

PhD position (UNIVERSITÄT WIEN)

Bewerbungsfrist: k.A.

The *Research Group Plant Systematics* of the *Department for Botany and Biodiversity Research* at the University of Vienna (<https://plantsystematics.univie.ac.at/>), Austria is recruiting a

PhD student in Plant Evolution & Phylogeography (m/f)

Transcontinental or even world-wide distribution of plants is a common phenomenon on the levels of families and genera. However, there are very few cases of world-wide distribution of plant species, that do not result from direct or indirect human aided dispersal. The tufted hair grass (*Deschampsia cespitosa*) occurs in (semi-)natural habitats worldwide in temperate zones (incl. tropical high mountains) and is thought to have achieved its present day distribution essentially without human assistance. We study the pathways and the chronology of long distance dispersal leading to its present world-wide distribution by investigating the biogeographic patterns, i.e. the relationships among the Eurasian, North and South American (including Antarctica), African, and Australasian populations and the evolution of polyploid variants in various regions. Using molecular (cpDNA) and genomic tools (Restriction site Associated DNA markers = RADseq) we aim to identify source populations and their derivatives. The cpDNA data are expected to provide a global picture of relationships and dispersal routes within and between geographical regions and continents. Single Nucleotide Polymorphism (SNP) patterns gained from RADseq data will deliver more precise information on divergence among populations within regions and among them. These data will also provide information on genetic structure and diversity, and help in revealing population history, for instance possible phases of very small founder populations following arrival after long-distance dispersal. This study using the combination of the above introduced and several additional tools (e.g. cytogenetics) in this grass species will provide new insights into the history of plant dispersal and the evolution of grassland ecosystems in the temperate regions on a global scale.

The candidate should have

- an MSc in evolutionary biology or related fields, such as, evolutionary genetics, molecular ecology, bioinformatics, etc;
- high motivation and enthusiasm;
- an excellent academic track record;
- a demonstrated computer literacy, including some knowledge of Unix (e.g., from a course);
- preferred: experience with NGS methodology (wet lab or bioinformatics);
- excellent organization and communication skills;
- fluency in English (NB German knowledge is not essential)

We are an international team with English as the working language. The position offers a salary according to Austrian Science Fund standard (including health insurance), and the opportunity to attend international conferences. To be considered please send your application as a single pdf file to josef.greimler@univie.ac.at, including a motivation letter with a statement of research interests (max. 2 pages), your CV and if applicable publication list, university certificates including grades, and the names and contacts of three referees. Please note: Incomplete applications will not be considered.

Screening of applications will begin immediately and will continue until the position is filled. The latest preferred start date is April 1st, 2018.