



Modelling of freshwater food webs under climate change and predator removal

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 and food web ecology.**

Institute of Hydrobiology owns multiple decades of detailed quantitative limnological data from nutrients to fish for a number of lakes and reservoirs:

<https://www.hbu.cas.cz/data/files/HBU/LTER%20Part%20I%20Reservoirs%20%2B%20cover.pdf>.

The successful candidate is expected to use these extensive data and construct and apply food-web models to investigate the 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 be directly involved in an ongoing large-scale ecosystem manipulation of fish communities in several freshwater reservoirs. She/he will also construct and parameterize food web models with the aim of predicting the ecosystem changes under the climatic forcing and extensive experimental biomanipulations. The models of community dynamics will include seasonal changes of all main functional groups (bacteria, phytoplankton, zooplankton, fish) and take into account the pervasive 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. Successful candidate is encouraged to establish new research directions and attract third-party funded projects to foster own reputation. 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. Close collaboration with Prof. David Boukal, University of South Bohemia, Ceske Budejovice

(<http://kbe.prf.jcu.cz/en/david-boukal>) and Dr. Pavel Kratina, Queen Mary University of London (<http://www.sbcs.qmul.ac.uk/staff/pavelkratina.html>) is expected.

DESIRED SKILLS AND EXPERIENCE

- MSc/PhD in ecology, limnology, environmental modelling, physical oceanography, computer science, applied mathematics or related fields
- Proven ability to pursue scientifically demanding questions, high motivation and a vision for creative research
- Interest in modelling individual life histories, population dynamics and food webs
- Good knowledge of programming in R, Matlab, C/C++, or Mathematica
- 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 April 2019 (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) by **15 January 2019**.

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