

# BAMBOOS OF INDIA



**INSTITUTE OF WOOD SCIENCE AND TECHNOLOGY**

(Indian Council of Forestry Research and Education)

**P.O. MALLESWARAM, BENGALURU-560003**

*(An Autonomous body of Ministry of Environment, Forest & Climate Change, Govt. of India)*



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## Preface

Bamboo with its multi farious uses from “cradle to coffin” has graduated from a “Poorman’s timber” to 'green gold' in recent times. There has been a renewed interest in growing, cultivating and utilizing bamboo. Out of the 140 odd species of bamboo recorded in India, many species are now seen in farm lands, arboretum and gardens across the country. To kindle the interest of the common man, Bamboo Society of India (BSI) had brought out a simple hand book in 2014 to identify some of the bamboo species. In the second edition, emphasis has been given to group the different species according to its utility and also add more species. It gives me great pleasure to bring out the second edition of this publication on "Bamboos of India" on the occasion of World Bamboo day' being celebrated across the world on 18th September 2016. I also hope that this book will be help ful in identifying at least some of the bamboo species for the common man as well as the bamboo enthusiast.

I would also like to thank Dr SyamViswanath, Scientist F, Institute of Wood Science and Technology (ICFRE), Bangalore and his team of young dedicated researchers for taking this initiative in bringing out this publication for BSI with original photographs of various Bamboo species across India

**Dr. K. Sundar Naik IFS (R)**  
Chairman, Bamboo Society of India



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A photograph of a lush bamboo forest. The bamboo stalks are tall and thin, with dense green foliage at the top. Sunlight filters through the canopy, creating a dappled light effect on the ground. The overall scene is vibrant and natural.

# **Bamboos with Industrial and Commercial Applications**

## *Bambusa bambos*



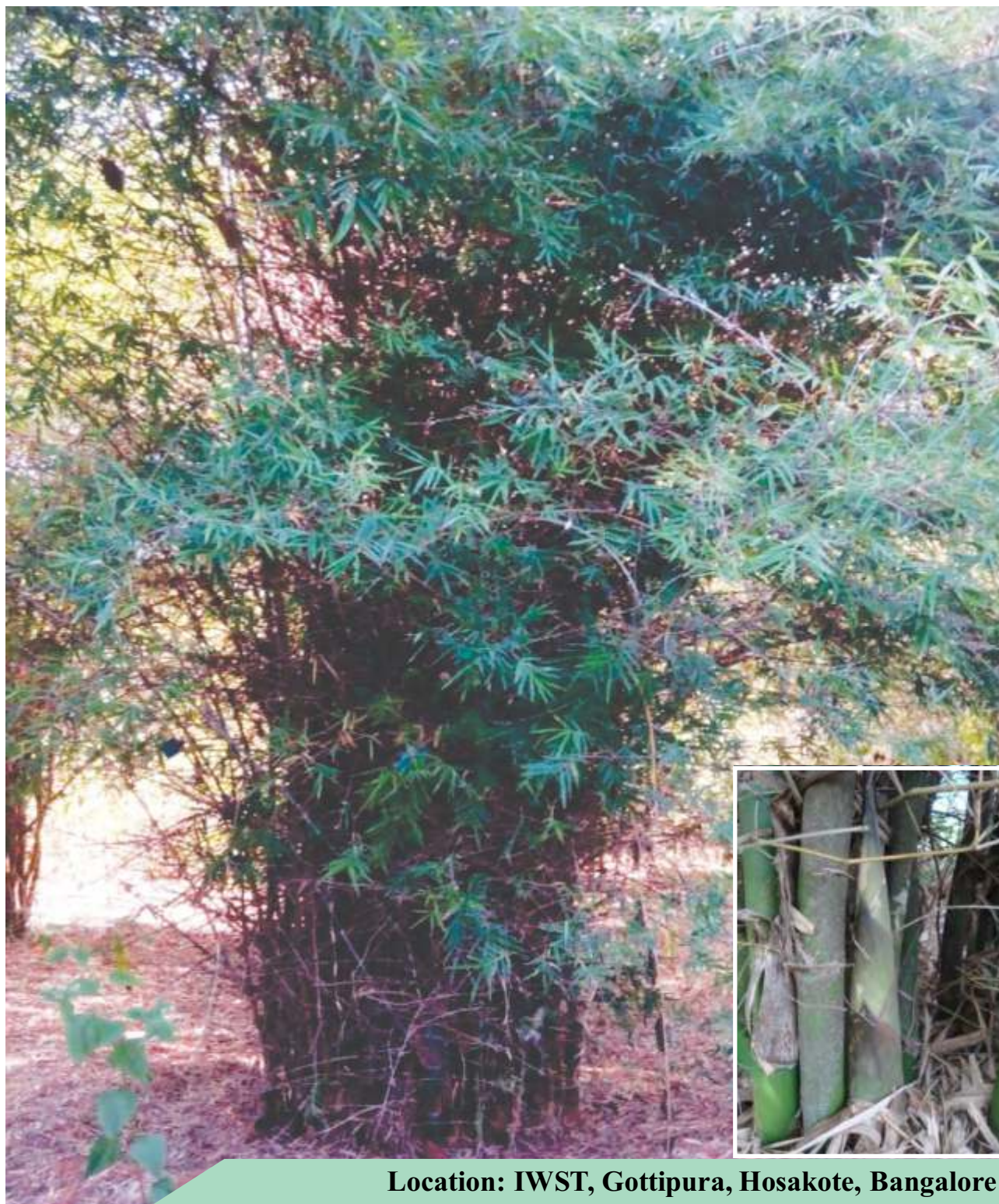
**Location:** Nagarhole Forest, Coorg, Karnataka

