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Study of Ethnobotanically important plants and their uses by the tribal communities residing nearby Nambor-Doigrung wild-life sanctuary of Golaghat, Assam, India

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ABSTRACT

Ethnbotanical study has been carried out with three tribal communities viz. Mising, Tai-Shyam and Adivasis (Santhal & Mura)of Nambor-Doigrung Wild-life Sanctuary of Golaghat, Assam. The surrounding fringe tribal villages of Nambor-Doigrung Wild life Sanctuary of Golaghat depends on the forests for the preparation of medicine, food, country liquor, fibre, construction materials, fishing implements, fire wood, spices, broom, agricultural implements, thatch-grasses and endless uses of materials required in their day-to-day life. The close relationship of these tribal communities with nature, their unique culture and ethos are manifested in their wall paintings, life style, relationship, attitude and behaviour. The present study has been done with detailed analysis of available literature during the research period and intensive Botanical survey and collection of plant material and observations has been done. A detailed representation of the genera, enumeration of species, their distribution, and plant parts used has been recorded in this study.

Key words: Adivasi, Ethnobotany, Golaghat, Mising, Nambor-Doigrung Wild life Sanctuary, Tai-Shyam, Traditional knowledge.

The term Ethnobotany was first coined by Harshberger in 1895. Ethnobotany is usually defined as anthropological approach to botany. Ethnobotany deals with the direct relationship of plants with man. The term has often been considered synonymous with either economic botany or with traditional medicine. Ethnobotany is not synonymous with traditional medicine. Early origins of traditional medicine must have had their roots in ethnobotanical folklore, but today, traditional medicine incorporates several well-organised, distinct systems of diagnosis and cure. In India alone, three traditional systems of medicine, namely

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Ayurveda, Siddha and Unani are distinguished. Further, ethnobotany includes study of medicinal plant, food, fibres, dyes, tans, other useful and harmful plants, taboos, avoidances and even magico-religious beliefs about plants[2,3]. Ethnobotany is "the study of the relationship which exists between people of primitive societies and their plant environment"[7]. The term is not new to India. "The ancient Hindus should be given the credit for cultivating what is now called ethnobotany"[4]. Therapeutic effects and medical efficacy of the wild herbs were identified and administered by the tribal people to cure various ailments, since time immemorial. This was followed by monumental ancient treaties on the subject like Charak Samhita (1000-800 B.C.), Sushrut Samhita (800-700 B.C.) and Vighatta's Astanga Hridayan. There is no ethnobotanical work available on the Nambor-Doigrung Wild-Life Sanctuary and very little work has been done on the ethnobotanical aspects in Golaghat district. Keeping the above in view the present work was under taken to investigate the indigenous knowledge system specially ethnobotanical aspects of some Tribal Communities *i.e.*, Mising, Tai-shyam and Adivasi by recording data, collection and preservation of the ethnobotanically useful plants used by the tribal communities residing nearby Nambor-Doigrung Wild-Life Sanctuary of Golaghat, Assam, India.

Map of Nambor-Doigrung Wild-life Sanctuary and the surrounding villages:

