

Submitted Abstract

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Title	Grasshoppers (Caelifera) On Dynamic Riverbanks Of The Alps: Current Status, Threats And Conservation Prospects.
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Abstract

The pan-Alpine River network consists of more than 10.500 river units with a total length of about 57.000 km. However, only less than 5 % of the river network length of larger rivers have been assessed to still show a high ecological status. In particular, stretches of braided floodplains with high seasonal and year to year hydrological and morphological dynamics and their banks which are dominated by extensive gravel fields with sparse vegetation and are characterised by a high small-scale variability in soil structures, micro-topography and micro-climates are only scarcely preserved throughout the Alpine Arc.

For thousands of years such riverbanks have been keystone ecosystems in all parts of the Alps and served as refuge and hotspot for highly specialised, mainly semiaquatic or hygrophilous plants and animals. These habitats traditionally have also been refuges for xerophilic and geophilic grasshoppers. Overall, more than a dozen Caelifera species originally have been or still are typical for bare ground habitats along alpine rivers. However, most of these species also inhabit other habitats dominated by raw soils and even artificial environments like e. g. gravel pits. On the contrary, four highly specialised river dwelling Caelifera species, namely *Tetrix tuerki*, *Epacromius tergestinus ponticus*, *Bryodemella tuberculata* and *Chorthippus pullus*, in the Alps are more or less exclusively bound to dynamic habitats along wild rivers, and, accordingly, are listed in higher threat categories of the Red Lists of the countries which have a part in the Alpine Arc, and are even regarded as “Regionally Extinct” in some of them. In fact, all four species show decreasing population trends in the Alps, and most regional populations are severely fragmented and isolated and continue to decline due to habitat deteriorations caused by ongoing river regulation programs, hydropower use or gravel-mining. Conservation measures therefore are urgently needed to preserve the last remaining alpine populations of these species. The talk gives an overview about the current population and threat status of the species in the Alpine Arc and about conservation activities which have been implemented so far, and discusses their future conservation prospects.