

Some Antipyretic Ethno-medicinal Plants of Manipuri community of Barak Valley, Assam, India

Manabendra Dutta Choudhury, Meenakshi Bawari, L. Shyamali Singha

Department of Life Science, Assam University, Silchar, 788011, Assam, India
Email- monishi_dc@writeme.com; ls09@rediffmail.com

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Abstract

This ethnobotanical survey was carried out to collect the information on the use of some antipyretic activity plants used by Manipuri community of Barak valley, Assam. A total of 26 nos. of antipyretic plant species belonging to 20 families and 23 genera have been recorded through structured questionnaires in consultations with the community practitioners. For curing fever the use of aboveground plant parts was higher (65.38%) than the underground plant parts (15.38%). Of the aboveground plant parts, leaf was used in the majority of cases (13 species), followed by whole plant part (5 species), fruit (1 species), bark (1 species), flower (2 species), root (2 species), and rhizome (2 species), were also found to be in use by the Manipuri community of Barak valley, Assam having antipyretic activity plants. The present paper implies the potential of the traditional knowledge for the mankind. Some of the interesting plants are *Canna indica* L., and *Dactyloctenium aegyptium* (L) P.Beauv.

Key words: Manipuri community, Barak valley, traditional knowledge

Introduction

Fever is associated with liver cell damage, viral infection, cold, cough etc. in our body. In nature there is so many types of plants which has some antipyretic activity are available. It is believed that the herbal medicine is the best one because it has no side effect in our body. Southern Assam is one of the remotest parts of N.E India & is also equally

significant so far as the medicinal plant research is concerned. Many traditional formulating medicines are available here for treating different types of diseases like Hepatitis, cancer, ulcer etc. from generation after generation.

The Barak valley is the southernmost part of the Assam and comprises three districts namely Cachar, Karimganj and Hailakandi. The inhabitants of these areas are Bengali, Hmar, Manipuri, Kuki, Dimasa, and other different types of tribal people. Manipuri is a Mongolian type of community inhabited in 18 villages of these three districts. Many of them still depend on medicinal plants for the treatment of different ailments. But with the modern civilization, their traditional knowledge on medicinal plants are going to be extinct. Some of the works related to the medicinal plants of Barak valley, Assam are Ethno medicinal uses of plants by Manipuri and Barman communities of Cachar district, Assam (Das et al., 2003), Diversity and conservation of medicinal plants in Barak valley, Northeast India (Barbhuiya et al., 2009), Environment ethics in the culture of Meeties from North east India (Singha et al., 2001), Traditional use of medicinal plants by the Jaintia tribes in North Cachar Hills district of Assam, northeast India (Sajem, et al., 2006), Some observations on the status of medicinal plants of Barak valley (Saha, et al., 2003), Economic development of Assam (Bhattācārya 1998) Ethnobotany of Barak Valley (Southern Assam) with special reference to folk medicine (Nath and Maiti, 2003), Flora of Assam Vol. I-IV (Kanjilal, *et al.*, 1934-40) published by the Govt. of Assam, A few Ethnogynaecological Records from the state of Assam' (Gogoi *et al.*, 1979) etc.

Comparatively very less attention has been given by the ethno botanists for exploring the ethnomedicinal resources of the Barak valley, Assam. This survey was done to explore more about the diversity of valuable ethnomedicinal plants of this valley.

Materials and Methods

The field survey was carried out during 2007 to 2008 covering all seasons to collect information on the plants having antipyretic activity used by the Manipuri people inhabited villages of Bibigram, Lakhipur, Jaribond, Moagalpur, Echaper, Katlicherra, Dulabcherra respectively located in the three districts of the Barak valley, Assam.