**Description:** Thorny Bamboo. Attains the best growth in moist deciduous forests upto an altitude of 1000 metres. Found almost throughout India, and is common in Central and South India. Not generally cultivated due to difficulty in managing thorny side branches. New shoot emerging (inset) has typical leathery culm sheath

**Potential Uses:** Used as raw material for pulp and paper, to make panel products and handicrafts and for thatching and roofing. Useful as biofence in farmlands.



## *Dendrocalamus strictus*



**Location:** IWST, Gottipura, Hosakote, Bangalore

**Description:** Found normally at altitudes upto 1000m, in dry, open deciduous forests. Widely distributed, it is the most common bamboo in India. Grows very congested especially in drier areas. Emerging shoot (inset) is greenish in color with dense dark hairs on outer surface of culm sheath

**Potential Uses:** The culms are used as building material and for making furniture, mats, basketry and implements.



## *Bambusa nutans*



**Location:** Ranga Farms, Jabalpur

**Description:** Grows best at altitudes of between 500-1500m. Thrives on moist hill slopes and flat uplands, and well-drained sandy loam to clayey loam soils. Commonly found and cultivated in the North East, Orissa and Bengal. Excessive branching seen in lower part of culms which restricts its utility when grown in S. India. Emerging shoot is slight greenish (inset), non prominent blade.

**Potential Uses:** Construction, edible shoots, basketry and craft.



## *Dendrocalamus stocksii*



**Location:** IWST, Gottipura, Hosakote , Bangalore

**Description:** Commonly known as 'Marihah bamboo'. Medium to mid-sized bamboo species. Endemic to Central Western Ghats and found in Karnataka, Goa, Kerala and Maharashtra. Non thorny, loosely spaced elegant mid sized culms with narrow light green leaves. Culm sheath(inset L)and emerging shoot(inset R).

**Potential Uses:** Furniture, handicrafts, edible shoots, farm implements, soil conservation, in agroforestry practices, stakes in agriculture, used in furniture industry as replacement for cane



## *Bambusa balcooa*



**Location:** Growmore Biotech, Hosur

**Description:** Native of Bangladesh and West Bengal. Mid-sized to large bamboo species. High calorific value and good physical and mechanical properties. Emerging shoot (inset)

**Potential uses:** Bio-energy, agarbatti sticks, edible shoots, furniture.



## *Bambusa pallida*



**Location: KFRI bambusetum, Peechi, Kerala**

**Description:** Grows best in high rainfall and high humidity areas with moderately high temperature. Naturally found and cultivated in the North East.

