

Ten Trees of Belize

TEXT AND PHOTOGRAPHS
BY JANINE ANDERSON

Belize is a small country with a rich cultural history and a wide array of flora, fauna and landscapes. Located in Central America, Belize borders Mexico's Yucatan Peninsula to the north, Guatemala to the west and south, and 200 miles of Caribbean seacoast to the east. Although it is about the size of New Hampshire, Belize boasts the wide diversity of flora typically found in tropical forests. It has some of the most extensive tracts of primeval rainforest in Central America, and over 40 percent of the country has been preserved as park, reserve or forest.

More than 750 species of trees can be found in its numerous habitats, which include rainforest, pine forest, savanna, marsh and mangrove—and new species of trees still are being discovered in them. These habitats also

RIGHT: A grove of red mangroves (*Rhizophora mangle*) on Belize's Caribbean coastline.

BELOW: Bayleaf (*Sabal mauritiforme*)



support nearly 600 species of birds, including ones that spend summers in, or migrate through, the Pacific Northwest, such as the western tanager and green-winged teal. The variety of mammals in Belize includes monkeys, jaguars and anteaters. Among its delicate eco-systems are the longest barrier reef in the Western Hemisphere and the Maya Mountains, with peaks exceeding 3500 feet in elevation.

With only about 250,000 inhabitants, the population density of Belize is the lowest in Central America. In addition to the indigenous



Maya, other major ethnic groups include Creole, Mestizo, Garifuna and East Indian. Although English is the official language, Maya dialects, Spanish and Creole are also commonly spoken.

Significance of Belizean Trees

The trees of Belize have been important to Maya civilization since it emerged around 2000 BCE. The Maya have used trees for constructing homes and for making tools, foods, dyes and paper. Trees also offer shade in open areas and homes to forest fauna. Today Belizeans continue

to use native flora for a variety of purposes, including making traditional medicines.

The plundering of trees by outsiders has changed the course of Belizean history. In the 1600s, British woodcutters (baymen) began harvesting logwood (*Haematoxylum campechianum*) found along the coast. Logwood contains haematoxylin, which was used for dyeing woolens in the expanding European textile industry of the day. In the early 1700s, African slaves were brought from Jamaica and Bermuda to cut wood. The slaves were emanci-

pated in 1838, and their descendants make up the present-day Creole population.

In the late 1700s, trade in mahogany (*Swietenia macrophylla*)—now the national tree of Belize—overtook that of logwood, and the slave trade expanded as more workers were needed to cut down the trees. This beautiful wood, which is resistant to rot and insects and easy to work with, has many uses, including furniture, cabinet making, trim, panels, veneers, boat building and carving. Mahogany exports were the mainstay of the economy until the 1950s. In 1862 this area became a British colony under the name British Honduras; it was renamed Belize at independence in 1981.

— Featured Species —

Described here are ten noteworthy trees found in the tropical forests of Belize:

Ceiba—An iconic tree in Maya culture, this pantropical species grows throughout Central America from Mexico to Brazil and is the national tree of Guatemala. It was cultivated by the ancient Maya and revered as the Sacred Tree of Life. They called it *Yaaxche* and believed it connected—and balanced power between—the gods of the underworld and those above. Its large, umbrella-like crown symbolized the upper world, the plank-like, buttressed trunk represented the terrestrial living world and the roots penetrated into the underworld.

The ceiba is in the family Malvaceae, which includes genera widely cultivated in Northwest gardens, such as *Fremontodendron*. *Ceiba pentandra* grows to seven feet in diameter and 200 feet tall, rising far above the forest canopy. The timber is too soft to use in construction, but the long straight trunks are carved into dugout canoes. Solitary specimens at Maya sites, such as Caracol in western Belize, can contain an entire ecosystem of airborne gardens full of orchids, fern and mosses, along with the hanging nests of oropendolas—large, blackish birds with long, dagger-like bills and yellow tails.



Give-and-take palm (*Chryosophyla stauracantha*)

Also called the cotton tree, the ceiba's brown seed pods contain cottony, water-repellent fibers (called kapok) that are excellent insulators and have been used for pillows and upholstery. During WWI and WWII, kapok was used for life preservers and flying jackets, having since been replaced by synthetic fibers.

