



# Indigenous Uses Of Ethno Medicinal Plants Among The Forest Dependent Communities Of Northern Bengal Of India

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## Abstract

Traditional medicine is defined as indigenous medicine that is used to maintain health and to prevent diagnose, treat physical and mental illness differently from allopathic medicines based on their theories, beliefs and experiences. Medicinal plants are the backbone of primary health care system and play a vital role in the health care system of human beings since the dawn of civilization. The exploration, identification, and documentation on utilization of ethno botanic resources are essential for restoration and preservation of ethno medicinal knowledge about plants and conservation of these species for greater interest of human society. Traditional medicine forms a valuable resource for the development of new pharmaceuticals.

**Key words :** North Bengal, Forest, Ethnomedicinal plants, Traditional medicine, Primary healthcare

Traditional knowledge on ethno medicinal is slowly eroding. The objective of present study is to document and preserve ethno medicinal knowledge use to treat different human ailments by traditional healers of Northern Bengal, India. Person who lives in a remote area mostly depends on forest materials. Some evidences are collected of using those ethno medicinal plants as their primary supplements of medicine for any kinds of diseases [1-4]. Many users of them basically are old practioners. The villagers are truly rich in ethno medicinal knowledge. They obtain a variety of plant products from the wild plants to fulfil their own needs as they are economically weaker sections of the society [5]. Plant accessibility and visibility in the cultural landscape seem to have important factors influencing strategies for obtaining useful plants. Researchers conducting studies in different parts of the world indicate that the knowledge of ethno medicinal plants increases in proportion to their proximity to human habitations.

The ethno medicinal plants are basically used in various physical ailments. Stomach related diseases are also documented to be treated by the maximum number of plants, followed by cuts and wounds. It is documented that the communities are treating severe diseases like cancer, pox, tuberculosis, skin problems, diabetes etc. The majority of the plants species have more than one part that is medicinally important as was also documented by earlier [6-10]. Among the different plant parts use for the preparation of the medicine, leaves (33.9%) are found to be the most frequently used plant parts followed by the roots (18.2%), whole plant (14.7%), seed (10.4%), rhizome (9.5%), fruit (9.5%), latex (3.4%), flower (3.4%) and only in rare occasion each by fleshy scale, flower bud, root bark and stem [11]. Most of the preparations include juice, paste, decoction, powder, infusion and chewing raw plant parts. The administration of therapy is raw, dried form in small pieces or powdered solution or mixed with the milk or water or honey. Generally the fresh part of the plant is used for the preparation of the medicine. It is also observed that herbal treatment is still appreciated and preferred by residents for bone fracture and dislocation over modern treatment. Senior citizens trust more upon the traditional treatment system over modern methods as they believe no side effects will be occurred with the traditional ethno medicine [2].

In the tribal areas the rules and regulations by which the tribal people have been traditionally governed are now being gradually abolished by the young literate generations. Another crucial factor responsible for such change is the migration of youth from the tribal areas to urban areas. The gap is further widened the adoption of modern medicine. Religious and cultural faith, poor economy and lack of modern medicinal facilities in villages of the study area seem to be the cause of the utilization

of these medicinal plants. The present information may serve as a baseline data to initiate further research for newly reported species for new compounds and biological activities which can be of immense value for societies to survive [12].

Medicinal plants are globally valuable sources of new drugs. There are over 1300 medicinal plants used in Europe, of which 90% are harvested from wild resources; in the United States, about 118 of the top 150 prescription drugs are based on the natural resources .furthermore, up to 80% of people in developing countries are totally dependent on the herbal drugs for their primary healthcare, and over 25% of prescribed medicines in developed countries are derived from wild plant species [13]. With the increasing demand for herbal drugs, natural health products and secondary metabolites of medicinal plants is growing rapidly throughout the world. According to the International Union for Conservation of Nature and the World Wildlife Fund, there are between 50,000 and 80,000 flowering plant species used for medicinal purposes worldwide [14].

