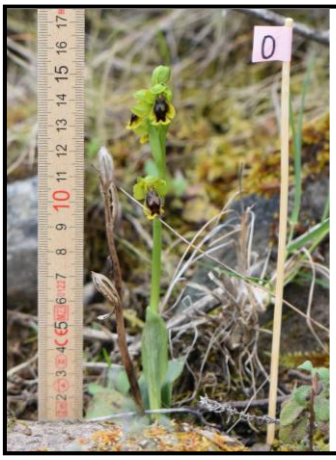
Thesis project:

Phenotypic diversity in *Ophrys lutea* s.l.

Work with images, 3D scans and spectra to explore phenotypic groups using R.



Background:
Yellow-flowered *Ophrys lutea* s.l. at the study site are largely unexplored in terms of floral trait variation. It is unknown how many phenotypic groups exist and whether trait variation is linked to plant fitness.

Project

Analyse phenotypic variation in the *Ophrys lutea* complex using an existing dataset.

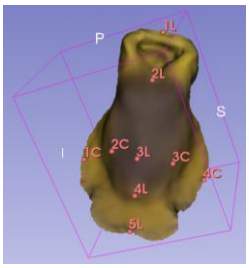
Aim: Investigate phenotypic groups/morphotypes that may indicate cryptic species.
Focus: Data cleaning, integration, and statistical analysis in R.

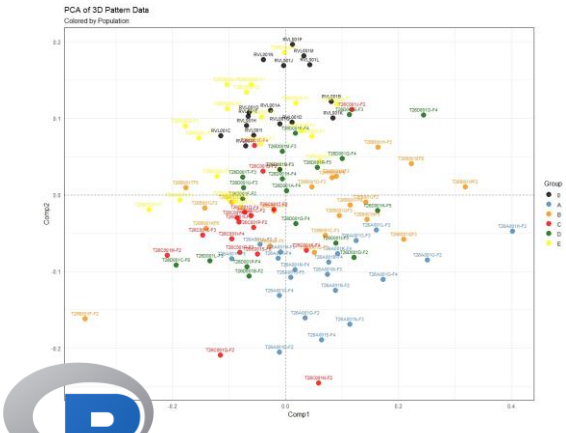
Methods

- Data import, cleaning, and structuring in R
- Deriving **phenotypic** variables (e.g. from 3D scans, images)
- Exploratory data **analysis** & **visualization**
- **Multivariate statistics** (e.g. PCA, clustering)

Dataset (~120 individuals):

- **Field data**
- Field & lab images
- **3D scans**
- Reflectance spectra





What you will learn

- Practical **R skills** from zero (data wrangling, plotting, basic stats)
- Working with complex, real-world **ecological datasets**
- Critical interpretation of **phenotypic variation**
- Documenting and **communicating** your analysis (R scripts, figures, thesis)

Who is this for?

- Students in Biology & related fields
- Interest in plant evolution, morphology, and data analysis
- **No prior experience in R required** – motivation to learn is essential!

Interested?

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