

## **Additional medicinal uses of some known medicinal plants of southern Assam, India**

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### **Abstract**

In the present study field survey for exploration of traditional medicinal plants from Reang tribe of Assam was conducted. A good number of medicinal plants have been collected and identified after taxonomic study. Some of the medicinal plants are found to be new i.e. reported first time as medicinal plants. For about hundred medicinal plants it has been observed that the mode and purpose of use as proposed by Reang tribe is different from that of established report. As such the present paper provides additional medicinal property of some already known medicinal plants.

**Keywords:** Reang tribe, Assam, Medicinal Plants, Additional information

### **INTRODUCTION**

It is said that about 80% of the world population is dependent upon traditional medicines for primary health care. In India, plenty of Medicinal Plants are available and hence it is designated as the “Botanic Garden of the world” (Vedavathi *et al* 1997).

It is seen in our ancient and mythological literature that from the time of yore peoples were totally dependent on herbal drugs for their primary need of medicines as there was no alternative. Even after sufficient development of medical science the plants are playing equally significant role. A recent analysis revealed that one-fourth of the modern drugs available in the market is derived from herbal sources by some way or other.

Not only that a good section of population of our country are still dependent upon crude plant drugs, as they are totally isolated and living far away from the modern health care system. One such primitive group of people of our country absolutely dependent on herbal drugs is ‘Reang Tribe’, who inhabit the hilly terrain of North East India. In Assam they are mostly available in the southernmost part of the state. Basically they are austro-mongoloid group and are nomadic in true sense.

Due to inaccessibility to their places of habitat, non availability of modern medicines and total dependence on herbal drugs, the medicine-man of the tribe have the opportunity to preserve a vast lore of medicinal plants. Considering these aspects, a survey was conducted to collect information about traditionally preserved medicinal plants with an expectation of getting some newer information about medicinal activity of plants.

Assam is one of the oldest member of the seven-sisters of North-East India situated between 24° N and 28° N Latitude and 92° E to 93° E Longitude and covers an area of 78,523 sq km. The state comprises of two valleys viz Brahmaputra Valley and Barak Valley being separated by N.C. Hills. The later is the southernmost part of the state lying approximately between Latitude 24° N to

25° N and Longitude 92° E to 93° E. Almost all the Reangs of Assam inhabit this valley. The whole valley is formerly included under a single district Cachar is bounded by N.C. Hills and Jaintia Hills in north, Mizoram on south, Manipur on east, and Tripura and Bangladesh on west. The total geographical area of the zone is 6941.2 sq km, which is equivalent to 8.84% of the total area of the state. At present the valley has been divided into three districts viz. Cachar with head quarter at Silchar, Hailakandi and Karimganj with head quarters at Hailakandi and Karimganj respectively. The Cachar district covers an area of 3786 sq km. The district accounts an average rainfall of 2910 mm/ year. The maximum and minimum temperature of the district is 32° C and 11° C respectively. The humidity ranges from 75 % - 80 %. The Reang inhabited villages of the district are Salganga, Hadamar, Bandarkhal, under Howaithang range and Lakhicherra under Lakhipur range. The Hailakandi district covers an area of 1326 sq km. Temperature ranges maximum 31.8° C to minimum 15.1° C. Average rainfall is 2329 mm/ year. The Reang inhabited villages are Kundanala, Durgapur, Kacchab, Nunaikhuli, Nanaicutting and Channighat under Matijuri forest range. Damcherra, Bagcherra, Raifalmar, Kanchiala, Gutguti, Sahebmar and Duttapur under Gharmura Forest Range. Baruncherra, Chotojamira, Banglabasa and Charkhuri under Manipur Forest Range. Karimganj district covers an area of 1839 sq km. Average temperature ranges from 30° C to 35° C during summer and 10° C to 20° C during winter. Humidity ranges from 62.86 % to 88.7 %. Average rainfall 3694 mm/ year. The Reang inhabited villages are Medicherra under Lowirpoa Range, Kalagaon, Hatkoragenai, Balia, Gutguti, Blongpara, Tiabeng and Haekhengpara under Cheragi Forest Range.

Ethnobotanical investigation in Assam is of quite significance because varied topography and changing climatic condition have resulted growth of a rich vegetation in the state. On the other hand, the state has provided habitat for a good number of ethnic groups who are self sufficient with their traditional systems of treatment. Sporadic but valuable information regarding ethnobotanical information in Assam are known through the works of Borthakur (1976, 1981), Mazumder et al (1978), Tiwary et al (1979), Bhattacharjee et al (1980), Hajra & Baishya (1980), Jain & Borthakur (1980), Baruah & Sharma (1984), Gogoi & Baishya (1984), etc. These investigations, although valuable are inadequate in comparison to the number of tribes inhabiting the state.

In the present day, considering the significance of the study a good number of researchers are also engaged in this field countrywide and consequently a number of publications are available viz. Janardhan (1963), Mishra & Dixit (1976), Audichya et al (1983), Gopal & Shah (1985), Nigam & Mishra (1989), Shukla et al (1992), Khanna et al (1993) and Gogoi (1998).

Critical review of literature indicates that the Reang Tribe is almost unexplored so far the ethnomedico-botanical aspects is concerned. Selection of the Reang tribe is based on the fact that they are secluded from the urban culture and somehow evaded the eyes of researchers. Certain socio-economic aspects of the Reang tribe in Tripura has been carried out by Samanta (1984) but no investigation in any form has so far been done to evaluate the ethnobotanical plant-lore of Reangs as a whole and this has necessitated the study in detail of the ethnomedico-botanical aspects of this tribe settled in Assam.