Plants have been collected in their flowering and fruiting stage as far as possible from the natural habitat. While collecting the individual plant species a thorough observation have been made regarding the location, natural habitat, distribution pattern, nature of roots, tubers, bulbs or rhizomes, etc. Methodologies as suggested by Schultes

(1960 and 1962), Jain (1964, 1967, 1987, 1989) and Ford (1978) have been followed using collection of information on ethnomedicobotanical aspects. The information about the antipyretic plants, have been gathered from the village old men, medicine man, even local men, women and cultivators using semi-structured questionnaires. Data on each plant have been recorded on their family, vernacular name, occurrence and process of utilization by the Manipuri for antipyretic effect.

Specimens were pressed by spraying 10% formaldehyde. Succulent, bulbous and rhizomatous plants were boiled till the plant turned yellow and pressed properly. Dried specimens were poisoned properly with a saturated solution of $HgCl_2$ dissolved in absolute alcohol and mounted with fish glue on standard (42 X 28 cm). Field data with collection number, locality, short description, vernacular name, collector's name were transferred from the field notebook to printed level on the right hand corner of the herbarium sheet for ready identification. The collected plants were identified by consulting a no. of Floras especially flora of British India (Hooker, 1872- 1897), Flora of Assam, Vol. 1-7 (Kangilal, et al., 1930- '40) and vol. 5(Bor, 1940), Flora of Tripura state vol. 1 and 2 (Deb, 1981, 1982), Assam University herbarium sheets collection etc. One each set of identified herbarium sheets have been deposited in the Herbarium of Department of Life Science, Assam University, Silchar.

Results

(1) **Name of the plant:** *Andrographis paniculata* Nees.

Family: Acanthaceae

Vernacular name: Vabuti.

Occurrence: It is commonly cultivated in home garden.

Process Of Utilization: The fresh juice of the leaves along with honey is prescribed in fever.

(2) **Name of the plant:** *Azadirachta indica* A.Juss

Family : Meliaceae.

Vernacular name: Neem

Occurrence: Commonly cultivated in home gardens.

Process Of Utilization: The fresh leaves are useful household remedy in fever.

(3) **Name of the plant:** *Bixa orellana* Linn.

Family: Bixaceae.

Vernacular name: Ureirom.

Occurrence: It is found in home garden.

Process Of Utilization: The bark decoction has antipyretic effect.

(4) **Name of the plant:** *Canna indica* L.

Family: Cannaceae.

Vernacular name: Laphurei.

Occurrence: It is cultivated in the flower garden.

Process Of Utilization: The crushed fresh root is given in fever.

(5) **Name of the plant:** *Cassia fistula* L.

Family: Caesalpinaceae.

Vernacular name: Chahui.

Occurrence: It is cultivated in home garden for its beautiful flowers.

Process Of Utilization: The decoction of the flower is given in chronic fever.

(6) **Name of the plant:** *Coptis teeta* Wall.

Family: Ranunculaceae.

Vernacular name: Urihangampal.

Occurrence: it grows wild.

Process Of Utilization: The decoction of leaves is prescribed in fever.

(7) **Name of the plant:** *Curcuma longa* L.

Family: Zingiberaceae.

Vernacular name: Yaingang.

Occurrence: It is cultivated in vegetable garden.

Process Of Utilization: The juice of the rhizome is useful in fever.

(8) **Name of the plant:** *Cuscuta reflexa* Roxb.

Family: Cuscutaceae.

Vernacular name: Swarnalata.

Occurrence: It is a total parasite grows in the tree found along the road sides.

Process Of Utilization: The boiled plant is considered in chronic fever.

(9) **Name of the plant:** *Cyperus rotundus* L

Family: Cyperaceae.

Vernacular name: Shembangkaothum.

Occurrence: it is a herb that grows wild in nature.

Process Of Utilization: The crushed extract of the roots is prescribed in fever.

(10) **Name of the plant:** *Dactyloctenium aegyptium* (L) P.Beauv.

Family: Gramineae.

Vernacular name: Pungphai.

Occurrence: It is found along the road side, with vegetable garden etc.

Process Of Utilization: The juice of the fresh plant is used in fever.

