



# BALATON LIMNOLOGICAL RESEARCH INSTITUTE

<https://www.blki.hu/en>

- **Operating since 1927**
- **Located in Tihany**
- **Member of the Eötvös Loránd Research Network**
- **Institutional membership in 9 international organizations**
- **56 employees of which 27 are researchers (on 1 April 2021)**
- **58 publications (in 2020)**
- **1568 independent citations (in 2020)**
- **Cumulative impact factor: 107.1 (2019)**

The **Balaton Limnological Research Institute** is open to further joint research activities at international level.

For any additional information on possible international cooperation please contact Mr. Gergely BOROS PhD at [boros.gergely@blki.hu](mailto:boros.gergely@blki.hu).

Located in Tihany, the **Balaton Limnological Research Institute (BLRI)** boasts the longest history among Hungary's biological research institutions. Since its opening in 1927, the BLRI (and its predecessor institutions) has been the centre of limnological and ecological exploration of Lake Balaton. The Institute, as a member of the Centre for Ecological Research, had been transferred to the Eötvös Loránd Research Network by the 1<sup>st</sup> of August 2019. From the 1<sup>st</sup> of April 2021, the Balaton Limnological Research Institute operates again as an autonomous institute within the Eötvös Loránd Research Network.

The **mission** of BLRI is to contribute to the better assessment, protection and management of freshwater ecosystems through basic and applied research to ensure the sustainability goals in the Carpathian Basin.

## Research fields

The BLRI examines the flora and fauna of Lake Balaton and its watershed, the spatial and temporal variation of biota, nutrient cycling, and the natural and anthropogenic environmental effects influencing patterns and processes in freshwater ecosystems. The research is also focused on the development of new ecological status evaluation methods, and the conservation of biodiversity. The BLRI actively takes part in higher education as well.

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## Research groups

- Fish and Conservation Ecology Research Group
- Aquatic Botany and Microbial Ecology Research Group
- Aquatic Invertebrates and Community Ecology Research Group
- Ecophysiology and Environmental Toxicology Research Group
- Zooplankton and Ecological Interactions Research Group

## Human resources

On 1 April 2021 the number of employees was 56, the number of researchers was 27, among which the ratio of women was 40%. Three researchers held the title of Doctor of the Hungarian Academy of Sciences, and 21 had a PhD. The ratio of young researchers (junior research fellows) was 22%.

## List of the most important research topics of the Institute

- Distribution, community assemblage, diversity, dynamics and ecophysiology of phytoplankton in Lake Balaton and other aquatic ecosystems, including extreme habitats;
- The regulatory role of between-species interactions and environmental effects (e.g. climate change) on the organization of aquatic food-webs. Ecological role of zooplankton, with special emphasis on the implications for Lake Balaton;
- Biodiversity and assemblage-organization of freshwater fish and macroinvertebrates, environmental drivers of population dynamics;
- Chemical characterization of aquatic environment with special attention to polluting sources, identification and quantification of pollutants (e.g. pharmaceutical residues, micro-plastics);

- Water quality monitoring in freshwater habitats complying with the requirements of the EU Water Framework Directives;
- Mesocosm experiments in the outdoor facility of BLRI.



## List of the most important original research articles from the past 3 years

- Erős, T. *et al.* (2018). A unified model for optimizing riverscape conservation. *J. APPL. ECOL.* 55: 1871-1883.
- Schmera, D. *et al.* (2018). On the reliability of the elements of metacommunity structure framework for separating idealized metacommunity patterns. *ECOL. IND.* 85: 853-860.
- Maász, G. *et al.* (2019). Spatiotemporal variations of pharmacologically active compounds in surface waters of a summer holiday destination. *SCI.TOT. ENVIRON.* 677: 545-555.
- Bernát, G. *et al.* (2020). Oligotrophication of Lake Balaton over a 20-year period and its implications for the relationship between phytoplankton and zooplankton biomass. *HYDROBIOLOGIA* 847: 3999-4013.
- Erős, T. *et al.* (2020). Multiple stressor effects on alpha, beta and zeta diversity of riverine fish. *SCI. TOT. ENVIRON.* 748: Paper 141407.
- Fodor, I. *et al.* (2020). The natural history of model organisms: The unlimited potential of the great pond snail, *Lymnaea stagnalis*. *eLIFE* 9: Paper e56962.

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