ISSN:2372-0743 print
ISSN:2373-2989 on line
International Journal of Ground Sediment & Water
Vol. 20
2024

◆ Research paper

DOI: 10.5281/zenodo.14025324

Flora of Protected and Environmentally Sensitive Afforestation Area in Çankırı, Türkiye

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Abstract: The objective of this study was to examine the flora of Çankırı Karatekin University Faculty of Forestry Prof. Dr. Abdulreşit Brohi Research and Application Forest and to provide insights that could contribute to the conservation of biodiversity in the region. This afforestation area is a 25-year-old protected area that is sensitive to desertification. Despite the maintenance and restoration efforts undertaken in the region, its combination of protected status and high sensitivity to desertification underscores this study's importance. Plant specimens were systematically collected from designated areas, and identification procedures were carried out following established botanical methods. Between April and August 2021, 205 plant specimens were gathered from the area. The identification process recorded 192 taxa representing 153 genera and 47 families. Among these taxa, one belongs to the *Pteridophyta* division, while 191 are classified under the *Spermatophyta* division. Notably, no natural Gymnosperm specimens were found in the area. Among the identified taxa, 170 are *Dicotyledoneae*, and 22 are *Monocotyledoneae* species. The families with the highest representation are as follows: *Asteraceae*, with 31 species; *Brassicaceae*, with 19 species; *Fabaceae*, comprising 17 species; *Lamiaceae*, consisting of 16 species; and *Poaceae*, which includes 15 species. The most abundant genera, represented by three species, are *Centaurea, Crepis, Tragopogon, Silene, Convolvulus, Astragalus, Onobrychis, Salvia, Teucrium* and *Veronica*. The study identified ten endemic taxa, resulting in an endemism ratio of 5.21%. These endemic taxa play a crucial role in conserving biodiversity in the region. In terms of phytogeographic regions, the taxa can be categorized as follows: Irano-Turanian (46 taxa, 23.96%), Euro-Siberian (9 taxa, 4.69%), Mediterranean (4 taxa,

2.08%), Eastern Mediterranean (3 taxa, 1.56%), with the remaining 130 taxa (67.71%) classified as unknown or multiregional. The research findings provide essential insights into regional conservation and sustainable management.

Keywords: afforestation, desertification, flora, protected area, semiarid