



Bamboo for Forest and Garden

Bamboos have been important in Asian cultures for thousands of years. Although less known in the New World, some species, such as the *Guadua* bamboos, are intricately connected to indigenous American cultures. In Hawaii, two species, *Bambusa vulgaris* and *Schizostachyam glaucifolium*, are linked to ancient Polynesian traditions. With more than 1200 known species, this group of plants is gaining popularity worldwide for ornamental and economic purposes.

Bamboo, of one type or another, is a “natural” for almost any tropical garden. In fact, most people think of bamboos as plants found only in tropical regions. Many of the hundreds of types of bamboos do grow in the tropics, but some species grow as far north as New York or Seattle. Bamboos vary from forest giants of 120 ft to dwarfs of 6 inches.

Bamboo canes (culms) grow from rhizomes (underground stems). Rhizomes of some species spread slowly, with new culms developing close to the base of the older culms. These are *clumping bamboos*. Other species have rhizomes that spread rapidly. In these species, rhizomes may grow laterally 2–3 ft from the original plant in the first year, and the rate of growth increases each year afterward. Rhizomes may spread as far as 15 ft in one season. These species with rapidly spreading rhizomes are the *running bamboos*.

Soon after a bamboo culm appears above the ground, it is as thick as it will be when fully grown. The culm lengthens rapidly, usually to its full height in five to eight weeks, sometimes growing at a rate of a foot or more a day. Culms of maximum size are not produced by the bamboo plant until several years after the rhizome is first planted.

Bamboo in the garden

Many specimens of bamboo are suitable for ornamental purposes. The clump bamboos are ideally suited for ornamental uses in their areas of adaptation. They can be planted in groups for hedges or singly for specimen plantings. They spread very slowly and are easy to keep within bounds. One of the best is the Mexican weeping bamboo. Others to consider are the Alphonse Karr, fern-leaf, and feather bamboos. These delicate clump types range from 10 to 20 ft high. For larger gardens, try Buddha’s belly, Oldham bamboo, punting pole bamboo, and weaver’s bamboo. These are all clumping types in the 40–50 ft height range.

The spectacular tropical clumping bamboos need plenty of room, because they often soar to 100 ft or more. This group includes the *Dendrocalamus*, *Guadua*, and *Gigantochloa* species, which have culms to 12 inches in diameter. They are grown for edible shoots, construction material, and furniture.

Miniature bamboos well suited to container growing are the *Sasa* species and *Shibatea kumasaca*. These and other running bamboos, like black bamboo, can be kept small when contained and are used in bonsai arrangements.

The running bamboos are more difficult to keep in bounds than the clumping types. However, they are desirable as ornamental plants because of diversity in their habit of growth, appearance, and size.

Because some running bamboos spread rapidly, growth must be restricted or a thick jungle may soon form, extending many feet beyond the original planting. A curb made of sheet metal, concrete, plastic, or similarly impermeable material that will prevent bam-

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boo from spreading. The curb must surround the planting. The top of the curb should be about one inch above the soil surface, and the curb should extend 24–30 inches into the ground. Joints in the curb must be lapped and secured tightly, because bamboo rhizomes can force their way through very small openings.

Buildings, wide concrete driveways, and roads also restrict the spread of bamboo. If the bamboo is planted in a turf area, mowing will destroy unwanted culms by cutting them while they are still small and soft. Unless the planting is curbed, rhizomes of a running bamboo will spread beyond the edge of the grove or patch a distance approximately equal to the height of the culms.

Propagation

Bamboo planting material is most commonly propagated by removing offsets from the clump or dividing the clump. The plants can be set in the garden as soon as they are dug up and should not be allowed to dry out. Limited numbers of new plants may be obtained by this method.

Many species of bamboo may also be propagated from rhizome cuttings or two- to three-node cuttings from recently matured culms taken from near the base. Rooting hormones have been found to be beneficial.