Cecropia—Ceremonial flutes are carved from the hollow stems of the large-leaved cecropia (*Cecropia peltata*)—a weed-like deciduous tree in its own family, Cecropiaceae, that grows quickly to over 60 feet tall. The giant (12 to 20 inches across), deeply lobed leaves are used as a tobacco substitute and as a tea infusion to treat high blood pressure and diabetes. Cecropia also produces a food attractive to Azteca ants; they form colonies in the trees, which provide them with some protection from strangling vines and from feeding herbivores, such as monkeys, toucans and bats. (The herbivores disperse their seeds.) Similar to red alder, cecropia is the first tree to reforest an area and is abundant along forest edges and in tree gaps.

Quamwood—Anyone who visits Belize during the dry season (February to May) will never forget the sight of quamwood (*Schizolobium parahyba*). During this time, the tall, deciduous member of the pea family (Fabaceae) loses its large, fern-like leaves and is covered with fragrant, bright-yellow flowers that shine like beacons in dense forests. Quamwood is named



Quamwood (*Schizolobium parabyba*)

for the crested guan, a slender bird approximately 34 inches long with a chicken-like beak and a bushy crest that feeds on its tear-shaped pods. Its buoyant timber is used to make dugout canoes and rafts for crossing flooded rivers.

Gumbolimbo—The gumbolimbo (*Bursera simaruba*) has beautiful, red, exfoliating bark and a comical name: Belizeans commonly call it the “tourist tree” because it “gets red and peels.” Reaching over 80 feet tall and common in both primary and disturbed forests, its shaggy, red bark is reminiscent of the paperbark maple (*Acer griseum*) and our native madrone. Outer layers of tissue-thin, copper-red sheets peel away to reveal a smooth, bright-green, waxy inner bark beneath. Its constant shedding may be an adapted strategy for getting rid of unwanted epiphytes and vines.

The gumbolimbo is a member of Burseraceae, also known as the “frankincense and myrrh” family, which comprises about 540 species of flowering plants in tropical regions worldwide. The gumbolimbo’s deciduous leaves have six to eight leaflets that are each two to five inches long. With a high content of tannin, the leaves smell like turpentine. The flowers are small, inconspicuous and largely pollinated by insects. The clusters of small, round, dark-red fruits are eaten by birds, monkeys and other indigenous animals.

The bark of the gumbolimbo provides an antidote to the painful rash brought on by the

caustic sap of the poisonwood tree (*Metopium brownei*), a member of the cashew family (Anacardiaceae), which also includes poison oak and poison ivy. A piece of the bark rubbed against the wound provides pain relief and accelerates healing. The two trees are often found growing near each other.

Sapodilla—Although 1200 year-old sapodilla wood door lintels and supporting beams have been found intact at the Tikal architectural site in Guatemala, the value to North Americans of the sapodilla or chicle tree (*Manilkara zapota*) was not discovered until 1869, when the American inventor Thomas Adams realized that the gummy resin exuded by a punctured tree was a perfect base for chewing gum. Soon after his discovery, the Wrigley Company used the substance in the manufacture of Juicy Fruit and Wrigley’s Spearmint gums, followed by the American Chicle Company, which created Chiclets candy-coated gum. The Maya used this gummy resin to fill tooth cavities in dental surgery.

For decades, resin collectors (*chicleros*) lived in damp camps deep in the jungle and made their livings by collecting sap from trees over 30 years old. Herringbone slashes were cut into the bark, and the dripping gum was collected in small, wax-lined bags. Later, the substance was boiled, distilled and pressed into blocks. Generally, each tree was tapped no more than once every six years. Today, many trees so tapped can be recognized by their zig-zag scars.

Logging of mahogany, logwood and sapodilla was the foundation of the British Honduran economy until the mid-twentieth century.

Strangler Fig—The strangler fig (the common term for several species of *Ficus*) is named for its propensity to envelop and eventually strangle its host tree. The strangler fig’s tiny seed is deposited by birds high in the canopy, from which its long, adventitious roots grow downward to the ground, where they root and



LEFT: *Cecropia peltata* RIGHT: Strangler fig (*Ficus* sp.)

take nutrients from the soil. Once anchored, the roots thicken and begin to circle and bind the host. The crown grows foliage that soon overshadows the host tree, which dies.

The many openings in the trunk of the fig house thousands of invertebrates, small mammals, reptiles, amphibians and birds. Other species are attracted to the fig for its fruits, and they distribute the seeds widely, ensuring the tree's continued success.

