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ETHNO-MEDICO-BOTANICAL SURVEY OF BHAGWAN MAHAVIR WILDLIFE SANCTUARY AREA OF MOLLEM, GOA

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ABSTRACT

Bhagawan Mahavir wildlife sanctuary area of Mollem, Goa is endowed with rich vegetation. Local healers and people are very nicely known the uses of the plant resources for their primary health care. These people treat many critical diseases with the use of plant based medicine too. This ethno-medico-botanical survey on people of these localities have recorded the use of 15 species belongs to 15 families. Different uses modalities of recorded plants are presented and discussed in this article.

Key Words: Ethno medicine, Traditional knowledge, Bhagwan Mahavir WildLife sanctuary, Medicinal plants

INTRODUCTION: Traditional medicine is the sum total of the knowledge, skills and practices based on the theories, beliefs and experiences. Indigenous to different culture used in maintenance of health as well in the prevention, diagnosis, improvement or treatment of physical or mental illness[1]. In many developing countries a large part of the population, especially in rural areas, depends mainly on traditional medicine for their primary health care[2, 3]. The indigenous knowledge of medicinal plants has been well documented in numerous ancient Hindu literatures since the age of Vedas has led to the discovery of many important drug of modern age [4-7].

The traditional knowledge of plant based treatment remains with healers with closely guarded secret within family. They do not preserve it as written document and pass it to next generation traditionally through practice and discussion.

In Goa there is a rich heritage of Ethno – medicinal practice. The study aims to record the traditional knowledge on uses of medicinal plants among the inhabitants of adjacent villages to Bhagwan Mahavir wild life sanctuary of Mollem, Goa has been presented.

METHODOLOGY: The present work is the outcome of extensive survey of Bhagwan Mahavir wildlife sanctuary of Mollem Goa State during 2015-2016, located 15.15^0 North Latitudes and 74.10^0 East Longitudes of Dharbandora taluka of Goa shared the eastern border with Karnataka..Information on traditional uses of Medicinal plants were collected from local healers and elderly people through interviews. The method of study was in general same as described by Jain S K[8, 9]. The sample of the plant species were collected, identified and the voucher specimen were deposited at research and utilization division of forest department of Goa.

The all recorded plants have been presented in the paper along with their scientific, local and *sanskrit* names, useful parts, uses and rout of administration etc.

RESULTS: After careful screening of 15 species belong to 15 families have been

recognized as ethnomedicinal plants from the study area. These plants are enumerated with relevent necessary information.

1) *Holoptelea integrefolia* (Roxb.) (Ulmaceae)

Sanskrit name-*Chirabilwa*
Local name-Vamvlo, Vavli
Uses
a) Hydrocele:Bark piece tie up on arm beneficial in hydrocele.
b) Wound healing;

Dusting powder of stem bark heals the wound faster.

2) *Lagerstroemia indica Linn* (Lythraceae)

Sanskrit name- *Siddhaka*
Local name-Joje mart
English name-Common crape mythle
Uses
a) Bleeding piles:Leaf paste applied on bleeding piles to stop bleeding.
b) Consumption;

Seed powder is claimed to have narcotic action.

3) *Emilia sonchifolia (L.)DC* (Compositae ,Asteraceae)

Local name-Undrachim Panam
Sanskrit name- *Shash-shruti*
Hindi-Hirankhuri
Uses
Glandular swelling & Goiter: Paste of whole plant applied around neck for glandular swelling around neck. It reduces the swelling of goiter.

4) Aloe barbadensis Mill

Syn- Aloe vera Tourn ex Linn. (Liliaceae)
Local name- Korphod, KateKuvar
Sanskrit name-*Kumari, GhritKumarika*
English name- Indian aloe
Uses
Cough:Paste of leaves pulp heated and given orally. It expels the cough out as expectorant.

5) *Barringtonia racemosa (Linn) Roxb*. (Barringtoniaceae , Lycythidaceae)

Local name- Sadphal
Sanskrit name- *Hijjala*
English name- Indian oak
Uses
Headache:Fruit paste applied on forehead for subside headache.

6) *Thespesia populnea Linn*. Soland.excorr (Malvaceae)

Local name- Bhendi, Khari-kapusi
Sanskrit name:- *Parisha.*
English Name: - Tulip tree
Uses
a) Dysentery &Hemorrhoids;

Root decoction 30-50ml twice daily for 2-3 days given orally beneficial in dysentery and Haemorrhoids.

7) *Tectona grandis Linn* (Verbenaceae)

Local name- Sylo, Sag
Sanskrit name:- *Shaka.*
English Name: - Teak tree.
Uses
Retention of urine:Seed paste applied locally on lower abdomen in retention of urine in urinary bladder.

8) *Sterculia urens Roxb* (Sterculiaceae)

Local name-Pandruk, Kandal
Sanskrit name: - *Kateera*.
English Name - Karaya gum
Uses
Vitalizer & aphrodisiac:White flakes of Karaya given, dried under sunlight and fried in ghee, then make its powder with adding a little amount of sugar. This prefers 5-6gms along with milk given orally acts as viralizer and aphrodisiac.

9) *Solanum nigrum Linn* (Solanaceae)

Local name:- Kamchi
Sanskrit name: - *Kakamachi.*
English name:- Black night shade.
Uses

Liver cirrhosis: Seed powder 5-10 grams with water or leaves juice 30-50ml twice daily given orally for 7 days beneficial in liver cirrhosis.

