



ETHNOBOTANICAL USES OF BAMBOOS AMONG DIFFERENT TRIBES IN MIZORAM, NORTHEAST INDIA

*Ramachandra Laha¹, Lalhriatpuia², P.C. Lalremruata³ and R. Vanlalpeka⁴

^{1, 2, 3, 4}Department of Botany, Mizoram University, Aizawl-796004, Mizoram, India

*Corresponding Author Email: rc_laha@yahoo.com

ABSTRACT

The state is rich in bamboo resources and inhabited with different tribes rich with ethnobotanical knowledge and traditions. The study highlights about indigenous uses of different species of bamboos. Interviews, discussion with knowledgeable resource villagers, elderly men, women about the ethnobotanical uses, species local name and different products made were collected during January-December, 2015. This study showed the rich diversity of bamboo flora for developing the traditional knowledge in the region and the findings has significant implications for the conservation, management and usefulness of different species.

KEY WORDS

Bamboo, Ethnobotanical, Mizoram, Northeast, Tribes

INTRODUCTION:

Bamboos are perennial arborescent grasses belonging to the family Gramineae with culms that arise from rhizome. In India, bamboos account for about 12.8% of the total forest cover and are one of the largest resources in the world (Tiwari, 1992). The North Eastern Himalayas region harbours more than 66% of the Indian bamboo genetic resources (Sarmah *et al.*, 2000) and Mizoram occupies the largest forest area (30.8%) under different bamboo species (Trivedi and Tripathy, 1984). Mizoram is situated in the extreme end of the Himalayan ranges in the North Eastern part it is located between 21° 58' N and 24° 35' N latitude and 92° 16' E and 93° 29' E longitudes (Pachau, 1994). The region have predominantly mountainous terrain; mountain ranges run in north to south direction, the soil in general young, immature, moderate to acidic, enjoys a pleasant, moderate climate warm in summer and cold in winter with an average rainfall of 2500 mm per annum, the temperature varies from 11°C to 35°C, forest cover in the region is tropical rain forest, rich in biodiversity with many endemic flora and fauna. The state comprises different ethnic groups Mizo, Mara, Bru, Lai, Pang,

Paihte and Chakma rich ethnobioculturally on the use of biodiversity, folk knowledge of bamboo. The geographic area with wide variation in altitude, climate and edaphic, biotic factors contribute to the bamboo diversity in the region. Bamboo is a valuable gift from nature to the tribes of Mizoram, it has wide acceptance for different uses. The popularity of bamboo in the region is due to their abundance, easily availability and important component of plant wealth.

Bamboo has played an important part in the lives of the tribes of Mizoram and has been an integral part in the life no such attempt been made to study the ethno botanical uses on different species of bamboo so this work is an attempt on different uses by the different tribes.

MATERIALS AND METHODS:

Field visits were conducted during January, 2015 - December, 2016 covering different villages and natural reserves inhabited by different ethnic groups of the region. During the visits to the village transect walks in natural reserve, secondary forest in around the region to collect different bamboo species. A structured

feedback form was used to collect information from the resource persons using standard method (Martin, 2004). Interviews, discussion with knowledgeable resource villagers, elderly men, women about the ethnobotanical uses, species local name and different products made were collected. The plant collection was done as per following the method of plant collection and herbarium technique (Jain and Rao, 1977). The specimen collected identified with the help of relevant floras and standard literatures (Hooker, 1973; Kanjilal *et al.*, 1982; Kanjilal *et al.*, 1982).

RESULTS AND DISCUSSION:

Bamboos are closely associated with the daily lives of different tribes and the resources are widely distributed throughout the state. The ethno botanical information on the uses of different species among different tribes

is presented with botanical name, ethnic name and ethno botanical uses (Table 1) and the indigenous products made from bamboo for different uses (Table 2). Bamboo has played an important role in the lives of the tribe form an integral part of the cultural, social and economic traditions of the state. Bamboo is a valuable gift from nature to the people has wide acceptance for different uses due to its structural properties, size, shape, flexibility, strength, abundance, easy to transport and quick seasoning (Mathur, 1981). Bamboo are multipurpose plants with high economic, environmental values have the potential to convert into useful goods and services better than most other tree species (Embaye *et al.*, 2005). Bamboo is the fastest growing high yielding renewable natural resources (Lessard and Chouinard, 1980) with global climate change aspects carbon sequestration and biomass production potential (Nath and Das, 2008).

