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in memoriam Antonio Galvagni (1924 - 2015)

PROGRAM



Records on the possible effect of climate changes on the distribution of some orthopteroid insects

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In recent years, several studies have been conducted in high-altitude mountain areas of Italy, both in the Alps and the Apennines. The aim of this research was to search for species of Orthopteroids typically living in high mountain habitats, with particular attention to the Orthoptera and Dermaptera. Some genera of Podismini such as *Podisma* Berthold, 1827, *Italopodisma* Harz, 1973, *Epipodisma* Ramme, 1951 and *Bohemanella* Ramme, 1951 and the Dermaptera of the genera *Chelidura* Latreille, 1825, *Forficula* Linnaeus, 1758 and *Pseudochelidura* Verhoeff, 1902 have been the subject of research. Even in the absence of quantitative and continuous data, it is still possible to assume that a rarefaction of some taxa or their movement to higher altitudes, where this is possible, is underway, although it cannot be said for how long or how much. In fact, research conducted in locations known to be the *Locus typicus* of some taxa and in many other locations known for the presence of some of these species according to bibliographic and collection data, in many cases gave negative results or the species were found with populations extremely reduced. This is the case for example of *Podisma pedestris caprai* Salfi, 1935, described from Alpe Finestre (Biella, Italy) and found abundant in the same locality in recent decades, according to literature, but not found during research conducted in 2023. Another emblematic case is that of the *Chelidura* genus. Most of the localities (having an adequately precise location) known to host populations of these typically Alpine Dermaptera, visited in recent years did not return any specimens while the species *Anechura bipunctata* (Fabricius, 1781) was very abundant in the same localities. A population of *Forficula apennina* Costa, 1881 monitored for several years during the 1990s at the Rifugio Duca degli Abruzzi (Gran Sasso, Italy) was no longer found during research conducted in the last 3 years, but was found a few hundred meters further away high, on Mount Aquila (Gran Sasso, Italy), where in previous years it had never been found. *Epipodisma pedemontana* (Brunner von Wattenwyl, 1882), in some locations where it was found abundantly in the early 2000s, was found to be scarce or absent during recent trucking. It is

not possible to say whether these declines in populations are to be explained by normal demographic fluctuations, typical for many species of Orthopteroids, or are to be interpreted as a real rarefaction, but it would be important to create a monitoring network for at least some of these typically high-quality species. altitude to verify the possible hypotheses of these phenomena.

Selected localities for monitoring Orthoptera in Trento province across time

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Aim of this study is to assess the Orthoptera species composition of selected localities in Trento province and compare the results with the species detected in previous similar researches. Thirty-three localities have been chosen among those surveyed in 2008-2009, samplings have been carried out with the same methods. Preliminary results show a decrease in the number of species (49 in 2008-2009 vs 43 in 2022-2023). The relative abundance of species have changed with *Pseudochorthippus parallelus*, *Stauroderus scalaris*, *Decticus verrucivorus* being the most abundant in 2008-2009, *Chorthippus dorsatus*, *Pseudochorthippus parallelus*, *Chorthippus brunneus* in 2022-2023. Also the species composition has changed with the appearance of *Decticus albifrons*, a thermophilous species every year more abundant and distributed.

Orthoptera Conservation in Italy, *Zeuneriana marmorata* and *Anonconotus italoaustriacus*

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