A strangler fig's broken leaf or stem emits a milky sap that protects the plant from insects. Traditionally, this sap has been used to relieve burns and to treat skin fungus, ringworm and boils.

Bayleaf—For centuries bayleaf (*Sabal mauritiforme*) has been the preferred palm for roof thatch, as it provides good waterproofing. Roofs made from the larger palmate fronds can last 25 to 30 years, if well maintained. Traditionally, it is harvested when the moon is full, as this is said to minimize the stem's susceptibility to insect damage.

Recently, it has become scarce owing to habitat loss and over-harvesting, partly because of the tourist industry's demand for authentic, rustic-looking thatched huts. (Eco-friendly lodges, such as DuPlooy's Jungle Lodge, which houses the Belize Botanic Gardens in western

Belize, use tile instead of thatch for roofs.) As an alternative to its collection from the wild, bayleaf is currently being evaluated for its potential as a sustainable agricultural crop.

The cohune (*Attalea cohune*) is a taller and stouter palm than the bayleaf. Especially abundant in disturbed areas, the cohune was one of the most important trees in Maya culture because of its many uses. The sight of cohune will become familiar to visitors, but they might not know that cohune oil is what gives Belizean dishes their distinctive flavor.

Give-and-Take Palm—Possibly the most menacing looking tree encountered in the forests of Belize is the give-and-take palm (*Cryosophila stauracantha*). The downward pointing, needle-like spines armoring the bark are up to three inches long and can cause painful, stinging cuts that can become infected from a mold growing on the underside of the thorns.

That's the "take" part of the name. The "give" part comes from the antidote to the wound, a sticky, pink, cotton-like substance found beneath the palm's upper bark. When applied to a fresh wound, the substance staunches the bleeding, helps anesthetize the pain and prevents infection.

Once stripped of their thorns, the long

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slender trunks make excellent, long-lasting poles for the walls of rural houses and thatched-roofed, open-sided *palapas*.

Red Mangrove—The cays and coastal areas have their own unique plant communities. Among the most noticeable woody plants are the salt-tolerant mangroves. Red mangrove (*Rhizophora mangle*), which encircles many of the islands, has reddish-brown bark and dark-green, leathery leaves. It is easily identified by its complex, sprawling “jungle” of stilt roots and lower branches that form a nearly impenetrable thicket. The raised roots provide not only support, but also aeration. By stabilizing their surroundings, mangroves create an environment in which other plants and animals can survive. Parts of mangroves have been used as medicine for many medical ailments, including angina, asthma, diarrhea and dysentery.

Caribbean Pine—One of the few conifers in a sea of broadleaves, the fast-growing Caribbean pine (*Pinus caribaea* var. *hondurensis*) is the one, true tropical pine found in Belize. Most abundant on nutrient-poor, sandy soils, the Caribbean pine reaches 100 feet in height, and its resin is used locally as an adhesive and burned as an insect repellent. Although it covers some 80 percent of the protected forest reserve of the Mountain Pine Ridge area in the Cayo region of western Belize, it was devastated by Hurricane Hattie in 1961 and, more recently, by infestation from the southern pine bark beetle. The devastation was so extensive that millions of pine seedlings have been planted over some 90,000 acres. Reforestation efforts and natural regeneration suggest that the forest eventually will recover.

Conclusion

At a time when botanical diversity is being lost and rainforests are being destroyed at a

staggering rate, it is a joy to visit Belize and its amazing array of trees. With close to half of Belizean lands under some kind of legal protection, it is among the most conservation-conscious countries in the world.

Eco-tourism has become a friend to habitat preservation, as tourists interested in the natural world and indigenous cultures provide an economic incentive for conservation. Institutions such as the Belize Botanic Gardens and Belize Zoo showcase indigenous plants (and animals), raising awareness of their importance to Belize and the planet.

Still, Belize is not without challenges, as it has a deforestation rate of 2.3 percent owing to, among other factors, development, climate change and the recent discovery of crude oil. Some of the trees that have played significant roles in Maya culture are endangered because of over-harvesting by those who have exploited these valuable resources. With careful oversight, these trees might regain their place in the ecosystem.

From my vantage point in Seattle, at latitude 47, the tremendous diversity of life in this small, subtropical country is a treasure. ♪

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