**Potential Uses:** Mainly used for making baskets, and mats.



## *Bambusa polymorpha*



**Location:** KFRI, Bambusetum

**Description:** Prefers deep, fertile, well-drained loam and riverine alluvial soil. Commonly found in Arunachal Pradesh, Meghalaya and Tripura and in other parts of the North East. Culm sheath blade prominent and leathery (inset)

**Potential Uses :** It is a bamboo with many uses - as edible shoot, in woven form for handicrafts, for house construction. Also used for pulping in paper industry.



## *Bambusa tulda*



**Location:** Cheesa, Arunachal Pradesh

**Description:** Known as 'Jati' in Assam. Occurs at altitudes of 1500 metres and thrives along water courses. Found extensively in the North East and West Bengal. In emerging culm, blade of culm sheath typically broad, fan shaped and green in color (inset)

**Potential Uses:** Construction purposes, traditionally favoured for agarbatti, basketry and woven applications.



## *Dendrocalamus hamiltonii*



**Location:** RFRI, Jorhat, Assam

**Description:** Commonly distributed in North-west Himalaya, Himachal Pradesh North-east India, Bhutan and Bangladesh. Common species in Palampur, Himachal Pradesh and other parts of H.P bordering Punjab in Shivaliks. Culm sheath (inset)

**Potential Uses:** Construction, basket making, edible shoots



## *Thyrsostachys oliveri*



**Location:** KFRI Bambusetum, Peechi, Kerala

**Description:** Commonly known as 'Kanaikach'. Small to mid-sized bamboo species. Looks similar to *D. stocksii* in culm characteristics but culms are clump forming. Emerging shoot (inset).

**Potential uses:** Fishing rods, furniture, potential species for agroforestry due to its ideal ideotype, land scaping



## *Bambusa vulgaris* (Green)



**Location:** SFRI bambusetum, Arunachal Pradesh

**Description:** Large size bamboo forming not very dense clumps. Commonly grown in home steads in Tripura where it is known as "Bari" and other North Easter States. The culm sheath blade is light yellow in newly emerging culms. Culms upto 20 m height, 7 to 12 cm dia. Dark green when young and slightly yellowish at maturity. Emerging shoot (inset R)

**Potential uses:** Construction, fencing, scaffolding, handicrafts, etc. shoots edible



## *Cephalostachyum pergracile*



**Location:** SFRI bambusetum, Arunachal Pradesh

**Description:** Around 12 to 15 m tall, culms are round with very distinct and persistent culms sheath. Young culm shaving bluish tinge.

**Potential uses:** Landscaping, basket and matweaving, construction, handicrafts etc.



## *Dendrocalamus longispathis*



**Location:** Malhar Good earth FootPrints, Kengeri Bangalore

**Description:** Occurring in moist hill slopes along streams and shaded forest fringes. Culms upto 20 m tall, 10 cm dia., inter node 20 to 30 cm long.

**Potential uses:** Basket and mat weaving, construction, handicrafts etc. Shoots edible.





**Giant Bamboos  
> 20m culm height**



## *Dendrocalamus giganteus*



**Location:** Kalasapura Estate, Koppa, Karnataka

**Description:** Commonly known as 'Giant Bamboo' reaching a height of 30-40 m under favourable conditions. New shoots can grow upto 40 cm per day. It is a giant tropical and subtropical dense clumping species native to Southeast Asia. Found in NE India, Kerala and Sri Lanka. Emerging shoot (inset R)

**Potential uses:** Furniture, handicrafts, edible shoots.



## *Dendrocalamus brandisii*



**Location:** Muthu Devaiah's Farm, Coorg, Karnataka

**Description:** Commonly known as 'Burma bamboo'. Giant bamboo species. First introduced in Coorg District, Karnataka in 1913. Preferred for cultivation in home steads mainly due to its large size, straight growth habit and thornless nature. Emerging shoot (inset).

**Potential uses:** Construction, furniture, farm implements, baskets, handicrafts, 'chandraki' in sericulture industry, incense sticks in agarbatti industry and edible shoots



## *Dendrocalamus sikkimensis*



**Location:** Namchi, Sikkim

**Description:** Considered to be a giant bamboo endemic to Sikkim. Grows upto 18-20m. It has many culms of different dimensions and shapes and varying internodes that are normally orange in colour in the same clump. See close up (inset L) and culm sheath (inset R).

