

## ***Tecomella undulata* (Rohira): A Valuable Endangered Tree of Indian Thar Desert**

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### **INTRODUCTION**

*Tecomella undulata* (Smith) Seemann vern. Rohira, Desert Teak, Marwar Teak, Rugtrora, Rohido, Raktarohida, Lahura, Roira and Rohi is a monotypic genera of family Bignoniaceae. It is distributed in small patches in arid and semi-arid regions of India, Pakistan, Sind and Baluchistan along with *Prosopis cineraria*, *Zizyphus numularia*, *Salvadora oleoides*, *Capparis decidua* and other xerophytes. It is small ornamental tree with a height of 4 to 8 m, curved trunk, drooped branches and yellow to orange showy flowers. Flowers are at full bloom in February and March months every year which later on produce 15-20 cm long brownish grey pods having light weight, brownish and winged seeds. Seeds are dispersed by wind currents and have poor germination capacity in harsh conditions of desert. Plant mainly regenerates from seeds but root suckers also capable to regenerate into new plants during rainy season. This species is mainly attacked by insect-pests like *Stegmatophora* and *Patiallus tecomella*. Its population has decreased to alarming level due to its continuous exploitation for timber, fodder & food; its poor germination and regeneration capacity and severe attack by pests. Now Rohira has been placed in the list of endangered species by most of the researchers.

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**Importance of Rohira**

*Tecomella undulata* is well known for its socio-economic and medicinal importance among people of arid areas. Though, it is slow growing, but capable to stabilize the shifting of sand dunes and check the erosion of sandy soil. Its wood is close grained, polishable and have high tensile strength which is used to make persian wheels, toys, furniture, doors and agricultural implements. Wood is also a good source of charcoal and firewood to people. Its heartwood has a quinoid, Lapachol which has anti-fungal and anti-termite properties. Bark of Rohira is locally used to cure gonorrhoea, urinary infection, spleen problems, leucoderma, syphilis and liver diseases. Bark extract is found effective

against thioacetamide caused hepatic toxicity and also has anti-oxidant characters. Tribal communities take steam of crushed leaves to cure cough and apply paste of bark on eczema. It is reported that in Khuzdar and Kalat areas of Pakistan, its flowers are used by women in tea to overcome sterility. Tree is found very effective to cure scabies caused by *Sarcoptes scabiei* due to presence of bio-mitocidal chemicals like Lapachol, Flavonoids etc. Many researchers have reported that Rohira tree has anti-cancer, anti-bacterial, anti-HIV and anti-diabetic properties also. Its leaves, flowers and pods are relished as a good fodder by camel, sheep and goats in adverse xeric conditions of desert.



**Rohira with full bloomed orange red flowers**

### CONCLUSION

*Tecomella undulata* is an agroforestry and ornamental tree of arid and semi-arid region which grows in small pockets on elevated sand dunes. It is well adapted to harsh environmental conditions of Thar Desert in India and plays an important role in man-tree-cattle trophic interaction for ecological balance in desert ecosystem. Rohira is mainly used by local people and Ayurvedic professionals to cure many ailments. Tree has a vast range of pharmacologically important compounds which are being used to manufacture biologically important medicines. Its population have severely declined due to illegal cutting, slow growth and poor germination factors and it is listed as endangered species in Red Data Book. Hence, there is a great need to conserve this valuable tree by adopting its rapid multiplication methods like tissue culture and biotechnological processes. In short, Rohira has many ethno-botanical, ecological and pharmacological importance to human being and it should be conserved by scientific efforts through in-situ and ex-situ measures.

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