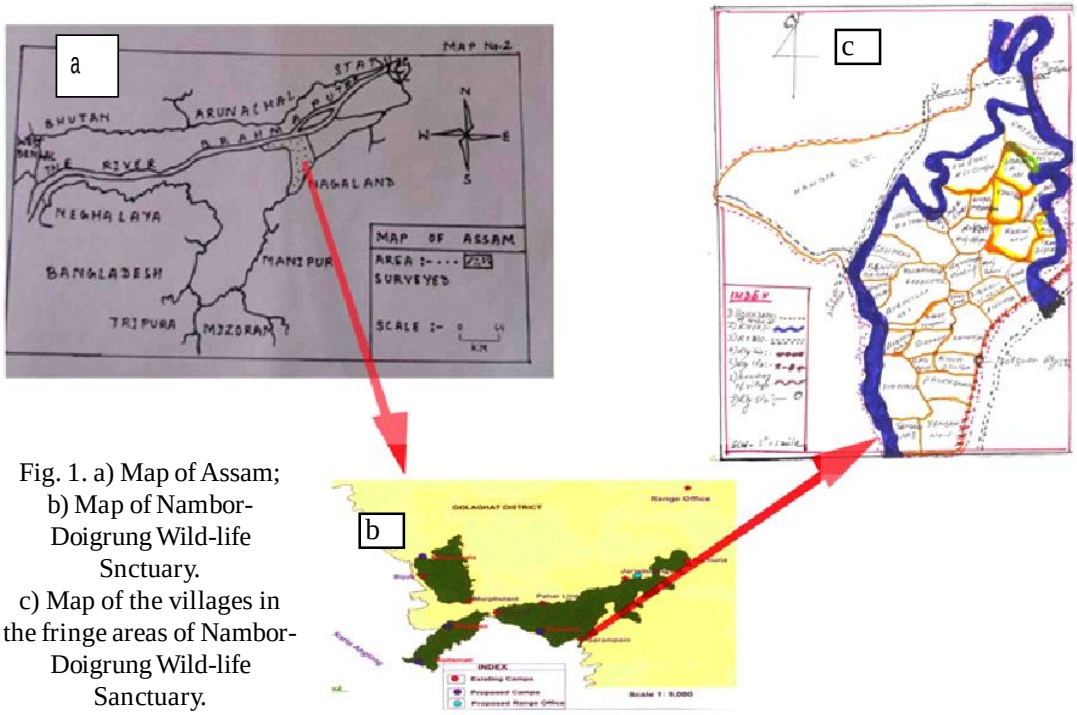


Fig. 1. a) Map of Assam; b) Map of Nambor-Doigrung Wild-life Snctuary. c) Map of the villages in the fringe areas of Nambor-Doigrung Wild-life Sanctuary.

