

Ethno-medico-botanical aspects of *Hmar* tribe of Cachar district, Assam (Part I)

Mautushi Nath & M Dutta Choudhury*

Ethnobotany and Medicinal Plants Research Laboratory, Department of Life Science, Assam University, Silchar 788 011, Assam
E-mail: monishi_dc@writeme.com

Received 08 September 2008; revised 13 January 2009

The paper deals with medicinal plants used by *Hmar* tribes of Cachar district for the treatment of various diseases. During investigation, 60 species of medicinal plants belonging to Rutaceae, Liliaceae, Meliaceae, Apocynaceae, Leguminosae, Solanaceae, Acanthaceae families have been collected. Collected plants are mostly used for the treatment of skin disease, toothache, cuts, wounds, stool problem, gastro-intestinal problem, high blood pressure, diabetes, menstrual problem, dysentery, jaundice, asthma, rheumatism, etc. Collected plants are enumerated providing correct nomenclature, vernacular name, and part(s) used. Of 60 plants, medicinal utility of only one plant is reported as new and for 46 plants additional medicinal utility have been recorded.

Keywords: Ethnomedicine, *Hmar* tribe, Medicinal plants, Assam

IPC Int. Cl.⁸: A61K36/00, A61P1/02, A61P1/08, A61P1/14, A61P1/16, A61P9/14, A61P13/00, A61P15/00, A61P19/00, A61P29/00, A61P35/00, A61P39/02

India in general and Northeastern region in particular is the treasure Island for ethnobotanical researches. Its diversity in genomic components, diversity in languages, diversity in religion and above all diversity in cultural heritage have made the subcontinent a prospective field for ethnobotanical study. Out of the total tribes and sub-tribes inhabiting the Northeastern region, probably the *Hmar* tribe is the most advance one so far as urbanization and education are concerned. They are the hill dwellers and live the States of Manipur, Assam, Mizoram, Tripura, Meghalaya and Upper Burma. They belong to the kuki-chin linguistic group, which has its origin in *Singlung* in Southwestern China. They are closely related to *Mizo* and *Lusai*. They entered Burma in 1350 AD and then migrated to Thangtlang (Burma) in 1400 AD. In 1450 AD, some of the *Hmar* groups entered Lusai Hills (Mizoram) and settled at a place called Dungtlang Sangthum khuo. This is the first time that the *Hmar* entered Northeast India. After that, some *Hmar* people entered Manipur in 1600 AD. Like other tribes, the *Hmar* people were also divided into several clans. Among them, the two clans viz. *Leiri* and *Aimol* left the other clan in Manipur and entered Cachar District of Assam in 1609 AD permanently settled in various part of Cachar district.

In Cachar district, there are 99 *Hmar* villages with about 36,684 population. In Northeastern region, most of the *Hmar* belong to Christian religion. The *Hmar* economy is mainly based on agriculture practicing primitive shifting or *jhum* cultivation. They also depend on nature for their food items and housing materials. Besides these, the *Hmar* people are also engaged in hunting, weaving, cane and bamboo works. Generally, the *Hmar* built their houses on stilts of wooden posts. The floor and the walls are made of split bamboo, and the roof is thatched. The weaving was one of the important activity in *Hmar* society. The *Hmar* economy is mainly based on agriculture and the main agricultural crop is rice which is their staple food. Some illustrious books on medicinal plants in addition to research reports in Indian ethnomedicine are available¹⁻¹⁹. Some research has been done on *Hmar* tribes, but all these works are related to socio-cultural aspects only²⁰⁻²³. Ethno-medico-botanical aspects of *Hmar* tribe as a whole has remained unexplored.

Methodology

Intensive fieldwork was undertaken covering all the seasons of the year in Hmarkhawlien, DigerFulertal, Lobonkhal, Poilapool and other villages for gathering information on each & every species used by the *Hmar* tribe. The Information of

*Corresponding author

medicinal plants have been collected from *Hmar* people by words of mouth and also by personal observation. Plants have been collected in their flowering and fruiting stages as far as possible from the natural habitat. Standard ethnobotanical methodology was followed during collection of information on medico-botanical aspects²⁴. Data on plant specimen includes vernacular name, parts used, doses & mode of application. Collected specimen were dried, mounted and identified.