Large numbers of new plants can be obtained by planting fresh, mature seeds. Most species will germinate within 5–10 days with a high germination percent. On the basis of the flowering behavior, the bamboos have been classified into three groups; (1) those that flower annually or nearly so, (2) those that flower heavily and periodically, and (3) those that flower sporadically and irregularly. Plants in the second group flower in definite physiological cycles for each species, and then the whole plant dies. Those in the third group have some of the culms of a clump flower and die at different ages, but the whole clump does not die.

Culture

Apply a complete fertilizer or composted manure four to six times per year. Mulch the soil around the planting. Mulches add organic matter to the soil, help to restrict the growth of weeds, and conserve soil moisture. Dead leaves or dry grass clippings can be used for mulch. Apply a layer of mulching material at least 3 inches deep.

References

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Species

The following table lists bamboo species presently found in Hawaii. Some are available in limited numbers at a few local nurseries. The list will expand as new bamboos are imported and released from quarantine. Special thanks are due Susan Ruskin and Peter Berg of Quindembo Bamboo Nursery, Kawaihae, Island of Hawaii, for their interest and commitment to the enjoyment of bamboo and their contribution to the information on this list.

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| Scientific name (synonyms); common names | Height (ft) | Diameter (inches) | Type* | Description and uses |
|---|-------------|-------------------|-------|---|
| <i>Bambusa bambos</i> ; giant thorny bamboo | 50–100 | 8–10 | C | One of the main bamboos used in India for construction and paper pulp. A larger form, <i>B. b. var. gigantea</i> , is almost thornless. |
| <i>Bambusa beecheyana</i> (syn: <i>Sinocalamus beecheyanus</i>); beechy bamboo | 12–40 | 4–5 | C | Culms strongly arching for graceful effect. Edible shoots, rapid growth. Used for house construction, basketry, and paper pulp. |
| <i>Bambusa burmanica</i> | 40–55 | 6–8 | C | Native to Burma-Malaysia; large-garden ornamental; used in construction. |
| <i>Bambusa dissemulator</i> ; durable thorny bamboo | 20–50 | 2–3 | C | Straight culms growing in compact clump. Grown as living fence. Whole culms used in heavy construction. Very durable, hard wood. |
| <i>Bambusa dolichomerithalla</i> | 30–60 | 2–4 | C | Culms used in craftwork. Internodes almost 2 ft long. Upright growth. Good for large gardens. |
| <i>Bambusa malingensis</i> ; maling bamboo, Chinese grafting bamboo | 15–30 | 1–2 1/2 | C | Grows in tight clumps with culms stiffly erect. Wood is fine grained and durable. Used for light construction and basketry. |
