

Request and sampling instructions for *Calluna vulgaris*

Background: Heather (*Calluna vulgaris*) has a large geographic distribution in Europe and is dominating many heath ecosystems. Global change, i.e. land use change, pollution and climate change affect heath ecosystems. These threats resulted in various restoration efforts, including assisted migration, i.e. the translocation of heath from putatively “preadapted” southern populations to more northern sites that in future will experience similar climatic conditions. However, we do have very limited knowledge about the phylogeographic structure and patterns of genetic variation and its relation to environmental conditions across the range of *Calluna vulgaris*, that might inform such actions.

Objectives: We want to analyse the genetic structure of *Calluna vulgaris* across its whole distribution range. We address intraspecific genetic relationships that resulted from the history of colonisation and from selection due to environmental conditions. Therefore we would like to get twigs with leaves from which DNA is extracted and processed with molecular methods to obtain single nucleotide polymorphisms (SNP) data.

Choosing sites: Choose large old populations, avoid recently founded and very small populations. If you can sample more than one site, they should be several kilometres apart. As we sample across the whole range and our resources are limited, the distance between adjacent sampling sites will generally be >100 km. Thus, if you intend to collect, please first get in contact with me (walter.durka@ufz.de) and/or consult the map of sites already sampled (<https://www.ufz.de/index.php?de=43305>) as to know whether your region is already sampled.

Sampling At a sampling site, choose 20 plants at random and with >5m distance between plants. From each plant collect a twig with young, healthy and clean leaves and place it in a separate paper bag/envelope. If fruits with seeds are available on the same plant, collect an inflorescence and put in the same bag. Label the bag with site name and consecutive numbers 1 to 20. Let dry in the air, or, if available, in a drying chamber at 50°C. Sampling should be finished by June 2018.

Send bags and the form below to Walter Durka, Helmholtz Centre for Environmental Research-UFZ, Department Community Ecology, Theodor-Lieser-Straße 4, D- 06120 Halle (Saale) Germany.

Please fill in for each sampled site

Site name:			
Country			
Collectors name			
Collectors email-address			
Date			
Coordinates (or send kmz-file by email)	°N	°E	
Vegetation type			
In this region <i>Calluna</i> is	<input type="checkbox"/> abundant	<input type="checkbox"/> frequent	<input type="checkbox"/> rare
In the local community <i>Calluna</i> is	<input type="checkbox"/> dominant	<input type="checkbox"/> subdominant	<input type="checkbox"/> rare
Comments			

If you have questions concerning sampling or the project do not hesitate to contact:

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(Samples taken (blue dots) by 12 August 2019)

Thanks a lot !