(11) **Name of the plant:** *Eclipta prostrate* Roxb

Family: Asteraceae.

Vernacular name: Uchishumbal.

Occurrence: it is found in wild nature along with the vegetable garden, road side , bank of a water pool etc.

Process Of Utilization: The juice of the leaves along with the honey is recommended in fever.

(12)) **Name of the plant:** *Hedyotis diffusa* Wild.

Family:Rubiaceae

Vernacular name: Limorui.

Occurrence: it is found in wild nature.

Process Of Utilization: The decoction of the plant is recommended in intermittent fever.

(13) **Name of the plant:** *Helianthus annus* L.

Family: Asteraceae.

Vernacular name: Numitlei.

Occurrence: It is cultivated in the flower garden.

Process Of Utilization: The decoction of the leaves and flowers along with honey is

prescribed in malarial fever.

(14) **Name of the plant:** *Hibiscus abelmoschus* L.

Family: Marvalceae.

Vernacular name: Shamal moturi.

Occurrence: It is cultivated in vegetable garden.

Process Of Utilization: The decoction of the leaves is given in typhoid fever.

(15) **Name of the plant:** *Hydrocotyle sibthorpioides* Lam.

Family: Umbelliferae

Vernacular name: Paruklei

Occurrence: it grows wild and also cultivated.

Process Of Utilization: The juice of the plant along with honey is prescribed in typhoid fever.

(16) **Name of the plant:** *Kyllinga triceps* Rotlb.

Family: Cyperaceae.

Vernacular name: Chumthang achouba.

Occurrence: It grows wild.

Process Of Utilization: The decoction of the plant is given in fever.

(17) **Name of the plant:** *Momordica charantia* L.

Family: Cucurbitaceae.

Vernacular name: karanaakhabi.

Occurrence: It is cultivated in vegetable garden.

Process Of Utilization: The fresh juice of the leaves is given in fever

(18) **Name of the plant:** *Nyctanthes arbortristis* Linn.

Family: Oleaceae.

Vernacular name: Singgralei.

Occurrence: It is cultivated in the flower garden.

Process Of Utilization: The juice of the fresh leaves is prescribed in chronic fever.

(19) **Name of the plant:** *Ocimum americanum* L.

Family: Labiatae.

Vernacular name: Tulsiamuba.

Occurrence: Commonly cultivated in home garden.

Process Of Utilization: The juice of the leaves along with the honey is given in fever.

(20) **Name of the plant:** *Ocimum gratissimum* L.

Family: Labiatae.

Vernacular name: Ramtulsi.

Occurrence: It is also cultivated in home garden.

Process Of Utilization: The juice of the leaves along with the honey is prescribed in fever.

(21) **Name of the plant:** *Ocimum sanctum* L.

Family: Labiatae.

Vernacular name: Tulsi

Occurrence: It is a holy plant that cultivated in every home garden.

Process Of Utilization: The juice of the leaves along with the honey is recommended in fever.

(22) **Name of the plant:** *Phlogacanthus thyrsiflorus* (Roxb) Nees.

Family: Acanthaceae.

Vernacular name: Nongmangkha amubi.

Occurrence: commonly cultivated in home garden.

Process Of Utilization: The decoction of the leaves is prescribed in fever.

(23) **Name of the plant:** Piper betle L.

Family: Piperaceae.

Vernacular name: Panamana.

Occurrence: It is widely found in forest area.

Process Of Utilization: The juice of the leaves along with the honey is useful in fever.

(24) **Name of the plant:** *Thevetia nerifolia* Juss.

Family: Apocynaceae.

Vernacular name: Utonglei.

Occurrence: it is commonly cultivated in flower garden.

Process Of Utilization: The outer cover of the fruits are prescribed in chronic fever.

(25) **Name of the plant:** *Tinospora cordifolia* (Wild)

Miers.

Family: Menispermaceae.

