

Two PhD positions in fishpond ecology at WasserCluster Lunz, Austria

Within the research project ‘*HydroFat* – Trophic fate of lipids in eutrophic aquatic ecosystems’, funded by the Austrian Science Fund (FWF; www.fwf.ac.at), we are looking for highly motivated students with expertise in aquatic food webs ecology to pursue her/his PhD studies at the University of Vienna, conducted at the inter-university research center for Aquatic Ecosystems Research 'WasserCluster Lunz' (www.wcl.ac.at), Austria.

We are recruiting students to study the trophic fate of diet sources in zooplankton and various fish (Common carp) tissues and organs. This research will combine eco-physiological, biomarker, and ecosystem approaches to;

- a) delineate how zooplankton and fish, particularly reproductive and neural tissues, respond to dietary lipid supply to secure their lipid and fatty acid demand under different dietary, light, and water temperature conditions (*experimental eco-physiological approach*);
- b) track lipid pathways into and within aquatic invertebrates and fish using novel molecular stable isotopes ($\delta^{13}\text{C}$ and $\delta^2\text{H}$ of fatty acids) (*biomarker approach*), and;
- c) quantify the spatial and seasonal variation in consumer dependence on the elemental and molecular composition of diets across eutrophic aquatic ecosystems (*ecosystem approach*).

The PhD students will use state-of-the-art methods, including controlled indoor feeding experiments with subsequent stable isotope, lipid, and compound-specific stable isotope analysis, linked with investigations of fishponds. Together with an international team of high-profile researchers (Fen Guo, Sami Taipale, Antonin Kouba, Tim Jardine, Matthias Pilecky, Len Wassenaar), this research will be coordinated and lead by Martin J. Kainz (PI) and provide excellent research opportunities for a more comprehensive understanding of trophic energy transfer and lipid dynamics in aquatic organisms.

WasserCluster Lunz is a highly interactive inter-university research center for Aquatic Ecosystem Research at Lake Lunz (145 km from Vienna) with a steadily growing number of international PhD students as well as post-doctoral fellows.

Candidates should send the following items, as a single PDF, to Prof. Martin Kainz (martin.kainz@donau-uni.ac.at): (1) a brief description of their background, career goals, motivations for pursuing a PhD, research ideas, and why they are specifically interested in joining this research project; (2) a CV with academic and professional experience (including published papers); and (3) contact information for 3 references. The application deadline is December 31, 2024, for enrollment in early spring 2025. However, applicants should express their interest by email as soon as possible.