PARIS
LODRON
UNIVERSITÄT
SALZBURG

Population genomics of catadromous eels in the Indian Ocean

The project:

We are seeking a motivated Ph.D. student to work in an Austrian Science Fund project entitled: *From Myth to Reason - Population structure and spawning area(s) of tropical eels in the southwestern Indian Ocean*. Worldwide, the Indian Ocean eels are the least studied and little is known about the marine phase of their life cycle and their biogeographic history.

The project focuses on two aspects:

(i) Whole genome sequencing data will be analysed to assess the population structure of all Indian Ocean species throughout their distribution ranges. Additionally, genomic data for population samples of all species of the genus *Anguilla* (16 species and 3 subspecies) will be analysed to investigate their phylogeny together with signals of interspecific hybridization.

(ii) Endemic *Anguilla mossambica* will be tagged with satellite transmitters to study their marine migration routes from Madagascar, locate their spawning area (which they may share with one or more of co-occurring species), and assess the oceanographic conditions along the eels' migration path to identify landmarks that the eels may use to find their spawning area.

Your role:

Using existing population samples, you will study the evolutionary and biogeographic history of species differentiation and hybridization across all anguillid species with whole genome sequencing techniques. You will use genomic data to quantify the degree of population structure in anguillid eels of the Indian Ocean region, including traces of hybridization across their genomes. In addition, you will have the possibility to join the team in Madagascar for tagging eels with pop-up satellite archival transmitters and the collection of additional tissue samples for genomic analyses. The position will be based at the University of Salzburg, supervised by Robert Schabetsberger. Prolonged research visits will be included to perform molecular work together with collaborators Robert Jehle (University of Salford, UK) and Chrysa Gubili (Fisheries Research Institute, Greece), and to perform bioinformatic analyses together with Michael Matschiner (University of Oslo, Norway) and Julia Barth (University of Basel, Switzerland).

Ideal qualifications:

Master degree in Biological Sciences (finished or being finalised)
Strong background in laboratory skills and molecular analyses
Great interest in Evolutionary Biology
Expertise in bioinformatic analyses
Willingness to work under demanding conditions in tropical environments
Team player and cooperation skills
Well-structured and autonomous working style
Strong English communication skills, both verbally and in writing

Salary: Annual gross income € 26.140.-, 3 years

Start date: 1 December 2021

Application:

Curriculum vitae
List of publications
Cover letter describing your interest and fit to this position
Email addresses of two referees

Robert.Schabetsberger@plus.ac.at