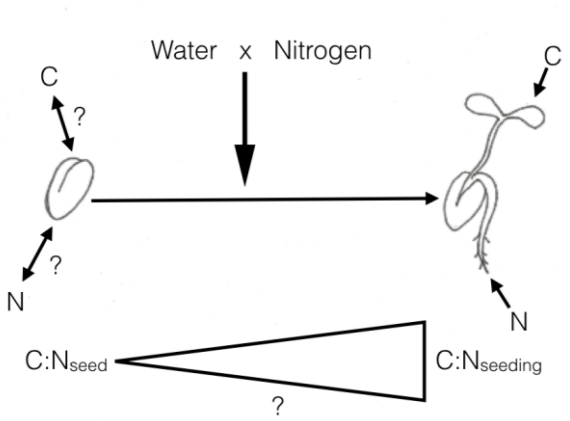
Master Project

Biodiversity and Ecological Modelling Group (AG Tietjen)

Biodiversity and Ecological Modelling

Can changes in seed C :N ratio predict germination time?

Germination is a capital process in the life of a plant yet it is often overlooked in plant-growth models. While the main factors contributing to the process of germination are known, both at the evolutionary and molecular level, a functional understanding of germination and its link to the rest of the plant's lifecycle is still missing. We suggest that changes in the seed C:N ratio can act as a mechanism to initiate germination. The offered Master thesis project will be centered on testing this hypothesis by comparing model predictions with empirical data.



The prospective student will:

- perform a germination experiment using at least 3 different species under controlled conditions
- measure morphological and chemical (C, H, N) traits
- analyse trait data and their temporal dynamics
- synthesise the findings in a simple mechanistic model with the goal to predict germination time.

We are looking for a motivated, open-minded student enrolled in a Masters degree program preferentially in Biology/Plant Sciences/Agricultural Sciences in the Berlin/Potsdam region. It will be an asset if you have experience in any of the following:

- Experimental design
- Handling plant samples
- Statistical analysis (e.g. ANOVA/ANCOVA) in R
- Basic understanding of ecological modelling experience

A working level in written and spoken English is a requirement.

If you are interested in this Masters project please contact Camille Guilbaud (guilbaud.camille@hotmail.fr) or Gregor Ratzmann (gregor.ratzmann@fu-berlin.de).