



# PhD position "Unraveling the genomic origin of species in the large white-headed gull radiation"

100% / start January 2023 or negotiable

A PhD position for four years (100%) is available at the Natural History Museum Basel and the Department of Environmental Science, University of Basel, Switzerland.

## Your position

Our project investigates the genomic basis of speciation in one of the fastest diversifying bird lineages, the Holarctic radiation of large white-headed gulls (*Larus* spp.) that produced 16 species and 35 subspecies in less than a million years. The PhD student will have the opportunity to investigate the genomic architecture of reproductive isolation across the speciation continuum and to reconstruct how the entire radiation of large white-headed gulls unfolded. We will investigate the speciation continuum using natural variation in the speciation process (Stankowski & Ravinet 2021 Evolution) present in this fantastic bird system, by comparing whole genome population genomic data of several species with varying degrees of divergence, geographic overlap and reproductive isolation, including transects across two independent hybrid zones (Gay et al. 2009, Heredity). We will further use whole genomes of all known taxa to reconstruct the origin, route, timing and the role of gene flow in this rapid bird radiation (Marques et al. 2019 Nature Comms, Marques et al. 2019 Trends Ecol Evol). The position will involve field, lab and museum-based work and genomic data analysis using population genomic and phylogenomic approaches. A Postdoc in our team will simultaneously generate state-of-the-art genomic resources in collaboration with the Wellcome Sanger Institute, Cambridge, UK.

This project is a collaboration between David Marques (principal investigator, Natural History Museum Basel, Switzerland), Walter Salzburger (University of Basel, Switzerland), Joana Meier (Wellcome Sanger Institute, UK), Pierre-André Crochet (CNRS Montpellier, France), Manuel Schweizer (Natural History Museum Bern, Switzerland) and Magdalena Zagalska-Neubauer (University of Wrocław, Poland). The PhD position will be supervised by David Marques at the Natural History Museum Basel and associated with the group of Walter Salzburger at the University of Basel, Switzerland.

## Your profile

I am looking for a highly motivated person eager to address big questions in evolutionary biology with whole genome data. In particular, I seek candidates with a strong foundation in evolutionary biology and interest in speciation, genomics and evolution in general, preferably (but not necessarily) with some experience in programming and genomic data analysis. Candidates for this position are required to hold a Master's degree in Biology or Bioinformatics from a higher education institution recognized by the University of Basel. In my mission to build a diverse, inclusive and highly collaborative lab, I am looking for a kind person that is both eager to work independently and to actively contribute to an interactive and supportive team and therein to a positive lab environment.

## We offer you

Both the Natural History Museum and the University of Basel harbor a friendly and welcoming community of MSc, PhD and Postdoc researchers and are located within 10 minutes walking distance from each other in the heart of Basel city. Basel is the third largest city of Switzerland, bordering France and Germany, is rich in historical buildings and with lively traditions, has a cosmopolitan ambience and a world-renowned art and museum scene. Strong public transport in the city and Switzerland allowing for easy train access to the Jura mountains and the Swiss alps add to the experience, letting Basel rank among the global top 10 cities for quality of living.

The PhD salary will be according to Swiss National Science Foundation standards (approx. CHF 47,000-50,000 annually before taxes for four years of 100% employment).

## Application / Contact

Please send an application letter (outlining your motivation and what your skills will add to this project), CV and contact information of two references. We accept only **online** applications. Applications are welcome until November 30, 2022. For any inquiries regarding the position, please contact David Marques (davidalexander.marques@unibas.ch).

APPLY