## METHODOLOGY

Information regarding medicinal plants used by the Reang People were collected from medicine men by words of mouth. Ethnobotanical methodology as suggested by Schultes (1960 – 1962), Jain

(1964, 1967, 1987, 1989) and Ford (1978) were followed during collection of information. Collected specimens are dried, poisoned and identified, consulting a number of Floras viz. Flora of British India (Hooker 1872 – 1887), Flora of Assam (Kanjilal et al 1934 – 1940; Bor 1940), Flora of Tripura State (Deb 1981 – 1983). Finally the identification are confirmed by consulting at ASSAM Herbarium. The identified plants are enumerated in alphabetical order provided correct nomenclature and author citation, name of the family, vernacular name, parts use and mode of use, etc.

For established reports of utilization a number of accounts viz. Bentley & Trimen (1980), Dey (1986), Kirtikar & Basu (1933), Dastur (1952), Nadkarni (1954), Cho[pra et al (1956, 1969), Wealth of India Series (1948 – 1976), Jain (1985), Nayer et al (1989), Asolkar et al (1992), The Useful Plants of India (Anonymous 1992), Rawat & Choudhury (1998) were consulted.

## RESULTS

Ninety-nine medicinal plants having additional uses are enumerated in alphabetical order in a tabular form (Appendix I). Data for each species are presented in the following sequence: Serial no., Botanical name, Family, Local name, Plant parts used, Purpose of use and Established reports on uses.

## DISCUSSION

In the present work total 100 species of medicinal plants have been reported belonging to 91 genera and 57 families. It is interesting to note that the parts used, purpose of use, preparation procedure and application of medicinal plants as reported here are different from that of the established reports. As such the work provides additional scope of utilizing some known medicinal plants in treating different ailments in different manners. It is a comparative study; the newer information recorded here may be utilized with scientific tools and techniques for the development of new drugs.

The Reangs have no written literature on medicinal plants. They simply inherit the knowledge from their ancestors by words of mouth. Therefore, with the premature death of a medicine-man, the medicinal utility of a particular plant that was known by him only ends. Thus, this investigation emphasizes the need to preserve the medicinal plant lore of Reang tribe.

## LITERATURE CITED

- Asolkar, L.V.; Kokor, K.K. & Clarke, O. J. 1992. Glossary of Indian Medicinal Plants with active principles. Part-I (A & K), C.S.I.R. Publication. New Delhi.
- Audichya, K.C.; Billore, K.V.; Joseph, J.H. & Choturvedi, D.D. 1983. Role of indigenous folk remedies for certain acute illness in primary health care. *Nagarjuna* 26: 199 – 201.
- Baruah, P. & Sharma, G.C. 1984. Studies of the medicinal uses of plants by Boro tribe of Assam. *J. Econ. Tax. Bot.* 599 – 604.
- Bentley, R. & Trimen, H. 1980. *Medicinal Plants*. Vols. I-IV. Bisen Singh Mohendra Pal Singh Dehradun.
- Bhattacharjee, S.; Tiwari, K.C.; Majumder, R. & Misra, A.K. 1980. Folklore medicine from district Kamrup (Assam). *Bull. Medico-Ethnobot. Res.* 1: 447 – 460.
- Bor, N.L. 1940. *Flora of Assam*. Vol.5 (Gramineae). Govt. of Assam.

