



Research Article

ISSN: 2454-5023
J. Ayu. Herb. Med.
2022; 8(1): 14-17
Received: 26-01-2022
Accepted: 28-03-2022
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www.ayurvedjournal.com
DOI: 10.31254/jahm.2022.8105

Ethno-medico-botanical claims of Bondla wildlife sanctuary vicinity of Goa

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ABSTRACT

An ethno-botanical study carried out in the village area near to Bondla wildlife sanctuary of Bondla, Goa revealed therapeutic application of 15 plant species representing 14 families. These plants are use for a wide range of common health ailments like Infertility, Hair loss, Cervical adenitis, Cancer, burnt wound, Antidote for opium, Diabetes, Kidney stone, Piles, Cough, Worm infestation, Constipation, Bronchial asthma, Sprain, Fracture, Leucorrhoea and Wound healing etc. Majorities of preparation are taken orally and local applications in form of decoction and paste. Information of medicinal claim was collected from elderly people and local healers residing in the vicinity of Bondla wild life sanctuary. The study describes the details of Botanical identity, Family, Local Konkani name, Sanskrit name, English name, Parts of the plant used, therapeutic uses, Process of preparation, Dosage, mode and route of application.

Keywords: Ethno Botany, Medicinal Plants, Bondla WildLife Sncuary, Traditional Healers.

INTRODUCTION

Ethno-medicinal use of plants has been known since ancient times and several plants were used to cure diseases for maintenance of good health. Biodiversity is the main base source of human survival & financial wellbeing [1]. on which the whole people, families, communities, nations and future generation depends [2]. Medicinal plants are globally valuable sources of herbal products and they are disappearing rampantly. Therefore, with proper care and management biological sources can be used sustainably ensuring their use for our forthcoming generation [3]. More than 8000 species of medicinal plants available in India and 70% of medicinal plants are found in tropical forest of various forest types of Western ghats, Eastern Ghats, the Vindhya, Aravalis and the Tarai regions etc [4].

The tribal, traditional healers have emotional and symbiotic relationship with biodiversity and they have been protecting and conserving it since with time of their civilization starts. The people of Goa have a vast knowledge on uses of medicinal plants in various disease conditions for their primary health care needs. Medicinal plant that found plentifully in Goa; now disappearing and become indistinct due to various reasons like population explosion, urbanization, developmental activities and mostly negligence due to lack of human care. So, it is a need to document the information of plant species with potent medicinal values. For this purpose, an ethno-medico-botanical study was conducted on the people and local healers from the area of Bondla wildlife sanctuary of Goa State has been enumerated.

METHODOLOGY

Extensive survey cum collection practices was made in the year 2016-17 in the local villages adjacent to Bondla wildlife area of Bondla North Goa district of Goa. The area situated between 15.1-44° North Latitudes and 74.10° East Longitudes. This area is rich in plant diversity of ethno-botanical and economic importance. Routine methods of botanical collection and herbarium techniques have been followed in the study [5]. Data about medicinal uses of plants were obtained through interviews (as first hand information), discussion, personal contact and keen observation of knowledgeable elderly people, local healers inhabitants to the study area. Plants were identified by using relevant floras. All these collected information was verified by cross checked with relevant available flora and voucher specimens were deposited at research and utilization division of forest department of Goa.

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RESULT

The ethno-botanical survey has been recorded of 15 species belong to 14 families. This enumeration of plant species are arranged alphabetically with their botanical names, families, local names in Konkani, Sanskrit and English names, their useful parts, preparations, route of administration, dosages and ethno-medicinal uses; are presented as follows-

1) *Elephantopus scaber* Linn. (Asteraceae, Compositae)

Local name – Hastipata

Sanskrit name- Hastipadi

English name- Pricky leaved elephant foot

Uses

Infertility: Flower decoction 30-50 ml given orally in female infertility

2) *Cuscuta reflexa* Roxb (Convolvulaceae)

Local name- Nirmuli

Sanskrit name-Akasavalli

English name – Doddar

Uses

Hair loss The whole plant powdered and mixed with sesame oil and kept exposed for 15-21 days. This prepared oil is used as hair tonic and also has beneficial effect in alopecia.

