

**ETHNO-MEDICO-BOTANICAL SURVEY OF COTIGAO (Villages nearby) WILDLIFE SANCTUARY OF GOA****Das Sangram Keshari<sup>1\*</sup> and Mohanty Bishnupriya<sup>2</sup>**

<sup>1</sup>Professor and Head, Dept. of Dravyaguna Vijnana, Gomantak Ayurveda Mahavidyalaya and Research Centre, At/PoShiroda, Dist- North Goa, Goa, India-403103.

<sup>2</sup>Professor and Head, Dept. of Sanskrit – Samhita – Siddhanta, Gomantak Ayurveda Mahavidyalaya and Research Centre, At/Po- Shiroda, Dist- North Goa, Goa, India-403103.

Article Received on  
21 November 2021,

Revised on 12 Dec. 2021,  
Accepted on 02 Jan. 2022

DOI: 10.20959/wjpr20222-22810

**\*Corresponding Author****Das Sangram Keshari**

Professor and Head, Dept.  
of Dravyaguna Vijnana,  
Gomantak Ayurveda  
Mahavidyalaya and  
Research Centre,  
At/PoShiroda, Dist- North  
Goa, Goa, India-403103.

**ABSTRACT**

The present communication deals with ethno-medicinal usage of some plants a treatment of various health problems by tribal people, medicineman and woman of villages nearby Cotigao wild life sanctuary of Canacona Taluka of South Goa district of Goa State. The present study documents ethno-medicinal usage of 20 Medicinal plants belongs to 15 families which are prevalent in study area along with botanical name, family, local name, useful plant parts, dosage, mode of use, form of application etc. The data collected are compared with available literature. These are mostly used as medication for scabies, to increase the quantity of breast milk, epilepsy, painful itching due to *Mucuna prurita*, Dhatura poisoning, diabetes, abscess, rheumatic swelling, diarrhoea, dysentery, wound healing, ring worm and round worm infestation. Mouth ulcer, skin diseases, bruises, sprains,

abortion, pimples, snake bite and jaundice etc. Further researches in scientific way are required for validation of the traditional knowledge.

**KEYWORDS:** Ethno-medicine, Cotigao, Medicinal Plant, Medicine man.

**INTRODUCTION**

Plants have traditionally served as man's most reliable and important weapon against pathogens. Medicinal plants are extensively used by all sections of people, whether directly as folklore medicine or medicaments of the different indigenous system as well as modern medicine.<sup>[1,2]</sup> In Goa there are many hills and sacred grooves having rich sources of rare and

endangered species. The people and traditional healers of the villages nearby Cotigao wildlife sanctuary area hugely practicing plant based medicine for their primary health care need since long. The main aim of the present study was to document the indigenous ethno-medico-botanical knowledge of these people and to suggest appropriate conservation practices have been enumerated.

## METHODOLOGY

An ethno-medico-botanical survey was made during Year 2014-2015 in villages nearby to Cotigao wild life sanctuary of Canacona Taluka of South Goa district of Goa State located 14.97<sup>0</sup> North latitude and 74.20<sup>0</sup> East longitudes. Initially a list of herbal healers residing in the study area was prepared by gathering the information from the local residence, NGO and some local agencies. The information was recorded by means of interviews of the medicine man, woman, tribal people repeatedly and cross checked regularly. Each claim was verified. The plant collected were identified authentically with local names in Konkani, useful parts, form of preparation, dosage, mode of use have been documented and preserved as herbarium. The voucher specimens have been identified by using related literature. The herbarium specimen were deposited in the research and utilization division, Department of forest; Government of Goa. Routine methods of Botanical collection and conventional technique have been followed.<sup>[3-7]</sup>

## RESULTS

The informations on total 20 medicinal plant species belong to 15 families are used as medicine in various diseases are mentioned with their botanical name, family, habit, local name, Konkani-Sanskrit & English names, useful parts, form of preparation, dosage, route and time of administration, duration of treatment and ethnic values etc.

### 1. *Tectona grandis* Linn (Verbenaceae)

Local name-Sylo

Sanskrit Name-Shaka

English Name-Teak wood

Uses

Scabies-Nut oil is used for promoting hair growth and for cures scabies.