- Borthakur, S.K. 1981a. Studies in Ethnobotany of Karbis (Mikirs): Plants masticatories and dyestuffs. In S.K. Jain (Ed.). *Glimpses of Indian Ethnobotany*. 180–190. Scientific publisher, Joadhpur.
- Borthakur, S. K., 1981b. Certain plants in folklore and folk life of Karbis (Mikirs) of Assam. In S. K. Jain (Ed.). *Glimpses of Indian Ethnobotany*. 170 – 181. Scientific publisher, Joadhpur.
- Borthakur, S.K. 1976. Less known medicinal uses of plants among tribals of Mikir hills. *Bull. Bot. Surv. India*. 18: 166 – 171.
- Chopra, R.N.; Nayar, S.L. & Chopra, I.C., 1956. *Glossary of Indian Medicinal Plants*. C.S.I.R. publication. New Delhi.
- Chopra, R.N. & Verma, B.S. 1969. Supplement to the Glossary of Indian Medicinal Plants. C.S.I.R. publication. New Delhi.
- Dastur, J.E. 1952. *Medicinal plants of India and Pakisthan*. D. B. Taraporevala Son's and Co. Pvt. Ltd., Bombay.
- Deb, D.B. 1981-1983. *Flora of Tripura State*. Vol-I & Vol-II. Today and Tomorrow Print. Publ., New Delhi.
- Dey, K.L. 1896. *Indigenous drugs of India*. International Book Distributors. Dehradun.
- Dutta Choudhury, M. 1999. *Ethno medico botanical Aspects of Reang tribe of Assam: A comprehensive study*. Ph.D thesis of Gauhati University. (Unpublished).
- Ford, R.I. 1978. *The nature and status of Ethnobotany*. Anthropological paper No. 67 Mus. Anthropol. University Michigan Arnold Arboretum.
- Gogoi, P. 1998. Orchids in culture and medicine. Potentialities of Orchid cultivation and commerce in Assam. *International festival of Orchids*, S. N. Hedge (Ed.), Orchid Society of Arunachal Pradesh.
- Gogoi, P. & Baissya, C.L. 1984. Information about a few herbal medicines used by the people of Assam (India) against jaundice. *Himal. Res. Div.* 2: 41 – 44.
- Hajra, P. K. & Baishya, A.K. 1980. Ethno botanical Notes on the Miris (Mishings) of Assam plain. In *Ibid*. 161 – 169.
- Hooker, J. D. 1872 – 1887. *The Flora of British India*. Vol. 1-7. Secretary for State, India, London.
- Jain, S.K. 1967. Ethnobotany: Its scope & study in India. *Museum. Bull.* 2(i): 39 – 43.
- Jain, S.K. 1964. The role of Botanists in folklore Research. *Folklore* 5 (4): 145 – 150.
- Jain, S.K. 1987. *A Manual of Ethnobotany*. Scientific Publisher, Jodhpur.
- Jain, S.K. 1989. *Methods & Approaches in Ethnobotany*. Soc. Ethnobotanist, Lucknow.
- Jain, S.K. 1985. *Medicinal plants*. National Book Trust, New Delhi (6<sup>th</sup> repr. ed.).
- Jain, S.K. & Borthakur S.K. 1980. Ethnobotany of the Mikirs of India. *Econ. Bot.* 34: 264 – 272.
- Janardhan, K.P. 1963. An enumeration of the medicinal plants of khed Talika, Maharashtra state. *Bull. Bot. Surv. India* 5: 363 – 347.
- Kanjilal, U.N.; Kanjilal P.C. & Das, A. 1936. *Flora of Assam*. Vol.-II. Govt. Of Assam
- Kanjilal, U. N., Kanjilal P. C., Das, A., De, R. N., 1938. *Flora of Assam*. Vol.-III. Govt. Of Assam
- Kanjilal, U. N., Kanjilal P. C., De, R. N., Das, A., 1940. *Flora of Assam*. Vol.-IV. Govt. Of Assam
- Kanjilal, U. N., Kanjilal P. C., Das, A., Purkayastha, C., 1934. *Flora of Assam*. Vol.-I. Govt. Of Assam
- Khanna, K.K.; Srivastava, P. K.; Shukla, G. & Mudgal, V. 1993. Unknown traditional uses of plants as veterinary medicines from Uttar Pradesh, India. *Proc. Nat. Acad. Sci, India* 63 (B): 407 – 411.
- Kirtikar, K.R. & Basu, B.D. 1933. *Indian Medicinal Plants*. Vols. 1- 4. L. M. Basu, Allahabad. India.

- Mazumder, R.; Tiwari, K.C.; Bhattacharjee, S. & Nair A.R. 1978. Some Folklore medicines from Assam and Meghalaya. *Intern. J. Crude Drug. Res.* 16: 4
- Mishra, R. & Dixit, R.D. 1976. Studies on ethno botany – II on some less known medicinal plants of Ajmer forest division. Rajasthan. in *Nagarjun.* 19: 20 – 22.
- Nadkarni, A.K. 1954. *Indian Materia Medica*, Vol-I. (3<sup>rd</sup> ed.). Popular Book Depot. Bombay.
- Nayar, M.P.; Ramamurthy, K. & Agarwal. V.S. 1989. *Economic plants of India*. Botanical Survey of India, Howrah.
- Nigam, S. & Misra, G. 1989. Phytochemistry: Basic principles in relation to ethnobotany. In S.K. Jain (ed.) *Methods and approaches in Ethnobotany*, 125 – 140. Scientific Publisher, Joadhpur.
- Rawat, M.S. & Chowdhury, S. 1998. *Ethno medico Botany of Arunachal Pradesh (Nishi and Apatani tribe)*. Bisen Singh, Mahendra Pal Singh. Dehradun.
- Samanta, R.K. 1984. The Reangs of Tripura – Their Sociocultural and Agro-climatic changes, 184-195. In Sebastian Karotemprel (ed.), *The Tribes of North East India..* Firma KLM Pvt. Ltd. Calcutta. .
- Schultes, R.E. 1960. Topping our heritage of Ethnobotanical lore. *Econ. Bot.* 14: 257 – 262.
- Schultes, R.E. 1962. The role of Ethno botanist in the search for new medicinal plants. *Lloydia.* 25: 257 – 266.
- Tiwari, K.C.; Majumder, R. & Bhattacharjee, S. 1979. Folklore medicine from Assam & Arunachal Pradesh (district Tirap). *Intrn. J. Crude Drug Res.* 17: 61 – 67.