| <i>Bambusa multiplex</i> (syn: <i>Bambusa glaucescens</i>); hedge bamboo | 10–40 | 1 1/2 | C | At least 8 forms. Some listed below. Excellent hedge and windbreak. |
| <i>Bambusa multiplex</i> 'Alphonse-Karr' (syn: <i>Bambusa glaucescens</i>) Alphonse Karr bamboo | 20–40 | 1 1/2 | C | Bright yellow and green-striped culms. Attractive as hedge or single clump. Excellent garden ornamental. |
| <i>Bambusa multiplex</i> 'Fern-Leaf' (syn: <i>Bambusa glaucescens</i> , <i>Bambusa nana</i> , <i>Bambusa disticha</i>); fern leaf bamboo | 10–20 | 1/2 | C | Delicate with 10–20 tiny leaves per twig. Graceful arching growth. Excellent garden ornamental. |
| <i>Bambusa multiplex</i> 'Golden Goddess' (syn: <i>Bambusa glaucescens</i> , <i>Bambusa falcata</i>); golden goddess bamboo | 6–10 | 1/2 | C | Graceful arching growth. Good as container or screen plant. Excellent garden ornamental. |
| <i>Bambusa multiplex</i> 'Silverstripe' (syn: <i>Bambusa glaucescens</i>); silver stripe fernleaf | 6–10 | 1/2 | C | Resembles Fern Leaf but has white striped leaves. Excellent garden ornamental. |
| <i>Bambusa oldhamii</i> (syn: <i>Sinocalamus oldhamii</i>); Japanese timber bamboo; oldham bamboo, clumping giant timber | 15–55 | 3–4 | C | Dense foliage and erect culms. May be used as screening hedge or windbreak. Used for pulp and edible shoots. Excellent specimen in large gardens. |
| <i>Bambusa oliveriana</i> ; oliver bamboo | 10–15 | 1/2 | C | Graceful ornamental. |
| <i>Bambusa pachinensis</i> | 6–35 | 1–2 | C | Ornamental; used for crafts; nodes up to 30 inches apart. |
| <i>Bambusa textilis</i> ; weaver's bamboo, wong chuck, mit chuck (China) | 15–50 | 2 | C | Outstanding with erect culms nodding slightly at tips. Used for baskets, mats, rope, hats. Seldom attacked by powder post beetle. |
| <i>Bambusa tuldoidea</i> ; punting pole bamboo, yao-chuck, chaan-ko chuck | 15–55 | 2 | C | Erect culms nodding at tips. Used in crafts, construction, furniture. Hard wood. Good for large gardens. |
| <i>Bambusa ventricosa</i> ; Buddha's belly bamboo | 6–55 | 2 | C | When dwarfed, internodes become short and swollen, suggesting Buddha's prominent paunch. |
| <i>Bambusa vulgaris</i> ; common bamboo, ohe | 20–60 | 4 | C | Origin unknown—thought to be an early Polynesian introduction to Hawaii. Open clump with green culms. Susceptible to beetle attack, limiting its use in construction. Proper curing minimizes insect damage. Used for pulp, edible shoots, props for coffee trees heavy with fruit. |
| <i>Bambusa vulgaris vittata</i> ; giant green-stripe, giant golden bamboo, painted bamboo | 20–50 | 4 | C | Similar growth to <i>B. vulgaris</i> , but golden culms with green stripes. Excellent and popular in large gardens. |
| <i>Bambusa</i> sp.; Hirose's bamboo | 50–60 | 4–6 | C | Introduced to the Big Island by Margaret Hirose. Very compact and upright; excellent ornamental, windbreak, and construction species. |

