



Study on Some Threatened, Rare and Endangered Plant's Species in Reserve Forest Area of Jhunjhunu District, Rajasthan

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Abstract: An extensive field survey of the Beed Jhunjhunu was conducted to reveal the many threatened, rare and endemic plants, which were used by rural people and local vaidya for the medicinal treatment and their daily needs. A total of 325 species of flowering plants including one gymnosperm were documented from the study area. Among the founded 38 species were rare, endemic and threatened, 14 species were found to be medicinally use from the area. The threatened, rare, endemic status of the plant's species were confirmed with IUCN Red List and other standard publications on rare and threatened taxa of the country. The rare, endemic and threatened categories listed in Red Data Book, those struggling for survival in their natural habitats due to enormous anthropogenic activities such as overgrazing, habitat fragmentation, illegal harvesting, over exploitation of economically important plants, smuggling of plant's and encroachment by nearby local community, pollution due to sewage and dumping of solid waste, alien species invasion, deforestation and unplanned developmental activities at study area. Endemic and rare species of the area are more vulnerable than widespread species because they occupy small geographic ranges and specific habitats. Due to destruction of habitat, so many plants' species have been depleting from this area since last few decades.

Keywords: Jhunjhunu Beed, Endemic, Rare, Threatened, Threats

India, a mega-diverse country with only 2.4 per cent of the world's landmass, harbours a total of 47,513 species of plants representing as much as 11.4 per cent of the world flora (Singh and Dash 2014). About 28 per cent of the plants in India are endemic in the country. Unfortunately, a number of taxa has been lost and going to be lost due to not having proper care by concerned authorities, in this concern, a lot of plants are going to lose their existence as they are under threatened category. The effects of biodiversity include habitat loss and fragmentation, introduction of non-native organisms, over-harvesting, and pollution, changes in geo-chemical cycles and climate change (Polasky et al 2005). It is a growing global concern regarding the loss of biodiversity due to unplanned human activities (Dirzo and Raven 2003). Due to human activity, the rate of plant's species have disappeared and accelerated largely from the Earth and the current rate of species loss will increase by an order of magnitude over the next century. Although the loss of plant's species directly alerts the remaining community by lowering its diversity, there is a considerable debate as to whether reductions in plant diversity will affect the manner in which terrestrial ecosystem function (Loreau et al 2001). In India, the work on threatened plants was first published by Botanical Survey of India in a booklet entitled "Threatened Plants of India- A State of the Art Report" in which a total of 134 threatened plants from all over India have been listed (Jain and Sastry 1980). Principally, threats to species are due

to decline in the areas of their habitats, fragmentation of habitats and decline in habitat quality (Kumar et al 2000). A publication has been published a list of rare taxa of western region of Rajasthan (BSI Jodhpur - Arid zone circle 2008). Almost same content have also been published depleting 65 taxa with their present status and conservation in Rajasthan (Pandey et al 2012). Eleven plant's species of Angiosperms are documented as threatened and 86 species as rare in Southern Rajasthan (Meena 2012). In Rajasthan state, such studies have also been carried out by many workers (Pandey et al 1983, Sharma 1983, Meena and Yadav 2006, Kasera and Mohammed 2007). Considering the importance of floral wealth of the country, the Environmental Information System (ENVIS) Centre of the Wildlife Institute of India published a compilation work in a bulletin entitled "Special Habitats and Threatened Plants of India" covering various bio geographic zones of the country (Rawat 2008). Many researches and documentation on threatened, rare and threatened taxa have been recorded in different region of the Rajasthan, but no such work has been done in the Jhunjhunu region of Rajasthan. Therefore, the present study was undertaken to document the threatened plant's species work in the Beed Jhunjhunu district with their conservation status.

MATERIAL AND METHODS

Jhunjhunu district is a part of Shekhawati region of Rajasthan and covering 5928 sq. km of total of geographic