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Short Communication

A brief discussion on Boswellia serrata-an important medicinal plant

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Abstract: Boswellia serrata is a very important medicinal plant, having different uses in traditional medicine. This plant is becoming very rare in the Ayodhya hills of the district Purulia of West Bengal. This plant is listed threatened species of India. Boswellia serrata is vigorously used by the different tribal communities of the forested areas. This plant is used to cure rheumatoid arthritis, septic wounds, nervous disorders and skin diseases etc. Considering its medicinal values and present status it is urgently needed to conserve for the human welfare.

Keywords: Boswellia serrata, Ayurveda, Endangered, Herbal medicine, Primary healthcare.

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1. Introduction

Boswellia serrata of the family Burseraceae is a large shrub and a very important medicinal plant in traditional and Ayurvedic medicine. This plant is commonly known as Salai or Salgaw. Boswellia serrata is a tree, which is native of India, Africa and the Arabian Peninsula. Present author documented this plant from Ayodhya Hill of the district Purulia. This is found to be noted that the plant is not so very common of those hills and forested areas.

B. serrata has been listed in the threatened species of India. Different tribal communities are used this plant products for their primary healthcare. The resin of Boswellia species has been used as incense in religious and cultural ceremonies and in medicines since time immemorial. The most important medical uses for B. serrata are to treat asthma, Crohn's disease, osteoarthritis, and rheumatoid arthritis (Alam et al., 2012, Basch, 2004, Gupta et al., 2011, Gupta et al., 1998). There are different reported medicinal uses

of this plant, presently the author focused some light on the uses of this plant basically in primary healthcare by the traditional practitioners of the Purulia district.

2. Phytography

A large shrub with ash coloured papery bark. Leaf's compound, alternate, deciduous with opposite usually serrate, pubescent leaflets, stipules 0; flowers white, minute in axillary racemes with watery latex having the aroma of mango leaves, persistent calyx with 5 distinct petals, seeds compressed with pendulous drupe.

Local Status: Rare

Flowering and Fruting Time: January to June. Flowers appear from the end of January to March and the fruit ripen in May-June (Troup, 1921). The species is self-incompatible and cross-pollinated flowers allows normal pollen germination (Sunnichan et al, 2015).

Indian distribution: Madhya Pradesh, Deccan, Bihar, Jharkhand, Orissa, Rajasthan, Gujarat and very rarely found in Assam and West Bengal.

Kingdom- Plantae

Sub kingdom-Tracheobionta

Super division- Spermatophyta

Division-Magnoliophyta

Class- Magnoliopsida

Subclass- Rosidae

Order-Sapindales

Family-Burseraceae

Genus- Boswellia

Species- Boswellia serrata Roxb. Ex Coleb

Medicinal use (From Primary sources):

(i) About 10gm. of gummy oleo-resin is boiled in mustard oil in 2:1 ratio and the resultant paste is applied on rheumatic swelling.

(ii) Fresh leaf decoction is used for washing septic wounds for expediting cure.

(iii) The resin is smoked to get rid from asthma.

Medicinal use (From Secondary sources)

Gum is diaphoretic, astringent, emmenagogue and used in rheumatism, nervous disorders and skin diseases.

Chemical constituents: Essential oils, gum, and terpenoids are contained in the gum oleoresin. The active constituent of Boswellia serratais boswellic acid which is present in the terpenoid portion (Indian Medicinal Plant Database;2020.)

The different uses of this plans have been focused by the authors. Boswellia serrata is one of the ancient and most valued herbs in Ayurveda. "Gajabhakshya", a Sanskrit name sometimes used for Boswellia, suggests that elephants enjoy this herb as a part of their diet (Sharma et. al., 2004).

Industrial applications

Due to of its unique fragrance, Boswellia gum resin is traditionally used as incense. It is extensively used in Ayurvedic medicines for treating asthma and arthritis. Boswellia gum has been reported to be better than drugs like Phenyl butazone. It also finds a place in various indigenous medicine especially for the treatment of rheumatism, nervous diseases and as diaphoretic and astringent. Certain ointments contain its formulations. Boswellia gum also has a usage for lighting fires. (Sultana et al. 2013)

Threatened Status

Boswellia serrata has been listed in the threatened species of India (Barik et al, 2018). Major threats are slow growth coupled with poor regeneration. However, stable trends have been reported in its population habitat (CITES, 2020). Indiscriminate exploitation for its high economic value, the tree has been identified by the government of India for its genetic improvement. There are several constrains in the cultivation of Boswellia serrata under natural conditions. Seed viability is very poor and germination percentage is very low (10-12%) (Siddiqui, 2011). The seeds require high humid conditions for germination. In India, changing climate, and soil conditions, dwindling habitats, degradation of forests and over-exploitation, are major threats faced.

3. Conclusion

Traditional system of medicine continues to be widely practiced for various reasons. Fast population-growth, inadequate supply of branded medicines, alarmingly prohibitive cost of treatment, adverse side-effects of several allopathic drugs and ever-increasing resistance to current drugs for infectious diseases have led to growing emphasis on the use of plant-materials as a source of medicines for a wide variety of human ailments. So, group of scientists have shifted their mode of interest in Ayourveda and herbal medi cine. In India, B. serrata has been listed in the threatened species list. The major threats to its survival are slow growth and poor

regeneration. (Kannan & Muthupandiyan, 2022). Though considering the medicinal values of this rare plant it needs to be conserved in sustainable way.

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