

# ALBA - Alpine Lentic Biodiversity Assessment Project

- **314** alpine standing waters surveyed across Tirol, **744** field visits over three years
- **2,232** biodiversity datasets generated
- Covers all major elevation zones, habitat types, and geological regions
- Development of a **standardized multi-taxa monitoring** protocol
- Focus on **conservation, biodiversity assessment, and freshwater ecosystem management**

The Alpine Lentic Biodiversity Assessment Project (ALBA) is a large-scale biodiversity research initiative investigating the fauna of standing waters across the European Alps. The project aims to develop and evaluate a standardized multi-taxa survey protocol capable of documenting the full spectrum of aquatic and water-associated animal communities, from zooplankton and aquatic invertebrates to amphibians, reptiles, birds, mammals, and fish. Based on a combination of visual surveys, zooplankton sampling, and standardized net sampling, the project provides an integrated approach to the assessment of alpine freshwater biodiversity.

Over a three-year field programme, 314 lakes, ponds, moor pools, wetlands, oxbow waters, and alpine water bodies throughout Tirol will be surveyed, generating approximately 2,232 standardized biodiversity datasets. This extensive sampling design is expected to produce one of the most comprehensive faunistic inventories of alpine standing waters currently available and establish an important baseline for future biodiversity monitoring and conservation efforts.

Beyond documenting species occurrence and distribution patterns, the project will address a broad range of contemporary ecological questions. The resulting dataset will enable analyses of community assembly, metacommunity dynamics, elevational gradients, habitat specialization, and the influence of environmental drivers such as geology, vegetation structure, fish presence, and climate. In addition, the project will provide valuable foundations for studying biodiversity responses to climate change, biogeographical patterns, and evolutionary processes shaping freshwater communities in mountain ecosystems. The results will contribute to scientific publications, biodiversity atlases, conservation planning, and the development of long-term monitoring frameworks for alpine freshwater habitats.

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