Bamboo

Bamboos are a diverse group of evergreen perennial flowering plants in the subfamily Bambusoideae of the grass family Poaceae. Giant bamboos are the largest members of the grass family. The origin of the word "bamboo" is uncertain, but it probably comes from the Dutch or Portuguese language, which originally borrowed it from Malay or Kannada.

In bamboo, as in other grasses, the internodal regions of the stem are usually hollow and the vascular bundles in the cross-section are scattered throughout the stem instead of in a cylindrical arrangement. The dicotyledonous woody xylem is also absent. The absence of secondary growth wood causes the stems of monocots, including the palms and large bamboos, to be columnar rather than tapering.

Bamboos include some of the fastest-growing plants in the world, due to a unique rhizome-dependent system. Certain species of bamboo can grow 910 mm (36 in) within a 24-hour period, at a rate of almost 40 mm (1+1/2 in) an hour (equivalent to 1 mm every 90 seconds). This rapid growth and tolerance for marginal land, make bamboo a good candidate for afforestation, carbon sequestration and climate change mitigation.

Bamboo is versatile and has notable economic and cultural significance in South Asia, Southeast Asia, and East Asia, being used for building materials, as a food source, and as a raw product, and depicted often in arts, such as in bamboo paintings and bamboo working. Bamboo, like wood, is a natural composite material with a high strength-to-weight ratio useful for structures. Bamboo's strength-to-weight ratio is like timber, and its strength is generally like a strong softwood or hardwood timber

Bamboos have long been considered the most primitive grasses, mostly because of the presence of bracteate, indeterminate inflorescences, "pseudospikelets", and flowers with three lodicules, six stamens, and three stigmata. Following more recent molecular phylogenetic research, many tribes and genera of grasses formerly included in the Bambusoideae are now classified in other subfamilies, e.g., the Anomochlooideae, the Peloidal, and the Ehrhartoid. The subfamily in its current sense belongs to the BOP clade of grasses, where it is sister to the Potidaea (bluegrasses and relatives).

The bamboos comprise three clades classified as tribes, and these strongly correspond with geographic divisions representing the New World herbaceous species (Olyreae), tropical woody bamboos (Bambuseae), and temperate woody bamboos (Arundinarieae). The woody bamboos do not form a monophyletic group; instead, the tropical woody and herbaceous bamboos are sister to the temperate woody bamboos. Altogether, more than 1,400 species are placed in 115 genera.

Animal diet

Bamboo is the main food of the giant panda, making up 99% of its diet. Soft bamboo shoots, stems and leaves are the major food source of the giant panda of China, the red panda of Nepal, and the bamboo lemurs of Madagascar. Rats eat the fruits as described above. Mountain gorillas of Central Africa also feed on bamboo and have been documented consuming bamboo sap which was fermented and alcoholic; chimpanzees and elephants of the region also eat the stalks.

The larvae of the bamboo borer (the moth Omphisa fuscidentalis) of Laos, Myanmar, Thailand and Yunnan, China feed off the pulp of live bamboo. In turn, these caterpillars are considered a local delicacy.

Human health

Gardeners working with bamboo plants have occasionally reported allergic reactions varying from no effects during previous exposures, to immediate itchiness and rash developing into red welts after several hours where the skin had been in contact with the plant (contact allergy), and in some cases into swollen eyelids and breathing difficulties (dyspnoea). A skin prick test using bamboo extract was positive for the immunoglobulin E (IgE) in an available case study

Fuel

This section is an excerpt from Bamboo charcoal.

Bamboo charcoal is charcoal made from species of bamboo. Bamboo charcoal is typically made from the culms or refuse of mature bamboo plants and burned in ovens at temperatures ranging from 600 to 1200 °C. It is an especially porous charcoal, making it useful in the manufacture of activated carbon.

Weapons

Bamboo has often been used to construct weapons and is still incorporated in several Asian martial arts.

Bamboo broom

Bamboo trays used in mussel farming (Abu cay, Bataan, Philippines) Bamboo has traditionally been used to make a wide range of everyday utensils and cutting boards,

Use of bamboo tree

This amazing plant has unique rapid growth and can play an important role in protecting our planet from pollution and improving the soil. Bamboo can be used as a biofuel, food, and for architecture and construction applications and plays a large role in the local economy by creating job opportunities.

Use of Construction

Because of its combined strength and lightweight, bamboo is one of the most used building materials, particularly in areas of the world where it is found in abundance. Historically and today, is an important resource to build bridges, houses, scaffolding, falls, floors, roofs and other structures.

References-

- https://en.wikipedia.org/wiki/Bamboo
- https://www.healthline.com