

AN ETHNO-MEDICO BOTANICAL SURVEY REPORT OF DIBRUGARH DISTRICT, ASSAM

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ABSTRACT

The present communication deals with the ethno medico botanical survey of different ethnic groups of Dibrugarh district, Assam. Total 70 species represented by 65 genera under 44 families are reported against 30 different diseases. Total 49 claims are reported, 26 claims are in the form of compound plant drug formulations where 54 plants are involved and 23 claims are single plant drugs represented by 21 plant species. Total 8 ethnic groups and communities are recorded from the district.

Keywords: *Ethno-Medico Botany, Dibrugarh, Assam*

INTRODUCTION

Assam, a part of one of the biodiversity hotspots, occupies a special place in North eastern India located between 24°44' N to 27°45'N latitude and 89°41'E to 96°02'E longitude, covering 2.4% of the geographical area of the country, i.e. 78,438 sq. km. The annual rainfall ranges between 305 cm. max. to 178 cm. min. with an average of 211.76 cm. The temperature recorded in summer is 37°C max. and 18°C min. and 26°C max. and 7°C min. in winter, with an average humidity of 83.00% (Baishya *et al.*, 2015). Dibrugarh district of Assam is situated between 27°5'28" to 27°42'30" N latitude and 94°30'46" to 95°29'8" E latitude and covering an area of 3303 sq. km. Main ethnic groups of Dibrugarh district are Sonowal Kachari, Mishing, Deuris (Kalita and Phukan, 2010). From this region uses of medicinal plants by different ethnic groups are published in different journals (Baruah and Kalita, 2007; Bhuyan, 2015; Kalita and Surajit, 2004; Kalita *et al.*, 2005). Medicinal plants are used by different ethnic groups or communities of this area to cure various disease conditions. Some common disease like asthma, boils, cough, jaundice etc are cured by using medicinal plants. The local health practitioners are commonly known as *Bej*, *Oja*, *Kobiraj* etc. they provide medicinal plant formulations to patient to cure various diseases. So, a sincere attempt has been made to focus on different ethnic groups of Dibrugarh district to document different types of practices to cure many diseases.

MATERIALS AND METHODS

Field surveys were conducted in different seasons covering different areas of Dibrugarh district to document ethno-medico-botanical information. Folk medico claims related to different diseases are properly documented during surveys by the help of local practitioners. Medicinal plants which are used in the treatment are identified with the help of local flora (Kanjilal *et al.*, 1934-1940).

RESULTS AND DISCUSSION

The medicinal plants are compiled against diseases in Table 1. Plants are arranged as scientific name, family, local name, habit, parts used (amounts of parts), mode of administration and ethnic group and community involved with the prescription. Total 70 species represented by 65 genera under 44 families are reported against 30 different diseases.

Total 54 plant species are involved against 26 compound plant drug formulations, out of 26 compound drugs one claim is repeated in both asthma and cough and 21 species are involved in 23 single drugs. Out of 70 species 28 plant species are herbs, 21 species are tree, 10 species are shrubs, 8 climbers and 1 each of epiphyte, fern and palm. Most of the preparations are orally administered either as juice, paste, tablet and decoction or infusion. Total 8 ethnic groups and communities are recorded from the district.