10) *Nyctanthes arbortristis Linn* (Nyctaginaceae)
Local name:-Parijat, Hursing
Sanskrit name:- *Parijata*.
English name:- Tree of sorrow, Night jasmine.
Uses
Sciatic pain :Decoction of 21 leaves given orally twice daily for 7 days, relieves pain due to sciatica.

11) *Moringa oleifera Lam* (Moringaceae)
Local name-Shevga,Segata.
Sanskrit name: - *Shigru.*
English Name:-Harse reddish, Drum stick tree.
Uses
Jaundice:50 grams tender leaves paste mixed with 25 grams paste of Bhumi amla (Phyllanthes fraternus- whole plant) make its *Sarvat*(Syrup) and consume twice daily for three days with cold water having beneficial effect on jaundice

12) *Leucas cephalotus* (Lamiaceae)
Local name **:-** Tumbo.
Sanskrit name: -*Dronapushpi.*
Uses
Common cold:Flower collected before sunrise contains honey and put in water, make its Sarvat, beneficial in Cold and Cough.

13) *Hemidesmus indicus R .Br* (Asclepiadaceae)
Local name**: -** Uparsal
Sanskrit name*:-* *Sariva.*
EnglishName:- Indian sarsaparilla.
Uses
Spermatorrhea:Take root and sugar candy, equal quantity, make its powder, then administer orally with a dose of 5-10 grams with half cup of water, twice daily for 5-7 days, cures spermatorrhea.

14) *Euphorbia hirta Linn*.(Euphorbiaceae)
Local name:- Dudurli.
Sanskrit name: - *Dugdhika*
English Name: - Australian asthma weed
Uses:
Dysentery:Whole plant juice 2ml. mixed with cup of curd given orally twice daily for 2-3 days in dysentery.

15) *Erythrina indica Linn* (Fabaceae)
Local name: - Pangaro
Sanskrit name: - *Paribhadra*
English name:-Indian coral tree
Uses
Menorrhagia:Coarse powder of stem bark soaked in water for 7-8 hours. Then the water is collected by separating the coarse powder. Priorly cooked rice is soaked in this water for 7-8 hrs then grind into paste and given orally as diet in menorrhagia (*Raktapradar*)

Table 1 Ethno-Medicinal uses of Plants enlisted from Survey area Bhagawan Mahavir WildLife Sanctuary, Mollem, Goa.

S no	Botanical Name	Local Name	Family	Useful Parts	Disease
1.	*Holoptelea integrifolia (Roxb.)*	Vamvlo, Vavli	Ulmaceae	Stem Bark	Hydrocele Wound healing
2.	*Lagerstroemia indica Linn*	Joje mart	Lythraceae	Leaves, Seed	Bleeding Piles, Nar-

					cotic Acton
3.	*Emilia sonchifolia (L.) DC*	Undrachim Panam	Compositae ,Asteraceae	Whole plant	Glandular Swelling, Goiter
4.	*Aloe barbadensis Mill Syn- Aloe vera Tourn ex Linn.*	Korphod, KateKuvar	Liliaceae	Leavespulp	Cough
5.	*Barringtonia racemosa (Linn) Roxb.*	Sadphal	Barringtoniaceae, Lycythidaceae	Fruit	Headache
6.	*Thespesia populnea Linn.Soland.excorr*	Bhendi, Khari-kapusi	Malvaceae	Root	Dysentery, Hemorrhoid
7.	*Tectona grandis Linn f*	Sylo, Sag	Verbenaceae	Seed	Retention of Urine
8.	*Sterculia urens Roxb.*	Pandruk, Kandal	Sterculiaceae	Gum	Vitalizer, Aphrodisiac
9.	*Solanum nigrum Linn*	Kamchi	Solanaceae	Seed	Liver cirrho-sis
10	*Nyctanthes arbortristis Linn*	Parijat, Hursing	Nyctaginaceae	Leaves	Sciatic pain
11	*Moringa oleifera Lam*	Shevga ,Segata	Moringaceae	Leaves	Jaundice
12	*Leucas cephalotus Spreng*	Tumbo	Lamiaceae	Flower	Common cold , cough
13	*Hemidesmus indicus R Br*	Uparsal	Asclepiadaceae	Root	Spermatorrhea
14	*Euphorbia hirta Linn.*	Dudurli	Euphorbiaceae	Whole plant	Dysentery
15	*Erythrina indica Linn*	Pangaro	Fabaceae	Stem Bark	Menorrhagia

DISCUSSION: This study revealed a considerable medicinal plant diversity-village area of Bhagwan Mahavir wildlife sanctuary Goa. Data were compared with available literature in different region of western Ghats; India on medicinal plants[10-17]. It was found that many of the uses listed are not recorded earlier. The present investigation has brought to highlight the therapeutic value of plants employed to cure Hydrocele, Wound healing, Bleeding piles, Narcotic action, Glandular swelling, Goiter, Cough, Headache, Dysentery, Retention of urine, Vitalizer, Aphrodisiac, Liver cirrhosis, Sciatic pain, Jaundice, Common cold, Spermatorrhea and Menorrhagia.

The ethno-medicinal plants listed above are required intensive phytochemical screening. Effort is need to do the survey in search of more such valuable informations.

CONCLUSION: The inhabitants of the study area have commendable knowledge on various uses of medicinal plants from common & critical diseases. It was observed that some of the listed medicinal uses of plants are mentioned first time even not recorded earlier. Hence the ethno-

medicinal surveys are of crucial importance in finding some miraculous medicine. The list of plants from this study area of Goa and their utilization will provide basic data for further studies helps in conservation, cultivation, traditional medicine and economic benefits. Further detail survey in this area needed for search of more new information and new plant species.

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