

Ground Beetle's Diversity in Agroecosystems of a Steppe Region, Algeria

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Abstract : This study presents the results of a comparative research aiming to examine the distribution of beetles in four agroecosystems in the Tiaret region, located in northwestern Algeria, during the year 2023. This study was initiated across 04 stations that were randomly distributed within the Ksar Chellala region and selected based on their plant composition. The sampling method used was based on pitfall traps, which were filled two-thirds with a solution of saltwater supplemented with vinegar. In total, 40 species of beetles belonging to 9 families were identified. Among them, tenebrionids were the most abundant group (43%), followed by scarab beetles (30%) The comparison between the four types of agroecosystems - olive culture, sheep farming, cereal cultivation, and Pomegranate cultivation- in this region revealed that cereal cultivation harbored the greatest species diversity (30 species), followed by the sheep farming site (32 species), and then the other sites based on their ecological importance and trophic interactions, these beetle species were mainly categorized as coprophages, phytophages, and predators. The spatiotemporal evolution of beetle activity highlighted peaks of richness and abundance, mainly during the dry period (from April to May), while the cold period (January) showed the lowest levels. The specific diversity of beetles varied significantly from one habitat to another.

Keywords : agroecosystem, beetle, entomology, steppe region

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