Table 1: List of Medicinal Plant Used in Different Diseases

S. No.	Botanical Name	Family	Habit	Local Name of Medicinal Plants	Parts Used (Amounts of Parts)	Mode of Administration	Ethnic Group or Community Involved
1.	ARTHRITIS						
I	<i>Lasia spinosa</i> Thw.	Araceae	H	Sengmora	Tuber (50 gm)	Juice is given to apply locally.	Sonowal-Kachari
	<i>Giradinia zeylanica</i> Decne.	Urticaceae	H	Sorat	Root (3-4 cm)		
	<i>Randia spinosa</i> Poir	Rubiaceae	S	Pani Kait	Bark (10-15 gm)		
2.	ASTHMA						
I	<i>Leucas aspera</i> Spreng.	Lamiaceae	H	Darun	Young branch (3 nos.)	Paste is given orally.	Deuri
	<i>Jasminum officinale</i> L.	Oleaceae	S		Leaf (20-25 nos.)		
	<i>Piper nigrum</i> L.	Piperaceae	C	Jaluk	Fruit (3 nos.)		
II	<i>Piper nigrum</i> L.	Piperaceae	C	Jaluk	Fruit (7-11 nos.)	5-10 ml decoction is given orally.	Ahom
	<i>Desmodium latifolium</i> DC.	Papilionaceae	H	Biyoni Habota	Whole plant (3 nos.)		
	<i>Croton caudatus</i> Geisler	Euphorbiaceae	T	Mahodi Lota	Leaf (3 nos.)		
III	<i>Calotropis procera</i> (Ait.) R. Br.	Asclepiadaceae	S	Akon	Latex (3-7 drops)	Mixed with 100 ml milk and given orally.	Ahom
3.	BLOOD DYSENTERY						
I	<i>Centella asiatica</i> Urban.	Apiaceae	H	Manimuni	Whole plant (10-15 gm)	Paste is mixed with milk and extract is given orally.	Ahom
	<i>Hydrocotyle rotundifolia</i> Roxb.	Apiaceae	H	Horu Manimuni	Whole plant (10-15 gm)		
	<i>Punica granatum</i> L.	Punicaceae	S	Dalim	Fruit (10-15 gm)		
4.	BODY ACHE						
I	<i>Calotropis procera</i> (Ait.) R. Br.	Asclepiadaceae	S	Akon	Latex	Used locally	Kaibarta
5.	BOIL						

I	<i>Sida rhombifolia</i> L.	Malvaceae	H	Boriyal	Leaf (1-3 nos)	Paste with salt and given to apply locally.	Deuri
6.	COLONIZATION OF LARVAE ON SKIN WOUNDS						
I	<i>Crataeva nurvala</i> Buch-Ham.	Capparidaceae	T	Barun	Bark	Paste is given to apply locally for 3 days.	Sonowal-Kachari
7.	COUGH						
I	<i>Leucas aspera</i> Spreng.	Lamiaceae	H	Darun	Young branch (3 nos.)	Juice is given orally.	Deuri
	<i>Jasminum officinale</i> L.	Oleaceae	S		Leaf (20-25 nos.)		
	<i>Piper nigrum</i> L.	Piperaceae	C	Jaluk	Fruit (3-5 nos.)		
8.	CUTS						
I	<i>Eclipta alba</i> L.	Asteraceae	H	Keheraj	Leaf	Paste is given to apply locally.	Deuri
II	<i>Pouzolzia zeylanica</i> (L.) Benn.	Urticaceae	H		Leaf	Paste is given to apply locally.	Ahom
9.	DIABETES						
I	<i>Centella asiatica</i> Urban.	Apiaceae	H	Manimuni	Whole plant (10-15 gm)	Paste is given orally for diabetes control.	Ahom
II	<i>Alstonia scholaris</i> R. Br.	Apocynaceae	T	Satiyona	Bark (100 gm)	50 ml decoction is given orally.	Ahom
	<i>Spondias pinnata</i> (L.f.) Kurz.	Anacardiaceae	T	Amora	Bark (100 gm)		
	<i>Mangifera indica</i> L.	Anacardiaceae	T	Aam	Bark (100 gm)		
	<i>Syzygium cuminii</i> (L.) Skeels	Myrtaceae	T	Jam	Bark (100 gm)		
	<i>Citrus medica</i> L.	Rutaceae	S	Nemu	Fruit (1 no.)		
10.	DOG BITE						
I	<i>Calotropis procera</i> (Ait.) R. Br.	Asclepiadaceae	S	Akon	Leaf (1 no.)	From the paste 3 tablets are	Plain community

