

Influence of Temperatures and Humidity on the Orthoptera (Insecta: Orthoptera) Associations of Dobrogea, Romania

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Abstract

Due to its climatic peculiarities, Dobrogea is an area suitable for the development of particular orthopteran populations. Abiotic factors influence the Orthoptera, limiting the number of generations and the abundance. Longitude, latitude and altitude determine the geographical spread of the species, but the main abiotic factors that influence orthopteran populations are the temperature and humidity. Although most species have wide tolerance limits on humidity and temperature variations, these factors directly influence affect the way they feed and reproduce.

Keywords: Orthoptera, diversity, ecology, humidity, temperature

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Introduction

Continental Dobrogea is a plateau with altitudes ranging between 100 and 476 m, which obviously rise above the western and northern plains, the Danube Delta, the Razelm Complex, as well as the Black Sea, passing south into the Deliorman Plateau. [20]The Dobrogea plateau, between the Danube (west and north), the Black Sea (east) and the border with Bulgaria (south) is a Danubian-Pontic unit. Dobrogea is generally characterized by the existence of two well-individualized climatic units: sea coast unit and the continental unit located over a distance of 50 km from the coast. A distinct feature of the climate in Dobrogea is the priority frequency of the drought phenomenon, which is formed against the background of the lowest amounts of atmospheric precipitation in Romania. The Black Sea determines the formation of a distinct regional unit: the coastal area, the continental shelf and the Romanian Black Sea coast [20].

A distinct feature of the climate in Dobrogea is the frequency of the drought phenomenon, formed against the background of the lowest amounts of atmospheric precipitation on the Romanian territory. The average annual air temperatures oscillate within limited the highest values, above 11° C, being recorded in the coastal strip, on a narrower surface in Central Dobrogea and wider in South Dobrogea and in the Danube Delta. [1] The monthly average values of the maximum daily air temperatures recorded in clear and cloudy skies increase from the sea shore to the western extremity of Dobrogea during the warm period of the year (April-October) and have an inverse distribution in the