

BIG-LEAF MAHOGANY

COMMON NAME

Swietenia macrophylla

SCIENTIFIC NAME

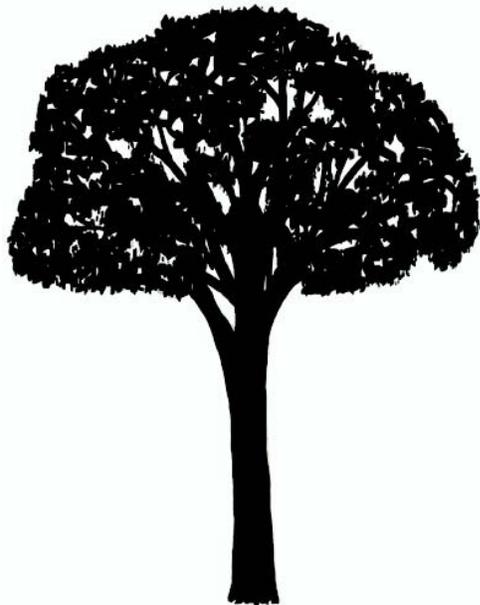
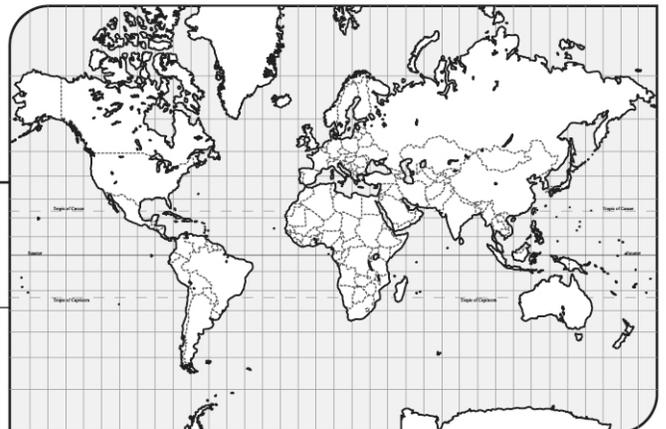


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Importance

Big-leafed mahogany is the most valuable and most extensively traded of the three American mahogany (*Swietenia*) species. The wood is highly prized for its density and strength, fine grain, and rich, red sheen. Around 1597, Sir Walter Raleigh presented a mahogany table to Queen Elizabeth I as a gift. Since that time, mahogany has been the wood of choice for high quality furniture and is widely used to in furniture, paneling, lumber, and musical instruments.

Big-Leaf Mahogany is native to Central and South America, growing from southern Mexico to north-central Bolivia. This tree is known by many different common names in the regions where it is found, and trade in the species is critical to local economies in the states where *S. macrophylla* grows. The name of the species actually describes some of its characteristics: the specific epithet, *macrophylla*, means large leaved and comes from Greek words *makros* (large) and *phyllos* (leaf).



Mahogany family (*Meliaceae*)

FAMILY

Vulnerable

RED LIST CATEGORY

Description

Form: A very large timber tree, Big-Leaf Mahogany can reach heights of 100 to 130 feet (30 to 40 m) and a girth of 10 to 13 feet (3 to 4 m); in favorable conditions it can reach 200 feet (60 m) high and 30 feet (9 m) in girth! The trunk is straight and cylindrical with a buttressed base.

Leaf: The leaves of this tree are compound, with opposite leaflets and no terminal leaflets (parapinnate). Leaves can over 20 inches (60 cm) long, with 6 to 16 lance shaped leaflets. Leaves are light green or reddish when young and deepen to a glossy dark green when mature.

Flower: If you could climb to the canopy, you would be delighted by sprays of greenish-white flowers, approximately 0.3 inches (8 mm) across with pointed petals. The sprays, or panicles are about 3 to 5 inches (8 to 13 cm) long and fragrant. Flowering mahogany trees have male and female flowers, with about 10 times as many male as female flowers, but the flowers of both sexes are similar. Trees are sometimes functionally dioecious, with flowers functioning as male or female flowers found on different trees.

