



Master thesis 2018/2019

The role of macrophytes in the nutrient cycling of Austrian lowland rivers.



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Background:

The quality and quantity of organic matter and nutrients is determined by upstream processes in the river system. Though macrophytes can be found within the whole catchment and are affecting the whole ecosystem structure of streams, their role in organic matter and nutrient transformation has obtained less attention. Therefore quantifying the effect of macrophytes on downstream fluxes in rivers, a key aspect to understand fundamental ecosystem processes and the basis for future management decisions.

Main research question:

How is the distribution and abundance of macrophytes linked to nutrients, sediments and hydrology and what are the implications?

Approach:

The master thesis is part of the international FWF-project FLASHMOB and includes field and lab work, as well as statistical and GIS analyses of the data. Within the framework of the project, different rivers in Lower Austria are studied. Nutrient and carbon concentrations of water samples, sediment samples and macrophyte samples are analyzed and combined hydromorphological and meteorological data. The results are set in context with recent literature and published in an international journal.

Start: Spring 2018

Location: Vienna/Lunz, field work in Lower Austria

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