

Some Ethno Medicinal Plants for the Treatment of Common Health Problems in Mayurbhanj District, Orissa, India

Madhusmita Jena¹ Shantilata Sahoo² and R.K. Sahu^{3*}

¹Kalyani Laboratories, Bhubaneswar, Email – madhu_rs79@yahoo.com

²Department of Botany, Utkal University, Bhubaneswar, Orissa
Department of Botany, BJB College (A), Bhubaneswar, Orissa – 751014
Email -sahurajani.sahu@gmail.com

Abstracts: The district Mayurbhanj one of the largest district of Orissa, very much famous for the Similipal Tiger Reserve. It is also well known for the highest number of tribal population in the state. Most of the tribal people depend on the forest and forest product for their life and livelihood. Ethno medicinal studies in some villages of the Mayurbhanj district resulted in the documentation of many therapeutic uses of the locally available medicinal plant resources. The present study deals with the ethenobotanical perception of 48 plant species belonging to 29 families of medicinal plant used by the tribal people in the rural area of Mayurbhanj district (Mostly Santal & Kolha) for their primary health care problems. As the health care facility is not accessible to the interior part of the district people still depend on the medicinal plants and traditional health care system for their health care. This paper illustrates some of the medicinal plants used by the tribals of the locality for their health care. The common diseases for which they are using these plants are cough, cold, diarrhoea, gynecological disorders, sexual debility, Malaria and other common fevers, anemia etc. [Madhusmita Jena, Shantilata Sahoo and R.K. Sahu Some Ethno Medicinal Plants for the Treatment of Common Health Problems in Mayurbhanj District, Orissa. New York Science Journal 2011;4(4):87-92]. (ISSN: 1554-0200). <http://www.sciencepub.net/newyork>.

Key Words: Ethno-medicine, Ethno-botany, Medicinal plants, Conservation.

1. Introduction

Majority of the world population depends on the traditional medicinal system. It has been estimated that about 64% of the total global population depends upon traditional medicine (Farnsworth, 1994). Nearly 8000 plants all over the world has been recognized for their ethno medicinal importance (Anonymous, 1994). In India about 2,500 plant species are used for medicinal purpose by the traditional healers (Chandel *et al*, 1996). About 85% of the rural population depends on wild plants for their primary health care (Jain, 1994). The traditional knowledge on the herbal medicine has been orally transmitted from generation to generation and this oral transmission leads to erosion of this knowledge.

The present paper is an effort undertaken for documentation of this traditional knowledge for future application and scientific investigation.

Mayurbhanj is situated towards the Northeastern region of the state. In the district the tribal occupy a larger portion of the population constituting 52% with 53 tribal communities both aboriginals and migrated tribes are found in the district glorifying the rich heritage of tribal culture (Naik 1998). The major tribes of the districts are Santal, Kol, Bhumij, Bhuyan, Bathuri, Kharia, Gond, Mankidias, Saharias, Sounti etc. The tribes like Kharia, makidia and

Saharas are primitive tribes and depends solely on the forests for their basic requirement like food and medicine.

2. Methodology

Extensive field survey was conducted in the tribal belts and other interior villages adjoining forest areas to collect the traditional medicinal practice of the district during the period 2007 – 2009. In the survey the traditional medicine men were included who serves as guide as well as informer during the survey and identification of the medicinal plants. The first hand information was collected from the traditional healers, knowledgeable women and other tribal people through interaction. Further participatory rural appraisal was conducted in the block level at Jashipur, Udala, Karanjia and Thakurmunda blocks for the authentication of the collected data with the involvement of the traditional healers for authentication of the information. A number of group discussions were conducted during the period of investigation. To ascertain the uses of these medicinal plants the earlier published literature sources were referred Rout *et al*, 2009, Rath *et al*, 2009, Mohanta *et al*, 2006, Behera, 2006, Rout *et al*, 2010).

3. Results & Discussion

Although the ethno medicinal uses of plants has been reported since long, most of these plants do not certify the efficacy (Tarafdar, 1986). The plants reported used for various ailments need to be pharmacologically screened, chemically analysed and tested for various bioactive compound (Chandler *et al.*, 1979 and Fairbairn 1980). The present study provides information of 48 plant species belongs to 29 families. Among the families Fabaceae contributes maximum number of plant species. Of the plant species 6 species are shrubs, 12 species are herbs, 9 species are climbers and 25 species are trees. The plants used for medicinal preparation were bark, flowers, rhizomes, roots, leaves, seeds, latex and whole plants. The most frequently utilized plant parts are root (6) followed by leaves (14), Fruit & bark (8), Flower & latex (4), Seeds (3), stem(2) and thorn (1). The paper present a brief account of various medicinal plants and traditional practices used for

treatment of various diseases like malaria, skin disease, Gynecological disorders, Skin disease, Diarrhoea, dysentery, gastritis, diabetes, cardiovascular disease etc. The details of the ethno medicinal uses documented from various parts of the district has been enumerated in the table below.