## References

1. Shukla, G. and Chakraborty, S. (2012) Ethnobotanical Plant use of Chilapatta Reserved Forest in West Bengal. *Indian Forester*, **138**: 1116-24.
2. Biswakarma, S., Sarkar, B.C., Shukla, G., Pala, N.A. and Chakraborty S. 2015. Traditional application of ethno medicinal plants in Naxalbari area of West Bengal, India. *Int. J. of Usuf. Mngt.* **16**: 36-42.
3. Chakraborty, R., De, B., Davanna, N. and Sen, S. (2012). North-East India an Ethnic storehouse of unexplored medicinal plants. *J. Nat. Prod. Plant Resour.*, **2**: 143-52.
4. Yonzone, R., Bhujel, R.B. and Rai, S. (2012). Genetic resources, current ecological status and altitude wise distribution of medicinal plants diversity of Darjeeling Himalaya of West Bengal, India. *Asian Pacific Journal of Tropical Biomedicine*. S439-S445.
5. Ghosh, A. (2008). Ethnomedicinal plants used in West Rarrh region of West Bengal. *Natural Product Radiance*. **7**: .461-5.
6. Bandyopadhyay, S. and Mukherjee, S. K. (2009). Wild edible plants of Koch Bihar district, West Bengal. *Natural Product Radiance*. **8**: 64-72.
7. Biswakarma, S., Pala, N.A., Shukla, G., Vineeta and Chakravarty. (2017). Ethnomedicinal plants used to cure stomach disorders in forest fringe communities in Northern part of West Bengal. *Indian Journal of Natural Products and Resources*. **8**: 370-80.
8. Singh, M.K., Meena, D., Bhattacharyya, R., Arya, M. and Bharati, A.K. (2018). Exploration of wild medicinal plants for better livelihood options for the tribal population of forest fringe villages. *Journal of Medicinal Plants Studies*. **6**: 156-66.
9. Raj, A.J., Biswakarma, N.A., Pala, N.A., Shukla, G., Vineeta., Kumar, M., Chakravarty, S. and Bussmann, R.W. (2018). Indigenous uses of ethnomedicinal plants among forest-dependent communities of Northern Bengal, India. *Journal of Ethnobiology and Ethnomedicine*. **14**: 8-36.
10. Pala, N.A., Sarkar, B.C., Shukla, G., Chettri, N., Deb, S., Bhat, J.A. and Chakravarty, S. (2019). Floristic composition and utilization of ethnomedicinal plant species in home gardens of the Eastern Himalaya. *Journal of Ethnobiology and Ethnomedicine*. **15**:14-30.

11. Bose, D., Ghosh Roy, J., Das Mahapatra, S., Datta, T., Das Mahapatra, S. and Biswas, H. (2015). Medicinal Plants Used By Tribals In Jalpaiguri District, West Bengal, India. *Journal of Medicinal Plants Studies*. **3**: 15-21.
12. Yadav, M., Gulkari, V.D. and Wanjari, M.M. (2016). Bryophyllum pinnatum Leaf Extracts Prevent Formation of Renal Calculi in Lithiatic Rats. *Anc. Sci. Life*. **36**: 90-7.
13. Arnold, J.E.M. and Perez, M. R. (2001). Can non-timber forest products match tropical forest conservation and development objectives? *Ecological Economics*. **39**: 437–47.
14. Chen, S.L., Yu, H., Luo, HM., Wu, Q., Li, CF. and Steinmetz, A. (2016). Conservation and sustainable use of medicinal plants: problems, progress, and prospects. *Chinese Medicine*, **11**: 37.