**Potential uses:** Landscaping, construction, handicrafts etc. shoots edible.



## *Dendrocalamus latiflorus*



**Location:** Growmore Biotech, Hosur

**Description:** Giant bamboo native to China/Taiwan, growing upto 20-25 m tall with culm walls over an inch thick. Now seen in Mizoram and other parts of NE. Large foliage, 25 cm long, green culms with long internode, growing inclump formation. The shoots are orange colored with purple top. Culm sheath (inset L).

**Potential Uses:** Excellent timber bamboo for house construction, crafts, edible shoots.









**Naturalized Exotic  
Bamboos of Economic Importance**



## *Guadua angustifolia*



**Location:** Tata Coffee Estate, Thithimathi, Kodagu, Karnataka

**Description:** Commonly known as 'Vegetable steel'. Mid-sized to large bamboo species. Native of South America. Considered to be outstanding in its physical and mechanical properties as well as highly durable. Grows well along rivers and creeks and also in patches away from water logged areas. Emerging shoot (inset R).

**Potential uses:** Scaffolding, building material, as a source of pulp for paper industry, furniture and edible shoots



## *Dendrocalamus asper*



**Location:** Devan Estate, Koppa, Karnataka

**Description:** Commonly known as 'Sweet bamboo'. Mid-sized bamboo species. Native of South East Asia. Edible shoots are ranked among the tastiest in the world. The mechanical properties of the culm are on par with any other species. Emerging shoot pinkish. Can be utilized even when  $>1.5$  m height (pic of shoot inset L).

**Potential uses:** Furniture, agarbatti industry, edible shoots, can be managed for edible shoot production in agroforestry



## *Schizostachyum brachycladum*



**Location:** Wild Wood Spa & Resort, Toodahalli, Kundapura, KA

**Description:** Also known as ‘Sacred Bali Bamboo’. Wide spread in South-East Asia. Culm erect with pendulous tip, 8-16 m tall, 7-10 cm in diameter, wall 3-5 mm thick, green, golden yellow internodes. Comes up well in peninsular India. Emerging shoot (inset R)

**Potential uses:** Landscaping, water containers, handicrafts, banana props etc.



## *Gigantochloa atrovioleacea*



**Location:** Dr. Soan's Farm, Moodubidri , Karnataka

**Description:** Native to Indonesia. Very dark erect culms with predominantly white nodes. Fairly tight clumping habit. Dense heavy culms with thick walls. Culm sheath broad with narrow blade. Comes up well in peninsular India. Emerging shoot is greenish (inset).

**Potential uses:** Furniture making, landscaping, construction fencing, handicrafts etc.







A dense thicket of thin-walled reed bamboos. The stalks are thin, green, and upright, with some showing signs of aging or damage. The leaves are long, narrow, and have a brownish-green hue, some appearing dry and brittle. The ground is covered with a layer of fallen, dried bamboo leaves and debris.

## **Thin Walled Reed Bamboos**



## *Ochlandra travancorica*



**Location:** KFRI Bambusetum, Peechi, Kerala

**Description:** Culm is upto 8 m tall, erect. Thrives in moist deciduous and semi-ever green forests. Confined to the southern Western Ghats. Comes gregariously along stream sides. Culm sheath prominent and typical with elongated narrow blade (inset R).

**Potential uses:** Basketry, mat-making and decorative handicrafts.



## *Ochlandra scriptoria*



**Location:** Kannur, Kerala

**Description:** Culm 5-8 m tall, erect sometimes drooping. Culm dia. and wall thickness smaller than *O. travancorica*. Almost pencil sized culms. Confined to the southern Western Ghats. Comes gregariously along stream sides.

**Potential uses:** Basketry, mat-making and decorative handicrafts.









## **Native Monopodial Bamboos**



## *Melocanna baccifera*



**Location:** SFRI Bambusetum, Arunachal Pradesh

**Description:** Thin-walled, small diameter, non-clump forming bamboo. Comes up like a gregarious bamboo forest. Found in Manipur, Mizoram, Tripura and other North Eastern states. Largest fruit in bamboo kingdom weighing upto 150gm (see photo inset L). Not suited for Peninsular India especially in drier tracts. Culm sheath inset R.

