



CHARLES UNIVERSITY

A Ph.D. position is available in the research group of Dr. Roswitha Schmickl at the Department of Botany of Charles University in Prague.

Title of the Ph.D. project: Cytogenomics of a Cape plant radiation – the role of whole genome duplication and transposable elements

Starting date: October 2019

Project summary:

Both the ubiquity of recent polyploids and association of ancient whole genome duplication (WGD) events with evolutionary radiations are frequently taken as indirect evidence of the adaptive value of polyploidy. However, in stark contrast to this stands the discovery that recent polyploids diversify at lower rates, which re-appraised older notions about polyploids as evolutionary dead-ends. This Ph.D. project focuses on the radiating southern African *Oxalis* clade (SoAO). Within-species ploidy diversity in SoAO is more than three times higher than global estimates of angiosperm intraspecific ploidy variation. Within this project it will be tested which processes lead to the extensive polyploidization in this plant group and if there is a ploidy-dependent diversification rate shift. In addition, the role of transposable elements in radiating SoAO and their interrelation with WGDs will be addressed. Methods will focus on phylogenomic analyses, common garden experiments, and flow cytometry.

The successful candidate is expected to have a broad and strong interest in plant evolution, phylogenetics and bioinformatics. Previous experience in any of these fields is a plus.

If you are interested, please send your CV and motivation letter to Roswitha Schmickl (roswitha.schmickl@natur.cuni.cz) until April 30th 2019.