**Appendix I:** Additional medicinal uses of some known medicinal plants of southern Assam, India

<b>Botanical name</b>	<b>Family</b>	<b>Local name</b>	<b>Plant parts used</b>	<b>Purpose of use by Reangs</b>	<b>Established reports of use</b>
<i>Aegle marmelos</i> Correa	Rutaceae	Belbli	Leaves	± 10 g leaf-paste in a cup of water taken orally against fever & body pain	Fruits used as laxative, diuretic, digestive, astringent, stomachic and against diarrhoea & dysentery
<i>Ageratum conyzoides</i> L.	Asteraceae	Samnama	Leaves	One teaspoonful of leaf decoction taken orally to reduce body temperature	Leaves applied to cuts, sores, boils, leprosy & skin diseases; leaf-juice as eye lotion
<i>Allium cepa</i> L.	Alliaceae	Peyaj	Scale leaves	Pungent gas from crushed bulbs used against eye measles	Bulb is stimulant, diuretic, expectorant & aphrodisiac; controls flatulence and dysentery
<i>Alpinia nigra</i> (Gaertn.) Burt.	Zingiberaceae	Theri	Rhizome	Fresh rhizome extract boiled with water, concentrated and applied on fresh cuts as antiseptic	Rhizome used in rheumatism, fever, bronchial catarrhal, stomachic, stimulant and aphrodisiac
<i>Alstonia scholaris</i> (L.) R.Br.	Apocynaceae	Chaithuang	Roots	± 5 g root-powder in water taken orally twice daily against stomach ache and abdominal pain	Bark used in malaria-fever, diarrhoea & dysentery; latex used in ulcer; stem extract hypotensive & anti-cancerous
<i>Amaranthus spinosus</i> L.	Amaranthaceae	Khentamyra	Roots	Root extract taken orally during chest pain and in snake bite	Root used in menorrhagia, gonorrhoea, eczema and dysentery
<i>Ananus comosus</i> Merr.	Bromeliaceae	Amatoi	Roots	Aquaus root extract <i>A. comosus</i> , <i>Citrus reticulata</i> & <i>Tamarindus indica</i> thrice daily for 7 days against typhoid	Leaf-juice anthelmintic; fruits abortifacient and anti-scorbutic
<i>Andrographis paniculata</i> (Burm.f.) Wall.ex Nees	Acanthaceae	Kirata	Whole plant	1 fresh plant cut into small pieces, soaked overnight in a glass of water and taken orally in empty stomach	Used as febrifuge, tonic, alternative, anthelmintic, anti-scorbutic

Botanical name	Family	Local name	Plant parts used	Purpose of use by Reangs	Established reports of use
				against stomach trouble and to expel small worms	
<i>Areca catechu</i> L.	Arecaceae	Kuail	Nuts	Crushed nuts and roots of <i>Curculigo capitulata</i> applied to fresh cuts as haemostat	Nuts aphrodisiac, astringent, anthelmintic, nerve tonic and used against urinary disorder, snakebite; in veterinary used against tape worm
<i>Asclepias curassavica</i> L.	Asclepiadaceae	Parija	Roots	Root paste applied to fresh cuts as haemostat	Leaf juice used against haemorrhage and gonorrhoea
<i>Asparagus racemosus</i> Willd.	Liliaceae	Suktichara	Cladodes	Leaf paste applied locally as pain-killer	Roots astringent, demulcent, diuretic, aphrodisiac, antispasmodic and anti-dysenteric
<i>Averrhoa carambola</i> L.	Averrhoaceae	Kamranga	Fruits	Fruit juice taken orally against diarrhoea; excess intake cause diarrhoea	Dried fruits used in fever; ripe ones used in piles and to relieve thrust & excitement
<i>Bauhinia acuminata</i> L.	Caesalpiniaceae	Sitakaya	Leaves	Tender leaf extract diluted in double amount water, decanted; supernatant taken internally in chest pain and congestion	Bark decoction or leaves used in stone in bladder, asthma, biliousness & leprosy
<i>Blechnum orientale</i> L.	Blechnaceae	Sikiomam-oidu	Fronde	Hot decoction of frond applied externally to release pus from abscess and as antiseptic	Chinese use rhizome as anthelmintic and in urinary disorder; as poultice on boils in Malaysia
<i>Blumea lanceolaria</i> (Roxb.) Druce	Asteraceae	Muisingha	Leaves	Fish curry prepared with its leaves, taken with rice to relieve from vaginal protrusion	Leaves used as sudorific in Indo-China and given in bronchitis.
<i>Carica papaya</i> L.	Caricaceae	Keingkoia	Fruits	Immature fruits taken orally with sugar for 7 days against lung infection in children; pseudofruits from inside fruits crushed with honey taken orally by women to induce fertility	Young leaves eaten to ease constipation and indigestion; latex anthelmintic and cure skin disease; ripe fruits diuretic, stomachic, carminative; seeds heart stimulant

Botanical name	Family	Local name	Plant parts used	Purpose of use by Reangs	Established reports of use
<i>Catharanthus roseus</i> (L.) G. Don	Asteraceae	Khumbairagi	Leaves	Water diluted leaf paste applied on forehead to reduce headache in fever; claim to reduce body temperature	Plants used as remedy of diabetes; leaf used for menorrhagia, wasp sting, various types of cancers and malignant growth; roots for hypertension and capillary fragility
<i>Chromolaena odorata</i> (L.) King & Robinson	Asteraceae	Mayes-hnuibli	Leaves	Fresh leaf paste applied locally to coagulate blood; claim to prevent microbial growth	Used to intoxicate fishes
<i>Cinnamomum tamala</i> Nees	Lauraceae	Khespa	Leaves	Powdered dried leaves used as preservative for herbal drugs	Aromatic bark used in gonorrhoea; leaves stimulant, carminative and relieve colic, rheumatism and scorpion stings
<i>Cissus adnata</i> Roxb.	Vitaceae	Khuntailai	Tuber	Tuber paste used as poultice on carbuncle to release pus and relieve from pain	Tuber decoction alterative, diuretic, blood purifier; heated root powder applied on cuts and fractures
<i>Cissus quadrangularis</i> L.	Vitaceae	Lepang	Leaves	Leaf paste applied externally in bone fracture after setting for seven days; leaf extract in dysentery	Root and young leaves alterative, stomachic; powdered form in digestive trouble; stem juice to regularise menstruation
<i>Citrus reticulata</i> Blanco	Rutaceae	Kamala	Roots	As in <i>Ananus comosus</i>	Fruits laxative, aphrodisiac, astringent and tonic; flowers stimulant; fruit juice used to dissolve a kind of seashell and drink in malarial fever
<i>Clerodendrum paniculatum</i> L.	Verbenaceae	Boie	Leaves	Diluted leaf paste taken orally during fever	Leaf paste diluted in water used for washing ulcers
<i>Clerodendrum viscosum</i> Vent.	Verbenaceae	Bhait	Roots	Pills from root paste and garlic taken orally in vocal cord trouble; decoction from leaf paste with mixture of zinger & sugar taken internally in dysentery	Roots and leaves used in skin diseases & tumours; leaves in malaria and sprouts in snakebite

