

TRIBAL USES OF PLANTS FROM NARAYANAPATNA REGION OF KORAPUT DISTRICT, ORISSA

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ABSTRACT: The paper reports the ethnomedicinal uses of 32 plants by the tribals of Narayanapatna area of koraput district, Orissa. Besides, uses of other plants or plant products are also dealt, with. Distribution of plants in the area, their field numbers, local and oriya names are appended.

Introduction:

India, the Ayurvedic system of medicine has been in use for over three thousand years, the medicines mentioned in the charaka samhita and the susruta samhita are esteemed even today as treasures of literature on indigenous medicines. From the crude beginning of the earlier physician botanists the study of drugs and drug plants has developed into modern pharmacognosy which deals with the knowledge of history, botany, preservation and commerce of crude drugs. Even today the system of allopathy is still unknown to the tribals inhabiting the interior areas, Most of the tribals, and rural and urban poor depend on Ayurvedic or traditional folk medicines to cure various diseases they suffer from. The importance of traditional medicines which provide health service to 70-80% of world population has been emphasized by Marini bettalol. In recent times emphasis has been given to collect information on ethnomedicinal uses of plants from various parts of the world.

In past, attempts were made to study the medicoethnobotanical aspects of various

regions of Orissa state. 2-8 Koraput district which is endowed with forests and tribals has not been studied thoroughly from ethno-botanical point of view except for a few reports. 9-12.

The present study aims to collect information on traditional uses of the plants by the tribals of Narayanapatna area of Koraput district, during 1993-94.

Study area and climate:

Narayanapatna, the block headquarters is situated at a height of about 305m above mean sea level on the bank of river jhanjabati in the district of koraput, Orissa. The area is situated towards southernmost part of the district and surrounded by parvatipuram district (Andhra Pradesh) on southern side and Rayadada district (Orissa) on eastern side. The study area has 64sq km. and comprises six gram panchayats and 127 villages.

About 75 per cent of the land are occupied by forests of different grades but it has been under constant pressure due to biotic interference. It should be emphasized that

the kondhas which formed the nucleus for our study of ethno botany, depend not only on the forest produce for their livelihood but also to sure diseases they or their cattle suffer from, and very seldom they use allopathic drugs.

The wide range of climatic conditions is the characteristic feature of this area. There has been a vast change in vegetational pattern and microclimate due to anthropogenic interference. The average maximum monthly temperature of Narayanapatna is 36.60 c and minimum temperature in winter months comes as low as 7to 8oC and daily maxlmm temperature exceeds 36oC in summer. The mean relative humidity varies from 70-80 per cent. The mean annual rainfall for the district is 1318mm.¹³

Methods:

With the initiation of the study several field trips were conducted to every locality in the Narayanapatna area, which covered al seasons, the base camp was made at Narayanapatna. The species were collected with their ethnobotanical data after discussion with Vaidyas, Kavirajas, Majhis or the village headman of the village concerned. Apart from ethnobotanical information notes on habit, habitat, flower colour, aroma if any distribution and floral characters were entered into the field notebook on the spot and the local names were noted plant specimens were kept in the field herbarium press. After the specimens were completely dried they were poisoned by dipping in saturated solution of mercuric. Chloride and then transferred to herbarium sheet. The specimens are preserved in the herbarium of department of Botany, Berhampur University.

Plants were identified with the help of regional floras.

Plants are arranged alphabetically according to their botanical names with latest available nomenclature. Local name (L.N) and Oriya name Or) followed by a short note on the habit of the plant locality along with the field collection number are appended to each taxon.

Information on various uses of plants/ plant parts by the tribals of the area are collected 13 but few important plants, the uses (medicinal) of which are different from other areas, are described below.

Enumeration:

1. *Acalypha indica* Linn. (Eupho biaceae) A perennial herb, more in winter in open fields of Narayanapatna, abundant, Dash 70.

Decoction used as a laxative for adults. For infants a piece of stem or root is inserted into the anal cavity against constipation.

In case of mouth infection (particularly tongue) the whole plat is crushed and paste is applied to mouth cavity. The process is repeated two to three times a day depending upon the severity of infection.

2. *Aerva lanata* (Linn) Juss ex schuld (Amaranthaceae)
LN Bada alata, Or Paunsia
Suffrutescent sub erect herb, spikes sessile dumusil, common weed on waste open field and grassland, Dash 109.

The whole plant is dried and crushed to paste and applied on herpes (LN Alati gha)

3. *Amaranthus spinosus* Linn (Amaranthaceae)
LN Kantabhaji Or Kanta leutia
Annual herb, Profusely branched in flowering stage dumusil, abundant in organic rich soil Dash 46.

