



**PhD position (m/f/d) in Speciation and Hybridization Genomics
at the State Museum of Natural History Stuttgart**

Homepage: www.naturkundemuseum-bw.de/en/

The State Museum of Natural History Stuttgart (SMNS) is one of the largest natural history museums in Germany and conducts collection-based research in the areas of systematics, taxonomy, biodiversity and evolution. The SMNS also cooperates closely with the University of Hohenheim in research and academic teaching. As an integrated research museum, the SMNS delivers an essential contribution towards a deeper understanding of complex biological phenomena and a broad range of engagement opportunities for all citizens.

We offer a PhD position in the project:

BUNTING-ZONE: a natural laboratory to understand how colour pattern maintains species boundaries in birds, Zoology department

[E 13 TV-L, 65%, 3 years]

Project and job description:

Hybrid zones are defined as areas where genetically differentiated groups of individuals meet, mate, and produce offspring of mixed ancestry. Studying these natural laboratories provide an opportunity to have a better understanding of the genomic regions and traits underlying the initial stages of reproductive isolation. We will use a moving hybrid zone between two songbirds – black-headed and red-headed buntings – where species are hypothesised to be behaviourally isolated due to an association between male plumage and female preference. Bunting hybrids display a spectrum of phenotypes, ranging from different degrees of intermediate to novel transgressive phenotypes. By integrating genotypic and phenotypic studies of contemporary and museum collections spanning the last ~25 generations of the hybrid zone, we will assess:

1. How heterogeneous is the genomic landscape of differentiation?
2. Which genomic regions are associated with the plumage traits?
3. Does selection in those regions maintain local genetic differentiation over time in the face of gene flow?

The successful applicant will work on this topic as part of their own research project, combining field- and lab work (for both contemporary and museum samples), with analyses of phenotypic and genomic data. The doctoral student will be based at the Zoology Department of the SMNS; however, it is recommended to enroll in the program at the University of Hohenheim (<https://www.uni-hohenheim.de/naturwissenschaften-promotionsstudiengang>). The project will be supervised by Dr. Niloofar Alaei Kakhki and Dr. Ricardo Pereira (<https://pereiralab.wixsite.com/rpereiralab>).

Requirements:

- M.Sc./Diploma degree or equivalent in biology or related program by the time of the start of the project
- Experience in fieldwork with birds

- Experience in genetic laboratory work
- Experience in population genetics
- Experience in computational languages (e.g. R and python)
- Fluent in spoken and written English language; German language skills is an asset
- Teamwork and communication skills
- Interest in working with conservation authorities and other stakeholders

Our offer:

- The opportunity to pursue your academic career
- An interdisciplinary and cooperative, team-oriented research environment
- Opportunity to attend national and international conferences
- Intensive academic and personal mentoring
- Attractive workplace in the centre of Stuttgart with flexible and family-friendly working hours
- A subsidised public transport ticket (JobTicket BW)

The position is funded by a DFG grant, and thus salary is paid according to the German salary scheme for the public sector for doctoral research (65% E13 TV-L). The position is guaranteed for three years. Applications in German and English are equally welcome, but the work language is in English.

How to apply:

Please send your application, including a motivation letter, CV and certificates exclusively online and the names and contact details of two referees (in one file, max 10 MB) to phd-buntingzone@smns-bw.de by **October 15, 2024**. Job interviews are scheduled for **October 25, 2024**. Invited candidates should give a max. 15-minute presentation on their research background, their interest in the project and their methodological skills.

For further information, please contact Dr. Niloofar Alaei Kakhki, niloofar.alaei@smns-bw.de.

The SMNS promotes equal opportunities for its employees and therefore welcomes applications from all people regardless of their gender, cultural and social background, age, religion, ideology, disability or sexual identity. As the promotion of equality between women and men is of particular concern to us, we expressly encourage qualified women to apply. Severely disabled applicants will be given preference if equally qualified.

Information on data protection law for applicants can be found on our homepage under "Jobs".

