

Research topic

Orthoptera fauna of the Carpathian Basin and the Balkans

Despite the long history of research on Orthoptera in the Carpathian Basin, faunistic survey of this region still holds surprising results.

The Balkan Peninsula has one of the richest Orthoptera assemblages in Europe. The fauna of this region significantly differs from the one of the Italian and Iberian Peninsula because of its Anatolian connections. We mainly focus on the least known areas of the Western Balkans, especially Albania and Croatia.



Figure 1: *Isophya nagyi* Szövényi, Puskás et Orci, 2012, a recently discovered endemic bush-cricket species of the Eastern Carpathians (Photo: Gergely Szövényi)



Figure 2: *Rammeihippus dinaricus* (Götz, 1970), a grasshopper from the Dinaric Alps

Development and temporal dynamics of Orthoptera assemblages on old-fields

Secondary succession of the vegetation of old-fields is a thoroughly studied topic, however, very few studies deal with the animal communities of these habitats. The group of Orthopterans is suitable for such research, due to their high abundance on grasslands, their sensitivity to the changes of vegetation and climate and the diverse dispersal ability of different species.



Figure 1: Mosaic of natural grasslands, old-fields with different ages and cultivated fields (Suatu, Romania)



Figure 2: Loess valley with natural and mown grassland stripes (Bölcske, Central Hungary)

Effect of different habitat use patterns on orthopterans as an important food source of vertebrates with significant conservation value

Grasshoppers, bush-crickets and crickets produce a significant biomass on most grassland habitats thus they are important food sources for many animal species. In our studies we search habitat management practices which help to maintain an appropriate amount and availability of food of two different vertebrate species. In the feeding area of red-footed falcon (*Falco vespertinus*) in Eastern Hungary (Hevesi-sík and Csanádi puszták), we study effects of crop structure in the arable fields and grazing and/or mowing management in the grasslands. In Southern Albania we examine the impact of mountain herding on orthopterans that are nearly the only food sources of Greek meadow viper (*Vipera (ursinii) graeca*).



Figure 1. *Platycleis (Tessellana) veyseli* Koçak, 1984, a common bush-cricket in habitats of the redfooted falcon in Eastern Hungary



Figure 2. Fence standing for a grazing animal excluding experiment on the habitat of Greek meadow viper on the Mt Trebeshinë, Southern Albania (Photo: Tamara Szentiványi)