3) *Crataeva nurvala* Buch.-Ham (Capparidaceae)

Local name- Nurval

Sanskrit name- Varuna

English name-Three-leaved caper.

Uses

Cervical adenitis:Root bark decoction 50 ml with honey given twice daily, given orally for 7 days, having beneficial effect on cervical adenitis.

4) *Clerodendrum infortunatum* Linn. (Verbenaceae)

Local name: - Saypilo, Kadri.

Sanskrit name: - Bhandira.

English name- Hill glory bower

Uses

Cancer: Root paste is claimed to be used in cancer.

5) *Celastrus paniculatus* Willd (Celastraceae)

Local name:-Kariganne, Kanguni.

Sanskrit name:- Jyotismati.

English name:- Climbing staff plant, Intellect tree

Uses

- Burn wound:- Ash prepared by burning the stem mixed with coconut oil applied locally in burn induced wound.
- Leaves paste used to reduce symptoms in opium poisoning.

6) *Vinca rosea* Linn

Syn-Catharanthus rosea Linn. (Apocynaceae)

Local name-Sadaphuli

Sanskrit name-Sadapushpi

English name- Madagaskar periwinkle

Uses

Diabetes: 2-3 grams leaves or flower paste added in a half cup lukewarm water in empty stomach at morning reduced blood sugar in diabetes.

7) *Ficus arnottiana* miq. (Moraceae)

Local name- Asti

Sanskrit name- Prarohi

Uses

Kidney stone (urinary calculi): Take 100 ml crushed bark add 400ml water boiled it and reduce up to its half quantity; to be taken orally 80-100 ml daily for 5days helps to break the kidney stone.

8) *Michillus micrantha* Nees (Lauraceae)

Local name-Kardel, Gulum

English Name-Machilus

Uses

Sprain & Fracture Taking equal quantity of bark crushed with Kajupheni (distilled fermented juice) applied paste at affected part and given bandage putting banyan lead over poultice. Pain and swelling subside in overnight in case of sprain and fracture.

9) *Mitragyna parvifolia* (Roxb.)konth (Rubiaceae)

Local name – Kalam,Kadam

Sanskrit name- Girikadamba

English name-Kaim

Uses

Swelling and pain: Paste of leaves or bark applied locally on traumatic inflammation site for 2-3 days reduces pain and swelling.

10) **Mirabilis jalapa** Linn. (Nyctaginaceae)

Local name-Meremdi, Gul-abbas

Sanskrit name-Krishnakali

English name – Four o'clock plant, Marvel of Peru

Uses

Constipation and cancer 2-5 grams of root paste given orally at bed time in case of constipation it causes loose motion. It also claimed for cancerous condition.

11) **Baliospermum montanum** Willd .(Euphorbiaceae)

Local name-Baktumbo

Sanskrit name-Danti

Uses

Bronchial Asthma: Leaves juice 15-20 ml given orally 2-3 times daily to lessen the frequency of Asthmatic attacks.

12) **Cassia absus** Linn.(Caesalpiniaceae)

Local name- Kankuti

Sanskrit name-Chakshusya

Uses

Piles: Seed paste applied on piles mass reduces the size of mass.

13) **Bridelia retusa** Linn . Spreng. (Euphorbiaceae)

Local name-Patharphod

Sanskrit name-Mahavira, Ekavira

Uses

Kidney stone: Decoction of stem bark 50ml taken orally twice daily 5-7 days helps to break the kidney stone.

14) **Lagerstroemia indica** Linn. (Lythraceae)

Local name –Joje mart, Mendhi

Uses

Piles: Leaves paste applied locally for healing wound.

15) **Thespesia populnea** Linn. Soland. Ex correa (Malvaceae)

Local name – Khari kapusi, Bhendi

Sanskrit name – Parisha

Uses

Leucorrhoea: Root decoction 50 ml taken orally twice daily for 5 days.

