



## Note On The Distribution Of *Commiphora stocksiana* Engl. In Kachchh: A Rare Medicinal Plant Of India Need Conservation

Rohit Patel\*, Arun Kumar Roy Mahato, Yogesh B Dabgar and V Vijay Kumar  
Gujarat Institute of Desert Ecology, Mundra Road, Bhuj-370001, Kachch, Gujarat, India

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**Abstract:** *Commiphora stocksiana* is a medicinal plant of arid and semi-arid parts of India and Pakistan. In India, the species is only distributed in some localities of Kachchh district of Gujarat. In the present survey, the *C. stocksiana* is recorded only in one locality of western part of the Kachchh district. The species is facing severe threats of extinction in present needs conservation measure to protect its gene pool.

**Keywords:** *Commiphora stocksiana*, Medicinal plant, Conservation, Kachchh, Gujarat

### Introduction

*Commiphora stocksiana* is an important medicinal plant traditionally uses from long time by the local communities, locally known as "Mitho Guggal" in the Kachchh district of Gujarat. *Commiphora wightii* is a related species of *C. stocksiana* widely distributed in the district. The *C. stocksiana* has limited distribution in India and found only in one locality of the district. Therefore, *C. stocksiana* is facing risk of extinction from India. The species needs conservation measure to protect its gene pool from extinction.

### Taxonomic position:

Division: Angiosperm  
Class: Dicotyledones  
Sub-class: Polypatela  
Series: Disciflorae  
Order: Geraniales  
Family: Burseraceae  
Genus: *Commiphora*  
Species: *stocksiana*

The species was first recorded in Sind province of Baluchistan, Pakistan by J. Ellerton Stocks in 1847 and described as *Balsamodendron pubscens* stocks. In later year the species was also reported by Hooker (1849). Boissier (1872) reported its distribution in presidency of Bombay. The genus *Balsamodendron* was revised and renamed as *Commiphora* and the species *pubscens* revised and renamed as *stocksiana* Engler (Hooker, 1875). Woodrow (1897) reported this species in its earlier locality as reported by Stocks. In India, the genus

*Commiphora* has four species which are *C. mukul* Hook. Ex Stock, *C. agollocha* Engl. *C. berryi* (Aen.) Engl. and *C. stocksiana* (Atal et al., 1975). The name *C. mukul* was later renamed as *C. wightii*. Among which *C. wightii* has wide distribution in western and southern part of India and Sindh province of Pakistan. The species *C. stocksiana* is differs from *C. wightii* by the presence of thorn and leaf pattern.

### Habit and habitat

*Commiphora stocksiana* is a balsamiferous small tree or shrub in hilly and moderately undulating terrain. It tree is prefer to grows in substratum of rocks or boulders and in sandy soil (Enright et. al, 2005). The species is generally found in the tropical thorn forest especially in the area of mixed thorn forests. The species is generally distributed in calcareous rocks and dry river beds of coastal regions. The tree species like *Acacia senegal*, *Euphorbia caducifolia*, *Grewia spp.* and *Salvadora spp.* are the associated species for *C. stocksiana*.

### Geographical Distribution

The species is found was reported (Cooke, 1967) and distributed in rocky hillock of the Sind province of Baluchistan, Pakistan. It is found that the species is restricted distribution in Sind region of Pakistan (Parveen et. al, 2008). In India, it is distributed only from the Kachchh region of Gujarat state by Rao et al., (1984). Apart from the above, the species was not reported from other parts of India.

### \*Corresponding Author:

Dr. Rohit Patel,  
Gujarat Institute of Desert Ecology,  
Mundra Road, Bhuj-370001, Kachch,  
Gujarat, India

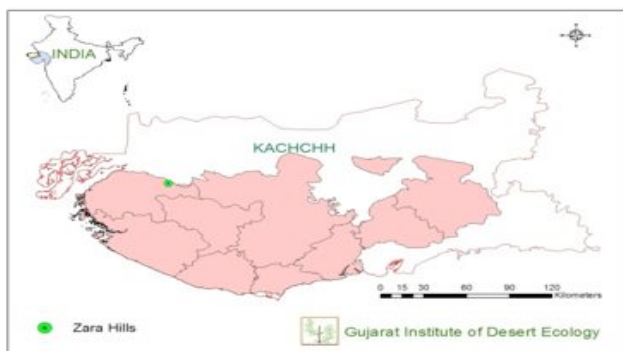
In our recent survey of Guggal (*Commiphora wightii*) in Gujarat state of India, the species (only three individuals) *C. stocksiana* is only recorded from Zara-Zumara hills of Lakhpat taluka, Kachchh district, Gujarat (Figure 1 & 2). Apart from the above area, no any individuals of this species found to occur in Gujarat state of India. The Zara-Zumara hill is an undulating hilly tract located in fringe of Greater Rann of Kachchh. The forest type of present habitat is mixed thorn forests habitat (Figure 3). It was found that the observed individuals of this tree were in the recruitment stage.



**Figure 1:** An individual of the locality showing *Commiphora stocksiana*



**Figure 2:** *Commiphora stocksiana*



**Figure 3:** New locality of *C. stocksiana* in Kachchh district, Gujarat



**Figure 4:** Gum of *C. stocksiana* observed from the individual of from Zara-Zumra Hill, Kachchh

The oleo-gum-resin of *C. wightii* is commonly known as Guggal is an important drug in Indian system of medicine (Atal et. al. 1975). The similar kind of oleo-gum-resin extracted from the *C. stocksiana*, which is used in traditional medicine by the villagers of the locality (Figure 4). The gum of this species is reported to use as a medicinal purpose for curing inflammations, rheumatism, indolent ulcers, gum complaints, tonsillitis, laryngitis, bronchitis, pneumonia, whooping cough, chronic dyspepsia, diarrhea, chronic endometritis, leucorrhoea and piles (Kalpesh et. al, 2008; Sharma & Kumar, 2012).

### **Conservation and Management**

The interviews and discussion made with the local people and traditional healers, it was found that the species was traditional used in medicinal purpose and traded to other parts of country in earlier days. Due to the trading, local uses and over exploitation, the species was eroded from the district and facing severe threats of extinction, as few individuals are naturally found in the area. The species *C. wightii* is a threatened plant (Kulloli & Kumar, 2013) and for its

conservation various plantations and other programme is undergoing in the district and in Gujarat by National Medicinal Plant Board, but very little emphasis is given for the conservation of *C. stocksiana*.

The species need conservation measure to protect it in their natural habitat from the risk of extinction. The species could conserve by plantation in similar types of habitat and by *ex-situ* propagation through seed or tissue culture technique to produce the adequate number of saplings.

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