

Plants associated in forecasting and beliefs within the *Meitei* community of Manipur, Northeast India

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This paper reports on a total of 10 plant species of different families which are used as indicators in forecasting weather, in predicting natural calamities, or as taboos or signals of bad omens, among the *Meitei* community of Manipur state in North eastern India. These plants belong to dicot (6 species), monocot (3 species) and pteridophyte (single species) and are both cultivated (5 species) and grown wildy (rest 5 species). The four species namely, *Alocasia indica*, *Brassica campestris*, *Hibiscus cannabinus* and *Mangifera indica* are cultivated purely for food purpose while *Platycerium wallichii* is cultivated as decorative pot plant. The species namely, *Quercus serrata* in not cultivated in private lands. This knowledge system is still prevalent among the local people, especially in rural areas.

Keywords: Forecasting, Traditional knowledge, Manipur, Northeastern India

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Indigenous peoples of Manipur state in the far Northeastern part of India (the Indo-Burma ‘hotspot’ of biodiversity) are closely associated in various ways with their surrounding landscapes and resources, mainly plants and animals, for their day-to-day requirements. These peoples, understandably, have a good knowledge of their local resources. The majority of the state’s population are rural villagers who still follow their traditional beliefs, including botanical folklore, and still adhere to the traditional ways of conserving biodiversity that were passed down from their ancestors¹. A large number of plants are used in traditional healthcare² and a many plants are also used not only as food, and for shelter and clothing, but for learning and understanding their applications in predicting the weather, in forecasting natural calamities, and in alleviating bad fortune. This paper presents 10 plants which are used for prediction by the *Meitei* ethnic people of Manipur and describes the significance of such indicators in the context of current global environmental change.

The Manipur state (23°27’ to 25°41’ N and 93°61’ to 94°48’ E) stretches a Geographical area of 22, 327 km². The state is bordered on all sides by hill ranges running parallel into North-South folds with altitudes varying from 750 m to 3600 m above sea

level. The state is rich in both cultural and biological diversity. There are more than 30 ethnic groups. The *Meitei*, *Naga*, *Kuki* and *Pangals* are the major ethnic communities of the state. The total population of the state was 23,89,000 in the year 2001³.

Research methodology

The data were collected by the author through interaction and discussion with local resource persons, locally called ‘*Maiba*’ for male and ‘*Maibi*’ for female for the last 10 yrs in Manipur mainly from Karam and Chajing villages (N=12). The data were also accumulated by the author from elders (age group of 55-75 yrs old) who have sound knowledge about bio-folklores, utilization and conservation of plants through interactions and questionnaire of descriptive types. The information provided by one resource person were crossed checked with another resource person and normalized the information. The identity of the plants reported in this paper were identified through available literature sources^{2,4}. The plant samples are collected and prepared herbarium voucher specimens and preserved in the Institute (NEIST, Lamphelpat, Imphal). The purpose of collecting data were clearly disclosed to the informants and resource person and taken their informal consents for publication.

Results and discussion

A total of 10 plants are reported to be used by the ethnic people of Manipur to forecast weather, to predict natural calamities and as taboos to help avoid negative occurrences. The species are listed in alphabetical order as follows, with details of their use and associated information:

1. *Agave americana* Linn. (Agavaceae)

English name: Agave, or Century plant

Vernacular name: *Kewa* (Manipuri); *Sisal* (Hindi)

The flowering pattern of this plant is used to predict the direction of winds and storms in a given year. The wind or storm is expected to blow from the opposite direction from where the greatest number of flowers is positioned on an inflorescence as revealed by 7 resource person.

2. *Alocasia indica* Schott. (Araceae)

English name: Alocasia, or Elephant ear plant

Vernacular name: *Yendem* (Manipuri)

In Manipur this plant is generally cultivated in kitchen gardens as a vegetable. The corm is highly edible in the form of local cuisine popularly called 'Singhju' and 'eronba'. This plant seldom produces flowers/inflorescence in home gardens. If it does, it is assumed that the family that cultivates this plant may face certain difficulties and that the prosperity of the family will be ruined. If flowering is noticed, the entire plant is removed immediately from the garden as revealed by 21 resource person.

3. *Bambusa* spp. (Poaceae)

English name: Bamboo

Vernacular name: *Waa* (Manipuri); *Bans* (Hindi)

If bamboos bear flowers, it is predicted that there will be famine in the coming years. When there is bamboo flowering, the numbers of the rodent (rat) population increase thereby damaging the crops; this phenomenon has been authenticated scientifically. If the shape of the apex crown (shoot) of a bamboo cultivated on private land is dome-shaped, it is assumed that one member of the family may die shortly because bamboos of this shape are used in funeral ceremonies. If this is noticed, the bamboo is cut immediately. Cutting down bamboos on Tuesdays and Saturdays is prohibited; it is believed that the bamboo colony may die shortly and the prosperity of the family may decline as revealed by almost all the resource person.