Root paste is applied around boils and carbuncle for easy and speedy burst Leaves are eaten as vegetables.

4. *Andrographis paniculata* Wall ex Nees (Acanthaceae)

LN Bhuin Limb, Or Bhuin Nima.

Annual herb both in flowering and fruiting stage pannabadi abundant in forest ground Dash 07.

Leaves are crushed with turmeric (*Curcuma Longa*) and applied on itches and in other skin infections.

To cure scabies the juice of leaves is taken orally in empty stomach in early morning.

Decoction of leaves of leaf paste taken orally before bed against round worm.

Roots together with roots of *andrographis echinoides* are crushed and applied on cattle wounds affected by larvae of housefly for healing.

5. *Annona squamosa* Linn (Annonaceae)

LN & Or Sitaphala

Tree, Dumusil, common around village, both in flowering and fruiting stage, Dash 44.

Leaf paste is applied to cattle to cure cuts and wounds. In deep cuts or when the cut becomes septic paste of both leaf and seed is applied. Ripen fruits are edible.

Seed paste is taken orally for abortion.

6. *Argemone maxicana* Linn (Papaveraceae)

L.N Dagrugacha, Or Odasamari

Erect, glaucous prickly herb, in flowering stage, Dumsil naturalized on the waste open field Dash 32.

Leaf juice is applied on eye corners in the morning and before bed to cure eye inflammation and conjunctivitis.

7. *Bambusa bambosa* Linn Voss in vil (Poaceae)

LN & Or Baunsa

Shout, tufted thorny bamboos inter-node long palaput (ca 12km interior to Narayanapatna) common in isolated clumps along road side in flowering stage, Dash 14.

In fatal injuries, the stem is crushed to paste and applied along with salvia in the affected area to stop excessive bleeding this also acts as an antiseptic. Young shoots are consumed as vegetables.

8. *Cissus quadrangularis* Linn (Vitaceae)

Ln. Nalaru, paga-i-ri, Or Hadabhanga.

A creeper with quadrangular stem, common on bushes, Chekkapadu, Dash 55.

A paste is prepared from the plant along with ragi (*Eleusine coracana*) and baked in fire. The resulting cake is taken to cure rheumatic pains on the backbone.

9. *Curcuma angustifolia* Roxb (Zingiberaceae)

LN basteri, Or Arrowroot

Herb, rhizome white, leaf deep green, dumusil, cultivated Dash 34.

Leaf paste is diluted with a little amount of water and is taken orally to cure constipation. The rhizome paste is backed with ragi powder or rice powder or rice powder and taken orally for acute constipation.

10. *Ficus racemosa* Linn (Moraceae)
LN Dumburi, Or Dhimiri
Tree, sparse, around road sides palaput Dash 16.

In case of pain in any part of the body the latex of the tree and salt are mixed into a paste and applied externally on the affected area directly alleviate pain. The paste is used as a plaster with the help of a white paper and left for 2-3 days to reduce swelling in the body.

11. *Helicteres isora* Linn (sterculiaceae)

LN Kapelidori, Or Modimodia phal licles spirally twisted dasani, scattered on moist shady places, Dash 17.

Diluted fruit paste is given to women for breast pain due to excessive milk production after delivery. The fruit is also kept as such on the pig-tail (Hair).

Bark paste is considered to be a remedy for scabies.

Fruit paste is administered for chronic dysentery and stomachache.

12. *Hemidesmus indicus* Linn R.Br. forma pubescens (Asclepiadaceae)
LN Sankamarabada, Or Sugandhi.

Twinning glabrous herbs, cymes subsessile dense, chekapadu and Dumusil scattered among moist localities of forest under shade Dash 42.

Root paste is given with fresh cold milk to infants for dysentery and diarrhea.

Root paste along with milk and sugar taken in morning for 40 days to cure nervous disorder.

13. *Ipomoea carnea* Jacq. (Convolvulaceae)
LN. & Or Amari
Perennial, sub-erect shrub, Dumusil, naturalized as troublesome weed Dash 30

Stem juice along with dust used as antiseptic to small cuts

Stem juice is applied externally to alleviate pain an external injuries.

14. *Leonotis nepetaefolia* (Linn) R.Br. (Labiatae / Lamiaceae)
LN Tipiri, Or Kantasido.

Annual erect, suffrutescent herbs flower red bumusil common on and around village wastelands, Dash 28.

Flower ash is made into paste and applied to scalds and burns.

Crushed root paste is applied on swollen breasts.

