



2 Master thesis 2021/2022

Analyzing communities in river-floodplain systems of the Danube – fish (1. thesis) and amphibians (2. thesis)



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Background:

One of the most important recent advances in community ecology is that biodiversity patterns are not only influenced by local scale determinants of species coexistence (e.g. niche theory, biotic interactions), but by dispersal from the regional species pool. Among vertebrates, fish and amphibians depend largely on local hydrologic conditions and dispersal is a key factor in their organization. Therefore, quantifying the effect of both factors is a key aspect to understand the functioning of communities and the basis for future management decisions.

Main research question:

How is the diversity and community composition of fish or amphibians linked to local environmental conditions and network structure of the river-floodplain system?

Approach:

The master thesis is part of the international FWF-project RIMECO and includes field work as well as statistical and GIS analyses of the data. Within the framework of the project, different side-arm systems of the Danube in Lower Austria are studied. One thesis will focus on the amphibian community and one on the fish community. Community data will be analyzed combined with local environmental parameters and the connectivity within the river-floodplain network. The results are set in context with recent literature and published in an international journal.

Start: Spring 2021

Location: Vienna, field work in Lower Austria (Danube east of Vienna)

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