4. *Brassica campestris* Linn. (Brassicaceae)

English name: Field mustard plant or turnip mustard

Vernacular name: *Hangam* (Manipuri); *Sarson* (Hindi)

Traditionally, a handful of mustard seeds are immediately sown on the funeral site of a dead person. If the seeds sprout and grow into seedlings, it is believed that the dead person may be reborn as a human being; otherwise he/she may reborn as another creature. This is practiced as an indicator of how much the deceased person contributed to betterment of the society when she/he was alive as revealed by almost all the resource person.

5. *Ficus rumphii* Blume. (Moraceae)

English name: Rumpf's fig tree

Vernacular name: *Khongnang* (Manipuri); *Paras papal* (Hindi); *Nyaung oyn* (Burmese)

This tree is generally not cultivated on private lands. It is believed that when a branch of this tree falls down a person in the direction the branch has fallen down may die. Generally, crows (*Corvus splendens*) make their nests on the branches of this tree. If crows construct their nest on the top branch, it is assumed that floods may occur in that particular year and that there will be fewer winds and windstorms whereas if the nest is made on the lower branches of the tree, there maybe strong winds in that year, but with scanty rainfall as revealed by 8 resource person.

6. *Hibiscus cannabinus* Linn. (Malvaceae)

English name: Deccan hemp

Vernacular name: *Sougri* (Manipuri)

The rainfall in a season is generally predicted by observing the flowering pattern of this plant. If the plant bears a large number of flowers, it is presumed that the rainfall for the year will be good. The ending of rainfall for a particular year is determined by the end of flowering of this plant. If the plants stop producing flowers and the leaves are tinged with a violet color it is assumed that the rainfall for the current year has finished as revealed by almost all the resource person (Fig. 1).

7. *Mangifera indica* Linn. (Anacardiaceae)

Family: Anacardiaceae

Common name: Mango

Vernacular name: *Heinou* (Manipuri); *Aam* (Hindi); *Tharyetthi* (Burmese)

If the mango trees produce extraordinarily large numbers of flowers/inflorescences, the current year may have more wind/storms and heavier rainfall. It is also



Fig. 1—*Hibiscus cannabinus* Linn.

assumed that if the colour of the mango leaves is dark green at the beginning of a season, there will be a good rainfall as revealed by almost all the resource person.

8. *Platyserium wallichii* Hook. (Polypodiaceae)

English name: Staghorn fern

Vernacular name: *Saji-machi changkhrang* (Manipuri)

This plant is a very rare epiphytic fern from Manipur (Moreh region) for the first time from India⁵. If the color of the vegetative parts of the staghorn fern plant is dark green, it is an indicator of imminent rainfall, whereas if the colour is dull, no rainfall is expected in the immediate future. Generally, is the plant is green in colour, it is expected that there will be good rainfall for the current year as revealed by 4 resource person (Fig. 2).

9. *Quercus serrata* Thunb. (Fagaceae)

English name: Tasar oak tree

Vernacular name: *Uyung* (Manipuri)

The wood/timber of this tree is not used in house construction. As narrated by knowledgeable person, this tree is frequently hit by lightning and houses constructed with the wood might be harmed by the lightning as revealed by 12 resource person.

10. *Terminalia tomentosa* (Roxb.) Weight & Arn. (Combretaceae)

English name: Indian Laurel

Vernacular name: *Mayokpha* (Manipuri); *Sadar/Marda* (Hindi); *Taukkyan* (Burmese)

The bark of this tree is used by local healers to treat heart disease. The fresh tree bark soaked in water overnight is given to heart patients for heart related problems mainly weak heart. However, any bark



Fig. 2—*Platyserium wallichii* Hook.

collected without a formal request to the tree is generally not used in the treatment. If the patient is treated by bark not properly obtained, it is believed to worsen the illness instead of curing it. Therefore, before collecting the bark from a living *Terminalia* tree, one visit the tree one day ahead of collection, make it an offering of betel nuts and leaves (*pan*), request permission to collect some bark.

Special comments

- 1 Prediction of natural calamities and disasters through modern science is not that fruitful.
- 2 As local communities practice this traditional knowledge system; they are taken care and preserve these plants as an important resource. This system of biodiversity conservation practice is very effective with mass common people involvement and lesser expenditure as compared to conservation programmes launched by Government Agencies.
- 3 Such traditional knowledge system may be included in the national database of climate change prediction and making strategy of disaster management as it involves with local communities who are the major causalities in calamities.

Conclusion

It is agreed that traditional knowledge system is greatly helped in research. As disaster and other calamities are difficult to predict by modern

science, the traditional knowledge may be used as a precautionary tool to minimize damages from disasters.

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