

**ETHNO-MEDICO-BOTANICAL SURVEY OF NETRAVALI (Villages nearby)
WILDLIFE SANCTUARY OF GOA****Das Sangram Keshari^{1*}, Mohanty Bishnupriya²**

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The ecosystem in India's the Western Ghats is severely threatened due to the increasing human settlements, mining, pollution and the drop in genetic diversity. The Western Ghats of India is facing severe threats to its ecosystem from 1920 to 1990. Around 40 per cent of its natural vegetation was depleted on those days. The Western Ghats is home to India's two biosphere reserves, 13 National parks, several wildlife sanctuaries and many Reserve Forests. Netravali Wildlife Sanctuary is located in the southeastern part of Goa state. It constitutes one of the vital corridors of Western Ghats covers an area of 211 km² endowed with rich vegetation. Many tribal communities reside in these areas using medicinal plants to cure their common as well as critical health problems. An ethno-medicinal study was carried out during 2015-16 in nearby villages of these areas with aims to record the traditional knowledge on the use of medicinal plants and create awareness for its conservation.

The paper provides information on the use of crude drugs for various diseases prevalent in villages adjacent to the Netravali wildlife sanctuary area of Verlem, South Goa district of Goa State. This work deals with 15 medicinal plants belonging to 14 families useful for different diseases by the villagers, elderly people and folklore practitioners. For each species the information regarding Botanical name, parts use, a form of preparation, route of ad-

ministration of the drug and ethnomedicinal uses have been structured. This could be also useful in future research with the above direction and purpose.

Keyword: Ethno-medicine, Netravali, Folk claimed Medicine, Medicinal Plants

INTRODUCTION

It has been estimated that about 80% of populations living in developing countries rely exclusively on traditional medicine^{1,2}. Indian traditional medicine is based on various systems like Ayurveda, Siddha, Unani and several tribal communities³. The knowledge of ethnomedicine is carried out from generation to generation among ethnic people orally and these medicinal plants survived in their minds and souls^{4,5}. In Goa, there is a rich heritage of Ethno-medicine. People and traditional healers of Goa have commanding knowledge about the use of medicinal plants in their primary health care on various health hazards. People of economically weaker sections collect medicinal from forests for commercial use as a livelihood option.

So, a survey work on ethno- medico – botanical studies had done about available medicinal Plant from the in formations of tribal healers, elderly men, women of villages nearby Netravali Wildlife Sanctuary, Verlem, South Goa district of Goa state during 2015 -16. The present study aims to document those resources and conserve that knowledge of the people has been enumerated.

Methodology-

An ethno-medico-botanical study was carried out during 2015-2016 in nearby villages to Netravali wildlife sanctuary are located 15.08⁰North Latitude and 74.24⁰East Latitude. Standard methodology was used to gather the Ethno-medicinal knowledge of plants from local elderly people⁴. The information regarding the uses of medicinal plants in common diseases was collected through interviews, questionnaires among the people and folklore healers of the study area. In addition to Local Names, information about Plant parts used, medicinal uses, method of preparation, form of uses and route of administration were also collected, the collected plant species were identified taxonomically^{5,6}. The identified plant spec-

imens were confirmed and recorded after screening with an available database of Indian Medicinal Plants⁷⁻¹⁹. The voucher specimen was deposited in the Research and utilization division of Goa Forest Department, Goa State.

Results-

The plants are enumerated alphabetically with their botanical Name, Family, Local name, Sanskrit name, English name and their ethnomedicinal values. The report was like-

1) *Erythrina Indica Lam* (Fabaceae)

Local name- *Pangaro*

Sanskrit name- *Paribhadra*

English name- Indian coral tree

Uses:

a) Karnanada (Tinnitus): Putting fresh leaf juice 2-3 drops in ear subside *Karnanada* (Tinnitus).

b) Worm infestation. Decoction of stem bark 20-30ml given orally. It kills the worms.

2) *Euphorbia hirta Linn* (Euphorbiaceae)

Local name-*Dudurli*

Sanskrit name-*Dugdhika*

English name-Australian Asthma weed.

