

The contribution of Oman Botanic Garden to ex-situ propagation and conservation of endangered plant species

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Oman's location and climatic variability contribute to its significant flora diversity, with a total of 1,447 native species, of which 261 are classified in the red list. Multiple factors, including degradation of conventional land management practices, expansion of human settlements and other non-agricultural land uses, and climate change, are contributing to the increase in the number of threatened species in the country. Oman Botanic Garden (OBG) significantly contributes to ex-situ conservation initiatives of native flora Oman. OBG mission is to collect, document, and cultivate all native flora, including those on the red list. The garden features seven distinct habitats that are home to the region's biggest known surviving collection of native species. The team employs state-of-the-art facilities for cultivating these endemic plant species. Shade houses, glass houses, polyethylene houses, and growth chambers are utilized as housing units for plant material with the intention of replicating the micro-climate endured by the native species in their natural habitats. By implementing computer-based information systems (BG-base) to store and monitor data on living plant collections, OBG has enabled the development of streamlined databases for each individual plant within the garden. To date, the horticulture team has achieved effective propagation of more than 100,000 plants. In addition, a total of more than 2,000 whole plants have been immediately translocated and rescued from impending destruction, thereafter, being transplanted from their original environment to the garden. The team successfully cultivated a total of 460 taxa, representing around 31% of the reported species in Oman. Out of the whole population of cultivated species, a total of 86 species have been designated as red list species. Among them, six as endangered, 25 as least concern, 21 as near imperilled, 24 as vulnerable, and one species lacks sufficient data.