*Type: C = culms clumping, R = culms running.

| Scientific name (synonyms); common names | Height (ft) | Diameter (inches) | Type* | Description and uses |
|--|-------------|-------------------|-------|---|
| <i>Chimonobambusa marmorea</i> (syn: <i>Arundinaria marmorea</i>); marbled bamboo, dwarf black bamboo | 2–6 | 1/4 | R | Can be fairly invasive but good for erosion control or container plant. |
| <i>Chimonobambusa quadrangularis</i> (syn: <i>Bambusa quadrangularis</i>); square-stem bamboo | 10–30 | 1 | R | Attractive square stems and vertical dark green culms with heavy whorls of leaves at each node. Rhizomes wander but not overly invasive. |
| <i>Chusquea brevi-glumis</i> ; upright chusquea | 15–20 | 1/2–1 | C | From Central America, An upright clumper. Very attractive. |
| <i>Chusquea coronalis</i> | 15–25 | 1/2–1 | C | Feathery, arching ornamental from Central America. Prefers moist conditions. |
| <i>Dendrocalamus asper</i> ; Java bamboo | 60–100 | 5–8 | C | East Indian bamboo. Open clump grown for construction and edible shoots. Immense new shoots are a furry silver-brown. Cold resistant for this genus. Should do well to 4000 ft. |
| <i>Dendrocalamus brandisii</i> ; kyellowa, waya wapyu (Burma), wakay, waktu | 60–120 | 5–8 | C | Used for house construction, paper pulp, furniture, baskets, and edible shoots. Native to India. |
| <i>Dendrocalamus giganteus</i> ; wabo (Burma), worra (Assam) | 80–100 | 8–10 | C | Used for house construction, paper pulp, furniture, baskets, and edible shoots. Impressive stature. |
| <i>Dendrocalamus latiflorus</i> ; sweet shoot bamboo, mazhu | 60–80 | 6–8 | C | Used for house construction, paper pulp, furniture, baskets, and edible shoots. Native to China. |
| <i>Dendrocalamus membranaceus</i> ; wap-yu (Malay) | 50–70 | 4 | C | Used in construction, basketry, and paper pulp. Edible shoots. Best in moist, low areas. |
| <i>Dendrocalamus strictus</i> ; calcutta bamboo | 80–100 | 5 | C | Drought resistant. Hardy to light frost. Used for paper pulp in India. |
| <i>Drepanostachyum khasianum</i> ; khasian bamboo | 10–12 | 1/2 | C | Small ornamental from India. Prefers moist conditions. Good for small gardens. |
| <i>Fargesia dracocephala</i> ; weeping bamboo | 10–15 | 3/4 | C | Slender fountain-like culms. Prefers shade. Good for small gardens. |
| <i>Fargesia spathaceus</i> (syn: <i>Fargesia murielae</i>); umbrella bamboo | 10–15 | 1/2 | C | Fountain-like growth. One of the Chinese mountain bamboos preferred by pandas. Cold hardy. |
| <i>Gigantochloa albociliata</i> | 40–50 | 2–4 | C | Culms strong and durable; used in construction and crafts. |
| <i>Gigantochloa apus</i> ; bambu tali (Malaya) | 40–65 | 4 | C | Culms strong and durable. Preferred for house construction in Java as well as bridges, crafts. Highly recommended commercial species, also ornamental. |
| <i>Gigantochloa atrovialiscea</i> ; giant black bamboo | 30–50 | 4 | C | Black-culmed bamboo of Indonesia. Shoots edible, useful in construction, crafts. |
| <i>Guadua angustifolia</i> ; Colombian guadua | 70–90 | 4–6 | C | South American species. Resists rot and insects. Excellent construction bamboo. Highly ornamental. |
| <i>Hibanobambusa tranquillans shiroshima</i> ; shiroshima variegated bamboo | 6–15 | 1 | R | Ornamental variegated leaves. Vigorous runner. For sun or shade. Best if contained. |
| <i>Otatea acuminata aztecorum</i> (syn: <i>Yushania aztecorum</i> , <i>Arthrostylidium longifolium</i>); Mexican weeping bamboo | 10–25 | 1 1/2 | C | Highly ornamental. Ideal for sunny conditions. Culms are slender and arching like weeping willow. Excellent for small gardens |
| <i>Phyllostachys bambusoides</i> (syn: <i>Phyllostachys reticulata</i> , <i>P. quillioi</i>); Japanese timber bamboo, madake | 30–70 | 1–6 | R | Japan's commercial timber bamboo. Forms open forest grove. Shoots are edible. Also used for medicinal purposes. |

