







UNIVERSITÄT BERN

ECOLOGY & EVOLUTION CONSERVATION BIOLOGY

The <u>Division of Conservation Biology</u>, Institute of Ecology and Evolution, University of Bern, and the <u>Division of Umweltsystembiologie</u>, Department of Environmental Sciences, University of Basel, Switzerland, offer

1 PhD position in conservation biology

Within the research project:

PROTECTION OF HIGH-ALPINE ALLUVIAL HABITATS RELEASED BY MELTING GLACIERS AS A CONSEQUENCE OF GLOBAL WARMING

The extremely rapid, and even accelerating, melting of glaciers in response to climate warming will pave the way for the formation of proglacial alluvial habitats in the Alps; these ice-free areas will gradually be colonised by pioneer species, followed by whole alpine communities via secondary succession, inducing changes in the composition and configuration of alpine landscapes in the long-term. However, the emergence of new subglacial alluvial habitats will also open opportunities for infrastructure development; for example, damming for hydropower production or water reserve retention (e.g., artificial snow for the tourist industry), or flooding for the same reasons, and/or management via heavy machinery (e.g., sediment removal) may all contribute to affect these habitats. The threats that human infrastructure represents to the conservation of the unique biodiversity values of subglacial alluvial landscapes are increasing driven by the rapid expansion of renewable energies in response to the emergent climatic and energy crises.

Tasks

The candidate will identify, via predictive spatial models, where these proglacial alluvial habitats will develop in the coming decades, to forecast what their biodiversity values will be and whether the latter could be at risk because of the potential of these new formed landscapes for infrastructure development (e.g., renewable energy). The candidate will also work on the development of a biodiversity indicator for high-alpine alluvial zones and on understanding how values of this indicator change under different environmental conditions (e.g., elevation, microhabitat structure). The main outcome of the PhD project will be a hierarchical ranking of Swiss alpine landscapes based on their conservation value and vulnerability to potential infrastructure development that will serve as a basis for deciding on the future use and management of these alluvial areas. Another goal is to provide guidelines for practical *in situ* management of these habitats to preserve and promote biodiversity.

Candidates are expected to actively participate in weekly lab meetings and present the results of their research both in scientific and plain language articles, and at national and international conferences. The PhD student will also contribute to teaching (e.g., cosupervising BSc and MSc projects on the same topic) and oversee some minor administrative duties.





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Requirements

The candidate must hold a MSc degree in biology or equivalent, and ideally will show a strong interest in conservation science, environmental management and spatial analyses. Knowledge on alpine or alluvial habitats, advanced statistical techniques, R, or on spatial tools (GIS analyses) will be an advantage but it is not a prerequisite. Good command of English is important, while knowledge of French and/or German can be favourable, notably to deal with stakeholders. The **Institute of Ecology and Evolution** of the University of Bern and its partner, the **Department of Environmental Sciences** at the University of Basel are committed to increasing diversity, equity and inclusiveness in ecology and evolution and especially encourage applications from underrepresented groups.

Conditions

Salary according to Swiss National Science Fund (SNSF) rules for PhD students: ca CHF 47,000.– gross annual salary. Start: November 2025. Duration: 3 years. The position is shared between the University of Bern and the University of Basel. While the position is administratively hosted at the University of Bern, the candidate will join the team in Basel, notably after the retirement of Prof. Raphaël Arlettaz. The candidate will have access to the CUSO PhD doctoral program as well as to postgraduate training opportunities at the University of Basel.

How to apply?

Applications must be submitted to <u>alexandra.depeyer@unibe.ch</u> and should include a motivation letter describing your interests, experience and relevance for this position, a CV (including a list of publications when available), the MSc certificate or transcriptions, a summary of the MSc thesis, as well as the names and contact details for two referees (name, surname, institutional addresses, email and phone number).

Please send your application via email as a single PDF named «surname.firstname», indicating «Glacier PhD post» in the email heading. The application deadline is September 15th, 2025. Interviews online are foreseen during the second half of September 2025.