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Ethno-medico-botanical observations of bamboos among Indigenous people of Manipur

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Abstract

Manipur, the state lies on the laps of eastern Himalayan ranges is known for its glorious landscape, scenic beauty and unique endowments. Its varied topography and ideal climatic conditions shaped diverse forest types in the state. Among these forests wide variety of bamboos grow luxuriantly from hills to the plains which form an key component of rural landscape. The present paper provides information gathered on Ethno-medico-botany of wide variety of bamboos found growing in forest fringe villages of Manipur.

Keywords: ethno-medico-botany, Manipur, fringe villages, bamboos

Introduction

Manipur, popularly known as 'The Land of Jewel' is one of the easternmost border states of India lies within the 'Indo-Burma' Hotspot region. It lies between 23° 47'-25° 41' N Latitudes and 93° 61'-94° 48' E longitudes with an area of 22,372 sq. km. This state is encircled by Assam in the North, Myanmar in the East, Nagaland in the North, Mizoram in the South and. Due to its unique location, topography and climatic conditions state is endowed with diverse forest types i.e. Tropical Semi-evergreen, Dry Temperate Forest, Sub-Tropical Pine and Tropical Moist (FSI report, 2018) [1]. The documented forest area of the state is 17,418 km² which is approx. 78.01% of its geographical area. The Reserve forest constitutes 8.42%, protected forest 23.95% and unclassed Forests 67.63% of the RFA (ISFR, 2011). These vast forested areas serve as the store house of biological diversity which comprises of approx 4000 angiosperm species, 430 wild medicinal plants species, 34 edible fungi, 500 different types of orchid species and 40 endemic rice cultivars, 160 fish species and 21 species of migratory birds (Singh, AS. 2016). Apart from that, various species of bamboos are also found blooming in the state, ranging from hills top to the valley bottom. Out of the total recorded forest area of Manipur 3268 km² area is under pure bamboo brakes, which account to nearly 18.6% of the total forest area of the state (Long, *et al.* 2003) [2]. It was documented that nearly 54 species belonging to 9 genera are found nurturing here. People of the state especially those inhabited in fringe villages are largely dependent on bamboos for various uses in their day to day life (Singh *et al.* 2018) [5]. In Manipur there are mainly three ethnic communities i.e. Meiteis which inhabiting mainly in the valley and Nagas and Kuki-Chins under which 29 sub-tribes comes colonized on the hills. All of them speak Meiteilon or otherwise known as Manipuri to the outsiders (Singh *et al.* 2003) [4]. These ethnic people have developed comprehensible knowledge on the use of bamboos and are highly dependent on bamboo as regular food supplements and for their livelihood. They used bamboos for various purposes such as house construction, fuel, fodder, food, tools, religious ceremony and curing various ailments. Thus present work is on bamboo resources of Manipur in forest fringe villages and their ethno-medico-botanical usage by the dwelling ethnic communities.

Material and Methods

The ethno-medico-botanical information on bamboos among people residing in the 29 forest fringe villages of the state was acquired during taxonomic survey for bamboos of Manipur during the period of 2017-18. The help has been taken from forest department people for consulting village people who have knowledge on the uses of bamboos. Collected specimens were processed and mounted on herbarium sheets and were identified consulting BSI, Shillong, and regional floras and published literatures. The Voucher specimens were deposited

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in the Herbarium of Rain Forest Research Institute, Jorhat, Assam.

Results and Discussion

India is second most leading countries after China having enormous bamboo cover represented by 23 genera and 128 species, of which Manipur contributes 9 genera and 54 species. Bamboos are distributed almost throughout the state in different forest types and each species has its specific utility and need. The ethno-medico-botanical information on bamboos among 29 forest fringe villages is presented with botanical name, local name, place of collection, bio-climatic of occurrence and their ethno medicinal and ethno botanical utility is given below:-

1. *Bambusa balcooa* Roxb.

Local name: - Leewa

Collected from: - Jiribam (Imphal East)

Bio-climatic zone: - Tropical

Ethno botanical use: - Culms are used as building material for houses, bridges, temporary fishing floats, frames of rickshaw hoods, to prepare agricultural and fishing implements and to weave mats and baskets.