15. *Mimosa pudica* Linn (Mimosaceae)
LN & Or Lajjakuli Lata.

A prostrate herb common in flowering stage palaput, Dash 19.

People of this area have a general belief that it is good to carry the plant during a ceremonial journey.

The paste of whole plant is applied on body during collection of honey to avoid wasp.

Decoction of root used in urinary complaint.
16. *Mollugo pentaphylla* Linn (Molluginaceae)

LN & Or. Pitasaga

A small diffused plant, dumusil common on open places of ghats as well as plain Dash 29.

The whole plant is dried and crushed to make a paste and applied on wounds, scabies and different skin diseases.

17. *Ocimum basilicum* Linn (Labiatae/Lamiaceae)

LN Banatulsi, Or Landa babuli.

Annual, erect, much branched herb, Dasani, most common on the village waste lands, Dash 40.

Tribals use the smoke of the leaves as insect repellent. Domestic animals or birds infected with flies or lice are exposed to the smoke in a semiclosed room for 2 hours and said to be freed from the insect.

18. *Pedilanthus tithymaloides* (Linn) Poit (Euphorbiaceae)

LN Badachitapar, Or Bilati sido

Fleshy shrub, Dumusil, Planted along hedges, Dash 36.

Latex of the stem along with castor oil warmed and applied externally to alleviate pain thrice daily for 3-4 days.

On severe external injury the leaves are directly pasted after warming on the affected area, as plasters.

19. *Phoenix sylvestris* Roxb (Palmae/Arecaceae)

N & Or Kajuri

A small bushy shrub to tree, Nilabadi, ca 12 km from Narayanapatna, Sparse, Dash 47.

In case of eye inflammation or eye infection of cattle the leaf paste with a little amount of saliva is applied to the eyes.

20. *Phyllanthus fraternus* Webster (Euphorbiaceae)

(*P. niruri* auct. Non L)

LN Badiamla Or Bhuinamla.

Annual; erect, glabrous herb, Dumusil and Palaput frequent along plains, Dash 43.

Decoction of leaves administered orally in early morning to cure amoebiasis (amoebic dysentery).

Fresh root decoction is taken orally to cure jaundice.

The whole plant is crushed to paste and applied externally to cure scabies, herpes and other skin diseases.

21. *Plumbago zeylanica* Linn (Plumbaginaceae)

LN Sanachitapar, Or Chitapar.

A bushy perennial shrub with trailing branches, Mundiguda and Sumusil, common in shrub jungles Dash 41.

Leaf paste used as an antidote in snakebite, paste is applied to the wound and also taken orally for immediate cure.

Decoction of bark administered orally to cure dysentery and itching diseases.

22. *Pterocarpus marsupium* Roxb, (Fabaceae)

LN. Tuluri Banabijja, Or Piasala.

Large deciduous tree, flowers yellow. Durigenda Ghat (ca 7 km from Narayanapatna) and Pannabadi, scattered among moist regions of dry deciduous forest, Dash 10.

Decoction of bark is administered orally in stomachache. The dose depends upon the severity of pain.

Stem bark of *pterocarpus marcupium*, *Hollarrhena pubescens* *syzygium cumini* and *Hemidesmus indicus* mixed in equal proportions and crushed into paste. The paste is taken orally twice daily for blood dysentery.

The root paste is used as a plaster on fractures. The roots are crushed and applied after warming on the affected area and redressed weekly for 3 times. The same process is also followed for cattle and other domestic animals.

23. *Semecarpus anacardium* Linn (Anacardiaceae)

LN. & Or Kalabhaliya.

Tree, in fruiting stage, Dumusil less frequent along hilly tracks of dry deciduous forests, dash 38.

Oil extracted from the nut is applied on the pharyngeal wall with the help of a long stick in alternate day for cough and pharyngitis.

Oil is also applied to cuts and wounds along with ant-hill earth for immediate recovery.

24. *Sida cordifolia* Linn (Malvaceae)

L.N Nelakatadi, or Bisiripi

Sub-prostrate herb, flower yellow, Mundiguda, frequent among bushes and tall grasses in the forest outskirts, Dash 23.

The whole plant is boiled and crushed to a paste and applied on fractures and swelling the fracture part is often tightened with the support of bamboo sticks and left for about 2-3 months.

25. *Solanum nigurm* Linn (Solanaceae)

LN. Kantabhegi, Or Lunilunia

Erect herbs, spinous Dumusil, Abundant in moist and shady places, Dash 33.

Dried fruit powder is smoked through pipes to cure pharyngitis and to alleviate severe toothache.

