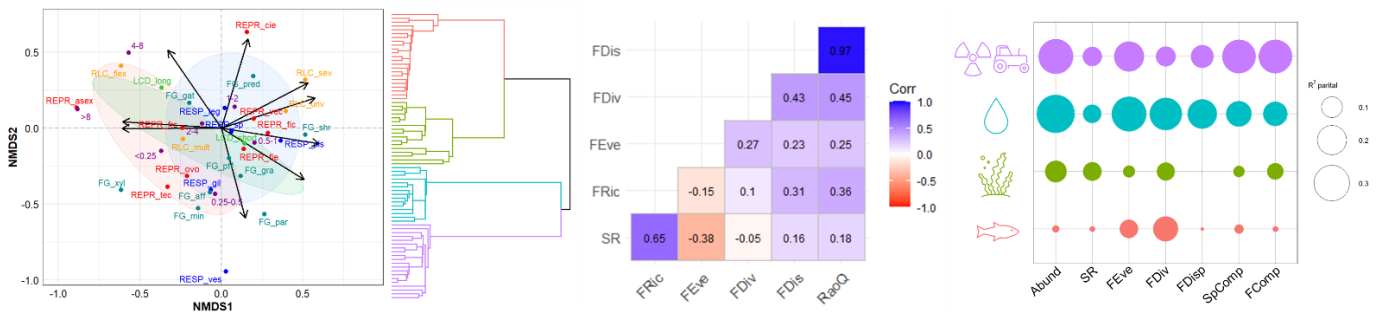



03.06. – 14.06.2024



**You want to learn different quantitative methods in community ecology for different community types (i.e. plants vs animals, terrestrial vs aquatic) using  tools**

**When, where:** 13-14 June 2024 (from 9:30 to 15:30); seminar room AG Tietjen (R212), Gartenhaus, FU Berlin, Königin-Luise-Straße 2/4, Berlin

**Instructors:** Oksana Buzhdygan, Felix May

If you have questions and want to register please send an email to [oksana.buzh@fu-berlin.de](mailto:oksana.buzh@fu-berlin.de) or to [felix.may@fu-berlin.de](mailto:felix.may@fu-berlin.de)

The **lectures** provide an introduction to Community Ecology, and give basics of analyzing biodiversity and community composition using methods in the statistical software R. The lectures are accompanied by applied examples for different community types (i.e. plants vs animals, terrestrial vs aquatic communities).

During the **seminars**, the topics covered in the lectures are deepened and discussed.

In the **seminars on the PC**, you will practically apply the topics and methods, learned during the lectures and seminars. Using a number of worked examples from the published ecological literature, you will develop, evaluate, modify and solve the community analysis exercises using the R software under supervision and later independently. You will practice the selection of data analysis strategies for different datasets (e.g., chose appropriate methods for different multivariate datasets).

In this course, you will learn **HOW TO**:

- analyze ecological communities using taxonomic and functional approaches (total and relative abundances, biodiversity indicators, functional traits, functional diversity, taxonomic and functional community composition);
- graphically visualize the variation within and between communities;
- apply statistics for multivariate data including Principal Component Analysis (PCA) ordination Nonparametric Multidimensional Scaling (NMDS) and other ordination methods and cluster analysis;
- test the effects of environmental variables on community diversity and changes in community composition and similarity and dissimilarity;
- analyze the scale-dependence of biodiversity and approaches for standardized biodiversity comparisons;
- analyze ecosystem functions;
- interpret the results in the ecologically meaningful contexts, present statistical methods and results in oral and written form to a specialist audience.