Table 1. Different Species, Ethnic name(s) and Ethnobotanical uses

Sl.no.	Name of the species	Ethnic name(s). (Mi-Mizo, Br-Bru, Ma- Mara, Ch –Chakma, Pa – Pang, Ph- Paihte, La- Lai)	Ethnobotanical use(s)
1	<i>Bambusa bamboos</i> (Linn.) Voss	Rawhling (Mi)	Mat, Basket, Fodder, Edible shoot
2.	<i>Bambusa nutans</i> Wall	Ankuan (Mi), Vakila(Br),	House making (Poles) Rafters, Ornamental plant, Basket, Mat
3	<i>Bambusa tulda</i> Roxb.	Rawthing(Mi), Rasohi(Ma), Midingibas(Ch), Uarna(Br)	House making (Roofing), Basket, Mat, Water vessel, Furniture, Toy, Hat, Musical instrument, Agricultural implement, House hold thing, Fuel, Walking stick, Fodder, Young shoot edible
4	<i>Bambusa vulgaris</i> Schrad ex Wendl	Vairua(Mi), Bachiabas(Ch), Uasur(Br)	House making (Walling, flooring, roofing, Frame, Poles), Toy, Handicraft, Fencing, Fuel, Hat, Furniture,
5	<i>Dendrocalamus hamiltonii</i> Nees & Arn.ex Munro	Phulrua(Mi), Arua(Ma), Rawpui(Pa), Uakformah(Br)	House making (Flooring, Tying, Poles), Basket, Mat, Water vessel, Fuel, Bridge, Rafter, Young shoot edible
6	<i>Dendrocalamus longispathus</i> Kurz.	Rawnal(Mi), Rahula(Ma), Pharbuabas(Ch)	House making, Basket, Fuel, Mat, Furniture, Young shoot edible
7	<i>Dendrocalamus sikkimensis</i> Gamble	Rawmi(Mi), Ano(Ma)	Water vessel, Furniture, Young shoot edible
8	<i>Dendrocalamus strictus</i> (Roxb.) Nees	Tursing(Mi)	House making (Walling, Partition, Flooring, Tying, Thatching) Fencing, Smoking pipe, Ladder, Fishing rod, Musical instrument, Fodder, Cradle, Water vessel, Basket, Mat, Fuel, Furniture, Agricultural implements, Fodder, Tool handle, Musical instrument, Walking stick
9	<i>Melocanna baccifera</i> (Roxb.) Kurz	Mautak(Mi), Ramau(Ma), Egochiabas(Ch), Uarthoi(Br), Mou(Ph)	House making (Walling, Partition, Flooring, Tying, Thatching), Mat, Flute Bridge, Toy, Hat, Handicraft, Basket, Umbrella handle, Fodder, Bed, Water pipe, Young shoot edible

10	<i>Melocalamus compactiflorus</i> Kurz.	Sairil(Mi), Uadu(Br), Sairi(Ma), Chhairil(La)	Basket
11	<i>Schizostachyum dullooa</i> Gamble	Rawthla(Mi), Rachhie(Ma), Uatlau(Bru), Dulubans(Ch)	House making, Mat, Basket, Handicraft, Umbrella handle, Split culm used as knife for cutting animal flesh, Young shoot edible
12	<i>Schizostachyum fuchsianum</i> (Gamble) Majumdar	Rawnal (Mi), RanglaMa), Ramrikawn(Pa)	Basket, Edible shoot, Fishing rod, House hold things
13	<i>Schizostachyum pergracile</i> (Munro) Majumdar	Maudang (Mi)	House making (Walling, Flooring, Roofing) Mat, Fishing rod, Fodder, Handicraft, Basket, Tying, Agricultural implement, Young shoot edible
14	<i>Schizostachyum polymorphum</i> (Munro) Majumdar	Chal(Mi), Rapai(Ma), Uanol(Br)	House making (Tying, Ceiling) Basket, Mat, Fishing net, Frame, Tying, Fodder, Fencing
15	<i>Sinarundinaria falcata</i> Nees.	Lik(Mi), Syuli(Ma)	Basket, Mat, Fishing rod, Hedge