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	<i>Piper nigrum</i> L.	Piperaceae	C	Jaluk	Fruit (2-3 nos.)	prepared and	
	<i>Piper betle</i> L.	Piperaceae	C	Pan	Leaf (2-3 nos.)	given orally.	
II	<i>Scoparia dulcis</i> L.	Scrophulariac eae	H	Senibon	Whole plant (10-15 gm)	Paste is given	Ahom orally.
11.	RINGWORM						
I	<i>Cynodon dactylon</i> Pers.	Poaceae	H	Duwor Bon	Whole plant (10-15 nos.)	Paste is given to	Ahom apply locally
	<i>Croton tiglium</i> L.	Euphorbiacea e	T	Koni Bih	Leaf (3-4 nos.)		
	<i>Eleusine indica</i> Gaertn.	Poaceae	H	Babosa Bon	Whole plant (3-4 nos.)		
12.	EPILEPSY						
I	<i>Caesalpinia crista</i> L.	Caesalpiniace ae	C	Letaguti	Seed (1 no.)	About 250 ml	Ahom decoction is given orally.
	<i>Spilanthes paniculata</i> C. B. Clark.	Asteraceae	H	Bon Jaluk	Stem (20-25 gm)		
II	<i>Carica papaya</i> L.	Caricaceae	T	Amita	Fruit	Used to cure	Plain community
13.	FEVER OF CHILD						
I	<i>Hibiscus rosa-sinensis</i> L.	Malvaceae	S	Joba	Leaf	Paste is given to	Ahom apply locally on forehead to reduce the temperature
II	<i>Rhynchosyilis retusa</i> Blume.	Orchidaceae	E	Kopou	Leaf	10 ml juice is	Ahom given orally.
14.	GASTRIC TROUBLE						
I	<i>Emblica officinalis</i> Gaertn.	Euphorbiacea e	T	Amlokhi	Bark (5-6 gm)	About 50 ml	Sonowal-decoction is given orally for 2 days.
	<i>Punica granatum</i> L.	Punicaceae	S	Dalim	Bark (3-4 gm)		
	<i>Terminalia chebula</i> Retz.	Combretacea e	T	Hilikha	Bark (5-6 gm)		

	<i>Cuscuta reflexa</i> Roxb.	Convolvulaceae	H	Akakhi Lota	Stem (10-15 gm)		
15.	HEADACHE						
I	<i>Dillenia indica</i> L.	Dilleniaceae	T	Ou Tenga	Root exudates	Given to apply locally on head.	Ahom
16.	HICCUP						
I	<i>Xanthium strumarium</i> L.	Asteraceae	H	Bon Agora	Root (5-10 gm)	Infusion is given orally during trouble.	Sonowal-Kachari
17.	INTESTINAL WORM						
I	<i>Musa balbisiana</i> Colla.	Musaceae	H	Bhim Kol	Leaf	5-10 ml juice is given orally after food.	Ahom
18.	TAP WORM						
I	<i>Cassia fistula</i> L.	Caesalpiniaceae	T	Sonaru	Young branch (3 nos.)	200-250 ml decoction is given orally in empty stomach for a day.	Ahom
	<i>Piper nigrum</i> L.	Piperaceae	C	Jaluk	Fruit (1 no.)		
II	<i>Punica granatum</i> L.	Punicaceae	S	Dalim	Bark (100 g)	Decoction is given orally in empty stomach.	Boro
19.	JAUNDICE						
I	<i>Averrhoa carambola</i> L.	Averrhoaceae	T	Kordoi	Leaf (1 bunch)	20-25 ml juice is given orally, till cure.	Plain community
	<i>Schefflera venulosa</i> (W & A) Harms.	Araliaceae	C	Dhoob Lota	Leaf (1 bunch)		
II	<i>Zanthoxylum nitidum</i> (Roxb.) DC.	Rutaceae	T	Tezmui	Bark (50 gm)	250 ml decoction is given orally in empty stomach for 3 days	Ahom
	<i>Piper nigrum</i> L.	Piperaceae	C	Jaluk	Fruit (5 nos.)		
III	<i>Cissampelos pareira</i> L.	Menispermaceae	C	Tubuki Lota	Leaf (21 nos.)	Pounded with 1	Sonowal-