Uses:

a) Wound healing: Latex is applied locally on the wound for healing.

b) To increase milk quantity in lactating mothers. Leaves paste is given orally to lactating mothers to increase the quantity of milk and secretion of breast milk.

3) *Hemidesmus indicus Linn.* R. BR. (Asclepiadaceae)

Local name-*Uparsal*

Sanskrit name- *Sariva*

English name- Indian sarsaparilla.

Uses:

Toothache: Chewing root of putting root in mouth subside toothache.

4) *Holarrhena antidysenterica* Wall. Ex DC. (Apocynaceae)

Local name- *Kuda*

Sanskrit name- *Kutaja*

English name- Easter tree

Uses:

Increase the quantity of milk.

Leaves paste is applied to the breast of the nursing mother to increase lactation.

5) *Leucas Cephalotus Spreng* (Lamiaceae)

Local name-*Tumbo*

Sanskrit name- *Dronapushpi*

Uses:

Insect bite: Leaves juice applied locally on the sting of a bee, wasps and insects relieves pain.

6) *Moringa oleifera Lamk.* (Moringaceae)

Local name- *Shevga, Noshing*

Sanskrit name- *Shigru*

English name- Horse reddish, Drumstick tree.

Uses:

High blood pressure: Fresh leaves juice 20-30ml given orally in the morning on empty stomach reduces blood pressure.

7) *Nyctanthes arborists Linn.* (Nyctaginaceae)

Local name- *Parijat, Hursing*

Sanskrit name- *Parijata*

English name- Tree of sorrow, Coral jasmine.

Uses:

Diabetes. 30-50ml of leaf decoction is given orally in the morning and evening controls blood sugar levels in diabetes.

8) *Solanum nigrum Linn.* (Solanaceae)

Local name- *Kamchi*

Sanskrit name- *Kakamachi*

English name- Black nightshade

Uses:

Sleeplessness: It is believed that if the root tied on the head by a cotton thread provide good sleep-in sleeplessness.

9) *Sterculia urens Roxb.* (Sterculiaceae)

Local name- *Kadayo, Pandruk*

Sanskrit name- *Kateera*

English name- Karaya gum

Uses:

Infertility: Gum soaked in water 8-10 hours and then filtered; the obtained solution added with fresh milk given internally acts as an aphrodisiac.

10) *Tectona grandis Linn.* (Verbenaceae)

Local name- *Sylo, Sag*

Sanskrit name- *Shaka*

English name- Teak tree

Uses:

Kidney stone: Seed powder 5-6 grams twice daily given orally beneficial in kidney stone.

11) *Thespesia populnea Linn Soland ex corr.* (Malvaceae)

Local name- *Bhendi*

Sanskrit name- *Parisha*

English name- Tulip tree

Uses

Delay puberty: 4 to 5 nos of seeds paste given orally for starting menstruation if not started in the time of age due to some causes.

12) *Cayratia trifolia Linn. Domin.* (Vitaceae)

Synonym- *Vitis carnos wall*

Local name- *Sarvari bel, Ambat-bel*

Hindi name- *Amal bel*

Sanskrit name- *Gandira*

Uses

Muscular pain: Root paste applied locally as poultice reduces muscular pain.

13) *Solanum torvum Swartz* (Solanaceae)

Local name- *Dorli*

Sanskrit name- *Brihati*

English name- West Indian Turkey Berry

Uses

Fever: Decoction of fruit taken orally subside fever.

14) *Triumfetta rhomboidea* (Tiliaceae)

Synonym- *T. angulata Lam. Jacq.*

Local name- *Thin pudi*

Sanskrit name- *Jhinjirita*

English name- Burbush, Burweed

Uses

White discharge: Root powder 5-6gms taken with water two times daily by mouth for 7 days.

15) *Annona muricata Linn.* (Annonaceae)

Local name- *PatPanas*

English name- *Sour sop*

Uses: Cancer: Leaves and ripe fruit is taken orally claimed for cancer.