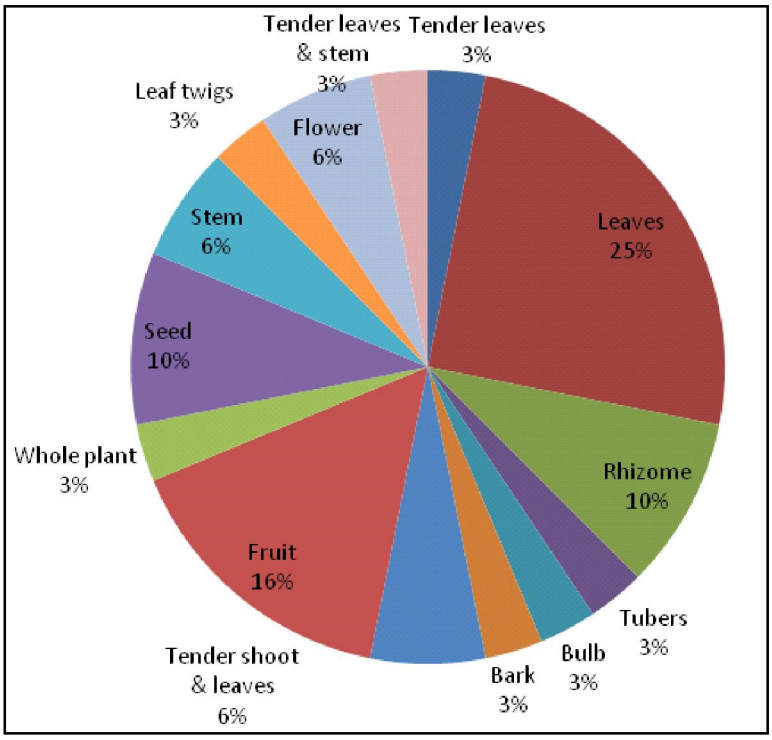


Fig. 2. Pie- diagram showing percentage of plant parts used by the tribals

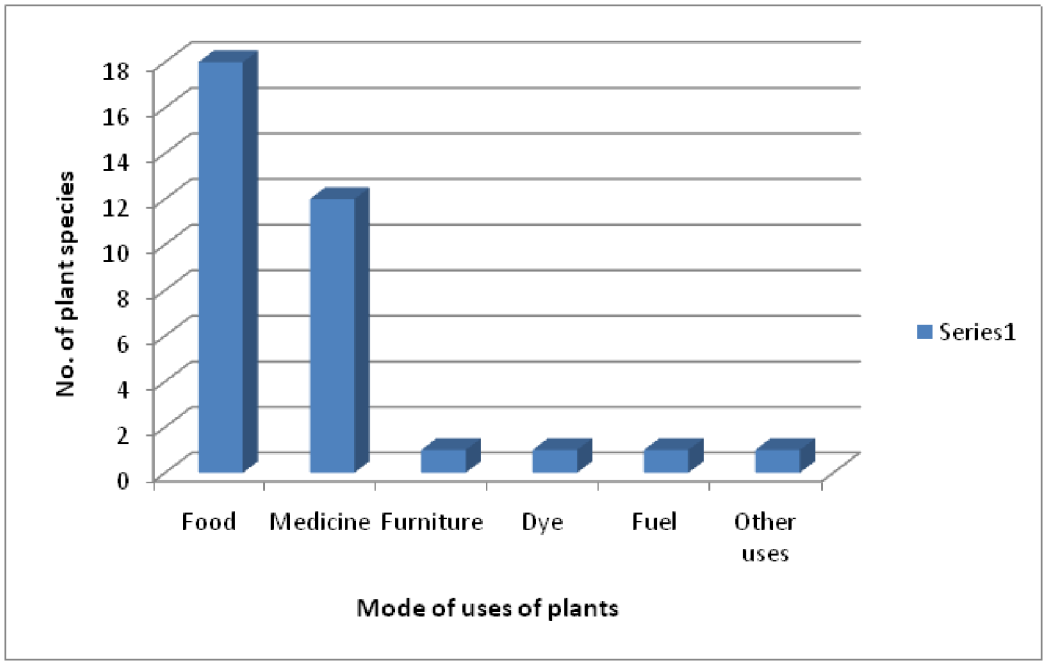


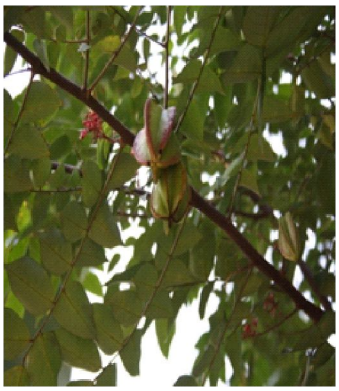
Fig. 3. Bar diagram showing mode of uses of plant species by the tribals

Photo Gallery



a) Traditional dress of Adivasi(Mura) b) Traditional dress of Mising
c) Traditional dress of Tai-shyam





d) Interview with a Tai-shyam medicine e) *Alstonia scholaris* (L.) R. Br.
f) *Averrhoa carambola* L. man



g) *Clerodendrum serratum* Spreng. h) *Costus speciosus* (Koen.) Smth.
i) *Achasma loroglossum* (Gagnep.) Larsen.

Table-1. Ethnobotanically important plants found in the fringe area, villages of Nambor-Doigrung Wild-life Sanctuary

Scientific name	Tribe	Local name	Parts used	Ethnobotanical uses
**Diplezium esculentum* (Retz.) Sw. (Athyriaceae)	Adivasi	Khua dhekia	Tender leaves and stem	Used for making curry
**Marsilea minuta* L. (Marsileaceae)	Adivasi	Pani tengesi	Leaves	Edible
Achasma loroglossum (Gagnep.) Larsen. (Zingiberaceae)	Adivasi	Kor-phul	Underground rhizome	Eaten with betel nut for its sweet scent
Acorus calamus L. (Araceae)	Adivasi	Boch	Tubers	Tuber of this species is ground and then the juice is taken and mixed with 2 spoon cow's milk and 5 spoon honey for 1 week when a person makes mistakes and loses memory power.
Ageratum conyzoids L. (Asteraceae)	Adivasi	Gundhal bon	Leaves	Fresh leaves are ground and applied in fresh cuts & wounds
Albizia lebbeek Benth. (Mimosaceae)	Tai-shyam	Moz	Leaves	Boiled and then curry is made
Allium cepa L. (Liliaceae)	Adivasi	Piyaj	Bulb	Ingredients are used for making curry
Alstonia scolaris (L.) R. Br. (Apocynaceae)	Adivasi	Sotiona	Bark	Bark chewed with 1black-pepper on empty stomach for 1 month to get relief from gastric problems
Alternanthera sessilis (L.) R. Br. (Amaranthaceae)	Adivasi	Mati kandri	Tender shoot and leaves	Used as vegetable and used in curry
Amaranthus viridis (Amaranthaceae)	Adivasi	Khutora	Tender shoot and leaves	Used as vegetable and in curry
Areca catechu L. (Arecaceae)	Adivasi	Tamul	Fruit	Fibrous pericarp is used for the preparation of dye; nut masticatory

Averrhoa carambola L. (Oxalidaceae)	Adivasi	Kordoi	Fruit	Edible
Azadirachta indica Adr. Juss. (Meliaceae)	Adivasi	Moha neem	Leaves	Effective in skin diseases
Bacopa monnieri (L.) Pennell. (Scrophulariaceae)	Adivasi	Brahmi saak	Whole plant	Juice is taken to increase memory power
Brassica campestris L. (Brassicaceae)	Tai-shyam	-----	Leaves Seed	Used as vegetable to prepare curry Used for extraction of mustard oil
Brassica oleracea L. (Brassicaceae)	Adivasi	Phul kobi	Fruit	Used as vegetable to prepare curry
Butea monosperma (Lamk.) Taub. (Papilionaceae)	Tai-shyam	Palash	Stem	Used as wood
Caesalpinia bonduc (L.) Robx. (Caesalpiniaceae)	Adivasi	Leta guti	Seed	Ground and then applied on forehead during high fever
Cannabis sativa L. (Cannabinaceae)	Adivasi	Bhang	Leaves	Consumed to treat minor body pain
Cinnamomum tamala (Buch-Ham.) T. Nees & Eberm.(Lauraceae)	Adivasi	Tezpat	Leaves	Used as spice; burnt and used during whooping cough
Clerodendrum glandulosum Coleb. ex Wall (Verbenaceae)	Tai-shyam	Hikai	Leaves	Boil/fry and then consumed as food item
Clerodendrum serretum Spreng.(Verbenaceae)	Mising	Dhapat tita	Leaf twigs	Ground and consumed during fever
Costus speciosus (Koen.) Smth. (Zingiberaceae)	Mising	Jamlakhuti	Rhizome	Ground and then consumed to treat jaundice
Curcuma longa L. (Zingiberaceae)	Adivasi	Halodhi	Rhizome	Used as an ingredient in making curry Effectiveagainst any type of skin problem Used as Blood purifier