	<i>Oryza sativa</i> L.	Poaceae	H	Saul	Grains	glass rice washed water and given orally in empty stomach for a day.	Kachari
IV	<i>Ziziphus jujuba</i> Mill.	Rhamnaceae	T	Bogori	Leaf (21 nos.)	Decoction is given orally in empty stomach for 3 days.	Ahom
	<i>Borassus flabellifer</i> L.	Arecaceae	P	Tal	Sugar (100 gm)		
V	<i>Cynodon dactylon</i> Pers.	Poaceae	H	Duwari bon	Whole plant (3 nos.)	From the paste 3 nos. cakes are prepared and given orally daily in empty stomach for 3 days.	Nepali
	<i>Entada scandens</i> auct. non-Benth	Papilionaceae	C	Ghilaguti	Seed (1 no.)		
	<i>Ocimum sanctum</i> L.	Lamiaceae	H	Tulshi	Leaf (5 nos.)		
	<i>Oryza sativa</i> L.	Poaceae	H	Dhan	Grains (100 gm)		
VI	<i>Diplazium esculentum</i> (Retz.) Sw.	Athyriaceae	F	Dhekia	Rhizome (10-15 gm)	Infusion is given orally in empty stomach for 3 days.	Sonowal-Kachari
VII	<i>Tabernaemontana coronaria</i> R. Br.	Apocynaceae	S	Kathana	Root (5 cm)	Decoction is given orally for 3 days.	Ahom
20.	KIDNEY STONE						
I	<i>Phyllanthus fraternus</i> Webster	Euphorbiaceae	H	Bhuiamlokhi	Bark (5 gm)	Paste is given orally in empty stomach for 10 days.	Ahom
	<i>Bryophyllum pinnatum</i> (Lam.) Kurz.	Crassulaceae	H	Pategaja	Leaf (3 nos.)		
	<i>Erythrina indica</i> Lam.	Papilionaceae	T	Modar	Leaf (3 nos.)		
21.	LABOUR PAIN						
I	<i>Phlogacanthus thyrsiflorus</i> Nees.	Acanthaceae	S	Bahak	Root	Root paste is given to apply locally on stomach for easy delivery.	Boro

22.	MENTAL DISORDER						
I	<i>Tabernaemontana coronaria</i> R. Br.	Apocynaceae	S	Kathana	Root (10 cm)	100-150 ml	Ahom
	<i>Piper nigrum</i> L.	Piperaceae	C	Jaluk	Fruit (3-5 nos.)	decoction is given orally for 2-3	
	<i>Rubus moluccanus</i> Hook. F.	Rosaceae	H	Jetuli Poka	Root (4-5 cm)	days.	
	<i>Coccinia indica</i> Cogn.	Cucurbitaceae	C	Beli Poka	Tuber (5 gm)		
	<i>Syzygium aromaticum</i> (L.) Merr & Perry.	Myrtaceae	T	Long	Flower bud (3-5 nos.)		
23.	PILES						
I	<i>Piper nigrum</i> L.	Piperaceae	C	Jaluk	Fruit (21 nos.)	250 ml of	Ahom
	<i>Musa balbisiana</i> Colla.	Musaceae	H	Bhim Kol	Root (20-30 gm)	decoction is given orally in empty stomach for 2 days.	
II	<i>Ocimum sanctum</i> L.	Lamiaceae	H	Tulshi	Young branch (31 nos.)	Crushed with 5-6 gm earthworm casting and 9 tablets are prepared. Daily 3 tablets are given in empty stomach.	Ahom
	<i>Cannabis sativa</i> L.	Cannabinaceae	S	Bhang	Young branch (3 nos.)		
24.	PNEUMONIA						
I	<i>Meyna laxiflora</i> Robyns	Rubiaceae	T	Bihmona	Bark (100 gm)	250 ml decoction	Ahom
	<i>Tabernaemontana coronaria</i> R. Br.	Apocynaceae	S	Kathana	Bark (10-20 gm)	is given orally twice daily for 2 days.	
	<i>Piper nigrum</i> L.	Piperaceae	C	Jaluk	Fruit (21 nos.)		
	<i>Zanthoxylum nitidum</i> (Roxb.) DC.	Rutaceae	T	Tezmui	Bark (50 gm)		
II	<i>Zanthoxylum nitidum</i> (Roxb.) DC.	Rutaceae	T	Tezmui	Bark (10-20 gm)	125 ml decoction is given orally in	Chutia

