

## Study on Taxonomic Characters and Uses of Bamboo Culture in Myanmar

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### Abstract

In the present research, bamboo plants of the family Poaceae (Tribe-Bambuseae) in Myanmar. The traditional applications culture of 11 species of bamboo in Myanmar were described. The application culture of bamboo were categorized as household articles, toys, construction tools, charcoal, vinegar, musical instruments and food. The taxonomic characters and uses of collective species were thoroughly studied and fully described with relevant photographs.

### Introduction

Bamboo, which belonged to the family Graminae and placed under Poaceae is widely distributed in tropical, subtropical and temperate zones of Africa, America, Asia and Pacific. Bamboo occurs at low to medium elevations in the tropics as wild or cultivated in a great variety of habitats. The geographical distribution of bamboo is greatly influenced by human activities. In Myanmar, bamboos were found as 18 genera and about 100 species (Hendley & Chit Ko Ko 1987) Kress *et.al* (2003) recorded 17 genera and 92 species in Myanmar.

In Myanmar lies between longitudes 92° 10'2"E and 10°30'N Latitudes Myanmar has total land area of 676577 km<sup>2</sup>, and 50% is covered with forest. Bamboos originated in the rainy areas of the tropics and subtropics. The weather of Myanmar is very suitable for many kinds of bamboos the complex landscape with varying altitude.

Bamboo is well known as the poor man's timber is the most versatile forest product. Myanmar is rich in bamboo resources and the species is greatly used by the rural people. The use of bamboo takes place in our daily life as a culture. Human's culture is dependent on its environment when they used plants for their household articles, foods, agricultural and constructive tools etc. (Maoyi 2000)

Bamboo is one of the natural resources of the tropics, and because of its wide distribution, availability, rapid growth, easy handling and desirable properties, it has been used widely in the daily life of the local community as a sustainable resource. Bamboo is closely associated with the national culture. Bamboos were all daily essentials frequently homemade and based on bamboo for material. (Hui, 2007)

There are over 100 kinds of Myanmar bamboo. Some houses in village are made of bamboo as a whole. Myanmar people make bamboo toys as present. Among the musical instruments coppers, pipe and xylophones are made of bamboo. Harvested when newly sprouted and tender, bamboo can be consumed as food. (Khin Maung Lwin 1995)

The aim and objectives of present research work are mainly intended to collect and identify of bamboo plants, to study the life style and culture of Myanmar people regarding bamboo utilization and to share some valuable information of the bamboo how far these plants can be beneficial to human society.

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## Materials and Methods

Bamboo plants belonging to the family poaceae (Tribe Bambuseae) were collected from study area. The collected specimens has been observed and described in detail. Identification of specimens were carried out by referring references of Hooker (1897), Dassanayake (1994), Stapleton (1994), Wong (1995), Dransfield (1995) and Shouliang *et.al* (2016). The index for nomenclatural data referred in Hundley & Chit Ko Ko (1987) and Kress *et.al* (2003). The morphological record and uses of all the collected species were stated in figure of photographs.

## Result

In the present study a total of 11 species of 6 genera belonging to sub tribe Bambusinae diversity were recorded. The lists of the collective diversity species were shown Table 1.

**Table 1. List of collected diversity species bamboo**

No	Scientific name	Local name	Locality	GPS data
1.	<i>Bambusa burmanica</i> Gamble	Hneewa (or) Thaikwagyi	Ngaungshwe Township	N 20°38'0" E 96°55' 51.06"
2.	<i>Bambusa polymorpha</i> Munro	Kyathaungwa	Myothit Township	N 20°10' 22.87" E 95°25' 23.73"
3.	<i>Bambusa vulgaris</i> Schroder.ex Jc.Wendland	Shwewa	Minbu Township	N 20°10' 56.26" E 94°50' 53.43"
4.	<i>Bambusa wamin</i> Brandis ex Camus	Wamin	Minbu Township	N 20°10' 56.26" E 94°50' 53.43"
5.	<i>Thyrsostachys siamensis</i> Gamble	Htiyowa	Pindaya Township	N 20°50' 48.08" E 96°26' 33.59"
6.	<i>Dendrocalamus calostachyus</i> (Kurz) Kurz	Wagyi	Kalaw Township	N 20°33' 25.02" E 96°36' 47.30"
7.	<i>Dendrocalamus giganteus</i> Munro	Wabogyi	Nyaungshwe Township	N 20°38' 55" E 96°56' 9.02"
8.	<i>Dendrocalamus strictus</i> (Roxb) Nees	Hmyinwa	Padan Township	N 19°51' 34.22" E 94°26' 37.55"
9.	<i>Gigantochloa nigrociliata</i> (Buse) Kurz	Waya	Nay Pyi Taw Township	N 19°57' 9.49" E 95°53' 15.8"
10.	<i>Cephalostachyum pergracile</i> Munro	Tinwa	Myothit Township	N 20°10' 22.87" E 95°25' 23.73"
11.	<i>Melocanna baccifera</i> (Roxb) Kurz	Kayinwa	Padan Township	N 19°51' 34.22" E 94°26' 37.55"