**Table : Medicinal Plants and their uses**

SL. No	Local name	Scientific name	Family	Medicinal uses
1.	almegh	<i>Andrographis paniculata</i> Wall. Ex Nees	Acanthaceae	Leaves and twigs of <i>Kalmegh</i> were boiled in water and the juice consumed to control worms. Use as liver tonic.
2.	lekhara	<i>Hygrophila schulli</i> ( <i>Buch.Ham</i> ) <i>M.Ret. et.</i> <i>S.M. Almeida</i>	Acanthaceae	Leaf extract used to treat anemia
3.	sak	<i>Justicia adhatoda</i> L.	Acanthaceae	Leaf juice used as expectorant to treat chronic bronchitis, cough and cold.
4.	tamuli	<i>Asparagus racemosus</i> Willd	Asparagaceae	Fleshy root is dried and its powder consumed diabetes, dysentery.
5.	iritaki	<i>Termenalia chebula</i> Retz.	Combretaceae	Fruits are dried and powdered with salt and consumed against rheumatism and indigestion.
6.	lshi	<i>Ocimum sanctum</i> L.	Labiatae	Leaves are boiled with sugar and salt and the juice consumed twice a day against asthmatic problems, cold, cough & cough.
7.	nala	<i>Phyllanthus emblica</i> L.	Euphorbiaceae	Bark is beaten into minute particles, mixed with water and filtered and taken in empty stomach.
8.	em	<i>Azadirachta indica</i> A. Juss.	Meliaceae	After harvesting the neem leaf manually, it is made into paste and even juice can be extracted; can also be boiled with water and used while bathing; small shoots can be broken or cut and used as a tooth brush.
9.	iritakumari	<i>Aloe vera</i> Linn	Liliaceae	In case of burn and rough skin, use for smearing on skin.

Table .....continued

SL. No	Local name	Scientific name	Family	Medicinal uses
0.	Daruchini	<i>Cinnamomum zeylanicum</i> Breyn.	Lauraceae	Administration orally to the patient once a day for 7 days in case of miscarriage (Abortion)
1.	Nageswar	<i>Desmodium gyrans</i> DC.	Fabaceae	In case of enlargement of liver or weak eyesight, drink use it two spoonfuls of juice daily.
2.	Currypata	<i>Murraya koenigii</i> (Linn.) Spreng.	Rutaceae	In case of diabetes mellitus, eat 10 leaflets once daily before lunch.
3.	Papita	<i>Carica papaya</i> Linn.	Caricaceae	For ringworm infection, extract obtained from the using portion of <i>C. papaya</i> is applied over the infected area three times daily until cure
4.	Amloki	<i>Embllica officinalis</i> Gaertn.	Euphorbiaceae	Fruit sour and astringent, cooling, diuretic, laxative and have anti-inflammatory ,antiulcer, hepatoprotective, and anticancer action
5.	Dubbaghas	<i>Cynodon dactylon</i> (L) Pers.	Poaceae	Fresh juice of durva is given in a dose of 15-20 ml in conditions of epileptic seizures and psychosomatic disorders also as eye drops to reduce the reddishness, burning sensation and treat the condition.
6.	Patharcutta	<i>Bryophyllum pinnatum</i>	Crassulaceae	It is used as the medicine for treatment of earache, burns, abscesses, ulcer, insect bite, diarrhea, lithiasis. It is also used for hypertension and for the treatment of kidney stones.
7.	Shialkanta	<i>Argemone mexicana</i> Linn.	Papaveraceae	In case of impotence, paste(5 g) of it taken daily for 30 days to cure.
8.	Ankar	<i>Alangium salviifolium</i> (Linn. f.) Wang.	Alangiaceae	In case of hydrophobia, administrated orally and externally applied on the wound made by dog bite as an antidote.
9.	White sarisha	<i>Brassica campestris</i> Linn	Brassicaceae	In case of acne/alopecia, externally applied on head for alopecia and on face for acne(pimple).
0.	Nagdona	<i>Artemisia vulgaris</i> Linn	Asteraceae	In case of anti-fertility, ten tablets claimed in each cycle to be contraceptive.