The heir of this exceptional higher education inheritance is the Lucian Blaga University – LBUS (http://www.ulbsibiu.ro/en/despre_ulbs/), a significant European centre of academic excellence and social renewal. As a part of it, the Faculty of Science (http://www.ulbsibiu.ro/en/facul_tati/stiinte/) with its Ecological and Biological departments and research centres, maintains the strong local and regional tradition in nature protection and conservation with a special accent on aquatic species, habitats and ecosystems.

Starting with the periodic international meetings from the 18th to the 21st Century of the members of the Transylvanian Society for Natural Sciences of Sibiu, to today's 21st Century International Conference on Aquatic Biodiversity (<http://stiinte.ulbsibiu.ro/trser/events.html>) held in the LBUS, the interest in nature including in the aquatic environment is obvious and traditional in this area.

In such a context, the collaboration of our experts in aquatic ecology with the International Association for Danube Research – IAD, the longest existing international scientific network in the Danube Basin region, founded in 1956, (<http://www.iad.gs/>), is a natural and a promising one. LBUS and IAD collaboration has been very fruitful in the last two decades, in many ways including our joint organization of the International Conference on Aquatic Biodiversity and the publication of the *Transylvanian Review of Systematic and Ecological Research* – The Wetlands Diversity series.

To crown an already stable collaboration in protecting the Danube Basin's natural heritage, the IAD and LBUS decided to celebrate the 60 years of existence of IAD by holding the 41st IAD international conference, “**The Role of Tributaries in Sustainable Management Approaches in the Danube River Basin**” (<http://stiinte.ulbsibiu.ro/trser/events.html>) on 13–16 September 2016. Why this title of the conference? Because the magnificent Danube is ultimately formed, and as a consequence influenced even by the smallest and most ‘insignificant’ remote stream of this basin. If we intend to have a ‘fairy tale’ Danube, the proper management of its basin is the ‘golden key’.

The 41st IAD international conference cannot fail to be a success, built as it is on an efficient collaboration between IAD and LBUS in the decades, on the legendary natural area that is Transylvania, on the traditional centre for nature research and protection of especially aquatic and semi-aquatic ecosystems that is Sibiu, and last but not least on the strong feeling of professionalism and friendship among the IAD members. All the members and friends of IAD are kindly invited to share this success and to maintain the high standards of this prestigious Danubian association.