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<i>Corchorus capsularis</i> L.	Tiliaceae	Pait	Seeds	Dried seed powder ( $\pm 10$ g) apply locally everyday, till it cures, in black sore disease of bovines	Leaf infusion used as demulcent and stomachic, stimulant, appetizer and against dysentery, fever, etc.
<i>Croton caudatus</i> Geis.	Euphorbiaceae	Jiron	Leaves	Leaves used for making cake for fermenting rice for rice beer	Roots used in constipation; tender root in cholera; leaf poultice in sprain
<i>Curcuma aromatica</i> Salisb.	Zingiberaceae	Blong karma	Rhizome	Fresh rhizome ( $\pm 20$ g) along with molasses taken in empty stomach for 7 days to treat stomach and liver ailments	Rhizome is tonic, carminative; externally used in sprain and wounds; powder anthelmintic; oil useful in cervix cancer; purifies blood
<i>Cuscuta reflexa</i> Roxb.	Cuscutaceae	Banalata	Stem	$\pm 10$ ml of filtered stem extract taken internally for 7 days in jaundice	Seeds carminative, alterative, anthelm-intic; plant used externally as itch and internally in protracted fever
<i>Cyathula prostrata</i> (L.) Bl.	Amaranthaceae	Samhamori	Leaves	Cold leaf-decoction applied locally with cotton in toothache	Root-decoction used in dysentery at Malaysia; plant used externally in skin complaints
<i>Cymbidium aloifolium</i> (L.) Swartz	Orchidaceae	Khelang	Arial roots	Paste of aerial root applied on broken joints as poultice after setting bones	Plant emetic; used as nutrient and demulcent
<i>Cymbopogon citratus</i> Stapf	Poaceae	Chaimandar	Leaves	$\pm 10$ g of hot decoction taken orally twice daily against cough and cold	Oil carminative and used in cholera
<i>Datura stramonium</i> L.	Solanaceae	Dhutra	Leaves	Old women take $\pm 5$ g of leaf paste internally in rheumatism; said to have narcotic properties	Leaves and seeds antispasmodic, anodyne & narcotic; fruits sedative; leaves applied to boils, sore and fish bites; fruit juice check dandruff and hair loss
<i>Dillenia indica</i> L.	Dilleniaceae	Thaifloy	Fruits	Crushed fruit with chilli and salt taken to treat cough; unripe fruits used against diarrhoea	Fruits tonic, laxative and used in abdominal pain; bark & leaves astringent
<i>Dioscorea bulbifera</i> L.	Dioscoreaceae	Rangrang	Tuber	Small pieces of tuber boiled and taken with salt and chilli to maintain good health	Tubers used in piles, dysentery, syphilis and ulcers

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<i>Eclipta prostrata</i> (L.) L.	Asteraceae	Pofli	Leaves	Leaf paste applied on fresh wounds to stop bleeding and healing	Plant used in headache; leaf juice taken in jaundice and fever; also used to treat intestinal parasite, asthma and anaemia
<i>Euphorbia ligularia</i> Roxb.	Euphorbiaceae	Siblatha	Leaves	± 2 teaspoonful of juice from heated leaves (over flame) taken orally in hoping cough	Stem latex used as expectorant; root juice used in scorpion sting and snake bite
<i>Ficus hispida</i> L.	Moraceae	Thaichuwath- iai	Hypentho- dia	2 – 3 fresh figs crushed and taken with common salt twice daily in mild cough	Figs, seeds & bark purgative, emetic, tonic, lactagogue etc.
<i>Flacourtia indica</i> (Burm.f.) Merrill	Flacourtiaceae	Lukluki	Leaves	Leaf paste applied over carbuncle to release pus and to cure	Fruits used in jaundice and enlarged spleen; gum used against cholera
<i>Grewia nervosa</i> (Lour.) Panigrahi	Tiliaceae	Lamaku	Bark	Bark extract with little water applied locally in toothache	Root decoction taken orally during cough in Indochina
<i>Hibiscus rosa-sinensis</i> L.	Malvaceae	Uribli	Leaves, Flowers, Roots	Leaves and flowers together mixed into paste, applied to cuts to stop bleeding; leaf extract taken orally in malaria	Roots useful in fever and cough; buds useful in vaginal and uterine discharges
<i>Holarrhena pubescens</i> (Buch-Ham.) Wall.	Apocynaceae	Damegla	Bark	Diluted bark extract taken orally, 2 teaspoonful thrice daily to express suppressed measles	Bark used in dysentery; seeds astringent and febrifuge
<i>Homalonema aromatica</i> (Roxb.) Schott	Araceae	Kamaitru	Rhizome Petioles	Diluted rhizome extract applied to eyes in drops to clear white spot on eyeballs; petiole used for good health	Essential oil from aromatic rhizome is stimulant; plant used in skin trouble
<i>Jatropha curcas</i> L.	Euphorbiaceae	Moiram	Young stem	Sap from young stem applied on fresh cuts to stop bleeding and as antimicrobial agent	Plant juice useful in eczema, scabies and ringworm; twigs used as tooth-brush
<i>Justicia adhatoda</i> L.	Acanthaceae	Asuamfang	Roots Leaves	± 40 ml of cold decoction of roots taken orally during pneumonia; fresh juice used in cough & cold	Leaves, roots & flowers used in cough & cold, bronchitis, asthma, tuberculosis of lungs and rheumatism