Acknowledgements:

Authors are grateful to the Director of Kalyani Laboratories, Bhubaneswar for facilities to carry out this work.

Corresponding Author:

Dr. R.K. Sahu
P.I.(U.G.C)
Department of Botany
B.J.B. Autonomous College
Bhubaneswar, Orissa, India
E-mail: sahurajani@yahoo.co.in

Enumeration:

Sl. No	Name of the plant & Family	Habitat	Oriya Name	Other Local Name	Parts Used	Local Use	Dose
1.	<i>Abutilon indicum</i> (L.) Sweet. Malvaceae	Herb	Pedipedica	Pituja	Leaves	Leaves juice with black pepper used for treatment of jaundice	10 ml
2.	<i>Aegle marmelos</i> (L.)Corr. Rutaceae	Tree	Bela	Bel	Leaves & fruit pulp	Blood purifier and digestive Fruit pulp is used as laxative	Powder-3-6gm, Juice-10-20ml
3.	<i>Andrographis paniculata</i> (Burm.f.)Wall.ex Nees Acanthaceae	Herb	Bhuin nimba	Kali Bohu (K)	Whole Plant	Used in Malaria, Different Fever, Dysentery, Skin Diseases	Powder-1 to 3gm, Juice-5 to 10ml
4.	<i>Anogeissus latifolia</i> (Roxb.ex DC)Wall.ex Guill. & Perr. Combretaceae	Tree	Dhau	Daucha (S) Dau (K)	Bark	Bark paste externally applied on boil Decoction used for diabetes	40 ml
5.	<i>Asparagus ramosus</i> Willd. Liliaceae	Climber	Satavari	Atrang (K)	Root	Used in nervous disorders, dyspepsia, diarrhea, dysentery, tumours, inflammation throat infections, tuberculosis, cough, colic etc.	Juice-10-20ml, Powder-3-6gm
6.	<i>Atylosia scarabaeoides</i> (L.)Benth. Fabaceae	Climber	Bana kolatha	Buru Kolthi (K)	Root	Root paste used for abdominal pain, The whole plant have high content of iron so used in anaemia, also used as galactogogue in cows	10 gm
7.	<i>Bombax ceiba</i> L. Bombacaceae	Tree	Simuli	Edle (K)	Thorn	Decoction of bark used in Diarrhoea and Sexual incompatibility, Thorn paste used in constipation and Applied on boils	Decoction – 40 ml, Thorn paste – 5 gm
8.	<i>Buchanania lanzan</i> Spreng Anacardiaceae	Tree	Chara	Tarab (K, S)	Root Latex	Juice of the root used in Asthma, Latex of the plant used in swelling of the parts of body	10ml
9.	<i>Butea monosperma</i> (Lam.)Taub.	Tree	Palas	Mutut (K,S)	Seeds	Bark used in diarrhoea, dysentery, bone fractures, rectal disease	Bark Quath-50-100ml,