**Potential uses:** Edible shoots, construction, basketry, paper and pulp.





# Ornamental Bamboos



## *Bambusa wamin*



**Location:** IWST, Bangalore

**Description:** Medium sized graceful bamboo. Culms much swollen, pitcher shaped in lower half of culm. Commonly called "Buddha's belly". The emerging shoot is highly distinct with its pyramid structure. Sheath is shown as inset.

**Potential Uses:** Ornamental value. For land scaping in gardens and parks



## *Bambusa vulgaris*



**Location:** IWST, Bangalore

**Description:** Mid-sized bamboo species with yellow culms. Green striations noticed in inter nodal region of culms. Most common ornamental variety of bamboo. Can be easily propagated by branch and culm cuttings

**Potential Uses:** Ornamental value. Can be used for landscaping purposes in gardens and parks.



## *Bambusa multiplex*



**Location:** IWST, Gottipura, Hosakote, Bangalore

**Description:** Also known as ‘Hedge Bamboo’. It is an ever green species growing upto 5 m with a number of small thin reed like culms.

**Potential uses:** Fencing, weaving, landscaping



## *Sasa japonica*



**Location:** SFRI Bambusetum, Arunachal Pradesh

**Description:** Small to mid-sized ornamental bamboo. Small green leaves streaked with white bands giving the canopy a fuzzy whitish appearance.

**Potential uses:** Land scaping and topiary in gardens, also as live hedges around homesteads.







A photograph of a bamboo forest. The bamboo stalks are tall, thin, and dark green, growing in a dense cluster. The leaves are bright green and appear to be blowing in the wind. The ground is covered with dry bamboo leaves and some small green plants. The background shows more bamboo trees, creating a sense of depth.

**Some Highly Restricted  
Endemic Bamboo species**



## *Bambusa assamica*



**Location:** SFRI bambusetum, Arunachal Pradesh

**Description:** Mid sized, erect with numerous branches emerging from the nodes in upper region. Culms may be as long as 10 m. Culm size is not very impressive. As name suggests it is endemic to Assam and other parts of North East.

**Potential uses:** Basketry, mat weaving, handicrafts etc.



## *Bambusa cacharensis*



**Location:** Tripura

**Description:** As the name suggests it is native to Cachar district of Assam. Grows well in plains and lower elevation hilly slopes. Erect woody culms, nearly 20 m height, 5 to 10 cm inter node diameter. Culm sheaths 12–15 cm long and 6-7cm wide. New shoots prominent by its green culm sheaths (Photo inset R). Potential to grow in peninsular India

**Potential uses:** Utility value in small construction, scaffolding, landscaping, basketry, handicrafts



## Pseudoxyteranthera richtyaii



Location: Bhorvalley, Maharashtra

**Description:** This species, highly endemic and commonly found in Bhor valley of Maharashtra is also known as ‘Mesh’ Bamboo. The clump forming habit and size of culms are similar to *D. stocksii*, but mechanical properties are superior to *D. stocksii*. Not properly documented and described and suspected to be a related to *Dendrocalamus stocksii*. Culm sheath (inset R) is different from *D. stocksii*

**Potential uses:** Construction, farm implements



## *Himalayacalamus hookerianus*



**Location:** Gangtok, Sikkim

**Description:** Known as 'Blue bamboo'. Found in Nepal, Sikkim, Bhutan and Assam. One of the most beautiful sympodial bamboo. Clump-forming bamboo, culms nearly 6-8 m tall, inter node upto 30 cm length and upto 3 cm in dia, uniformly blue-green. The new culms are bluish with a hint of red or even purple. Sub tropical species with ornamental value. Culm sheath blade elongated and tapering. Culm diameter small <40 mm and 15-20 feet ht.

**Potential uses:** Land scaping, live fencing, basketry, weaving



## *Bambusa multiplex* 'Alphonse Karr'



**Location:** Growmore Biotech, Hosur

**Description:** Commonly called as 'Alphonse Karr'. Has a maximum height of 10 m, dia 4-5 cm, the culms on this bamboo are golden with random green stripes of variable width. Like other forms of *Bambusa multiplex*, best for indoors and generally grows in a tight cluster of culms.

**Potential uses:** High Ornamental value







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