**2. *Hemidesmus indicus* Linn.R. Br.** (Asclepiadaceae)

Local name-Uparsal

Sanskrit Name-Sariva

English Name-Indian sarsaparilla

Uses

Increase quantity of breast milk-Sariva leaves added with a small amount of common salt and fried with gentle fire; given 5-6gms orally twice daily for 3-5days. It helps to enhance the quantity of breast milk in lactating mother.

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

Local name- Hastipata

Sanskrit Name-Hastipadi

English Name- Prickly leaved Elephant foot

Uses

Epilepsy-Leave paste 5-10gms given orally twice daily for 5-7days.

**4. *Cassia tora* Linn**(Caesalpiniaceae)

Local name-Takla

Sanskrit Name-Chakramarda

English Name-Ring worm plant

Uses

Painful itching-Due to contact of *Mucuna pruriens*-Leave juice applied locally subside the pain & itching.

**5. *Calotropis procera*, Linn** (Asclepiadaceae)

Local name-Rui

Sanskrit Name-Arka

English Name-king's crown, Swallow wart

Uses

a) Poisoning due to *Datura* (*Datura metel*):- Root paste of plant given orally in *Datura* poisoning.

b) Collect mature leaves, the hairy waxy coated part of lower surface of leave put on contact area of soul and bind with thread; then wear socks at bed time for overnight. This process reduces blood sugar level in diabetes.

**6. *Bombax ceiba* Linn.** (Bombacaceae)

Local name:-Sawar,

Sanskrit name: - Shalmali.

English name: - Silk cotton tree.

Uses

Abscess: - Application of root paste of sapling around the abscess to burst/open in overnight.

**7. *Baliospermum montanum* (wild) Muell-Arg.**(Euphorbiaceae)

Local name: - Buktumbo.

Sanskrit name: - Danti.

Uses

Rheumatic swelling: - Extracted Seed oil applied locally radices pain & swelling.

**8. *Alstonia scholaris* R. Br.**(Apocynaceae)

Local name: - Satwin, Satvin

Sanskrit name: -Saptaparna.

English Name: - Devil's tree

Uses

Galactagogue: - Cold infusion of bark powder given orally to lactating mothers for increasing breast milk.

**9. *Ageratum conyzoides* Linn.** (Asteraceae)

Local name: - Vosadi.

Sanskrit name: - Visamusti.

English Name: - Goat weed, Appa grass.

Uses

Diarrhoea in children: - Root paste made with few drops of mother milk given with a dose of 2-5 gms orally to the children suffering from diarrhea.

**10. *Achyranthes aspera* Linn.** (Amaranthaceae)

Local name:-Aghado.

Sanskrit name: - Apamarga.

English Name: - Prickly chaff flower.

Uses

Pain due to Hemicrania- Root paste by using cow milk applied on forehead subsides pain due to Hemicrania even in the eye ball pain.

**11. *Anisomeles malabarica* R.Br.** (Lamiaceae)

Local name:- Kalothumbbo, Tumbo

Sanskrit name: - Sprnikka

English Name: - Malabar catmint.

Uses

Leaves extracts 25 – 30 ml given orally for twice daily with ghee gives very good result in dysentery.

**12. *Alternanthera sessilis* [Linn.]R.Br.** (Amaranthaceae)

Local name:- Koypa

Sanskrit name: - Matsyakshi, Matsyagandha

Uses

Galactagogue: -Curry prepared from leaves beneficial in increasing milk in lactating mother.

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

Local name: - Katekabach, Kamte-asan,

Sanskrit name: - Mahavira

Uses

Wound Healing-Paste prepared from leaves of *Bridelia retusa* and *Kali musali* (*Curculigo orchoides*) of equal quantity each then mixed with Castor, Coconut and Gingelly oils is applied locally to cure wound.

**14. *Butea monosperma* (Lam.) Kuntze.** (Fabaceae)

Local name:- Palas

Sanskrit name: - Palasha.

English Name: - Flame of the forest, Bastard teak

Uses

Ring worm & Round worm infestation- The gum/seed powder given orally with a dose of 5-6 gms twice daily.