	Fabaceae					dysmenorrhoea, inflammations, Flowered in fever, skin disease, swelling, arthritis. Seed used as tonic and treatment of skin disease, ring worms, Sexual debility, Dysentery etc	Flower Powder-3-6gm, Seed Powder-3-6gm
10.	<i>Caerya arborea</i> Roxb. Lecythidaceae	Tree	Kumbhi		Bark	Juice used in fever with collapse, Indigestion, Burning sensation in the chest, acidity. Bark paste also applied externally on bone fracture.	Juice – 10-20ml
11.	<i>Cassia fistula</i> L. Caesalpiniaceae	Tree	Sunari	Hari (K)	Bark	Constipation	10 gm
12.	<i>Cissampelos pareira</i> L. Menispermaceae	Climber	Akanabindhi	Ranured (k)	Root Leaves	Leucorrhoea Warm leaves externally applied on boils	2 gm
13.	<i>Clausena excavate</i> Burm.f. Rutaceae	Herb	Agnijhal	Agnijal (k)	Root	Root paste applied externally on bone fracture, Whole plant paste used in diarrhea, indigestion, Bark juice used in fever	Paste – 5 – 10 gm, Bark juice – 10ml
14.	<i>Clerodendrum serretum</i> L. Verbenaceae	Herb	Samarkana	Saramlutur (K)	Root	Root paste is used to cure hyperacidity.	10 gm paste
15.	<i>Clitoria ternatea</i> L. Fabaceae	Climber	Aparajita	Jipi Kolthi (K)		Gynecological Disorder	
16.	<i>Costus speciosus</i> (Koenig) Sm. Zingiberaceae	Herb	Keu	Keuna (K)	Rhizome	Root paste directly applied on joint swelling, used as germicidal and also chewed for toothache	As per the requirement
17.	<i>Cryptolepis buchananii</i> Roem. & Schult. Periplocaceae	Climber	Gopa kanu	Gaddah (K)	Roots	Paste along with 10 – 15 no. of black pepper.	50gm
18.	<i>Curculigo orchiodes</i> Gaertn. Ammarilyidaceae	Herb	Talamuli	Telkanda (K)	Root	Used in leucorrhoea, halmorrhoids, skindisease, asthma, bronchitis, jaundice, diarrhoea, cuts and wounds, colic and gonorrhoea	3-6gm
19.	<i>Curcuma angustifolia</i> Roxb. Zingiberaceae	Herb	Palua	Pala (K)	Tuber	Tuber paste used along with sugar beads to cure Diarrhoea, dysentery, Acidity	50gm
20.	<i>Dalbergia sissoo</i> Roxb. Fabaceae	Tree	Sisoo	Sisi (K)	Seed Oil Leaves	Seed oil used for Skin disease, Leaves paste along with sugar beads used for burning micturation	External application
21.	<i>Diospyros malabarica</i> (Desr.) Kostel. Ebenaceae	Tree	Mankada kendu	Sarhatirim (K)	Fruit	Leaf paste along with <i>Madhuca</i> and <i>Adina cordifolia</i> leaves used for Loose motion, Leaf juice used for piles, Fruit pulp also used in loose motion.	Leaf paste – 5-10 gm, Fruit pulp – 10-20gm
22.	<i>Diospyros melanoxylon</i> Roxb. Ebenaceae	Tree	Kendu	Tirim (K)	Leaves, Fruit	Leaf paste along with <i>Madhuca</i> and <i>Adina cordifolia</i> leaves used for Loose motion, Leaf juice used for piles, Fruit pulp also used in loose motion.	Leaf paste – 5-10 gm, Fruit pulp – 10-20gm
23.	<i>Elephantopus scaber</i> L. Asteraceae	Herb	Mayurchulia		Root, Leaves, Flower	Root paste used in sinusitis, Cold and cough, Bronchitis, Diarrhoea, Urethrorrhoea and also used in eye infection of cattles	5- 10 gm
24.	<i>Emblica officinalis</i> Gaertn. Euphorbiaceae	Tree	Amla	Merel (K, S)	Fruit	Used in diabetes, cough, asthma, bronchitis, skin disease, jaundice, and intermittent fever, Indigestion, Acidity.	Juice-10-20ml, Powder-3-6gm
25.	<i>Ficus benghalensis</i> L. Moraceae	Tree	Bara	Bade (S) Bai (K)	Leave petiole	Paste of leaf petiole applied on the scalp to remove the wound in scalp and the latex used for loose motion	Latex - 5-6 drops

