



ECOLOGY & EVOLUTION
CONSERVATION BIOLOGY



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UNIVERSITÄT
BERN

1 PhD position

Conservation biologist/restoration ecologist

within our new research programme funded by the Swiss National Science Foundation:

Restoring grassland biodiversity: from degraded, species-poor to integral stable-state ecosystems

Farmland of the Swiss Lowlands is devoted to high-intensity, modern agriculture that has generated precarious conditions for biodiversity, as typically encountered in most Western and Central Europe. Agri-environment schemes have tried to remedy to these dramatic situation, but have had limited success so far. We shall experimentally – full-block design with random allocation of treatment to field – evaluate the effectiveness of pro-active reseedling methods for restoring flora-rich hay meadows. The restoration methods tested consist of 1) simple hay transfer from biodiversity-rich, donor meadows; 2) sowing locally collected or commercialised seed mixtures. The overarching objective is to push degraded plant and invertebrate assemblages towards species-richer, stable-state grasslands.

The PhD candidate will collect baseline data (before interventions) and monitor subsequent biotic and abiotic environmental changes (following experimental manipulation) using a series of metrics for biodiversity (plant and invertebrate species richness, diversity indices, functional traits, community analyses, etc.), as well as for hay productivity and quality. The reliance on a full block design will enable avoiding the caveats and biases typically encountered in mere observational studies, notably those caused by unavoidable confounding environmental factors such landscape naturalness. The ultimate objective of this research is to provide end-users, notably farmers and authorities, with easily implementable, evidence-based recommendations for future grassland restoration strategies that maximize the return on investment of the agricultural subsidies targeting biodiversity. The experiment will start in 2018 and is foreseen to run 4-8 years, with the PhD candidate engaged in its first phase.

The candidate holds a MSc degree, shows a strong interest in agro-ecology and masters modern analytical techniques and statistical software. Knowledge of grassland indicator taxa would be advantageous though not prerequisite. English literacy is important, while knowledge of German and French would represent a real asset, notably for dealing with farmers. Start: January 2018. Salary according to [SNSF rules](#). The PhD student will have to contribute to teaching and some minor administrative duties.

Email a letter of motivation with CV, list of publications, summary of MSc thesis, as well as two references (name, institutional address, email and phone number) to jean-yves.humbert@iee.unibe.ch.

Application deadline: 12 November 2017. Interviews in Bern on 4 December 2017.

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