Results and discussion

Sixty plant species of medicinal plants collected have been enumerated with their correct nomenclature, vernacular names, parts used, and uses (Table 1). While conducting field survey it has been observed that common diseases amongst *Hmar* population are piles, blood pressure, cancer, dysentery, blood sugar, jaundice, skin diseases, asthma, rheumatism, etc. Out of 60 plants identified, one plant each is used for the treatment of piles and

Table 1—Medicinal uses of some medicinal plants from *Hmar* villages

Plants/vernacular names	Family	Mode of uses
<i>Adhatoda vasica</i> Nees. <i>Basok</i>	Acanthaceae	Leaf juice is taken to cure dysentery and cough.
<i>Aegle marmelos</i> L. <i>Belthei</i>	Rutaceae	Fruit juice is taken to cure dysentery.
<i>Albizia lebbek</i> (L.) Benth <i>Kamatrak</i>	Meliaceae	Bark powder is spread over the slow moving stream as fish poison to catch fish.
<i>Aloe vera</i> (L.) Burm. <i>Elongera</i>	Liliaceae	Leaf juice mixed with cow's milk and whisky is taken to remove stomach pain and also applied on face to cure the black spot. Leaf paste is applied to heal cuts and itching problem.
<i>Allium cepa</i> L. <i>Purunsen</i>	Liliaceae	Bulb juice is warmed and taken twice a day for menstrual trouble.
<i>Allium sativum</i> L. <i>Purunvar</i>	Liliaceae	One piece of bulb is to get relief from gastro-intestinal problem.
<i>Alstonia scholaris</i> (L.) R.Br. <i>Chawngpereng</i>	Apocynaceae	Stem latex is locally applied over the disease part of the skin and also applied on all sides of boils. Leaf juice is injected inside the body against snakebite.
<i>Ananas comosus</i> L. <i>Rengtheite dawng</i>	Bromeliaceae	Unripe fruit juice is taken for regular menstruation and abortion.
<i>Andrographis paniculata</i> (Burm.f.) Wall. <i>Chirata hna</i>	Gentianaceae	Leaf soaked in water overnight and in the morning, water is taken to cure stomachache and fever. It is also taken to destroy tapeworm.
<i>Averrhoa carambola</i> L. <i>Thaiherot</i>	Oxalidaceae	Fruit juice is taken to cure liver troubles. Little drops of fruit juice are applied on eyes to cure redness or eye troubles. Ripe fruit juice is taken to cure jaundice.
<i>Azadirachta indica</i> A. Juss <i>Neem</i>	Meliaceae	Leaves are taken or leaf juice is applied to cure smallpox. Leaves are boiled for few minutes and when taken bath in it relieves itching and skin allergy problem.
<i>Cajanus cajan</i> L. <i>Betlineng</i>	Leguminosae	Leaf juice is given to cure jaundice.
<i>Calotropis procera</i> (Air.) R. Br. <i>Akanhna</i>	Asclepiadaceae	Latex of the stem is applied on abscess.
<i>Cannabis sativa</i> L. <i>Nganja</i>	Cannabinaceae	Leaf juice is given to hens, dogs to remove weakness.
<i>Carica papaya</i> L. <i>Thingfenghna</i>	Caricaceae	Fruit sap is used to cure dog bite. Leaf juice is taken to cure jaundice.
<i>Centella asiatica</i> L. <i>Lambak</i>	Apiaceae	Leaf juice is used for dysentery.
<i>Chromolaena odorata</i> (L.) R.King. <i>Thlobuong</i>	Asteraceae	Leaf juice is applied on cutting spot.
<i>Cinnamomum tamala</i> (Buch-Ham) <i>Tejpata</i>	Lauraceae	Leaves are soaked in water overnight; in the morning, water is taken to control blood sugar.
<i>Citrus aurantifolia</i> (Chrstr.) Sw. <i>Serhna hring</i>	Rutaceae	Leaf juice is applied inside the nose to check bleeding. Prickle can be used when the boil has suppured.
<i>Clausena heptaphylla</i> (Roxb.) <i>Champara</i>	Rutaceae	Fruit juice is used for curing kidney problem and for removing kidney stone.

