

Ecology and conservation of small mammals in Switzerland



Background: Small terrestrial mammals is a diverse group of animals with 37 species in Switzerland. They occupy a variety of environments from lowland wetlands to alpine ecosystems, and they exploit a variety of microclimates and microhabitats thanks to their small sizes. They play a key role in ecosystem functioning by regulating the composition of vegetation and other trophic levels as preys or predators, and hosting parasites and pathogens. Because of their fast life cycle, they respond rapidly to climate and environmental changes. Despite their importance as ecological indicators and as components of native biodiversity, small mammals are poorly studied compared to their larger counterparts. In order to better understand their ecology and to suggest adapted conservation measures in Switzerland, it is important to better study patterns and driving factors of their spatial distribution and connectivity.

Research: We propose Master projects on several native species of small mammals in Switzerland, including the Bicolored shrew (*Crocidura leucodon*), Harvest mouse (*Micromys minutus*) or Garden dormouse (*Eliomys quercinus*). The student will conduct field work using camera traps, footprint tunnels, living traps, bioacoustics and/or genetic tools, as well as existing data from [Info Fauna](#) database. He/she will investigate the environmental variables that shape the distribution and connectivity of the species in order to better characterize the limiting factors and to provide suggestions for conservation measures. The student will benefit from existing collaboration between the Conservation biology lab at the University of Neuchâtel and experts in the field of small mammals in Switzerland.

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