In case of rheumatic swellings decoction of the whole plant is given orally.

26. *Solanum surattense* N. Burman (Solanaceae)

(*S. xanthocarpum* Schrud & Wendl)

LN Chakada bhegi, Or Ankaranti.

Prickly perennial diffused herb, cymes short yellow, pallur Ghat (ca 17 from Narayanapatna), common on waste open fields and road sides, Dash 82.

Decoction of fruit is taken orally to cure cough. In case of severity the fruits are taken orally by chewing. This is an effective indigenous medicine for tuberculosis.

27. *strychnos nux-vomica* Linn (Loganiaceae)

LN Kora, Or Kochila.

A small tree, Nundiguda, scattered along moist region of deciduous forest, Dash 08.

Fruits and leaves are crushed and mixed with water in the stream or pond as fish poison. After 6-8 hours the fishes were caught in an unconscious state.

Fruits are exported by drug vendors. This serves as a main economic source to the tribal people.

28. *Strychnos potatorum* Linn. (Loganiaceae)

LN. & Or Kataka

Erect tree, upon 10 m height, stem dark, bark cracked, durigenda ghat, scattered in interior forests Dash 15.

Atwig of the plant is crushed and spread over water in a stream or pond to catch fishes. It is believed that by doing this fishes turn blind.

Bark is dried and powdered, then applied on cuts or wounds as an antibiotic.

Fruit paste is used to clean muddy water and also used as gum.

29. *Syzygium cumini* (Linn) skeels (Myrtaceae)

L.N Jomokoli, Or Jamu.

Large evergreen tree, Durigenda ghat, common along river and stream banks, planted around villages, Dash 20.

Bark paste is diluted with common salt and taken orally for vomiting in case of food poisoning.

The bark paste and seed paste is used as an antidote for snake or scorpion bite.

30. *Tamarindus indicus* Linn (Caesalpinaceae)

LN. and Or Tentuli.

Perennial large tree, Durigenda Ghat, Sparse, Dash 13.

Bark charcoal powder is applied on bone injures and scalds.

Pulp of one year old fruit is mixed with water and salt and given to cattle to sure fever and dysentery.

31. *Tephrosia purpurea* (Linn) Pers, (Papilionaceae/Fabaceae)

LN Paharagacha, Or Kolathia

Bushy herb, 50-60 cm high, pods puberulent, Narayanapatna, common on open fields, Dash 02.

Whole plant along with roots are crushed and applied on cattle to eradicate lice and fly.

The plant is crushed together with mustard (*Brassica comprestis*) seeds and given orally to been aged girls after the monthly menstrual cycle to check abdominal pain. The dose is about two teaspoons in six hours duration. This also checks excess bleeding.

32. *Thevetia peruviana* (Pers) Merrill. (Apocynaceae)

LN and Or Koniya.

Tree, Dumusil, sparse, Dash 31.

Leaf is crushed to paste, and mixed with castor oil. After warming this paste is applied on external injuries as a pain alleviator. The usual dose is thrice daily for 2-3 days.

Discussion:

The study conducted under this project reported ethnobotanical use of 98 plants for various purposes such as religious, food (rhizomes, leaves, flowers fruits and seeds) fodder, stimulated and medicines.

Minor forest products such as mahua flower and seed, tamarind fruit and seed, myrobalan fruits, karanja seeds, sal leaves and hill produce were collected during the production season by the villages. Besides, for preparation of ropes fishing nets sacs, clothes, brush and brooms, painting thatching and for rough weaving the tribals solely depend upon forest, this mode of use

enhances the economic status of the indigenous people.

Regarding fodder plants, although the villagers categorise their nutritional values on their own experiences, scientific evaluation and optimal utilization of these natural resources must be balanced. Necessary improvement in extraction technique of the fibre are important for the welfare and economy of the local people.

In this paper uses of 32 plants are described particularly for medicinal purpose. The uses are endemic to this region particularly to the tribal community. It is very difficult to judge the effectiveness of the traditional medicines. However further research on these medicinal plants will provide an

insight to improve the quality and effectiveness of traditional medicines. The purpose of this paper is not to prescribe any remedy against diseases but a preliminary report on ethnomedicinal uses of some plants which should be screened and tested by the pharmacologists before used as medicines for various diseases.

The larger number of species with multiple ethnobotanical uses by the forest dwellers provide ample evidence of richness of flora in the region. As the tribals depend on forests for their livelihood, these forests must be conserved at any cost. This not only enhance the economic status of the local tribal but also safeguard the germ plasm wealth in situ, which are in the verge of elimination.

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