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<i>Justicia betonica</i> L.	Acanthaceae	Yosrem	Leaves	Leaf paste applied locally on abscesses twice daily till it dries up; has antimicrobial activity	Plants used in boils, swelling and diarrhoea
<i>Kaempferia rotunda</i> L.	Zingiberaceae	Khuntowia	Rhizome	Fresh rhizome and black zinger pounded together into paste, applied on chest during acute chest pain	Roots stomachic, reduce swelling; rhizome paste applied on mumps; plant powder used in wounds
<i>Kalanchoe pinnata</i> (Lamk.) Persoon	Crassulaceae	Jihor	Leaves	± 20 ml leaf extract taken orally, thrice daily in respiratory trouble till cured	Roasted leaves applied to bruises, boils and bites of poisonous insects
<i>Lagerstroemia regine</i> Roxb.	Lythraceae	Singshree	Bark	Decoction of fresh buds used as mouthwash to clean tongue during fever	Seeds narcotic; bark purgative; roots astringent; leaves used in diabetes
<i>Lygodium flexuosum</i> (L.) Swartz	Schizaeaceae	Duareng	Whole plant	Leaf-rachis tied on hand to keep away evil spirits and tied to forehead to reduce headache	Plant used as expectorant; roots used in carbuncle, scabies, rheumatism, ulcers, eczema, cuts and wounds
<i>Mangifera indica</i> L.	Anacardiaceae	Aam	Bark	20 ml of bark or leaf extract taken orally twice daily in dysentery	Leaves used in scorpion stings; fruits in haemorrhage from uterus, ophthalmia & eruptions
<i>Melastoma malabathricum</i> L.	Melastomataceae	Taingrong	Stem	Freshly cut stem used as toothbrush	Leaves used in diarrhoea, dysentery & leucorrhoea
<i>Mentha arvensis</i> L.	Lamiaceae	Khumbabow	Leaves	Paste of leaves & <i>Piper nigrum</i> fruits diluted to double its content and decanted; decoction taken internally thrice daily in asthma	Dried plant anti-spasmodic, stimulant, carminative, stomachic, diuretic, etc.
<i>Mesua ferrea</i> L.	Clusiaceae	Khersai	Seeds	Seed paste used for massaging in excess body-ache	Flowers astringent, stomachic and used in cough; flower buds cure dysentery; leaves used in scorpion stings
<i>Merremia umbellata</i> (L.) Rallier	Convolvulaceae	Gairamrang	Leaves	Diluted leaf paste taken orally thrice daily in dysentery till it cures	Seeds used in medicine
<i>Michelia champaca</i> L.	Magnoliaceae	Champa	Seeds	±10 g of seed powder mixed in cold water, taken in empty stomach for 7 days in jaundice	Bark febrifuge, astringent, stimulant & expectorant; flowers & fruits used as tonic and antiseptic

<b>Botanical name</b>	<b>Family</b>	<b>Local name</b>	<b>Plant parts used</b>	<b>Purpose of use by Reangs</b>	<b>Established reports of use</b>
<i>Mikania micrantha</i> Kunth	Asteraceae	Santhaloma	Leaves Stem	Leaf extract antiseptic, applied to cuts to stop bleeding; applied on forehead in headache	Plant used in snakebite; leaves used in etches in different countries
<i>Momordica charantia</i> L.	Cucurbitaceae	Kangla	Leaves	±20 ml of diluted leaf paste taken as hypothermic in high fever	Fruits tonic, carminative, used in internally rheumatism, dysentery, etc.; used for healing wounds in Syria
<i>Morus australis</i> Poir.	Moraceae	Mukhoiya-ngfa	Fruits	Ripe fruits taken for better stomach function; unripe fruits cause stomach ache	Fruits laxative; bark anthelmintic; gargle with leaf decoction in inflammation of vocal cord
<i>Murraya koenigii</i> (L.) Sprengel	Rutaceae	Santaukhi	Roots	Root paste made into tablets; 1 tablet taken thrice daily in stomach-ache & dyspepsia till it cured	Leaves, roots & bark used as tonic and carminative; bark & roots used it bites of poisonous animals; root juice taken orally in renal pain
<i>Musa paradisiaca</i> L.	Musaceae	Haili	Pseudo-stem	±40 ml pseudo-stem extract taken internally thrice daily against mild dysentery	Roots anthelmintic; flowers astringent; juice of pseudo-stem used in otalgia & haemoptysis; fruits used in intestinal disorder
<i>Mussaenda roxburghii</i> Hook.f.	Rubiaceae	—		Root paste diluted in water and decanted; ±20 ml decoction taken orally thrice daily in cholera	Root & bark powder diluted and taken in mouth ulcers and to improve appetite; leaf juice applied to cuts & wounds
<i>Ocimum bacilicum</i> L.	Lamiaceae	Tulasisom	Leaves	±10 ml of leaf juice taken orally during stomach pain	Leaf juice used as nasal douche and for ringworm; seeds given in gonorrhoea, dysentery & diarrhoea; flowers diuretic, stimulant etc.
<i>Ocimum gratissimum</i> L.	Lamiaceae	Khumbabow	Leaves	±10 ml of leaf extract diluted with and decanted; taken internally in cough & cold and in stomach pain	Leaf decoction used in fumigation for water rheumatism and paralysis
<i>Oroxylum indicum</i> (L.) Vent.	Bignoniaceae	Thaukharung	Bark	Aqueous bark extract applied locally on fresh wounds as antiseptic and in eczema	Root & Stem bark used in rheumatism; seeds purgative; stem bark powder used in cuts & burns; leaf-decoction given in stomach-ache; stem-bark decoction used for contraction of uterus during delivery