Table 1—Medicinal uses of some medicinal plants from *Hmar* villages — *Contd.*

Plants/vernacular names	Family	Mode of uses
<i>Clerodendrum viscosum</i> Vent. <i>Phuibimhna</i>	Verbenaceae	Leaf paste is applied on cuts and wounds for immediate healing.
<i>Clerodendrum colebrookianum</i> Walp. <i>Anphui</i>	Verbenaceae	Leaf juice after heating is used against high blood pressure.
<i>Curcuma domestica</i> Salisb. <i>Aieng</i>	Zingiberaceae	Rhizome powder mixed with water is taken to cure liver problem.
<i>Cynodon dactylon</i> L. <i>Thlo</i>	Graminaceae	Leaf juice is used in cuts as antiseptic.
<i>Datura stramonium</i> L. <i>Invetpar</i>	Solanaceae	Boiled leaves are smoked to get relief from asthma. Leaf paste is applied externally on rheumatism.
<i>Datura metel</i> L. <i>Invetpar</i>	Solanaceae	Boiled leaves are smoked as a remedy for asthma. Leaf paste is applied externally on rheumatism.
<i>Dillenia indica</i> L. <i>Ailang</i>	Dilleniaceae	Juice of the fruits is taken to cure dysentery problem.
<i>Emblica officinalis</i> Gaertn. <i>Sunhlu</i>	Euphorbiac-eae	Boiling fruit juice is taken to cure gastric problem and vomiting tendency. Fruit extract is also applied to prevent hair fall.
<i>Euphorbia niruri</i> (L.) <i>Sunlunoith-um</i>	Euphorbiac-eae	Whole plant decoction is taken for jaundice and when liver is extended.
<i>Hibiscus rosa-sinensis</i> L. <i>Reibalsen</i>	Malvaceae	Leaf juice is applied externally on cuts and abscess. Flower paste is applied on hand to cure scurf.
<i>Jatropha curcas</i> L. <i>Mutmaleng</i>	Euphorbiaceae	Stem latex is applied on teeth for curing toothache problem. Leaf paste is applied on burnt spot to cure burning sensation.
<i>Justicia gendarussa</i> Burm.f. <i>Hlothing</i>	Acanthaceae	Leaf paste is applied externally on cuts.
<i>Lawsonia inermis</i> L. <i>Mehendi</i>	Lythraceae	Leaf juice is applied on head for removing dandruff and in wounds for healing.
<i>Leucas aspera</i> L. <i>Sairam</i>	Lamiaceae	Leaf paste is applied for removing dandruff.
<i>Mangifera indica</i> L. <i>Theihai kung</i>	Anacardiaceae	Dried bark decoction is taken to cure dysentery.
<i>Melastoma malabathrium</i> L. <i>Hmurkuong</i>	Melastomaceae	Boiling leaf juice is taken for diabetes. Stem, bark, root can also be used.
<i>Mentha arvensis</i> L. <i>Pudina</i>	Lamiaceae	Leaf juice is taken for stomachache ailments and is also used as ear drop.
<i>Mikania micrantha</i> Kunth. <i>Hlothar</i>	Asteraceae	Leaf juice is applied in cutting spot and allergy and also taken to cure piles.
<i>Mimosa pudica</i> L. <i>Hlonuor zung</i>	Mimosaceae	Root paste is applied on teeth for curing toothache.
<i>Momordica charantia</i> L. <i>Chankha</i>	Cucurbitaceae	Leaf decoction is taken for reducing high blood pressure.
<i>Moringa oleifera</i> Lam. <i>Daingul</i>	Moringaceae	Bark paste is applied on bone and tied tightly with the help of a cloth to relief bone fracture and bone pain. Tender stem is useful for stomach pain.
<i>Opuntia dillenii</i> Haw. <i>Kata kung</i>	Cactaceae	Plant warmed above fire is rubbed against insects bite and snakebite.
<i>Oxalis corniculata</i> L. <i>Inrainuthei</i>	Oxalidace	Powdered root is applied on teeth to cure toothache.
<i>Piper betle</i> L. <i>Pan</i>	Piperaceae	Leaf juice is applied externally on cuts and also against scorpion sting.
<i>Piper nigrum</i> L. <i>Hmarcha-inhlum</i>	Piperaceae	Fruit powder is useful for cough, throat pain or throat troubles.
<i>Polygonum orientale</i> L. <i>Mirongru</i>	Polygoniaceae	By spreading whole plant powder on water, fish can be easily caught.
<i>Psidium guajava</i> L. <i>Kawlthuzik</i>	Myrtaceae	Leaf juice is used to cure dysentery and tender leaf juice for abdominal pain.
<i>Punica granatum</i> L. <i>Thaebufai</i>	Punicaceae	Leaf twigs extract is taken to cure gastric problem and dysentery.

Contd. —

Table 1—Medicinal uses of some medicinal plants from Hmar villages — Contd.

