Submitted Abstract

ID IMC22-FSAbstr- 489

First Author First Name Last Name	 Johannes (1) Rüdisser
Submitting Author First Name Last Name	 Johannes Ruedisser
Correspondence	Johannes.Ruedisser@uibk.ac.at
Co-Authors **>> E-Mails will be not listed**	Tasser, Erich (2); Tappeiner, Ulrike (1,2); Huemer, Peter (3)
Organisations	1: University of Innsbruck, Austria 2: Eurac Research, Italy 3: Tiroler Landesmuseen Betriebsges.m.b.H., Austria
Country	Austria
Region	Western Europe
Title	Spatially Representative Butterfly Monitoring Combining Citizen Science And Expert Based Approaches.
Keywords	Biodiversity, Insect Monitoring, Citizen Science, Lepidoptera, Sdg15
Type	List Of Focus Session
Focus Session ID	53

Abstract

A remarkable decline of insect abundance and diversity is observed in many terrestrial habitats, even in protected areas. This is of special concern as insects are important components of ecosystems with influence on key ecosystem functions and related to the supply of important ecosystem services. Data on most insect populations and their development in mountain regions are still inadequate. Butterflies (Papilionoidea) are one of the best-investigated insect groups, with precious long-term observation data from numerous monitoring schemes, mostly executed by volunteers in different regions and countries. Site-based monitoring schemes that involve volunteers are, however, often biased towards good-quality and hence butterfly-rich habitats. Therefore, we present a butterfly monitoring approach – which has already been applied at 200 sites in Western Austrian - using a spatially representative sampling design. It aims to representatively monitor the development of butterfly populations on the landscape scale in order to provide scientific basis for evidence-based environmental politics and ample protection measures on national and international scale. For a cost-effective implementation, we propose the combination of structured citizen science observations with recurring expert assessments. Volunteers are engaged in the systematic butterfly surveys to complement the detailed surveys carried out by experts and hence increasing the temporal survey resolution while, at the same time, promoting public awareness and engagement for insect conservation in mountain regions. Citizen science aided biodiversity research and monitoring is a very fast developing and growing field. Its combination with established research approaches can promote mutual enrichment, provide educational opportunities, and support broad community based biodiversity observation efforts. We are convinced that the chosen approach can serve as a blueprint for many other similar monitoring needs.