## 70 Additional medicinal uses of some known medicinal plants

Botanical name	Family	Local name	Plant parts used	Purpose of use by Reangs	Established reports of use
<i>Pajanelia longifolia</i> (Willd.) Schum.	Bignoniaceae	Kharung	Bark	Bark paste applied locally on mad-dog bites thrice daily for 7 days	Stem bark contains alkaloid Pajaneelin
<i>Phyllanthus emblica</i> L.	Euphorbiaceae	Amlai	Leaves Fruits	±10 ml of diluted leaf extract given twice daily against stomach-ache & constipation	Used in fever, vomiting, indigestion, constipation etc; good source of Vit-C; fruits blood purifier
<i>Persicaria orientalis</i> (L.) Spach.	Polygonaceae	Biskatalai	Whole	Plant extract of black variety added in pond water as slow poison for fishes; little amount of extract of yellow variety can relieve dry cough	The plant is used as a good tonic and plant vulnerary
<i>Piper betle</i> L.	Piperaceae	Fathoi	Petiole	Small pieces of petiole mixed with dead housefly, inserted in a small copper tube, sealed with wax and tied arm in sleeping sickness	Leaves used in snakebite, night blindness, cerebral congestion; fruits used in cough; roots along with bark used to produce to sterility in women
<i>Piper nigrum</i> L.	Piperaceae	Jatmori	Fruits	Dry fruit powder mixed with extract of <i>Ocimum basilicum</i> & <i>O. tenuiflorum</i> taken with sugar twice daily against cough & cold	Fruits used in cholera, malaria, dyspepsia, weakness following fever; externally used in piles and skin diseases
<i>Pithecellobium heterophyllum</i> (Roxb.) Benth.	Mimosaceae	Samtawkhi	Leaves	For jaundice leaves boiled and cooled, few drops of decoction taken in empty stomach, give bath once a day with this	Leaves used as poultice in swellings, chicken & small pox; leaf ash mixed in coconut oil used in skin problems
<i>Plumbago zeylanica</i> L.	Plumbaginaceae	Agunsita	Leaves	Prepared fish curry with tender leaves and taken with rice in rheumatism	Roots used in skin disease, leprosy, piles, diarrhoea; leaf paste used for curing abscesses
<i>Plumeria rubra</i> L.	Apocynaceae	Sichu	Bark	± 10 g bark paste dissolved in a cup of water and decanted; decoction taken orally twice daily in dysentery and stomach-ache	Latex used in toothache, itches & rheumatism; flowers used as pectoral syrup; root & bark used in menorrhagia in Guiana; bark stimulant & purgative
<i>Portulaca quadrifida</i> L.	Portulacaceae	Khumcho-wma	Leaves	Decoction of diluted leaf paste taken internally during congestion of lungs and in chest pain	Plant used in cough, asthma, urinary discharge, inflammation and ulcers; plant applied as poultice in haemorrhoids

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<i>Prunella vulgaris</i> L.	Lamiaceae	Lamaku	Bark	Concentrated bark extract applied locally against toothache	Plant is anti-spasmodic, expectorant, alterative, tonic and used in fever and cough
<i>Psidium guajava</i> L.	Myrtaceae	Giang	Leaves Roots	Decoction of tender leaves used as gurgle in pyorrhoea; also useful in diarrhoea; pills from root paste taken orally during fever	Roots used in diarrhoea; fruits in colic and bleeding gum; leaf decoction in cholera and to check vomiting in diarrhoea
<i>Pteris ensiformis</i> Burm.	Pteridaceae	Jobamfang	Fronde	Fronde-paste applied locally joint swelling till it cured	Decoction of fresh fronds given in dysentery; rhizome juice applied for glandular swelling at neck
<i>Rhus chinensis</i> Miller	Anacardiaceae	Dounibli	Leaves	Leaf paste applied on cuts for blood clotting and as antiseptic ; leaf-poultice on carbuncle to reduce pain	Galls used for dying and as astringent and expectorant; prevents swelling of wounds; fruits edible and used in colic and dysentery
<i>Rhynchostylis retusa</i> (L.) Blume	Orchidaceae	Sibraimyfy	Leaves	Leaf extract used as gurgle in acute pyorrhoea	Plant used as emollient
<i>Ricinus communis</i> L.	Euphorbiaceae	Moirma	Bark	Bark extract applied locally for 7 days in vagina within three months of conception for abortion	Leaves used in headache, boils, etc. Roots carminative, purgative and useful in leprosy
<i>Saccharum officinarum</i> L.	Poaceae	Kruksom	Stem	Slightly warm stem juice taken orally as anti-blood coagulant	Stem laxative, diuretic, coolant and aphrodisiac; root used as coolant, demulcent and diuretic
<i>Scoparia dulcis</i> L.	Scrophulariaceae	Burahaganja	Leaves	± 20 ml of leaf decoction mixed with sugar taken orally in rheumatism till it cured	Plant used in kidney problem, diabetes, anaemia, albuminuria, keto-nurea, retinitis, etc.
<i>Sida rhomboidifolia</i> L.	Malvaceae	Bonisuo	Leaves	Leaf paste applied locally on fresh wounds for instant blood coagulation	Plants used for skin troubles, swellings; roots used for tuberculosis & rheumatism in Europe
<i>Solanum anguivi</i> Lamk.	Solanaceae	Kamchacte	Leaves	Leaf used in making starter mixture to prepare local rice beer	Roots used in asthma, cough, colic, toothache and fever; leaf juice stops vomiting; fruits digestive