Table I: Ethno-Medicinal uses of Plants enlisted from Survey area Netravali Wildlife Sanctuary

SL No	Botanical Name	Local Name	Family	Useful Parts	Disease
1.	<i>Erythrina Indica Lam</i>	<i>Pangaro</i>	Fabaceae	Leaves	Karnanada, Worm infestation
2.	<i>Euphorbia hirta Linn</i>	<i>Dudurli</i>	Euphorbiaceae	Latex, Leaves	Wound Healing, Increase quantity of Breast Milk
3.	<i>Hemidesmus indicus Linn. R. BR</i>	<i>Uparsal</i>	Asclepiadaceae	Root	Toothache
4.	<i>Holarrhena antidysenterica Wall. Ex DC.</i>	<i>Kuda, Kudaga</i>	Apocynaceae	Latex	Wound Healing
5.	<i>Leucas cephalotus Spreng</i>	<i>Tumbo</i>	Lamiaceae	Leaves	Insect bite
6.	<i>Moringa oleifera Lamk.</i>	<i>Shevga, Noshing</i>	Moringaceae	Leaves	High Blood Pressure
7.	<i>Nyctanthes arbor-tristis Linn.</i>	<i>Parijat, Hursing</i>	Nyctaginaceae	Leaves	Diabetes
8.	<i>Solanum nigrum Linn.</i>	<i>Kamchi</i>	Solanaceae	Root	Sleeplessness
9.	<i>Sterculia urens Roxb.</i>	<i>Kadayo, Pandruk</i>	Sterculiaceae	Gum	Infertility
10.	<i>Tectona grandis Linn.</i>	<i>Sylo, Sag</i>	Verbenaceae	Seed	Kidney Stone
11.	<i>Thespesia populnea Linn Soland ex corr.</i>	<i>Bhendi</i>	Malvaceae	Seed	Delayed Puberty
12.	<i>Cayratia trifolia Linn. Domin. Syn- Vitis carnos wall</i>	<i>Sarvari bel, Am-bat-bel</i>	Vitaceae	Root	Muscular Pain
13.	<i>Solanum torvum Swartz</i>	<i>Dorli</i>	Solanaceae	Fruit	Fever
14.	<i>Triumfetta rhomboidea Syn- T. angulata Lam. Jacq.</i>	<i>Thin pudi</i>	Tiliaceae	Root	White Discharge
15.	<i>Annona muricata Linn</i>	<i>Pat Panas</i>	Annonaceae	Leaves & Fruit	Cancer

DISCUSSION

Indigenous and traditional systems of medicine persist all over the world. This unique Health care system progressed from generation to generation within the society is still prevalent. It is evident from the observation that the villagers of Netravali wildlife sanctuary have rich knowledge about phytomedicine. The ethno-medico-botanical study shows the therapeutic effect of 15 medicinal plants belonging to 14 families used in various disease conditions. The collected data were recorded after critical analysis with databases, literature available all over India⁷⁻¹⁹. The present study highlighted the efficacy of medicinal

plant use to cure worm infestation, tinnitus, wound healing, increase quantity of milk in lactating mothers, toothache, insect bite, blood pressure, diabetes, sleeplessness, infertility, kidney stone, delay puberty, muscular pain, fever and leucorrhoea etc. These listed medicinal plants need intensive phytochemical screening given their immense potential to cure certain vital health problems. The Credibility of folk claims has often been questioned. Authentication and standardization of these ethno-medicinal claims should be initiated by modern scientific methods. This will help in conservation and their popularization.

CONCLUSION

People of the study area have rich knowledge about the uses of folk claimed potent or naturally available medicinal plants in various health hazards. Many of the medicinal uses of the above-listed plants have not been recorded earlier in the classics. In Goa, no detailed studies on ethnomedicine have been conducted yet. Hence it is necessary to encourage sustainable folklore practice and their proper conservation. Efforts could be arranged to survey these areas extensively for more such information and relocate new plant species to prevent their indistinctness.

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