Table 1: Ethno Medicinal uses of Plants enlisted from Survey vicinity of Bondla wildlife Sanctuary

SL No	Botanical Name	Local Name	Family	Useful Parts	Disease
1.	<i>Elephantopus scaber</i> Linn.	Hastipata	Asteraceae, Compositae	Flower	Infertility
2.	<i>Cuscuta reflexa</i> Roxb	Nirmuli	Convolvulaceae	Whole Plant	Hair loss
3.	<i>Crataeva nurvala</i> Buch.-Ham	Nurval	Capparidaceae	Root bark	Cervical adenitis
4.	<i>Clerodendrum infortunatum</i> Linn	Saypilo, Kadri.	Verbenaceae	Root	cancer
5.	<i>Celastrus paniculatus</i> Willd	Kariganne, Kanguni.	Celastraceae	Stem, Leaves	Burn wound & Opium poisoning
6.	<i>Vinca rosea</i> Linn. <i>Syn-Catharanthus rosea</i> Linn.	Sadaphuli	Apocynaceae	Leaves & flower	Diabetes
7.	<i>Ficus arnottiana</i> miq.	Asti	Moraceae	Bark	Kidney stone
8.	<i>Michillus micrantha</i> Nees	Kardel, Gulum	Lauraceae	Bark	Pain & Fracture
9.	<i>Mitragyna parvifolia</i> (Roxb.)konth	Kalam, Kadam	Rubiaceae	Leaves	Traumatic swelling & Pain
10.	<i>Mirabilis jalapa</i> Linn.	Meremdi, Gul-abbas	Nyctaginaceae	Root	Constipation, cancer
11.	<i>Baliospermum montanum</i> Willd	Baktumbo	Euphorbiaceae	Leaves	Asthmatic attack
12.	<i>Cassia absus</i> Linn	Kankuti	Caesalpiniaceae	Seed	Piles

13.	<i>Bridelia retusa</i> Linn . Spreng	Patharphod	Euphorbiaceae	Stem Bark	Kidney stone
14.	<i>Lagerstroemia indica</i> Linn.	Joje mart, Mendhi	Lythraceae	Leaves	Wound
15.	<i>Thespesia populnea</i> Linn. Soland. Ex correa	Khari Kapusi, Bhendi	Malvaceae	Root	Leucorrhoea

DISCUSSIONS

It is evident from the observation that the local healers, elderly people of Bondla wildlife sanctuary areas have vast knowledge on medicinal plants. The ethno-medicinal studies show the therapeutic efficacy of medicinal plants in various health problems. The collected data were recorded after critical analysis with databases, literature available all over India specifically the Western Ghats region [6-17]. The present study focused on the uses of medicinal plants use to cure Infertility, Hair loss, Cervical adenitis, Cancer, burnt wound, Antidote for opium, Diabetes, Kidney stone, Piles, Cough, Worm infestation, Constipation, Bronchial asthma, Sprain, Fracture, Leucorrhoea and Wound healing etc. These listed medicinal plants also require further study to get new scientific interpretation and new health applications.

CONCLUSION

The rich sources of available medicinal plant information with the hand of local healers are much effective clinically. Those informations were recorded and presented in this study will be helpful in conservation strategies. The cultural and traditional knowledge are need to be appreciated and supported with modern scientific methods and techniques while planning for protection and conservation of biodiversity. Further surveys in this area are needed to generate new information about new plant species.

Acknowledgement

Authors are thankful to Research and Utilization division of Department of Forest Government of Goa for their help and providing necessary facilities. Also expressing whole hearted thanks to elderly people and local healers of study area for sharing their valuable information, cooperation during field study.

Conflict of Interest

None declared.

Financial support

None declared.

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HOW TO CITE THIS ARTICLE

Keshar DS, Bishnupriya M. Ethno-medico-botanical claims of Bondla wildlife sanctuary vicinity of Goa. *J Ayu Herb Med* 2022;8(1):14-17. DOI: 10.31254/jahm.2022.8105

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