

From: Joacim Näslund
Subject: Master Project Internships (Czech Republic) - Aquatic invertebrate ecology

Up to four Master internship positions focusing on population ecology and phenotypic plasticity of aquatic invertebrates are available in the group of Dr. David Boukal at the Faculty of Science, University of South Bohemia and Institute of Entomology in Ceske Budejovice (Czech Republic) in the spring and summer of 2017. The students will work under the supervision of David Boukal, Pavel Sroka, Joacim Näslund (Swedish postdoc) and Julien Mocq (French postdoc). We work mainly on aquatic insects and offer detailed hands-on training during the entire lifetime of your project. Our interns achieve good to excellent results. Three previous projects have been published in a top journal (one in Sentis et al. 2015, *Global Change Biology*; two other in Sentis et al., *Global Change Biology* in press).

The positions are defined relatively broadly and the successful candidates will have the opportunity to choose among these topics depending on personal interests and skills:

1. Animal personalities in aquatic invertebrates. You will carry out lab experiments to investigate the covariance between behavioural and metabolic traits within individuals and how these are affected by different environmental conditions. This includes collection of animals in the wild, carrying out the experiments, and statistical analyses of data.
2. Trophic interactions in aquatic invertebrates. You will perform lab experiments to investigate the effects of environmental conditions (e.g., temperature, habitat complexity) on predator-prey interactions. This includes collection of animals in the wild, carrying out the experiments, and statistical analyses of data.
3. Phenotypic plasticity and functional traits in aquatic invertebrates. You will help collect and analyze data on phenotypic plasticity and/or functional traits (e.g., body size, feeding relationships) with emphasis on standing water taxa. This work can be based on an experiment and/or literature survey.
4. Thermal performance windows and metabolic rates of aquatic invertebrates. You will measure metabolic rates of aquatic insects and other invertebrates on a temperature gradient to help understand the underlying allometries and the ability of species to withstand future effects of climate change.
5. Gut content analysis of Odonata. You will run simple experiments to analyze prey digestion of 1–2 common species of Odonata and to identify which prey traits affect digestion times and prey identifiability in these species.

Starting Date: Flexible for literature-based topic 3. Preferably in late March/April 2017 to help start the experiments (topics 1, 2, 4, 5 and experiment-based topic 3). Later start is also negotiable.

Advisors: D. Boukal (head of group), J. Näslund, J. Mocq or P. Sroka.
Duration: between 3 and 6 months, with possible extensions.

Stipend: Successful candidates will need to secure most or all of their

funds. ERASMUS SPM (Student Mobility for Placement, ~350 Euros/month) or another similar European scholarship or a 'bourse de mobilité internationale sur critères sociaux' is enough to cover basic living costs and shared accommodation in student dormitories or in private for the entire duration of the stay. Exceptionally good performance may be supported with an additional Czech stipend. For more information about major French scholarships see [here](#), [here](#), [here](#) and [here](#). If you are not in France and would like to apply, please contact us at boukal@entu.cas.cz. Some information can also be found [here](#) for European applicants.

We are seeking highly motivated students with good organizational skills and strong interests in quantitative ecology, behavioral ecology or evolutionary ecology. Master students in biology, ecology, entomology, limnology and related fields are welcome. Students interested in experimental work are particularly encouraged to apply. Candidates should be sufficiently fluent in English to be able to engage in discussions and write the report. For all topics, previous experience with aquatic invertebrates, lab experiments, use of spreadsheets (e.g., Excel) and statistical analyses (R software) will be appreciated.

To apply, please send your CV, motivation letter (1 page maximum), and names and contact information for two references to D. Boukal (boukal@entu.cas.cz) or J. Mocq (Julien.mocq@gmail.com) no later than 6 January 2017. Informal enquiries are welcome - please contact us by email.

Contact information:

Department of Ecosystem Ecology, Faculty of Science, University of South Bohemia &
Biology Centre AS CR, Institute of Entomology, Laboratory of Aquatic Insects
and Relict Ecosystems, Branisovska 31, CZ-37005 Ceske Budejovice, Czech Republic

www: kbe.prf.jcu.cz/en and www.entu.cas.cz/boukal

tel: +420 387 772 327

email: boukal@entu.cas.cz (in English) or Julien.mocq@gmail.com (in French or English)