26.	<i>Gardenia gummifera</i> L.f. Rubiaceae	Large shrub	Ghurudu	Loa (K,S)	Latex	Sexual debility, stimulant	Latex – 2 to 5 gm
27.	<i>Gmelina arborea</i> Roxb. Verbenaceae	Tree	Gamhari	Gainyer (S)	Roots, Fruits	Used in fever, headache, neurological disorder, heart disease, Leucorrhoea	Root bark decoction 50-100ml
28.	<i>Hemidesmus indicus</i> (L.) R.Br. Asclepiadaceae	Climber	Ananta mool	Tay (S) Dudi (K)	Root	Root paste used in treatment of Fever, Root paste applied on forehead to lower down the temperature	5 gm
29.	<i>Holarrhena pubescens</i> (Buch. – Ham.) wall.ex G. Don Apocyanaceae	Large shrub	Kutaj	Kuduchi (S) Kueint (K)	Bark	Decoction bark used for Abdominal pain, Diarrhoea,Hyper acidity Dysentery, cold and cough	20 ml
30.	<i>Madhuca indica</i> Gmel. Sapotaceae	Tree	Mahula	Matkam (K,S)	Flower Latex	Flower paste along with leaves of Diospyrus used for diarrhoea, Latex used for Carcked feet	5 gm
31.	<i>Nyctanthus arbor-tristis</i> L. Oleaceae	Large shrub	Gangasiuli	Saparun (K,S)	Leaves	Leaves paste along with <i>Andrographis paniculata</i> & <i>Azadirachta indica</i> leaves used for treatment of Malaria	Juice-10-20ml, Powder-1-3gm
32.	<i>Ocimum canum</i> Sims. Lamiaceae	Herb	Gaya tulasi	Seta Tulasi (K)		Mosquito repellent	
33.	<i>Pongamia pinnata</i> (L.) Pierre. Fabaceae	Tree	Karanj		Root, Bark, Leaves and Seeds	Used in ulcer, gonorrhoea, dyspepsia, diarrhoea, leprocy, Skin disease, cough, inflammation pectorical disesse, chronic fever,	Bark leaf juice-10-20ml. Seed Powder-1-3gm, Oil as per requirement
34.	<i>Pterocarpus marsupium</i> Roxb. Fabaceae	Tree	Piasal	Hit (K)	Latex	Latex of the plant used in Jaundice, Skin diseases	5 gm Latex
35.	<i>Semecarpus anacardium</i> L.f. Anacardiaceae	Tree	Bhalia	Bhelie (S) Sasa (K)	Fruit/ seeds	Fruits used for foot and mouth disease of cattle, Boils & Wounds, Seeds used in Rheumatism	As per requirement
36.	<i>Shorea robusta</i> Gaertn.f. Diptocarpaceae	Tree	Sal	Sarjam (K,S)	Bark/ Leaves	Bark decoction used in Diarrhoea, Cholera. Leaves along with Adhatoda leaves used in cough	Bark – 40 gm, Leaves – 10 gm
37.	<i>Sida cordata</i> L. Malvaceae	Herb	Brahmanajhatia		Stem Leaves	The stem used as brush for making tooth strong, Whole plant paste is applied on the boil	As per requirement
38.	<i>Smilax zeylanica</i> L. Smilacaceae	Climber	Muturi	Artikar (K)	Root	Root juice used in burning micturation, meterorrhoea, Chest pain, amorrhoea, Hyper acidity,	10-20 ml of juice
39.	<i>Syzygium cumini</i> (L.) Skeels Myrtaceae	Tree	Jamu	Kud (S) Kude (K)	Leaves/ Seeds	Leaf juice along with honey used in Diarrhoea, Cholera, Seed powder used in diabetes	Juice – 10ml, Seed powder – 5 gm
40.	<i>Tectona grandis</i> L.f. Verbenaceae	Tree	Saguan	Saguan (S) Ramdaru (K)	Dried leaves	Dried leaves used on the wound of children	As per the requirement
41.	<i>Terminalia arjuna</i> (Roxb. Ex DC.) Wight & Arn. Combretaceae	Tree	Arjuna	Arhatna (K)	Bark	Bark milk decoction used in Hypertension and also used as a heart tonic. Fresh bark paste is also applied on the affected parts to cure cut and wounds	For decoction – 40 gms & for paste – 20 gm
42.	<i>Terminalia bellirica</i> (Gaertn.) Roxb, ex Flem. Combretaceae	Tree	Bahada	Lupung (K)	Fruit	Fruits mixed with <i>Terminalia bellirica</i> and <i>Embllica officinalis</i> (<i>Triphala</i>) used for Indigestion and other stomach disorders. 50gm of small pieces of these three put in	Powder – 5-10 gm