**15. *Calycopteris floribunda* Lam. (Combretaceae)**

Local name:- Swet dhataki, Ukshi

Sanskrit name: - Susavi

Uses

In thirst-By cutting stem it given sufficient water which fulfills the **thirst** in jungle in absence of water.

**16. *Celosia argentea* Linn.(Amaranthaceae)**

Local name:- Kurdu,Tanduli.

Sanskrit name: - Vitunna, Shitivaraka.

English Name: - Wild cocks comb.

Uses

Seed powder 5-10 gms with sugar & milk taken orally twice daily for three days in dysentery, diarrhoea & mouth ulcer.

**17. *Croton oblongifolius* Roxb.(Euphorbiaceae)**

Local name:- Ghansurang.

Sanskrit name: - Nagadanti

Uses

Root paste applied locally at morning & evening for 3-5 days in skin diseases- bruises, sprains and wound healing.

**18. *Dioscorea oppositifolia* Linn.(Dioscoreaceae)**

Local name:- Marpaspoli.

Sanskrit name: - Sarpakshya.

## Uses

Tuber paste 15-20gms taken orally twice daily for 2days causes abortion.

**19. *Glycosmis pentaphylla* Correa.**(Rutaceae)

Local name:- Menki.

Sanskrit name: - Ashwa shakhota

## Uses

External application of wood paste helps in pimples & also claimed to be effective in snake bite.

**20. *Grewia nervosa* Lour.**(Tiliaceae)

Local name:- Ansale.

## Uses

Jaundice-Leaves extract 20-25 ml taken orally twice daily for 3-5 days.

**Table I: Ethno-Medicinal uses of Plants enlisted from Survey area.**

SL No	Botanical Name	Local Name	Family	Useful Parts	Disease
1.	<i>Tectona grandis</i>	Sylo	Verbenaceae	Nut oil	Scabies
2.	<i>Hemidesmus indicus</i> Linn.R. Br.	Uparsal	Asclepiadaceae	leaves	Increase quantity of breast milk.
3.	<i>Elephantopus scaber</i> Linn.	Hastipata	Asteraceae/ Compositae	Leaves	Epilepsy
4.	<i>Cassia tora</i> Linn	Takla	Caesalpiniaceae	Leaves	Painful itching due to contact of Kapikachhu
5.	<i>Calotropis procera</i> Linn	Rui	Asclepiadaceae	Root, Leaves	Poisoning due to Dhatura, Diabetes
6.	<i>Bombax ceiba</i> Linn	Savar	Bombacaceae	Root	Abscess
7.	<i>Baliospermum montanum</i> Wild	Danti	Euphorbiaceae.	Seed oil	Rheumatic swelling
8.	<i>Alstonia scholaris</i> R. Br. Family Apocynaceae.	Satwin	Apocynaceae.	Bark	Increase quantity of breast milk.
9.	<i>Ageratum conyzoides</i> Linn.	Vosadi.	Asteraceae.	Root	Diarrhea in child
10.	<i>Achyranthes aspera</i> Linn.	Aghado.	Amaranthaceae.	Root	Pain due to hemicrania.
11.	<i>Anisomeles malabarica</i> R.Br.	Kalothumbo	Lamiaceae.	Leaves	Dysentery

12.	<i>Alternanthera sessilis</i> [Linn.]R.Br.	Kanchari, Koypa	Amaranthaceae	Leaves	Increase quantity of breast milk
13.	<i>Bridelia retusa</i> Spreng.	Katekabach, Kamte-Asan	Euphorbiaceae	Leaves	Wound Healing
14.	<i>Butea monosperma</i> (Lam.) Kuntze.	Palas	Fabaceae	Gum/seed powder	Ring worm & Round worm infestation.
15.	<i>Calycopteris floribunda</i> Lam.	Swet dhataki, Ukshi	Combretaceae	Stem Cutting	By cutting stem it given sufficient water which fulfills the thirst in jungle in absence of water
16.	<i>Celosia argentea</i> Linn.	Tanduli, Kurdu	Amaranthaceae.	Seed powder	Dysentery, diarrhea & mouth ulcer.
17.	<i>Croton oblongifolius</i> Roxb.	Ghansurang	Euphorbiaceae	Root	Skin diseases-bruises, sprains and wound healing.
18.	<i>Dioscorea oppositifolia</i> Linn.	Marpaspoli	Dioscoreaceae.	Tuber	Abortion
19.	<i>Glycosmis pentaphylla</i> Correa	Kirmira & Menki	Rutaceae.	Wood	Pimples & Snake bite
20.	<i>Grewia nervosa</i> Lour.	Amsali & Ansale	Tiliaceae.	Leaves	Jaundice

