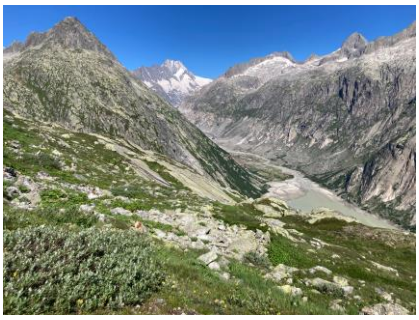
UNIVERSITÄT BERN

ECOLOGY & EVOLUTION
CONSERVATION BIOLOGY



The **Division of Conservation Biology** at the *Institute of Ecology and Evolution*, University of Bern, Switzerland, offers

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., co-supervising BSc and MSc projects on the same topic) and oversee some minor administrative duties.

Prof. Dr Raphaël Arlettaz
Head of the division of Conservation Biology
Institute of Ecology & Evolution
Office: Muesmattstrasse 27
Mail: Baltzerstrasse 6
CH–3012 Bern

Dr Alejandra Morán Ordóñez
Division of Conservation Biology
Institute of Ecology & Evolution
CH-3012 Bern
alejandra.moran@unibe.ch
www.cb.iee.unibe.ch

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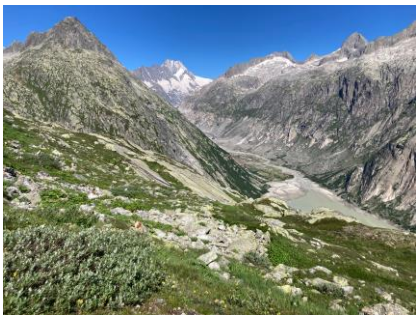

Requirements

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* is 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: CHF 47,390- gross annual salary. Start: October-November 2023. Duration: 3.5 years with a possibility of extension up to 4 years.

How to apply?

Applications must be submitted to alejandra.moran@unibe.ch 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 (or an example of scientific writing), as well as the names and contact details for two referees (name, surname, institutional addresses, email and phone number).

Please send your application as a single PDF named "application_firstname.lastname". The application deadline is September 10th, 2023. Interviews in Bern are foreseen on the 26th of September 2023.

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