2. *Bambusa nana* Roxb.

Syn. B. multiplex (Lour.) Raeusch. ex Schult.

Local name: - Khokwa

Collected from: - Thongju part II (Imphal East)

Bio-climatic zone: - Tropical, Subtropical

Ethno botanical use: - Plant makes a good screen or hedge and windbreak and also use as weaving material for mats, baskets and other household goods.

3. *Bambusa pallida* Munro

Local name: - Moirangwa

Collected from: - Kwatha village (Tengnoupal District)

Bio-climatic zone: - Tropical, Subtropical

Ethno botanical use: - Construction of houses, making walls, roofing, agricultural implements, house hold articles, etc.

4. *Bambusa polymorpha* Munro

Local name: - Nachiwa

Collected from: - Lokchau on Imphal Moreh Road Tengnoupal District

Bio-climatic zone: - Tropical, Subtropical

Ethno botanical use: - Use in construction (walls, floors, roofs), matting, handicrafts, paper and board-making.

5. *Bambusa tulda* Roxb.

Local name: - Saneibi

Collected from: - Thinungei (Bishnupur), Ngoiphai (Churachandpur), Poiroukhongjil & Thongju (Imphal east), Saikmai (Imphal West)

Bio-climatic zone: - Tropical, Subtropical, temperate

Ethno botanical use: - Construction of houses and preparation of agriculture implement, weaving materials, different types of baskets, mats, household articles, musical instruments, etc.

Ethno Medicinal use: - Used in tetanus

6. *Bambusa nutans* Wall. ex Munro

Local name: - Utang

Collected from: - Thinungei & Terakhong Sanbei (Bishnupur); Kairou, Sekta & Oang (Imphal East); Saikmai (Imphal West); Ngoiphai (Churachandpur).

Bio-climatic zone: - Tropical, Subtropical

Ethno botanical use: - Canes use as weaving material for mats, baskets and other household goods.

7. *Bambusa kingiana* Gamble

Local name: - Watangkhoi

Collected from: - Keirao (Imphal East)

Bio-climatic zone: - Tropical, Subtropical

Ethno botanical use: - Construction, scaffolding, fencing, handicraft etc.

8. *Dendrocalamus latiflorus* Munro

(Sweet bamboo)

Local name: - Wui

Collected from: - Poiroukhongjil (Imphal East); Phunalmaring (Imphal East)

Ethno botanical use: - Young stems eaten - raw or cooked

9. *Dendrocalamus asper* (Schult.) Backer ex Heyne syn. *D. flagellifer* Munro

Local name: - Longwa

Collected from: - Saikmai Awang, (Imphal West)

Ethno botanical use: - Culm internodes use as containers for water or to collect juice being tapped from palm inflorescences and also used as building material for houses and bridges, for making furniture, boards, musical instruments, household utensils, crafts, outriggers of fishing boats and for paper making.

10. *Dendrocalamus giganteus* Munro (Giant bamboo)

Local name: - Maribob

Collected from: - Keirao (Imphal East); Saikmai (Imphal West)

Bio-climatic zone: - Tropical, Subtropical

Ethno botanical use: - Culm use for construction of rural housing, scaffolding and, water pipes, buckets, boat masts, matting, woven wares and paper production.

Ethno Medicinal use: A siliceous secretion from culm is considered aphrodisiac and also uses to produce steroid drugs.

11. *Dendrocalamus hamiltonii* Nees et Arn.ex Munro

Local name: Unap

Collected from: - Bishnupur-10 (Bishnupur); Ngoiphai (Churachandpur); Tengnoupal (Chandel)

Bio-climatic zone: - Tropical, Subtropical, temperate

Ethno botanical use: - Construction of houses, baskets mats, house hold utensils, container for water etc.

12. *Dendrocalamus hookerii* Munro

Local name: - Utangkhoi

Collected from: - Poiroukhongjil (Imphal East)

Bio-climatic zone: - Tropical, Subtropical, temperate

Ethno botanical use: - Construction of houses, baskets, buckets, paper making etc.

