Ecological Challenges and Floristic Diversity in the Forest Ecosystems of North-Eastern and Steppe Regions of North-Western Algeria: A Comparative Study

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Abstract:

This study compares the floristic diversity of two Algerian regions: the North-East (Mechroha, Souk-Ahras Province) and the North-West (the steppe of Tiaret). Although geographically distinct, these two areas share a rich biodiversity but face similar ecological challenges, primarily related to the degradation of their ecosystems. The **Mechroha** region, with its diverse landscapes (grasslands, maquis, and cork oak forests), hosts a particularly rich Mediterranean flora, dominated by species such as orchids and medicinal plants. A floristic survey of the Ouled Bechih cork oak forest revealed the presence of 100 taxa, several of which are endemic or threatened. The main drivers of degradation in this area include recurrent wildfires and anthropogenic changes (urbanization, agriculture), which are threatening local biodiversity. In contrast, the **Tiaret** region, characterized by its semi-arid steppe, features a flora adapted to harsh conditions, with species such as *Artemisia herba-alba, Astragalus gombiformis,* and *Stipa tenacissima*. This region is crucial for local resources (food, medicine, materials). However, overgrazing and land degradation have led to a decrease in floristic diversity, as indicated by Shannon's indices, which show a significant decline compared to previous years. Both regions share a common challenge: preserving their ecosystems in the face of human pressures. Urgent measures, such as the establishment of protected areas, habitat restoration, and sustainable resource management, are essential to maintain biodiversity and ensure the long-term viability of these fragile ecosystems.

Keywords:

Mediterranean flora, biodiversity, steppe, maquis, conservation, degradation, preservation.