Folk medicines used by the Moran of Brahmaputra valley, Tinsukia district, Assam, India

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Abstract
It is well known that from the time immemorial large numbers of plant species are used by the mankind for the treatment of different kinds of diseases. The herbal folklore of the Moran of Tinsukia District of Assam is very rich hence, an attempt has been made to study and document uses and methods of applications of various plants for different diseases. During present study treatment of 10 diseases namely acidity, anemia, blood poisoning, constipation, diabetes, gout, rheumatism, piles, stomach pain and tetanus were paid attention and noted medicines applied to cure them. A total number of 19 such medicinally important plant species are reported in this paper.

Keywords: Moran, Folk medicine, Brahmaputra valley, Barak valley, Tinsukia district, Assam.


Introduction
Assam is one of the Indian states which is situated in the North East corner of India. The state is located between 90°-96° East longitude and 22°-28° North latitude. The state is surrounded by Bhutan and Arunachal Pradesh in the North, Nagaland and Manipur in the East, Meghalaya and Mizoram in the South, and Bangladesh, Tripura and West Bengal in the West. Only a narrow strip of sub-mountain region of Himalayas connects Assam with Indian main land. There are two main rivers of Assam, Brahmaputra and Barak which divide the state in to two regions, namely Brahmaputra Valley and Barak Valley. The two valleys geographically separated by hilly portion of Assam which include Karbi Anglong and North Cachar hills districts. The Tinsukia district is situated in southern part of the Brahmaputra and in the eastern part of Assam. The area covered by the district extends roughly from 27° 14' to 27° 59' N latitude and from 96° 15' to 96° 1' E longitude. The district is bounded from North by Lakhimpur district and Arunachal Pradesh from South and East by Arunachal Pradesh and West by Dibrugarh district. The total area of the district is 3676.4sq.km and is divided into three subdivisions, viz. Tinsukia, Sadiya and Margherita. The soil of Tinsukia district is mainly alluvial, deposited by the
river Brahmaputra and its tributaries. Relatively long rainy season, high humidity and moderate to high temperature are suitable factors for luxuriant growth of the vegetation in this district. The natural vegetation of the district can be divided into the monsoon forest, with an admixture of evergreen and deciduous forests, the grasslands and swamp growth. The Moran is one of the major ethnic groups of Assam which belongs to more backward classes (MoBC). They speak Assamese and mainly confined in Tinsukia district. Few Moran’s villages are found in Dibrugarh, Jorhat, Sivasagar, Dhemaji, Lakhimpur districts also. They are Mongoloid in origin\(^1\) and their main occupation is cultivation. They cultivate paddy, mustard, pulses, different varieties of vegetables, etc. The cash crops of this ethnic group are Kamala (\textit{Citrus reticulata Blanco}), Chah (\textit{Camellia sinensis Linn.}), Tamul (\textit{Areca catechu Linn.}), Pan (\textit{Piper betle Linn.}), etc. The Moran follows patriarchic family system and maintains joint family culture. They are followers of Sri Sri Anirudha Dev of Hinduism.

The ethnobotanical lore of the Moran is very rich. They use many plant species in their daily life as medicines, food, dye, for building house, preparation of household articles, etc. They also use some plant species in their rituals and festivals. There was no systematic ethnobotanical works on the Moran of Tinsukia district till the beginning of this century. The Moran people depend on nature for their primary health care because of poor transport facility to go in town, costly treatments. Also they believe that medicinal plants available in their area are equally effective as modern medicines are.

**Methodology**

The study was conducted in 2007-2008. A number of Bejes (local medicine men) and Bejinis (local medicine women) were contacted and medicinal information was collected. Efforts have been made to see the plants in wild and collected plant specimens with their reproductive parts. The botanical collection and herbarium techniques followed here are those suggested by Mitra\(^2\). For authentic identification of collected plant species Flora of Assam Vol. I-IV,\(^3\) Flora of British India Vol. I-VII\(^4\) were consulted. The plants collected were added to herbarium of the Botany Department, Dibru College, Dibrugarh.

Folk medicines used for the treatment of different diseases along with their common names, family, voucher specimen number (VSN) and methods of preparations and doses are enumerated below.

**Enumeration**

**Acidity:** One teaspoonful of leaves extract of \textit{Madar, Erythrina stricta Roxb.} (Fabaceae), (VSN-3251) is given twice daily for three days. One teaspoonful leaves extract of \textit{Amlakhi, Emblica officinalis Gaertn.} (Euphorbiaceae) (VSN-3250) also given twice daily for five days for the same. Four teaspoonful leaves extract of \textit{Bahok, Adhatoda zeylanica} syn. \textit{A. vasica} Nees. (Acanthaceae) (VSN-3252) mixed with equal amount of honey is given thrice daily for a week for the treatment of acidity.
Anemia: Half cup fruit extract of *E. officinalis* mixed with two spoonful honey and half cup of water is given to take once daily for a fortnight. If not cured after one week the above mentioned dose is repeated. One cup extract of edible portion of *Gajar, Daucus carota Linn.* (Apiaceae) (VSN-3261) mixed with one cup of leaf extract of *Palang, Spinacia oleracea Linn.* (Chenopodiaceae) (VSN-3249) is also used once daily for fifteen days.