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| Scientific name (synonyms); common names | Height (ft) | Diameter (inches) | Type* | Description and uses |
|---|-------------|-------------------|-------|---|
| <i>Phyllostachys dulcis</i> ; sweet bamboo | 30–40 | 2–3 | R | Edible shoots among the most esteemed. As with others of this genus, it will tolerate temperatures many degrees below freezing. |
| <i>Phyllostachys heterocyclus pubescens</i> (syn: <i>P. edulis</i>); hairy bamboo, moso | 40–70 | 3–7 | R | Moso is considered most handsome of giant hardy bamboos. Grown for edible shoots, construction material, piping, and crafts. |
| <i>Phyllostachys nigra</i> ; black bamboo | 15–25 | 1 1/2 | R | Highly ornamental. New culms green, turning black. Used for cabinet work. |
| <i>Phyllostachys nigra</i> 'Bory' (syn: <i>P. boryana</i>) | 30–50 | 3 | R | Culms with purplish spots. Shoots are edible. Used in construction, crafts. |
| <i>Phyllostachys nigra</i> 'Henon'; Henon bamboo | 35–55 | 3 1/2 | R | Culms thin-walled but strong. Shoots edible. Used in construction and crafts. |
| <i>Phyllostachys nuda</i> ; fishing pole bamboo | 25–35 | 1–2 1/2 | R | Edible shoots. Culms used for fishing poles, stakes. Very cold hardy, can tolerate below 0°F. |
| <i>Phyllostachys vivax</i> ; giant edible shoot bamboo | 30–70 | 4–5 | R | Ornamental, open grove, edible shoots. Reported to be fastest growing of the timber bamboos. |
| <i>Pleioblastus chino-variegata</i> ; dwarf variegated Chinese bamboo | 1–3 | 1/4 | R | Small, variegated leaves. Ornamental for sun and shade. Best if contained. |
| <i>Pleioblastus distichus</i> ; dwarf fern leaf bamboo | 8–12 | 1/8 | R | Ornamental ground cover or potted plant. Best if contained. |
| <i>Pleioblastus gramineus</i> (syn: <i>Arundinaria graminea</i>); grass-leaf bamboo | 6–15 | 3/4 | R | From Okinawa, with narrow grass-like leaves for shady locations. |
| <i>Pleioblastus shibuyanus</i> Tsuboi; shibuya-zasa | 1/2–1 | narrow | R | Vigorous dwarf with variegated leaves. Best for shade. Contain to avoid wandering runners. |
| <i>Pleioblastus viridi-striata</i> ; dwarf variegated Japanese bamboo | 1–2 | 1/4 | R | Dwarf ornamental Japanese bamboo for semishade, with variegated leaves. Best if contained. |
| <i>Pseudosasa japonica</i> (syn: <i>Arundinaria japonica</i> , <i>Sasa japonica</i>); arrow bamboo, bambusa metake | 6–20 | 1/4–3/4 | R | Culms stiffly erect, rampant, thick. Rhizomes not aggressive; does not spread rapidly. |
| <i>Sasa palmata</i> (syn: <i>Sasa senanensis</i> , <i>Arundinaria palmata</i>); palmate bamboo | 4–12 | 1/2 | R | Broad, handsome leaves to 15" long and 4" wide. Rampant spreader for shade or semi-shade. Best if contained. |
| <i>Sasa pygmaea</i> (syn: <i>Arundinaria pygmaea</i> , <i>Pleioblastus pygmaeus</i>); dwarf bamboo | 1–1 1/2 | 1/16 | R | World's tiniest bamboo from Japan. Forms a carpet on the forest floor. Excellent ground cover but needs containment. |
| <i>Sasa tessellata</i> (syn: <i>Indocalamus tessellata</i>); Chinese tessellated sasa | 3–7 | 1/2 | R | Ornamental. Very large dark green leaves to 24". Ideal for moist, shady areas. Best if contained. |
| <i>Sasa variegata</i> (syn: <i>Arundinaria variegata</i>); variegated sasa | 2–3 | 1/4 | R | Ornamental groundcover or for container. Best in semishade. Somewhat invasive. |
| <i>Schizostachyum glaucifolium</i> ; native Hawaiian bamboo, ohe | 30–40 | 2 | C | Thought to be indigenous to Hawaii or introduced by early Polynesians. Used in crafts and in the making of nose flutes. |
| <i>Semiarundinaria fastuosa</i> (syn: <i>Arundinaria fastuosa</i>); Japanese palm-tree bamboo, temple bamboo | 8–25 | 1 | R | Slow runner, ornamental. Upright plant with dark green foliage. Excellent in small gardens, |

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| <i>Shibatea kumasaca</i> (syn: <i>Phyllostachys kumasasa</i> , <i>Sasa ruscifolia</i>); kumasasa | 2-6 | 1/4 | R | Seldom invasive. Delicate ornamental requiring moisture and shade. Short wide leaves, 2 ft long by 4 ft wide. Resembles the genus <i>Ruscus</i> of the lily family. |
| <i>Sinobambusa tootsik</i> ; tootsik | 15-25 | 1 1/2 | R | Ornamental but rampant. Used in early days in Hawaii for erosion control. Needs containment if used in garden. |
| <i>Thyrsostachys siamensis</i> ; monastery bamboo | 25-40 | 3 | C | From Thailand. Highly esteemed for natural grace and delicious shoots. |

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