



Masters Student Project:
**Land use/land cover in Bodensee watershed & links to
ecosystem functioning**



Input of dead material from the terrestrial ecosystem into streams has been identified as an important subsidy supporting stream functioning. Our lab is using the freshwater crustaceans *Amphipoda* to test this concept at a higher spatial level: do leaf litter inputs near the headwaters of a stream have effects on the animals living downstream? How do litter inputs along the length of the stream affect the diversity of organisms found at different points within it? Can inputs from wooded areas near the headwaters promote the functioning of the downstream areas where agriculture and development have crowded out trees from the stream banks?

We are seeking a masters student to help us learn more about the catchment characteristics of 20+ streams running into Bodensee (Lake Konstanz). Streams are of varying length but many follow a similar pattern of wooded upland reaches then moving through agricultural areas further downstream. Work would be a primarily GIS-based. A possible application would be to ask what changes in land use might imply for detrital inputs and amphipod communities, from three perspectives: (1) as part of the current effort to take some land around Bodensee out of production; (2) in terms of hedgerows and further ecologically-friendly agriculture, which is already practiced in the region; and (3) the possibility of agriculture intensifying in the future. However, we welcome input on the direction of the masters project!



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