## DISCUSSIONS

The traditional healers of nearby villages areas of Cotigao wild life sanctuary of Canacona Taluka of South Goa district of Goa having commendable knowledge of medicinal uses of plants available in their surroundings. The present paper represents the facts and figures of medicinal plant diversity and utilization knowledge of people of these villages. The 20 species are used for various health conditions. These people know well about the plant parts useful in various formulations, single drug use, collection time, method of preparation and storage etc. The datas were recorded after critically screening with available texts, compendia, databases, different regions of India on medicinal plants<sup>[8-20]</sup> (Shown in Table No-I).

Since these plant species are being exploited from the forest area of Cotigao wildlife sanctuary; there is an urgent need for their conservation.

## ACKNOWLEDGEMENT

Grateful thanks are due to the research and utilization division Department of Forest, Government of Goa for their extent help, encouragement and facilities. Expressing whole hearted thanks to the people who shared their knowledge and co-operation during the study.



**REFERENCES**

1. Alok S.K, Medicinal plant of India; Approaches to exploitation and conservation, The conservation of Medicinal plants (Cambridge University Press), 1991; 295-303.
2. Kala C.P, Medicinal plant of India Trans Himalaya, Bishen Singh Mahendra Pal Singh, Dehradun-2002; 200.
3. Chopra RN, Nayer SL & Chopra IC, Glossary of Indian medicinal plants, CSIR, New Delhi, 1956.
4. Jain SK & Rao RR, A hand book of field and herbarium methods, Today & Tomorrow printers and publishers. New Delhi, 1967.
5. MitraJN, An Introduction to systemic Botany and Ecology, The world press private limited. Calcutta, 1974; 52.
6. Jain SK, Dictionary of Indian folk medicine and Ethno botany, Deep publication, 1991.
7. LentiniF, The rule of Ethno-botanics in scientific research. State of Ethno-botanical knowledge in Sicily, Fitoterapia, 2000; 71: 583-588.
8. Jain, S.K & Rao, R.R.A hand book of field and herbarium methods, Today & Tomorrow printers and publishers. New Delhi.
9. Jain, S.K. Some basic consideration in methods and approaches in Ethnobotany, Society of Ethnobotanist, Lucknow, 1989; 13-23.
10. Kirtikar, K.R & Basu, B.D. Indian medicinal plants, Bishan singh mahendrapal singh, Dehradun, 1999; I-IV.
11. Agarwal VS, Economic plants of India, Kailash prakashan, Calcutta, 1986.
12. Watt G, A Dictionary of Economic products of India, reprint, 1972; I-IV, Periodical Experts, Delhi, 1889-1892.
13. Chopra R.N., Chopra's Indigenous drug of India, 2<sup>nd</sup> reprint, Academic publishers, Kolkata, 1994.
14. Nadkarni AK, Indian meteria medica, reprint, 1976; I, Popular publication, Bombay.
15. Rao RS, Flora of Goa, Diu, Daman, Dadra & Nagarhaveli, I - II, Botanical Survey of India, Howrah.
16. Naithani HB, et al, Forest flora of Goa. International book distributors, Dehradun, 1997.
17. Arora AK, Ethno-botany & its role in the conservation & use of plant Genetic resources in India, Ethno-botany, 1997; 9: 6-15.
18. Warriar PK, Indian medicinal plants, reprint, Orient and Longman Ltd, Madras, 1994; I-IV.
19. Bhatt GK, Flora of Udipi, Indian naturalist Publication, Udupi, 2003.

20. Shethy BV, Plant resources of Western ghats and lowlands of Dakshin Kannada and Udupi Dist, Pilikula Nisarga Dharma society, Mangalore, 2002.