

## Easy lab – field DNA extractions

Project work course (10-15hp), contact: Martin Ryberg, [martin.ryberg@ebc.uu.se](mailto:martin.ryberg@ebc.uu.se)

DNA sequences are a prime data in modern biological research. To be able to get the DNA sequence, the DNA first have to be extracted from the tissue of the organism of interest. Most standard DNA extraction protocols require a full size molecular lab. This project will explore protocols for extracting DNA under simpler conditions. The goal is to have one or several protocols that can produce PCR/library prep ready DNA that work in field lab conditions with low risk of contamination and minimum waste.



The project will involve research about options, testing protocols on different materials, and control of quality of extracted DNA. The protocols will be used during an expeditions to Africa, but may also be used on a long term basis at the University of Parakou (Benin), during other field trips, in the lab by my research group, in teaching, and/or be disseminated more widely.

### Ryberg group:

During the project you will be part of the Ryberg research group. We focus on diversity of mushroom forming fungi. In collaboration with the University of Parakou we have field sites in Western Africa, but we also do fieldwork in Sweden and other parts of the world.

### Experience:

You should have experience working in a molecular lab (using pipettes, centrifuges etc.) and analyzing DNA sequences (e.g. working with alignments).

You will get: extended lab experience working with different materials, understanding of different aspects of DNA extractions, and an understanding of different aspects of DNA quality and the requirements on DNA quality for different applications.

### Extension:

As an extension of the project it will be possible to explore making of own lab equipment, and or sequencing techniques.

### Contact:

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