Dillenia indica L. (Dilleniaceae)	Adivasi	Chalta tenga	Fruit	Used as an ingredient in dal
Hibiscus rosa-sinensis L. (Malvaceae)	Adivasi	Joba	Flower	Used in dandruff and for smoothening of hair
Jatropha curcas L. (Euphorbiaceae)	Mising Tai-shyam	Bongali era ----------	Stem Seed	Used as tooth-brush Used for lightening
Lasia spinosa Thwaites. (Araceae)	Adivasi	Chengmari	Tender leaves	Used as vegetable to make curry
Nyctanthes arbortiristis L. (Oleaceae)	Adivasi	Sewalee phul	Flower	Used as vegetable and in curry
Spondias pinnata (L.) Kurz. (Anacardiaceae)	Adivasi	Amora	Fruit	Edible

(*) indicates Pteridophytes

Study site :

The study has been done in the nearby villages of Nambor-Doigrung Wild-life Sanctuary in North Nambor (Tengani part) [$26.00^0 – 26.35^0$ N lat. and $93.40^0 – 94.00^0$ E long.] of Golaghat district, Assam (Fig. 1).

A small group of people has been selected and interviewed qualitatively about a wide range of topics in a semi-structured way, allowing a comprehensive view of how community acts as a whole. The techniques are highly visual and has been carried out with the help of the community members under study[5]. The herbarium label include the name of the institution, and of the collector, the project title, local name, family, genus and species of the specimen, specialist and date of collection, locality, vegetation and habitat, latitude and longitude, altitude, plant description and collection date. Pictures of a plant in its natural habitat has also been taken as it is very useful for its identification. The list of plant names has been compiled and presented in tabular form.

The present work is the result of a thorough investigation, exploration and study of ethnobotanical aspects in the adjoining villages nearby Nambor-Doigrung Wild-life Sanctuary of Golaghat district. The observations and findings related to this study are presented in the table below. Here a total of 30 duly identified taxa are arranged in alphabetical order. The plants with * indicates Pteridophytes consisting of 2 plant species and the remaining 28 plant species belong to Angiosperms. A total of 23 families have been observed from the study area and they are used by the tribal communities in their various requirements such as medicine, food, furniture etc. Out of those

families the family Zingiberaceae is observed to be the most dominant family with 3 plant species. While the Second dominant families with 2 plant species under them are as listed- Araceae, Papilionaceae, Amaranthaceae, Brassicaceae and Verbenaceae. The various plant species those are being collected are categorised as under: Food-18 plants species, Medicine-12 plant species, Furniture-1 plant species, Dye-1 plant species, Fuel-1 plant species and other uses-1 plant species.

As, there is no ethnobotanical work available on Nambor-Doigrung Wild-life Sanctuary and so far little work has been done on the ethnobotanical aspects in Golaghat district[1], recorded rich information on the Ethnomedicinal plants used by the people of Golaghat district of Assam. An account of medicinal plants used to cure jaundice by Shan and Bodo tribes of Golaghat district of Assam was also presented[6]. Keeping the above in view the present work was under taken to investigate the indigenous knowledge system specially ethnobotanical aspects of Tribal Communities residing in Nambor-Doigrung Wild-life Sanctuary of Golaghat (*i.e.* Mising, Tai-shyam, Adivasi).

For conservation and utilization of biological resources it is necessary to document indigenous knowledge. The information on plants verified thorough discussion with the herbal practioners have revealed that such knowledge have been gathered by them from their fore fathers through oral tradition.

A review of scientific literature of Ethnobotanical information in the present study shows that not many plants have been scientifically studied. So, it is high time to document and properly identify and conserve the traditional knowledge of the tribals regarding the uses of the plants. A considerable number of Ethnobotanical plants need to be studied to discover their potential in obtaining newer drugs from those plants. Conservation efforts need to be taken up as soon as possible for preservation of these plant species. Otherwise, these plant resources will be lost that may never be replaced.

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