Table 2: Indigenous products made from bamboo

Sl.no.	Local name	Indigenous products
1	Aiâwt	Catching crab
2	Arâwt	Carrying hen, chicken
3	Arbawm	Case for chicken
4	Bawmrang	Carrying vegetable, firewood, etc.
5	Bengbung	Musical instrument
6	Chakaibawm	Case with crab sold in market
7	Chhemthei	Blow fire
8	Dawrawn	For carrying vegetables and rice
9	Emping	Carrying vegetable, rice
10	Fawng	Storing vegetable
11	Hlang	For carrying patients
12	Hnam	Modifying rope for carrying
13	Hnâng	Rope for tying
14	Kho	Storing rice and vegetable
15	Khumbeu	Hat
16	Maufian	Spoon for eating
17	Mauno	For drinking tea and water
18	Ngawi	For catching fishes
19	Pai kawng	Carrying vegetable, firewood
20	Phenglawng	Flute
21	Pum	Blacksmith for fire purpose
22	Sisep	Cleaning rice
23	Talhkhuang	Musical instrument
24	Thlangra	Cleaning rice
25	Thul	Storing clothes, costly things
26	Tlahthi	Knife
27	Tuium	Carrying, storing water
28	Tumphit	Musical instrument
29	Vaibel	Smoking pipe
30	Zampher	Mat used for sun drying rice

CONCLUSION:

This study showed the rich diversity of bamboo flora for developing the traditional knowledge in the region and the findings has significant implications for the

conservation, management and usefulness of different species. In recent decade there has been depletion of bio-resources along with the indigenous knowledge due to various anthropogenic activities like shifting

cultivation, deforestation, overgrazing, agriculture, mining, indiscriminate exploitation of natural resources from the wild and urbanization. So there is a need for conservation, mass propagation and cultivation of different bamboo species in jhum gardens, home gardens, agro-forestry and restoration of the traditional heritage of the region, promoting the sustainable use and improve the economy.

REFERENCES:

- Embaye K., Weih M., Ledin S., Christerssen L., Biomass and nutrient distribution in a highland forest in South west Ethiopia: Implications for Management. *Forest Ecology and Management*, 204: 159-169 (2005)
- Hooker J.D., The flora of British India (Reprinted by Bishen Singh Mahendra Pal Singh Vol I-VII, Deharadun and Periodical Experts, New Delhi, India), 1973.
- Jain S.K., Rao R.R., A handbook of field and herbarium method (Today and Tomorrow Printers and Publishers, New Delhi), 1977.
- Kanjilal U.N., Kanjilal P.C., Das A., A flora of Assam Vol 1 – II, (Avon Book Company, New Delhi), 1982.
- Kanjilal U.N., Kanjilal P.C., De R.N., Das A., A flora of Assam Vol 111 – IV, (Avon Book Company, New Delhi), 1982.
- Lessard G., Chouinard A., Bamboo research in Asia. In: *Proceedings of a workshop held in Singapore, (IDRC, Ottawa, Canada), 1980.*
- Martin G.J., *Ethnobotany: A Methods Manual* (Earthscan Publications, London UK), 2004.
- Mathur G.C., State of art report on use of bamboo in low cost housing (NBO and UN Regional Housing Centre, ESCAP, New Delhi, India), 1981.
- Nath J.N., Das A.K., Bamboo resources in the home gardens of Assam: A case study from Barak valley. *Journal of Tropical Agriculture*, 46: 58-61 (2008)
- Pachau R., *Geography of Mizoram* (R J Enterprise, Venghlu, Aizawl, Mizoram), 1992.
- Sarmah A.S., Thomas M., Goswami R., Haridashan K., Borthakur S.K., Rattan and Bamboo flora of Northeast India in a conservation perspective. *Sustainable Management of Forest in India* (Arunachalam A and M L Khan eds.). (International Book Distributors, Dehra Dun), 2000.
- Tiwari D.N., *A monograph on Bamboo*. (International Book Distributors, Dehra Dun, India), 1992.
- Trivedi S., Tripathy R.S., Bamboo as an important renewable resource of Northeast India. *Resource Potential of Northeast India Vol.II*. (Meghalaya Science Society, Shillong, India), 1984.

Received:03.05.18, Accepted: 06.06.18, Published:01.07.2018

***Corresponding Author:**
Ramachandra Laha*
 Email: rc_laha@yahoo.com