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	<i>Caesalpinia crista</i> L.	Caesalpiniaceae	C	Letaguti	Seed (1 no.)	empty stomach for 3 days.
	<i>Centella asiatica</i> Urban.	Apiaceae	H	Manimuni	Whole plant (3-5 gm)	
	<i>Piper nigrum</i> L.	Piperaceae	C	Jaluk	Fruit (1 no.)	
	<i>Stereospermum chelonoides</i> Auct.	Bignoniaceae	T	Paroli Goch	Bark (10-20 gm)	
III	<i>Centella asiatica</i> Urban.	Apiaceae	H	Manimuni	Leaf (20-25 nos.)	Juice is given Ahom
	<i>Piper nigrum</i> L.	Piperaceae	C	Jaluk	Fruit (7-9 nos.)	orally in empty
	<i>Leucas aspera</i> Spreng.	Lamiaceae	H	Darun	Young branch (3-5 nos.)	stomach for 3 days.
25.	SINUSITIS					
I	<i>Calotropis procera</i> (Ait.) R. Br.	Asclepiadaceae	S	Akon	Latex (3-4 drops)	Mixed with 1-2 drops of mustard oil and given for deep nostril inhalation. Ahom
II	<i>Drymaria cordata</i> Willd.	Caryophyllaceae	H	Laijabori	Leaf	Juice is given for deep nostril inhalation once daily for 2 days or till cure. Deuri
26.	SWELLING OF LEG					
I	<i>Plumbago indica</i> L.	Plumbaginaceae	H	Agyachi	Leaf (7-9 nos.)	Curry prepared with a <i>Channa punctatus</i> fish (snakehead) and given orally Deuri
27.	TONSILITIS					
I	<i>Sapindus mukorossi</i> Gaertn.	Sapindaceae	T	Monisal	Fruit (1 no.)	From the paste 6 Sonowal-

	<i>Zingiber cassumunar</i> Roxb.	Zingiberaceae	H	Ada	Rhizome (1-3 cm)	nos. tablets are prepared. 3 tablets are given orally and other 3 tablets are given to apply locally on throat.	Kachari
28.	TUBERCULOSIS						
I	<i>Eupatorium cannabinum</i> L.	Asteraceae	S	Tog Loti	Leaf (4 nos.)	100 ml decoction	Boro
	<i>Piper nigrum</i> L.	Piperaceae	C	Jaluk	Fruit (8-9 nos.)	is given orally in empty stomach for 3 days.	
	<i>Oryza sativa</i> L.	Poaceae	H	Dhan	Grains (9-11 nos.)		
II	<i>Piper nigrum</i> L.	Piperaceae	C	Jaluk	Fruit (50 gm)	50 ml of decoction is given orally in empty stomach for one month.	Ahom
	<i>Nigella sativa</i> L.	Ranunculaceae	H	Kal Jira	Seed (50 gm)		
	<i>Elettaria cardamomum</i> Maton.	Zingiberaceae	H	Elachi	Fruit (25 gm)		
	<i>Cuminum cyminum</i> L.	Apiaceae	H	Jeera	Seed (50 gm)		
	<i>Musa balbisiana</i> Colla.	Musaceae	H	Bhim Kol	Sprout (50-60 gm)		
	<i>Foeniculum vulgare</i> Mill.	Apiaceae	H	Sauf	Seed (25 gm)		
29	VERICOCELE						
I	<i>Quisqualis indica</i> L.	Combretaceae	C	Madhoimaloti	Root (15-25 cm)	50-60 ml decoction is given orally for 1-2 days.	Ahom
30.	VITILIGO						
I	<i>Vitex negundo</i> L.	Verbenaceae	S	Posotiya	Leaf	20-25 ml leaf juice is given orally and applies locally for 6 days or till cure.	Sonowal-Kachari

*C- Climber; E- Epiphyte; F- Fern; H- Herb; P- Palm; S: Shrub; T- Tree.

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Conclusion

The present paper is deals with medicinal plants used by different ethnic groups or communities of Dibrugarh district to cure various diseases. People of this area are still depending upon the medicinal plants for treatment of various disease conditions. According to folk healers some medicinal plants are very rare during preparation of drugs this is mainly due to loss of habitat and young generations are not interested in traditional health practices. So, it important to documentation of medicinal plants used in preparation of folk medicine. The reported medicinal plants in present work may play an important role in discovery of new pharmaceutical drugs. So, it is very important for conservation of these medicinal plants and also further scientific investigations are need of the hour for validation of these folk claims so that possible lead can be achieved.

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