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<i>Solanum torvum</i> Swartz	Solanaceae	Khangka	Roots	Supernatant of diluted root paste taken internally in gastric problems	Plants useful in cough, also as sedative, diuretic and digestive; roots used in foot-crack
<i>Solena amplexicaulis</i> (Lamk.) Gandhi [ <i>Melothria heterophylla</i> (Lour.) Cognx.]	Cucurbitaceae	Dupoitha	Roots	Root decoction taken orally thrice a day for 7 days to get relieved from urinary trouble and blockage	Root decoction with cumin and sugar in cold milk used as a remedy for spermatorrhoea
<i>Spilanthes paniculata</i> DC.	Asteraceae	Ushmui	Leaves	Large amount of leaf paste added in water to intoxicate fishes for catching them easily	Capitula used in toothache, paralysis, stammering and also as mosquito larvicide; plant used in dysentery
<i>Syzygium cumini</i> (L.) Skeels.	Myrtaceae	Chambu	Bark	± 10 ml of bark or fruit extract to check excess mucus in stool	Decoction of bark & seeds used in diabetes and as mouthwash and gurgle
<i>Tamarindus indica</i> L.	Caesalpiniaceae	Taintai	Roots	Pills prepared from root paste taken orally during typhoid	Fruits refrigerant, digestive, carminative and laxative
<i>Thunbergia grandiflora</i> (Roxb. ex Rotbl.) Roxb.	Acanthaceae	Mukrafaiko	Leaves Stem	Leaf extract applied to eyes in conjunctivitis; cut out single internode used as pipe to blow air for remedy of troubled eye	Leaf decoction given in stomach trouble
<i>Thysanolenia latifolia</i> (Roxb. ex Horrem.) Honda [T. <i>maxima</i> (Roxb) O. Kuntze]	Poaceae	Neeusi	Leaves	Leaf paste applied to cuts for clotting blood and as antiseptic	Juice of young stem applied to red and dirty eyes
<i>Tinospora cordifolia</i> (Willd.) Hook.f. & Thoms.	Menispermaceae	Duboei	Stem	Decoction of stem taken orally during dysentery	Stem useful in diabetes, leprosy, fever, piles, gonorrhoea, jaundice and also for blood purification
<i>Tournefortia montana</i> Lour. var. <i>griffithii</i> (Cl.) John	Boraginaceae	Pamomle-nima	Leaves	Leaf extract applied on cuts for clotting blood instantly and as antiseptic	Root infusion employed to bathe convalescing babies
<i>Urena lobata</i> L.	Malvaceae	Santhi	Roots	± 10 ml of decoction taken orally to reduce thirst during fever	Plant used in rheumatism, flatulent colic; flowers used as expectorant

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<i>Zanthoxylum armatum</i> DC.	Rutaceae	Chaingslong	Roots	Pills prepared from root paste taken orally during gastric pain	Fruits aromatic, used in gastrointestinal problems, a tonic and carminative
<i>Zingiber officinale</i> Rosc.	Zingiberaceae	Hichini	Rhizome	Rhizome extract mixed with cardamom and cinnamon taken orally during headache	Rhizome used for flavouring food; also a digestive and used in headache
<i>Zingiber purpureum</i> Rosc. [= <i>Z. cassumunar</i> Roxb.]	Zingiberaceae	Brintaukru	Rhizome	Warmed decoction of rhizome taken orally against cough & cold	Rhizome used as stimulant, carminative, flavouring agent; also used in dyspepsia & flatulent colic
<i>Zingiber rubens</i> Roxb.	Zingiberaceae	Brintaukru	Roots	Root paste taken internally to get relief from urinary passage difficulty	Root paste is mixed with other ingredients and used in headache
<i>Zizyphus mauritiana</i> Lamk.	Rhamnaceae	Bruai	Roots	Root paste taken internally in high fever and dysentery	Fruits nutritious, cooling & tonic, used against vomiting and abdominal pain during pregnancy
<i>Zizyphus oenoplia</i> Mill.	Rhamnaceae	Maibrui	Roots	Root extract along with garlic and black pepper taken internally in throat irritation and fever	Bark used for healing fresh wounds; fruits used as stomachic