A



B



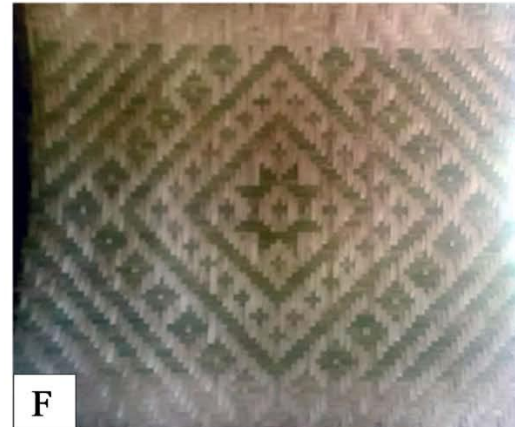
C



D



E



F

**Figure 1. *Bambusa barmanica* Gamble (Hneewa (or) Thaikwagi)**

A. Showing clump appearance

B. Green of young shoot

C. Bamboo Pagoda

D. Table Light of Bamboo

E. Bamboo Rectangular Basket

F. Bamboo Matting



**Figure 2. *Bambusa polymorpha* Munro (Kyathaungwa)**

A. Showing clump appearance

B. Yellow of young shoot

C. Bamboo Accessories

D. Edible Shoot of Bamboo

E. Bamboo Soap

F. Bamboo Chair



**Figure 3. *Thyrsochloa siamensis* Gamble (Htiyowa)**

A. Showing clump appearance

B. Strawed coloured of young shoot

C. Bamboo Broom

D. Works of Bamboo Painting

E. Selected of Bamboo

F. Shan Traditional Umbrella Workshop



**Figure 4. *Dendrocalamus calostachyus* (Kurz) Kurz (Wagi)**

A. Showing clump appearance

B. Orange brown of young shoot

C. Bamboo Hut

D. Bamboo Shop

E. Bamboo Lamp

F. Tea Set & Tea Pot of Bamboo



**Figure 5. *Dendrocalamus giganteus* Munro (Wabogyi)**

A. Showing clump appearance

B. Orange brown of young shoot

C. Bamboo House

D. Bamboo Tray

E. Bamboo Handicraft

F. Bamboo Hat



**Figure 6. *Dendrocalamus strictus* (Roxb.) Nees (Hmyinwa)**

A. Showing clump appearance

B. Pale blue green of young shoot

C. Bamboo Bridge

D. Bamboo Charcoal

E. Gold Leaf (Shwe-Hsai) of Bamboo Paper

F. Gold Leaf (Shwe-Hsai) of Bamboo Paper





A



B



C



D



E



F

**Figure 7. *Gigantochloa nigrociliata* (Buse) Kurz (Waya)**

A. Showing clump appearance

B. Brownish green of young shoot

C. Bamboo Basket

D. Bamboo Basket

E. Bamboo Vinegar

F. Bamboo Tissue Box and Clock



**Figure 8. *Cephalostachyum pergracile* Munro (Tinwa)**

A. Showing clump appearance

B. Reddish brown of young shoot

C. Sticky rice Cooked in Bamboo

D. Sticky rice Cooked in Bamboo



**Figure 9. *Melocanna baccifera* (Roxb.) Kurz (Kayinwa)**

A. Showing clump appearance

B. Pale brown of young shoot

C. Dried Tender Bamboo Shoots

D. Bamboo Homemade

E. Bamboo Jelly

F. Bamboo Jelly

### Discussion and Conclusion

The present research deals with taxonomic characters and used of bamboo culture in Myanmar. Myanmar forests are rich with bamboo which should be used in a versatile ways. There are kinds of bamboo can be found in Myanmar. The present study 11 species of the most useful bamboo are selected.

It is founded that *Dendrocalamus giganteus* Munro is the biggest one. In any jointed of *Dendrocalamus strictus* (Roxb) Nees can be used in making paper to cover the very thin gold sheath called gold leaf (shwe-hsai). *Bambusa burmanica* Gamble and *Dendrocalamus calostachys* (Kurz) Kurz can be used for scaffolding, rural housing, water pipes and other furniture. The distance between the joints of *Cephalostachyum pergracile* Munro is quite long. Thus, it can be used to make a snack by using sticky rice cooked in a green bamboo tube.

The hilts of Myanmar Umbrella are made by *Thyrsostachys siamensis* Gamble because their stems are straight and tidy. *Bambusa burmanica* Gamble, *Dendrocalamus calostachys* (Kurz) Kurz and *Dendrocalamus giganteus* Munro are used for many purposes, e.g homemade, construction, rural housing, water pipes, ceiling, floors doors and wall partitions. Bamboo bridge spanning across the river or streams provide the common and traditional landscape of Myanmar Country. *Bambusa polymorpha* Munro, *Dendrocalamus strictus* Munro (Roxb) Nees, *Cephalostachyum pergracile* Munro, *Melocanna baccifera* (Roxb) Kurz, *Gigantochloa nigrociliata* (Buse) Kurz can be used as a bamboo charcoal and bamboo vinegar. The most famous bamboo is *Bambusa vulgaris* Schroder.ex Jc.Wendland and *Bambusa wamin* Brandis ex Camus as ornamental landscape plants.

Bamboo is a widely distributed and which is very beneficial to Myanmar people. Bamboo and their products are involving in daily life of Myanmar society. Myanmar has bamboo in most regions, near the road side and in the home gardens, in the fruit plantation and in the villages and in the forests. Traditional bamboo products play an important role on socio-economy of people and most products are used in inland. Bamboo forests are an important part of the functions of the earth's vegetation. Bamboo forests functions of water, soil conservation, weather adjustment, and air purification while also providing food. Therefore the present research shall be useful for persons belonging to various walks of society.

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