13. *Dendrocalamus longispatus* (Kurz) Kurz

Local name: - Chingwa/ Unap-manbi

Collected from: - Moreh, Bishnupur, Churachandpur

Bio-climatic zone: - Tropical, Subtropical

Ethno botanical use: - Culms are used for making temporary constructions, baskets, furniture, mats and containers and for paper making.

14. *Dendrocalamus manipureanus* Naithani & Bisht

Local name: - Ui

Collected from: -Poiroukhongjil (Imphal East)

Bio-climatic zone: - Tropical, Subtropical

Ethno botanical use: - House construction, fencing, wall mud plastering etc.

15. *Dendrocalamus sericeus* Munro

Local name: Ooei

Collected from: - Saikmai Awang (Imphal West)

Bio-climatic zone: - Tropical, Subtropical

Ethno botanical use: - Construction, furniture, decorative strips, mats etc.

16. *Dendrocalamus strictus* Nees

Local name: Unan

Collected from: - Thongju part II (Imphal East); Saikmai Basti (Imphal West)

Bio-climatic zone: - Tropical, Subtropical

Ethno botanical use: - Stem use for scaffolding, bridges, poles, agricultural implements, raw material in paper mills and other large bamboo implements

Ethno Medicinal use: - Siliceous matter from culm is used as tonic and astringent; Leaf's decoction is used as abortifacient.

17. *Dendrocalamus brandisii* (Munro) Kurz

Local name: Wamu

Collected from: - Chandel village in Chandel district

Bio-climatic zone: - Tropical, Subtropical, temperate

Ethno botanical use: One of the strongest and largest bamboos use for building purposes, furniture, farm implements, baskets and other woven wares and handicrafts.

18. *Melocanna bambusoides* Trins

syn. *Melocanna baccifera* (Roxb.) Kurz.

Local name: - Moubiwaa/ Moubi

Collected from: - Sekta (Imphal East)

Bio-climatic zone: - Tropical

Ethno botanical use: - Young shoots – cooked; leaves use in brewing liquor

Ethno Medicinal use: - *Culm* siliceous concretion known as Tabashir use as tonic for treating respiratory diseases.

19. *Schizostachyum pergracile* (Munro) Majumdar

Local name: - Pongshang

Collected from: - Komlatibi (Chandel)

Ethno botanical use: - Construction of houses, rural huts, making mat, basket and agricultural implement.

Ethno Medicinal use: - Leaf infusion is used as anthelmintic to cure stomach pain.

20. *Thyrsostachys oliveri* Gamble

Local name: - Kabowaa/ Burma Wa

Collected from: - Phunalmaring & Poiroukhongjil (Imphal East); Saikmai (Imphal West); Ngoiphai (Churachandpur); Mchano (Chandel).

Ethno botanical use: - Culm use for construction purposes and also used for reinforcing concrete blocks, basketry, handicrafts, broom handles etc

21. *Thyrsostachys siamensis* Gamble

syn. *Thyrsostachys regia* (Thomson ex Munro) Bennet

Local name: - Poiroukhongjil & Phunalmaring (Imphal East)

Collected from: - Phunalmaring (Imphal East); Saikmai (Imphal West)

Ethno botanical use: - Culm use in house construction, providing raw material for cottage, for making baskets, chopsticks, umbrella and broom handles, handicrafts, fishing rods and they serve as raw material for paper pulp and as fuel

Some bamboo species documented from Fringe forest of Manipur state



Khokwa



Utang



Saneibi



Maribob



Kabowaa



Ooei



Ui



Unan



Pongshang



Moubiwaa

Conclusion

Bamboo is one of the most important resources in Manipur, especially among forest dwelling peoples. Through centuries these ethnic people have acquired incredible skill to craft magic from the bamboos and utilize them to develop wide variety of enticing handicrafts, utensils, containers and use them in medicinal system of treatment and several other cultural and tradition systems. As these ethno-medico-botanical studies have been carried out only at ground level among fringe villages, immense cultural diversity is still remain unexplored, in the state. So, there is urgent need to document this vast knowledge of ethno-medico-botanical information available with indigenous people. This will surely improve rural economy of the state and add colour to the cultural heritage of the nation.

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