Plants/vernacular names	Family	Mode of uses
<i>Ricinus communis</i> L. Muthi	Euphorbiaceae	Leaf juice is taken for curing stool problem.
<i>Saccharum officinarum</i> L. Mafu	Poaceae	Stem juice is taken to cure jaundice and liver troubles.
<i>Scoparia dulcis</i> L. Khuongabaihlo	Scrophulariaceae	Whole plant past is taken with water in case of diabetes.
<i>Solanum indicum</i> Tawkrakur	Solanaceae	Fruit is boiled with mustard oil and tightly tied with a piece of cloth just below ear or cheek to cure toothache.
<i>Solanum torvum</i> Sw. Samtawkte	Solanaceae	Fruit paste is applied locally on abscess.
<i>Spilanthes paniculata</i> wall.ex.Dc Ansate	Asteraceae	Leaf decoction is taken to get relief from smallworm.
<i>Tabernaemontana divaricata</i> (L)Br. Pararsi	Apocynaceae	Juice extracted from leaf twigs is taken as a remedy for cancer, when it is in preliminary stage.
<i>Tamarindus indica</i> L. Simkerlet	Caesalpiniaceae	Half portion of seed warmed above fire is rubbed against snakebite and dog bite.
<i>Terminalia arjuna</i> (Roxb.)Wight. Arjun	Combretaceae	Bark is soaked in water for one night; water is given to cure stomach problem. Dry bark powder boiled with water is taken to get relief from cardiac ailments.
<i>Thunbergia grandiflora</i> (Roxb.ex Rottl.)Roxb. Vaakhrui	Thunbergiaceae	Watery juice obtained from node inter-node part is applied locally on eyes for treating conjunctivitis.
<i>Urena lobata</i> L. Vawkpuhmer-kawl	Malvaceae	Root powder mixed with rice water or plain water is taken for the treatment of hyperacidity and dysentery. Stem is also used as tooth brush.
<i>Zingiber officinale</i> Rosc. Aithing	Zingiberaceae	Rhizome juice is taken to cure cough. Leaf paste is applied to reduce inflammation.

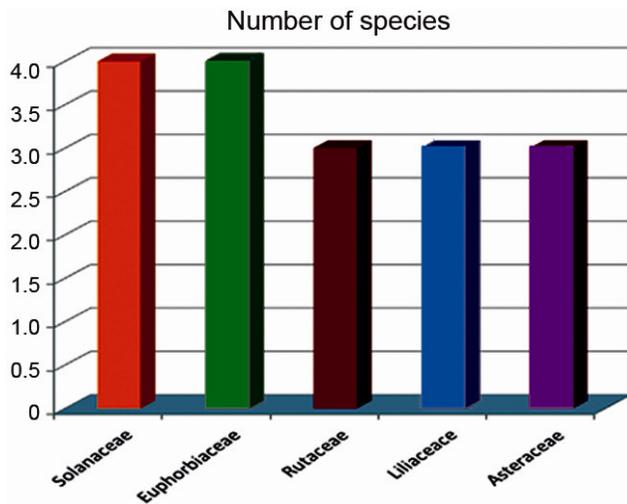


Fig. 1— Dominant families with number of species

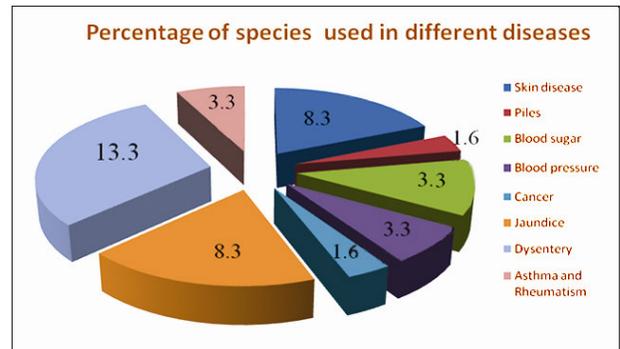


Fig. 2 Percentage of species used in diseases

Uses	Total no of species	Percentage
Skin disease	5	8.3
Piles	1	1.6
Blood Sugar	3	5
Blood pressure	2	3.3
Cancer	1	1.6
Jaundice	5	8.3
Dysentery	8	13.3
Asthma & rheumatism	2	3.3

cancer, 3 plants for the treatment of blood sugar, 5 for treating skin diseases, 2 for the treatment of asthma and rheumatism, 8 plants for treating dysentery, etc. Solanaceae and Euphorbiaceae are the major families with 4 numbers of species used by Hmar tribe as medicine (Fig. 1). Only one plant species, *Thunbergia grandiflora* is reported as new medicinal plant. For 46 medicinal plants, additional utility have been recorded. Interestingly, it has been seen that 13.3% of the plants are used for treating dysentery and 8.3% of the plants are used for treating skin diseases and hepatitis or jaundice (Table 2, Fig. 2).

