

Genetic diversity and differentiation of *Olea europaea* subsp. *cuspidata* in the Hajar Mountains, Sultanate of Oman

Background

Oman is considered the connective link between two large distribution areas of *Olea europaea* subsp. *cuspidata* (Engl.: wild olive, African Olive), a relative of the cultivated Mediterranean olive. Its distribution ranges from South Africa, Ethiopia, to the Pamir, Himalaya und Tibet. The species forms plant associations of savannah-like structure, is landscape determining element and offers habitat for many plant and animal species. Wild olive is used for its fruits, forage and wood. The use of especially its wood as construction material and for char coal as well as the use as forage crop (pruning of branches and browsing of seedlings) threatens however many populations resulting in diebacks of branches and entire individuals. Climate variations in addition are believed to accelerate this process. How far genetic aspects (genetic diversity and differentiation, bottlenecks) are important factors or are even affected by these changes is unclear, but are key to consider management and conservation purposes and goal of the announced MSc thesis.

Your tasks

1. Lab work (2-3 months): available leave material from 420 individuals should be tested and analysed with already established SSR-markers at Forest genetics and Tree Breeding Department (Göttingen)
2. PC-analyses (2 months): common population genetics software (R, GenAlex, etc.)
3. Thesis write-up (1-2 month/s)

Your skills

- Good English: not a prerequisite, but improves the chance to become a co-author in an internationally peer-reviewed paper. A thesis in German is also possible.
- Interest in molecular and population genetics
 - lab work
 - use/explore of new software
- communicative

We offer

- Lab and desktop work in close cooperation with Tropenzentrum (Dr. Martin Wiehle, University of Kassel) and the Department of Forest Genetics and Tree Breeding Department (Prof. Dr. Oliver Gailing, University of Göttingen)
- Set up of efficient time schedules
- Fast response and exchange between supervisors
- Flexible working hours and collegial off-work activities

Expected time frame

- 6 months (regular MSc thesis)
- Nov/Dec 2017-May/Jun 2018
- Later dates are possible upon consultation

More information

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Dieback wild olive in the Hajar Mountains, Oman

MSc thesis in population genetics

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