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postdoctoral researcher

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Education & experience

I graduated at Eötvös Loránd University (Hungary), receiving an MSc in Biology in 2009 and a PhD in 2013. I am currently a postdoctoral researcher at WasserCluster Lunz (Lunz am See, Austria) and also affiliated with the German Centre for Integrative Biodiversity Research (iDiv) in Leipzig, Germany. I have been a visiting scientist at the Institute for Chemistry and Biology of the Marine Environment (ICBM) in Wilhelmshaven, Germany (2011 and 2012) and at KU Leuven in Belgium (2015).

Besides ISSLR, I am a member of European Pond Conservation Network (EPCN), Association for the Sciences of Limnology and Oceanography (ASLO), International Society of Limnology (SIL), and SIL Austria, serving as a steering committee member of EPCN.

I am an aquatic ecologist particularly interested in metacommunity ecology and the importance of connectivity among habitats in a landscape. Most of my work comes from saline temporary ponds (soda pans), where we study plankton and large branchiopods. I equally enjoy investigating empirical patterns via spatial statistics and addressing specific ecological questions with experiments. We mostly work with microcosms (hatching and feeding experiments), but I also had the opportunity to get involved with mesocosm experiments. Combining both approaches can be crucial for understanding the interplay of local stressors (like salinity) and the safeguarding role of spatial connectivity in a landscape. I like using a landscape-level view when investigating saline lakes as this provides a good basis and effective management tools also for the conservation of these valuable and highly sensitive habitats. Working with these invisible connections between ponds and lakes is an important topic in both research projects I am currently involved in. I am a co-PI (with Robert Ptacnik) of the sTURN Working group (“Does time drive space? Building a mechanistic linkage between spatial and temporal turnover in metacommunities”) of sDiv (2017–2019) and a work package coordinator in the EU Interreg V-A Austria-Hungary “Vogelwarte Madárvárta 2” project (2016–2020; lead partner: Fertő–Hanság

National Park), where we investigate the meta-ecosystem role of waterbirds in soda pans in Central Europe.

Five representative publications on saline lakes

Vad, Cs. F., Péntek, A. L., Cozma, N. J., Földi, A., Tóth, A., Tóth, B., Böde, N. A., Móra, A., Ptacnik, R., Ács, É., Zsuga, K. & Horváth, Zs. (2017). Wartime scars or reservoirs of biodiversity? The value of bomb crater ponds in aquatic conservation. Biological Conservation 209: 253–262.

Horváth, Zs., Vad, Cs. F., & Ptacnik, R. (2016). Wind dispersal results in a gradient of dispersal limitation and environmental match among discrete aquatic habitats. Ecography 39: 726–732.

Horváth, Zs., Vad, Cs. F., Tóth, A., Zsuga, K., Boros, E., Vörös, L., & Ptacnik, R. (2014). Opposing patterns of zooplankton diversity and functioning along a natural stress gradient: When the going gets tough, the tough get going. Oikos 123: 461–471.

Horváth, Zs., Vad, Cs. F., Vörös, L., & Boros, E. (2013). Distribution and conservation status of fairy shrimps (Crustacea: Anostraca) in the astatic soda pans of the Carpathian basin: the role of local and spatial factors. Journal of Limnology 72: 103–116.

Horváth, Zs., Vad, Cs. F., Vörös, L., & Boros, E. (2013). The keystone role of anostracans and copepods in European soda pans during the spring migration of waterbirds. Freshwater Biology 58: 430–440.

Candidate's statement

Soda pans (temporary saline ponds and lakes) have been my study systems since the start of my PhD in 2009, but I have joined the International Society for Salt Lake Research only recently. It was a great honour to receive the Young Scientist Award of the society in 2017, which significantly helped my participation at the last (to me, the first) meeting. At the same time, I feel that European researchers are somewhat underrepresented at the society, and through my involvement in the board, I would try to increase the number of members (and particularly the young scientists) from this region. I would also like to inspire the society to put more emphasis on biodiversity research in saline lakes and to sustain and, if possible, even increase the support of young scientists. I would also foster the role of the society as a channel for promoting communication and cooperation of salt lake researchers, by bringing possible funding sources and calls to more focus. This could also facilitate more cooperation with freshwater scientists.