References

- 1 Bhattacharjee S, Tiwari KC, Majumdar R & Misra AK, *Folk-lore medicine from district Kamrup (Assam)*, *Bull Medicoethnobot Res*, 1 (1980) 447-460.
- 2 Boissya CK & Majumdar R, Some folk-lore claim from the Brahmaputra Valley, Assam, *Ethnobotany*, 6 (1980) 139.
- 3 Borthakur SK, Less-known medicinal uses of plants among the tribals of Mikir hills, *Bull Bot Surv India*, 18 (1976) 166-171.
- 4 Borthakur SK, Certain plants in folk-lore and folk-life of *Karbhis (Mikirs)* of Assam, In: *Glimpses of India Ethnobotany*, edited by Jain SK, (Oxford & IBH Publishing Co, New Delhi), 1981, 170-181.
- 5 Dutta Choudhury M, Ethno-medico-botanical aspect of *Reang* tribe of Assam, PhD Thesis, (Gauhati University, Guwahati, Assam), 1999.
- 6 Dutta Choudhury M & Choudhury S, Ethno-medico-botanical aspects of *Reang* tribe of Assam, Part- II, New ethnomedicinal plants, In: *Biodiversity of Assam and its Conservation*, edited by Bhattacharya MK, (Today & Tomorrow's Printers & Publishers, New Delhi), 2002.
- 7 Gogoi P & Boissya CL, Information about a few herbal medicines used by people of Assam (India) against jaundice, *Himal Div*, 2 (1984) 41-44.
- 8 Gogoi Pushpadhar, Orchids in Culture and Medicine, Potentialities of Orchid cultivation and commerce in Assam, In: *International Festival of Orchids*, edited by Hegde N, (Orchid Society of Arunachal Pradesh), (1998).
- 9 Jain SK & Dam N, Some Ethnobotanical notes from Northeastern India, *Econ Bot*, 33 (1979) 52-56.
- 10 Kumar Y, Haridasan K & Rao RP, Ethnobotanical notes on certain medicinal plants among some *Garo* people around Balphakram Sanctuary in Meghalaya, *Bull Bot Surv India*, 22 (1980) 161-165.
- 11 Kumar Y, Faney S & Rao RR, Further contribution to the ethnobotany of Meghalaya, plants used by *Jaintia* of Jaintia Hills district, *J Econ Tax Bot*, 5 (1987) 841-843.
- 12 Kumar S, *The Medicinal Plants of Northeast India*, (Scientific Publishers, Jodhpur), 2002.
- 13 Nayar MP, Ramamurthy K & Agarwal VS, *Economic Plants of India*, (BSI, Hawrah), 1989.
- 14 Rao RR & Neogi B, Observation on Ethnobotany of the *Khasi* and *Garo* tribes in Meghalaya, *J Econ Tax Bot*, 1 (1980) 157-162.
- 15 Rawat MS & Chowdhury S, *Ethno-medico-botany of Arunachal Pradesh (Nishi and Apatani tribes)*, (Bishen Singh Mahendra Pal Singh, Dehradun), 1998.
- 16 Tarafdar CR, Some traditional knowledge about tribal health, *Folklore*, 28 (1987) 37-42.
- 17 Tiwari KC, Majumdar R & Bhattacharjee S, Folklore medicine from Assam and Arunachal Pradesh (district Tirap), *Int J Crude Drug Res*, 17 (1979) 61-67.
- 18 Tiwari KC, Majumdar R & Bhattacharjee S, Folk claims on medicines and treatments from Assam, *Bull Medicoethnobot Res*, 1 (1980) 166-178.
- 19 Tiwari KC, Mazumder R & Bhattacharjee S, Folklore information from Assam for family planning and birth control, *Int J Crude Drug Res*, 20 (1982) 133-137.
- 20 Chakroborty B, Continuity and change in the socio-cultural life of *Hmar* tribe with special reference to the status of women of Assam, MPhil Thesis, (Assam University, Silchar, Assam), 2000.
- 21 Pakhuongte R, *The Power of the Gospel among the Hmar Tribe*, Shillong, Meghalaya, India, 1983.
- 22 Pakhuongte R, *The Power of the Gospel among the Hmar Tribe*, Shillong, Meghalaya, India, 2nd edn, 2005.
- 23 Pudaite R, *The Education of the Hmar people*, (Indo-Burma Pioneer Mission Sielmat, Manipur), 1963.
- 24 Jain SK, *Dictionary of Folk Medicine and Ethnobotany*, (Deep Publications, New Delhi), 1991.