



## ETHNO-MEDICO-BOTANICAL UTILITY OF DIFFERENT PARTS OF THE PLANT ASHOKA

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## ABSTRACT

The plant Ashoka (*Saracaasoca* Roxb.) is an endangered species in the flora which is very useful in different condition of the health of a mankind. But different source plants are used in the name of Ashoka in the rural area of Moodubidire. Different parts of Ashoka are also useful as medicine in various disorders. Hence a preliminary survey work on ethno-medical uses of Ashoka were conducted at Moodubidire Talluk in Karnataka State. It was found that the various source plants such as *Saracaasoca* Roxb., *Humboldtia brunois* Wall., *Xylia xylocarpa* Roxb., *Polyalthia longifolia* Sonn. etc. were used in the name of Ashoka. But *Saracaasoca* (Roxb). is being popular and authentic source of Ashoka, different parts of parts of Ashoka are beneficial in the management of different diseases in different forms. The bark of Ashoka is said to be useful in the management of menorrhagia, the flowers in gastritis & piles, leaves in acne vulgaris, intestinal worms and stem in the management of Skin diseases. The complete documentation on the ethno-medico-botanical utility of different parts of Ashoka in the Moodubidire Range were done in the present study.

**Keywords:** Ethno-medico-botanical study, Ashoka, *Saracaasoca* (Roxb.), Moodubidire

## INTRODUCTION

The traditional knowledge on herbal medicines were passed on among generations to generation as folklore or ethno-medicine. Nature has created plants on earth to fulfill the basic needs of the human being. The plant Ashoka (*Saracaasoca* Roxb.) is one such multi-dimensional folklore medicine found in the Moodubidire Range of Dakshina Kannada District. The plant Ashoka (*Saracaasoca* Roxb.) is having Kashaya Rasa, *SnigdhaGuna*, *SheethaVeerya* and *Katu Vipaka*<sup>1,2</sup>. It is having multiple uses with its different parts. The decoction of the bark is useful in the management of gynaecological disorders, the flowers in the form of milk shake or syrup or Tambuli (food preparation) is beneficial in gastritis, tender leaves in acne vulgaris, stem in case of skin diseases, roots as cosmetics etc. But there are some more plants used as source plants for Ashoka such as *Humboldtia brunois* Wall., *Xylia xylocarpa* Roxb., *Polyalthia longifolia* Sonn. etc. Hence, an attempt has been made to document the source plants for Ashoka and also to document the ethno-medical uses of different parts of the plant Ashoka (*Saracaasoca*Roxb.).

### Materials and Methods

An ethno-medico-botanical survey was conducted during 2019-2020 in the Moodubidire Talluk of Dakshina Kannada District belongs to Karnataka State. Twenty-six villages in the Moodubidire were identified and planned for the present study. Principal investigator, Co-Principal investigator, technical assistant and local members visited each village in regular intervals to gather the information regarding folklore food habits, folklore practitioners and medicinal plants. A detailed proforma was prepared to collect the information about folklore uses of different sources and different parts of Ashoka. The local name, taxonomic identification of the plant, parts used, means of collection of plant material and part(s) used, medicinal or nutritional values, ingredients to be added in case of multi-herbal formulations, process of preparation of the medicine or food, and mode of application, name, sign(s) and symptom(s) of the disease(s) treated, dosage and duration of treatment, therapeutic uses, dietary restriction(s) during the treatment

and food values of the plants etc. were gathered. Information thus gathered were verified and cross-checked for its earlier documentation and authentication of plant identity by making use of available classical and current literature such as Bhavaprakasha Nighantu<sup>[1]</sup>, Raja Nighantu<sup>[2]</sup>, Kaiyadeva Nighantu<sup>[3]</sup>, Flora of Udupi<sup>[4]</sup>, Flora of South Canara<sup>[5]</sup>, Flora of Shimoga<sup>[6]</sup> Flora of Madras presidency<sup>[7]</sup>, Flora of British India<sup>[8]</sup> and also by consulting expert herbalists. Herbarium specimens and Photography of the botanical source and different parts of Ashoka with proper information were also documented.

### 3. Results

In the present study, various folklore medicinal and food preparations of Ashoka in the Moodubidire range were documented. The names of the recipe are mentioned in the local language (Kannada). The herbal ingredients of the particular preparation are identified with botanical names. The useful part of the herbs, method of preparation, health benefits are also documented, which are as mentioned below.

#### i) *Humboldtia brunois* Wall.–Fabaceae (Subfamily: Caesalpinioideae)/ Haasige Mara/Bark

Decoction of the bark given internally in case of menstrual disorders such as menorrhagia, metrorrhagia etc

#### ii) *Polyalthia longifolia* Sonn./Annonaceae/Ashoka Kambada Mara/Bark, Leaves.

- The decoction of the bark is useful in fever and believed to be beneficial in menstrual disorders.
- Decoction of the leaves are useful in fever, diabetes and gastritis.

#### iii) *Saraca asoca* (Roxb.)- Fabaceae (Subfamily: Caesalpinioideae) / Ashokada Mara/ Root, Stem, Stem bark, Leaves, Flowers, Seeds.

Many medicinal uses of different parts of Ashoka are documented. They are as follows-

##### Root

- Root powder mixed with water, applied to the face in case of blackish discoloration of the face
- Root powder of Ashoka are found useful in the treatment of skin complications such as eczema, psoriasis, acne, dermatitis, herpes etc.

- Dried root of Ashoka is found useful in paralysis and visceral numbness.
- Roots powder of Ashoka used as herbal remedy for mental problems.
- The root decoction of Ashoka consumed after delivery for enhanced lochial discharge.

**Stem:**

- Decoction of the stem is useful in case of Eczema.