						water over night and wash the eye in the water in morning will help to treat all eye infection and better vision.	
43.	<i>Terminalia chebula</i> Retz. Combretaceae	Tree	Harida	Rala (K)	Fruit	Fruits mixed with <i>Terminalia bellirica</i> and <i>Embllica officinalis</i> (<i>Triphala</i>) used for Indigestion and other stomach disorders. 50gm of small pieces of these three put in water over night and wash the eye in the water in morning will help to treat all eye infection and better vision. Ring worm infection.	Powder – 5-10 gm
44.	<i>Tinospora cordifolia</i> (Willd.) Hook.f. & Thoms. Menispermaceae	Climber	Guluchi	Hadgali (K)	Stem	Decoction of the stem used for fever. It is also used along with <i>Nyctanthes arbor-tristis</i> leaves and black pepper for curing malaria. Juice of the stem used as blood purifier. For rheumatism raw stems also chewed.	Decoction – 40 ml
45.	<i>Tridax procumbens</i> L. Asteraceae	Herb	Bisalya karani	Tantaj (K)	Whole Plant	Leaf juice is used in case of wound and cut to check bleeding Cut & Wound infection	10 ml
46.	<i>Vitex leucoxydon</i> L.f. Verbenaceae	Tree	Chadhei godia	Sionkata (S)	Bark	Bark decoction used for Malaria, Kidney problem	40 ml
47.	<i>Vitex nigundo</i> L. Verbenaceae	Shrub	Begunia	Begna (K)	Root, Leaves, bark and flower	Roots used in arthritis, inflammation colic, wound ulcer, malaria etc. Leaves used in cough, cephalgia sprain, orchitis, ulcer etc. Bark used in Ophthalmopathy, Flower in diarrhoea, cholera, fever halmorrhage and cardiac disorder, Leaves used in scabies and also used for storage of grains	Leaf Juice-10-20ml, Root Bark Powder-3-6gm
48.	<i>Woodfordia fruticosa</i> I (L.) Kurtz. Lythraceae	Shrub	Dhataki	Echea (K)	Flowers	Used in leucorrhoea, gynecological disorder, skin disease and highly stimulant in pregnancy	Powder-1-3gm

References

1. Anonymous, Ethnobiology in India. A status report of all india co-ordinated research project on ethnobiology. Ministry of Environment and forests, Govt. of India, New Delhi, 1994.
2. Behera K.K. 2006. Ethnomedicinal plants used by the tribals of Similipal Bioserve, Orissa, India: A pilot study. *Ethnobotanical Leaflets* 10:149 – 173. 2006
3. Chandel KPS, Shukla G & Sharma Neelam, Biodiversity of Medicinal and Aromatic Plants in India: Conservation & Utilization, (NBPGR, New Delhi), 1996
4. Chandler RF, Freeman L. Hopper SN 1979. Herbal remedies of maritime Indians. *J. Ethnopharmacol*, 1:49 -54.
5. Fairbairn JW 1980. Preseptive in research on active principles of traditional herbal medicieb, A botanical approach: Identification and supply of herbs, *J. Ethnopharmacol*, 2: 99 -106.
6. Farnworth, N. (1994). Ethnopharmacology and drug development. Pp. 42 – 51. In: Chadwick, D.J. and J. Marsh (Eds.). *Bioactive compounds from plants*. Cifa foundation symposium, 185, Wiley, Chichester.
7. Jain SK, Ethnopharmacology and Drug Developmebt, IN: *Ethnobotany and Search for New Drugs*, edicted by Chadwick DJ & March U. (Ciba Foundation Symposium 183, Wiley Chichester), 1994.
8. Mohanta R.K., Rout S.D. & Sahu H.K. 2006. Ethnomedicinal plant resources of Similipal Biospehere reserve, Orissa, India. *Zoo's Print Journal* 21(8):2372 – 2374.
9. Naik D. 1998. Tribal culture in the context of Similipal. Workshop journal on Different problematic Aspects of Similipal Protection and its solitary action programmes. Pp. 63 -64
10. Rath S.K., Mohapatra N., Dubey D., Panda S.K., Thatoi H.N. & Dutta S.K. 2009. Antimicrobial

- activity of *Diospyris melanoxylon* bark from Similipal Biosphere reserve, Orissa, India. *African J. of Biotechnology*, 8(9), pp. 1924 – 1928.
11. Rout S.D. & Panda S.K. 2010. Ethnomedicinal plant resources of Mayurbhanj district, Orissa. *Indian J. of Traditional Knowledge*, Vol 9 (1), 68 – 72.
 12. Rout S.D., Panda T. & Mishra N. 2009: Ethnomedicinal plants used to cure different disease by tribals of Mayurbhanj district of North Orissa. *Ethno med*, 3 (1): 27 – 32.
 13. Tarafadar CR 1986. Ethnobotany of Chotnagpur, less known and unknown 38 medicinal plants used by the tribals. *Folklore*, 27:119 – 122.

3/22/2011