Fruit: The fruit is an erect woody capsule resembling a large inverted club, about 5 inches (12.5 cm) long. Flowering and fruiting are distinctly seasonal. Fruit may be produced once a year and trees start to produce fruit regularly when about 15 years old. Seeds have a thin, tail-like wing that makes them rotate when they fall; they are thus dispersed by wind as far as 1640 feet (500 m) from the parent tree

Bark & Twigs: The dark brown bark is rough, often flaking off in small patches, and has a sweet odor.

Habitat and Ecology

Big-leaf mahogany has a wide geographical and ecological range, growing in Mexico, the Central American countries of Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama and the South American countries of Bolivia, Brazil, Colombia, Ecuador, Peru, and Venezuela. Big-Leaf Mahogany grows naturally in wet and dry tropical forests and on a variety of soil types, up to 1 mile above sea level (0 to 1500 m altitude). Basic inventories are lacking for most of its range, though good stands apparently still remain in parts of Brazil and Bolivia.

S. macrophylla is found in all forest types, from the edge of the pine savannah to the climax rainforest, but mostly in mixed hardwood forest belts, along riverbanks, on deep river-shaped soils of considerable fertility. It occurs scattered or in small groups, but densities of more than 4 to 8 trees/ha are rarely encountered. It can be among the pioneer species reoccupying degraded agricultural land, and has been reported to be very firm in wind, resistant to cyclones. The species has some weed potential and may invade native forest communities, especially following disturbance. Because of this weedy habit, and due to the pressure to harvest, this tree should not be planted in close proximity to areas of high nature conservation significance. The ecology of northern subpopulations is relatively well understood whereas virtually nothing is known about Amazonian subpopulations.

Threats

This species is the most commercially important of the mahoganies. Because of the high demand for this species, exploitation has led to the exhaustion of supplies particularly in the northern parts of its range. Bolivia, once the world's largest producer, has nearly run out of mahogany to log. Worse, the species is nearly extinct in Ecuador, Colombia, Panama, Costa Rica; declining in Mexico, Belize, Brazil; and is in severe decline in Guatemala, Peru, Nicaragua, and Honduras.

The majority of mahogany entering into trade is from unmanaged natural forests. Over-harvesting from these forests and illegal logging are decimating the populations of the tree in its native range. In addition, the high prices that mahogany fetches pay for the construction of roads into areas that would otherwise be inaccessible to commercial logging, causing erosion and soil degradation, and impacting other plant and animal life. Growth of new trees in natural forests is random, and depends upon large scale disturbance events, meaning that harvested trees are not replaced by new trees. Unfortunately, there is currently little economic incentive to manage natural stands sustainably.

Conservation Action

Big-leaf mahogany has been protected under Appendix II of CITES, the Convention on International Trade in Endangered Species of Wild Flora and Fauna since 2003. This convention restricts international trade in wood from the Central and South American populations of the species, including logs, sawn wood, veneer sheets and plywood, though export quotas have been granted to certain countries. *S. macrophylla* is being successfully cultivated, at various areas

around the world, including India, the Solomon Islands, Haiti, and Indonesia, where there are over 54,000 ha of plantations in Indonesia, mainly in West Java. The establishment of these managed forests may help promote sustainable mahogany harvests, but the high value of the wood will always provide an incentive for harvesting natural forests as long as there is a market.

Despite these protections, illegal cutting remains a big problem for big-leaf mahogany, since it sells for high prices. Want to help? Only buy mahogany from certified forests, such as products that carry the Forest Stewardship Council (FSC) trademark. You can also support mahogany restoration work in Belize through the Global Trees Initiative's Conservation Gifts program at Tree2MyDoor.com – visit their site for more information and to [plant a mahogany tree](#) as a gift.

References

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