Blood poisoning: Half cup fruit extract of *Karela, Momordica charantia Linn.* (Cucurbitaceae) (VSN-3276) mixed with one cup water is taken once daily for one week. The fried leaves of *Mahaneem, Azadirachta indica A. Juss.* (Meliaceae) (VSN-3265) are also used with lunch for a week for the same purpose.

Constipation: Three or four seeds of *Bakul, Mimusops elengi Linn.* (Sapotaceae) (VSN-3274) are given twice daily for a week. Half teaspoonful latex of *Chatiyana, Alstonia scholaris R. Br.* (Apocynaceae) (VSN-3259) is taken once daily for three days.

Diabetes: Very young twenty leaves of *Bhaluka bah, Bambusa balcooa Roxb.* (Poaceae) (VSN-3226) are finely crushed and boiled in two glasses of water for few minutes, filtered and given to take once daily for a month. One teaspoonful root extract of *E. stricta* is also given to take once daily for a month for the same purpose. Extract of six leaves of *Nayantora, Catharanthus roseus G. Don* (Apocynaceae) (VSN-3275) is also used once daily for a week for the treatment of same disease.

Gout: Six leaves of *Bhang, Cannabis sativa Linn.* (Cannabinaeaceae) (VSN-3227), half inch root of *Churat, Trogia involucrata Linn.* (Euphorbiaceae) (VSN-3266), half inch rhizomatous steam of *Ada, Zingiber officinale Rosc.* (Zingiberaceae) (VSN-3272), three fruits of *Pipoli, Piper longum Linn.* (Piperaceae) (VSN-3255), five fruits of *Jaluk, Piper nigrum Linn.* (Piperaceae) (VSN-3281) are finely crushed separately and mixed properly to make four pills and given to take twice daily for fortnight.

Piles: Decoction of leaves of *Moringa oleifera Lam.* is applied twice daily over the affected area for fortnight in alternate day. Meat, fish, egg, spice should be avoided during the treatment.

Rheumatism: Two teaspoonful extract of flowers of *E. stricta* mixed with half cup of cow’s milk is given to take once daily for fortnight. One teaspoonful extract of *Dubariban, Cynodon dactylon Pers.* (Poaceae) (VSN-3279) mixed with equal amount extract of rhizome of *Haladhi, Curcuma domestica Valeton.* (Zingiberaceae) (VSN-3293) and small amount of common salt is added just before the use. The preparation is taken once daily for one month.

Stomach pain: Five seeds of *Kumura, Benincasa hispida* (Thunb.)Cogn. (Cucurbitaceae) (VSN-3296) are crushed finely and taken once daily for five days.

Tetanus: Two teaspoonful leaves extract of *C. sativa* is given to take once daily for five days. Finely crushed leaves of *Bhang* are also applied over the affected area. Fried flowers or young leaves of *M. oleifera* are given to take for the same purpose and finely crushed flower or young leaves can also be applied over the affected area.

Results and Discussion

In the present paper information on 19 different plant species is given. Out of these 15 species belong to Dicotyledons and 4 belong to Monocotyledons. It is noticed that both wild and cultivated plant species are used for preparation of folk medicines by the inhabitants of study area. During preparation of folk medicines only one plant species or more than one are used. Sometimes same plant species is used for treatment of different diseases, as for example *E. stricta* is used for treatment of acidity, diabetes and rheumatism. *E. officinalis* is used for the treatment for acidity and anemia. Along with plant materials animal based products such as milk, honey, etc. are also found to be useful.

Traditional and indigenous systems of medicine persist in all over the world. Ethnomedicobotanical study of the primitive tribes has gained popularity in developed as well as developing countries. So far no record on the plants used as folk medicines by the Moran’s of Assam is available; this is evidently the first record of the ethnomedical plants used by this ethnic group. Some of the medicinal plants used by these people like *Z. officinale, E. officinalis, P. nigrum* and *C. domestica* are being used for preparation of Ayurvedic medicines by some Pharmaceutical companies. More over some species mentioned in this paper are also reported in some earlier works.

**Conclusion**

Since the uses reported in this paper are quite different from earlier reports, the biochemical analyses and pharmacological studies of these plants may bring some new scientific information of immense ethnopharmacological interest.

**References**