



## Modelling of freshwater food webs under climate change and food web manipulation

Institute of Hydrobiology (<http://www.hbu.cas.cz/en/homepage/>), Biology Centre of the Czech Academy of Sciences, Czech Republic, is seeking to appoint **an outstanding postdoctoral researcher in the field of aquatic food webs.**

Institute of Hydrobiology owns multiple decades of detailed quantitative limnological data from nutrients to fish for a number of lakes and reservoirs. The successful candidate is expected to use these extensive data and construct and apply food-web models to investigate ecosystem dynamics of lakes and reservoirs, link modelling activities to ongoing research projects including models of water quality management and reservoir operation, initiate new research projects and supervise young researchers in these projects.

The successful candidate will work in an experienced and dynamic team of aquatic ecologists at the Institute. She/he will develop and parametrize food web models with the aim of predicting community dynamics under scenarios of extensive experimental biomanipulations or climate change. The ultimate goal of the community dynamic models will be to cover seasonal changes of all main functional groups (protists, phytoplankton, zooplankton, fish) and to take into account the size structure of the communities and longitudinal gradients of the reservoirs.

This work will improve our understanding of ecosystem functioning and mitigation of climate change impacts. The models should inform on future water quality and fisheries management of freshwater lakes and reservoirs and generate hypotheses for further empirical research at the Institute. The successful candidate is encouraged to establish new research directions and attract third-party funded projects to foster her/his own research career. Creating a research group aimed on modelling of freshwater ecosystems and cooperation with the universities and other research institutions will be strongly supported.

The project will be linked to internationally funded, multi-group research projects (ClimeFish, MacFish) and utilize extensive, multi-level data currently available at the Institute of Hydrobiology. Additional modelling expertise will be provided by Assoc. Prof. Pavel Kratina, Queen Mary University of London (<http://www.sbcs.qmul.ac.uk/staff/pavelkratina.html>) and Assoc. Prof. David Boukal, University of South Bohemia, Ceske Budejovice (<http://kbe.prf.jcu.cz/en/david-boukal>).

## DESIRED SKILLS AND EXPERIENCE

- PhD in ecology, limnology, environmental modelling, physical oceanography, computer science, applied mathematics or related fields
- Post-doctoral experience with models of population or food web dynamics
- Proven ability to pursue scientifically demanding questions, high motivation and a vision for creative research
- Good knowledge of programming languages such as R, Matlab, C/C++, or Mathematica
- Interest in modelling individual life histories, population dynamics and food webs
- Prior knowledge in data treatment and analysis of large and complex datasets, multispecies size-spectra, or size-/stage-structured modelling tools is highly desired
- Excellent written and spoken English
- Promising publication record commensurate with the career stage
- Good knowledge of aquatic ecosystem processes and past work in multidisciplinary environment will be preferred

## POSITION DETAILS

Target start date is January 2021 (negotiable). Initial appointment will be for 24 months, with an extension for up to 5 more years based on initial performance. We offer a highly competitive salary in local standards (up to ca. 2500 EUR monthly with additional performance bonuses for every published paper and supervised project) commensurate with the applicant's experience and skills. Successful applicant will be encouraged to develop his/her own research agenda compatible with the mission of the Institute.

## HOW TO APPLY

Applicants should email the following documents to Prof. Jan Kubečka ([kubecka@hbu.cas.cz](mailto:kubecka@hbu.cas.cz)) by **15 October 2020**.

- 1) Cover letter outlining main research interests
- 2) CV including full publication list
- 3) Copy of PhD (postdoc position) diploma
- 4) Copies of 2–3 relevant publications
- 5) Contact details for 3 (postdoc position) references.

Preliminary enquiries are welcome.

## BACKGROUND

Ceske Budejovice is a medium-sized town ca. 150 km south of Prague with 100,000 inhabitants, a relaxed atmosphere, and a growing expat community at the Biology Centre and the University. Both the town and the surrounding countryside provide numerous opportunities for research and leisure activities.

Living costs are low by international standards. Foreign applicants will receive support in transferring to the Czech Republic. The Institute can also help secure non-commercial accommodation at the campus shared by the Biology Centre and the University. Czech courses are available for foreign staff and students to reach a basic level of proficiency in everyday situations. Position includes standard health and social security benefits, support for barding, leisure and holiday activities, coverage of required travel and SW/HW, and help with moving family members. Biology Centre AS CR has been awarded a 'Human Resources Excellence in Research' Award of EU.