**Stem Bark**

- Bark decoction administered orally in dysfunctional uterine bleeding, fever, anaemia etc.
- It is used also in uterine debility and hysteria.
- The decoction of the bark is a popular uterine tonic and sedative.
- As the bark is astringent, used in uterine affections, biliousness, dyspepsia, dysentery, colic, piles, ulcers, pimples etc
- It is also useful in fracture of the bones.

**Leaf**

- Decoction of the leaves given internally in case of Intestinal worms and abdominal pain.
- Tender leaves paste with rose water/ water/milk applied to the face in case of Acne.
- Tender leaves roasted with ghee, grinded with coconut and then mixed with butter milk and salt is called as tambuli is consumed with rice is a tasty food as well as medicine for Gastritis.
- Decoction of the leaf of Ashoka is very good blood purifier.
- Leaf juice mixed with cumin seeds cures pain abdomen.
- Leaf paste of Ashoka along with coconut oil applied over scalp 2-3 times in a week cures dandruff and hair fall.

**Flower:**

- Juice prepared by the flowers are said to be coolant.
- The flowers are used in the treatment of dysentery.
- Flowers pounded and mixed with water are used in retention of urine.
- Flowers are also useful in scabies in children and other skin diseases.

- Dried flower powder of the plant *S. asoca* is taken with milk or honey in case of diabetes.
- Ashoka bark decoction is taken twice a day for the treatment of diabetes.
- The flowers are taken and cleaned properly with water. It is grinded with grated coconut, pepper, and little water and salt. To this mixture, buttermilk is added and served as Tambuli with rice.
- The flowers are taken and cleaned properly with water. These are taken in a vessel and to this, hot water is added. The lid is closed and let it to cool. After cooling it is filtered and only liquid is collected. To this liquid, sugar candy, Cardamom are added and taken internally.
- *Pushpa Churna* mixed with water can be used in *Raktatisara*.
- Flower paste used as face pack in acne vulgaris
- Dried flowers with honey are used for itching in scrotum, joint pain, chest pain, neck pain, heartburn, sleeplessness, breathing problems.
- Flower powder mixed with coconut oil and applied over skin for scabies and eczema.

**Seed:**

- 2-3 grams of the powders of seeds are useful in urinary disorders such as urinary calculi, burning micturition and also in fever.

**iv) *Xylia xylocarpa* Roxb./ Fabaceae (Subfamily: Caesalpinioideae) / Chiruve Mara/ Stem bark, Leaves, Flowers, Seeds**

- Decoction of the bark is given internally and the paste of the bark is applied externally in skin diseases.
- The decoction of the bark or wood is given in menorrhagia but not recommended for pregnant women.
- The decoction of the bark or wood is given for intestinal worms, diarrhea, fever and gastric complaints.
- Hot infusion of the flowers are useful in fever.
- Seed oil used in rheumatism and piles.

## DISCUSSION

The present study aimed at survey on source plants of Ashoka and different parts of *Saraca asoca* (Roxb.). The source plants for the plant Ashoka are many, such as *Polyalthia longifolia* Sonn, *Saraca asoca* (Roxb.), *Shorea robusta* Gaertn and *Bauhinia variegata* (L) Benth which are mentioned by Acharya Bapalal Vaidya<sup>{8}</sup>. But in the present study, there are some different plants such as *Humboldtia brunois* Wall. and *Xylia xylocarpa* Roxb. are found to be considered as Ashoka. *P. longifolia* may be useful in fever but may not be useful in gynaecological disorders. Hence it may not be considered as substitute for Ashoka. In the present study, the documented uses of Ashoka (*S.asoca*) in the diseases such as Jwara (fever), Pradara (menorrhagia) etc. are also found in the classical literatures such as Bhavaprakasha Nighantu, Raja Nighantu etc. The other reported uses in skin diseases like eczema, herpis, acne etc are the new contribution of the study. Classically the stem bark of the plant is mainly used in the medicine where as the present study reported the medicinal uses of flowers, tender leaves, Root etc.

The different parts of the plant Ashoka (*S. asoca*) are useful in various diseases as food and medicine. It controls various health related problems manifested due to modern lifestyle such as irregular food habits, irregular sleep, spicy food, stress in working atmosphere etc. Such a potent medicinal plant is becoming extinct. If the therapeutic utility of the plant is explored, the cultivation of the same is also will increase for the benefit of the mankind. Thus, we can develop the sustainable management and conservation of the plant as well in the nature. In a nutshell, the outcome of the present study will be beneficial for the society as most of the population are suffering with various ailments due to modern lifestyle.

## CONCLUSION

In the present study, it was observed that folk remedies are frequently used in rural areas more than urban population successfully. The plants *S. asoca* is the authentic source for the Ashoka. The *H. Brunois* and *X. xylocarpa* are may be used as substitute. The plant *P.*

*longifolia* is useful only in fever and not in the gynaecological disorders. Hence, it cannot be taken as Ashoka. The multiple uses of different parts of Ashoka (*S. asoca*) as food and medicine is the outcome of the present study. Therefore, the cultivation and conservation of Ashoka (*S. asoca*) should be encouraged all over in India by the Government of India through National Medicinal Plants Board. The different recipes documented in the present study should be analyzed for their nutritional value and health benefits.

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### Source Plants of Ashoka

 <p><i>Humboldtia brunois</i> Wall.</p>	 <p><i>Polyalthia longifolia</i> Sonn.</p>
 <p><i>Saraca asoca</i> (Roxb.)</p>	 <p><i>Xylia xylocarpa</i> Roxb</p>

### Different Parts of Ashoka (SaracaasocaRoxb.)

 <p>Tender leaves</p>	 <p>Leaves</p>
 <p>Stem Bark</p>	 <p>Stem</p>
 <p>Flower</p>	 <p>Seeds</p>

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