Vernacular name: Ningthou- khongli

Occurrence: It is found in forest area.

Process Of Utilization: The extract of the whole plant antipyretic.

(26) **Name of the plant:** *Zingiber officinale* Rosc.

Family: Zingiberaceae.

Vernacular name: Shing.

Occurrence: It is commonly cultivated in vegetable garden.

Process Of Utilization: The rhizome juice is mixed with honey is prescribed for cold fever.

Discussion

The present study reveals the great diversity of antipyretic plants in this southern part of Assam and their uses for human kind. It has been found that the use of aboveground plant parts was higher (65.38%) than the underground plant parts (15.38%). In present investigation out of 26 antipyretic plants that are collected from different areas of Barak valley, Assam, the highest number of plants are used from the family Labiatae (3 species). Two species each from the families Acanthaceae, Cyperaceae. Rest of the families contributed either 1 or single species.

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References

Chopra R.N. Nayer, S.L. and Chopra I.C 1980. Glossary of medicinal plants, New Delhi.

- Deb D.B 1961. Dicotyledonous plants of Manipur Territory Bull.Bot.Survey India, no.3&4,253-350.
- Devi, L.D. (1990). Folflore medicines of ethnobiological importance in Manipur: Volume 1.; Imphal.
- Ford, R. L. 1978. The nature and status of Ethnobotany. Anthropological paper No. – 67. *Mus. Anthropol.* Univ. Michigon Arnold. Arboratum
- Gogoi, P, Baishya , s. and Baishya , C.L. 1979. A few Ethnogynaecological records from the State of Assam, India ; Submitted paper for the Seminar on Traditional Asian Medicine (International Conference). Canberra, Australia.
- Hajra, P.K.1981. Nature conservation in Khasi folk beliefs and taboos, *ibid*.pp, 149-152.
- Hooker, J. D. 1872-1897. *The Flora of British India*. Vol. 1-7. London.
- Huidrom Singh B. K. 1996. Ethnobotanical observation on the preparation of Choarak (a local wine)in Tripura state, India. *J. Econ. Taxon. Bot.* 12(Add. Ser): 273- 274.
- Jain, S.K. and Borthakur, S.K. 1980 . Ethnobotany of the Mikirs of India. *Econ. Bot.* 34 : 264-272.
- Kanjilal, U.N., *et al.*, 1934-40. Flora of Assam Vol. I-IV; Govt. of Assam.
- Khumbmayung, A.D., Khan, M. L. & Tripathi. R. S. 2005. Ethnomedicinal plants in the sacred groves of Manipur; In: *Indian Journal of Traditional Knowledge*, Vol- 4, No. 1: 21-32.
- Krishna,B and Singha. 1987. Ehnobotanical observation in Sikkim,*J.EconTax. Bot.* 9:1-7 (18)
- Kumar S. 2002. The medicinal plants of North- East India: Scientific publisher, India.
- Nath, A. and Maiti, G.G. 2003.: Ethnobotany of Barak Valley (Southern Assam) with reference to folk medicine. *J.Econ. Taxon. Bot.* Vol. 27. No.4, 964-971.
- Rao, R.R. and Jamir, N.S. 1982a. Ethnobotanical studies in Nagaland-II. 54 medicinal plants used by Nagas. *J.Econ. Tax. Bot.* Vol.- 41, No. 3: 11-17.
- Tamuli, P. & Saikia, R. 2004. Ethnomedicobotany of the Zeme Naga tribe of north Cachar hills district of Assam; In: *Indian Journal of Traditional Knowledge*; Vol.-3, No. 4:430-436.
- Visen P.K.; Saraswat B.& Dhawn B.N 1998. Curative effect of Piccolive on primary rat hepatocytes against different hepatotoxins: an in vitro study. Division of Pharmacology, Centrel Drug Research Institute, Lucknow, UP, India. *J. Pharmacol Toxicol Methods*.40(3): 173-179

