

## **SHORT- AND LONG-TERM CONSEQUENCES OF AMBIENT TEMPERATURE FOR THE DEVELOPMENT AND FITNESS IN PASSERINE BIRDS**

We are seeking a motivated PhD Student to join the project “Short- and long-term consequences of ambient temperature for the development and fitness in passerine birds”, funded by the Polish National Science Centre (NCN) OPUS grant.



### **About the project**

The temperature at which an animal develops or subsequently lives as an adult can affect many aspects of its phenotype. Growing evidence suggests, that early life stages are particularly important in shaping life-time fitness of individuals. In particular, birds provide a rich source of data on a great range of topics dealing with the effects of climate change. Although many studies have study the effects of climate change on birds little is known about the mechanisms underlying the behavioural, physiological and molecular genetic responses of organisms to thermal stress. The aim of this project is to examine how ambient temperature during the critical phase of offspring early development affects both parents' and offspring's fitness-related traits. Specifically, in this project we will manipulate the developmental conditions by a modification of nest temperature to investigate the effects of pre- and post-hatching temperature in the nests and interaction between them on an individual's phenotype. The field study will be carried out across four breeding seasons. We will conduct study on established nest-box population of collared flycatcher in the southern part of Gotland, an island in the Baltic Sea off the coast of Sweden. This project will provide important insight into the processes through which phenotypes are adjusted over very short timeframes in response to current conditions.

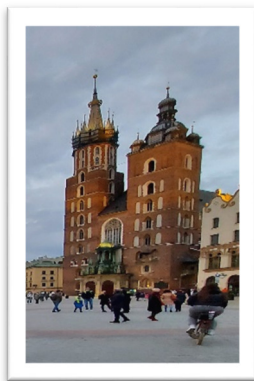


**PhD student responsibility will include:**

1) working in the field on Gotland island 2) working in the molecular lab (DNA extraction and telomere assessment with real-time quantitative PCR assay adapted for birds) 3) performance of heterozygosity analysis and paternity analysis (SNPs). PhD student will be involved in preparing manuscript and will present the results of the project at conferences. The PhD student will gain a broad range of skills and experience including field work, sequence data analysis and scientific writing that will provide solid bases for future career.

### **About the place and salary**

The Student will be based at one of the top research institutes in the fields of Evolution in Central Europe – The Institute of Systematics and Evolution of Animals of the Polish Academy of Sciences, Krakow, Poland. Krakow is a beautiful city with a dynamic cultural life (European City of Culture 2000; more than 100 festivals and other events organized every year; modern museums, cinemas, theaters, restaurants, etc.). It has good access to outdoor activities (biking, hiking and more) and is well-connected to the rest of Europe. The PhD student will be supported by a 48-month, scholarship: PLN 5000 (the amount not include public and legal charges in accordance with applicable law, take-home pay ~PLN 3600 per month). Note that in Poland, the living costs are relatively low (check out a cost-of-living calculator such as [www.numbeo.com](http://www.numbeo.com)) and even without additional funding from graduate school the salary is more than enough to fully enjoy life in Krakow



### **Requirements**

The successful candidate will have an M.Sc. degree in a relevant field by September 2022. We are looking for a student with strong interest in Behavioural Ecology, Molecular Ecology and Climate Change Studies and English language, communication, and organizational skills. Previous experience with, ecology, genetics, bird's biology and evolution are advantageous.

If you are interested please send a cover letter explaining your background, skills, and interest in the project, a CV, and contact details of two academics who are willing to provide a reference, to Dr. Aneta Arct ([aneta.arct@gmail.com](mailto:aneta.arct@gmail.com) or [arct@isez.pan.krakow.pl](mailto:arct@isez.pan.krakow.pl)). The review of applications is ongoing; please apply by July 2022 to ensure full consideration. The starting day for the position is 1<sup>st</sup> September 2022 (but can be negotiable!)