



The 1969 Seven Ponds - Botanical Gardens, Georgetown

Some of the Botanical Wonders of Guyana

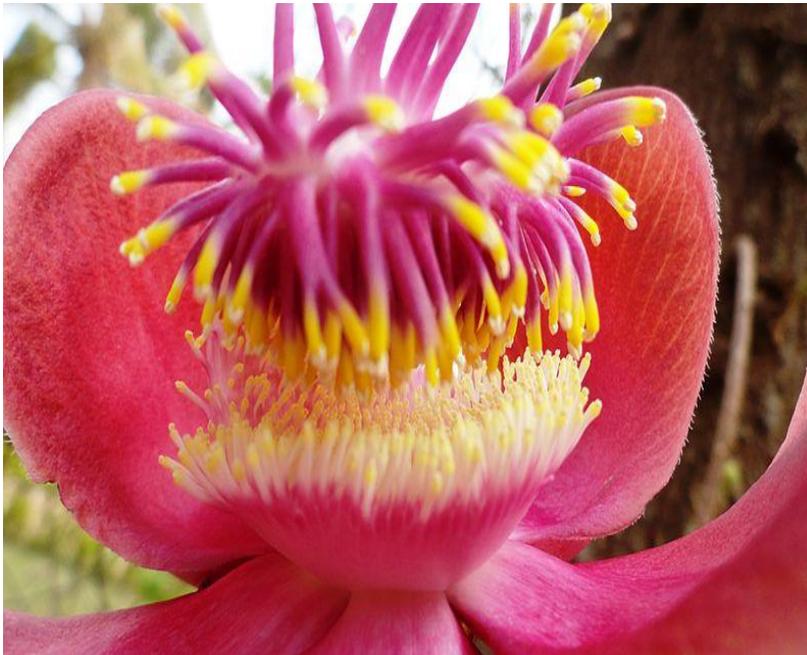
By Dmitri Allicock

With over its 80% unspoiled rainforest, Guyana is a hothouse of interest at every turn to botanist. To each region, distinct plant associations are found according to the differences of soil and its formation. From the alluvial flat coastal plains that slowly rises to the rich vegetation covered sand dunes, river valleys, wet savannahs, hills and untouched mountains, the transition from one region to another is for the most part gradual and is never so abrupt that distinct zones of flora are defined.

The famous German Schomburgk brothers, botanists Robert and Richard played pioneering roles in scientific collection and classification of botanical specimens from the interior of Guyana in 1835 to 1839. Robert Schomburgk is credited with discovering the Victoria Regia, Guyana's national Flower when he saw it on the Berbice River on January 1, 1837. Perhaps the first to note down a few observations on the plants he saw was Adriaan van Berkel, an official who lived in Berbice between 1670 and 1674. He lived at the end of the 17th century under the Arawaks on the River Berbice and later in Suriname, and made accurate account of his experiences in 1695. Then there was the infamous American of the 1776 War of Independence, Edward Bancroft, who was a doctor on the plantations in 1763 to 1766. He recorded some of the medical properties of the plants he listed. Perhaps his greatest claim to fame was the fact that his book provided possibly the first written recipe for the Amerindian poison, curare.

Georgetown was once regarded as the Garden City and the most beautiful in the Caribbean. Handsome houses, painted white, or brightly colored, were built on each side of the street, nearly all of which surrounded by gardens, full of crotons, palms, poinsettias, bougainvilleas, and all sorts of bright-hued plants and flowers; on some of the trees, clusters of cattleyas with their mauve and rose colored flowers, from another, oncidiums with its racemes of odorous petals, four to five feet in length. The 1851 Promenade Garden and later 1879 Botanical Gardens showcased many specimens of the natural beauty and native flora of Guyana.

Cannon Ball Flower-(*Couroupita guianensis*)-Amongst the trees the most striking is the Cannon-ball tree with its peculiar, sweet-scented flowers and its brown cannon-ball-like fruits hanging on naked branches up the stem. It is a [deciduous tree](#) in the family [Lecythidaceae](#),



which also contains the [Brazil nut](#) (*Bertholletia excelsa*). It is native to the rainforests of Central and South America It is cultivated in many other places. Barks, leaves and flowers have by long tradition been used for medicinal purposes and said to have antibacterial, antiseptic and analgesic qualities. The bark supposedly cures colds, the juice from its leaves is good for treating malaria and for skin diseases, while chewing young leaves alleviates toothache, and the interior of the fruit can disinfect wounds. The flowers of Cannonball Tree have a

wonderful smell and can be used to scent perfumes and cosmetics. The hard shells of the fruit are sometimes used as containers.



The water lettuce (Pistia stratiotes) -

Found in trenches alongside roadways, sugar estates, canals and wetlands. As its name implies, water lettuce resembles a floating open head of lettuce. Water lettuce has very thick **leaves**. The leaves are light dull green, are hairy, and are ridged. There are no leaf **stalks**. Water lettuce **roots** are light-colored and feathery. Plants resemble small open heads of lettuce. New plants are formed at the ends of stolons radiating outward from the mother plant. Plants can spread rapidly to form

dense mats of foliage (to 4" tall), and are considered to be noxious weeds where they can quickly cover a pond or lake from shore to shore. Tubular, arum-like, yellowish-green to creamy white flowers are generally inconspicuous. Flowers give way to similarly inconspicuous green berry-like fruits. Feathery roots dangle downward from the plants, providing a shelter for many small fish. As an ornamental plant, water lettuce provides attractive foliage that inhibits growth of algae and helps keep water clear.

Sacred Lotus (Nelumbium) - Found in trenches alongside roadways, sugar estates, canals and wetlands. An individual lotus can live for over a thousand years and has the rare ability to revive into activity after stasis. In 1994, a seed from a sacred lotus, dated at roughly 1,300 years old was successfully germinated.



Hindus revere it with the divinities Vishnu and Lakshmi often portrayed on a pink lotus in iconography. The flowers, seeds, young leaves, and "roots" are all edible. In Asia, the petals are sometimes used for garnish. Young lotus stems are used as a salad ingredient in Vietnamese cuisine. It is used as a vegetable soup in Japan and Korea and also deep-fried, stir fried and as a braised dish. Petals, leaves, and rhizome can also all be eaten raw, but there is a risk of parasite transmission it is

therefore recommended that they be cooked before eating. The roots are also used in traditional Asian herbal medicine.



Eichhornia caerulea- The beautiful Lavender water hyacinths known, water hyacinth reproduces primarily by way of runners or stolons, which eventually form daughter plants. Each plant can produce thousands of seeds each year, and these seeds can remain viable for more than 28 years. The common water is a vigorous grower known to double their population in two weeks and can choke waterways, becoming a serious problem. The roots naturally absorb pollutants, including lead, mercury, and

strontium-90, as well as some organic compounds believed to be carcinogenic, in concentrations 10,000 times that in the surrounding water .Water hyacinths can be cultivated for waste water treatment. The plant is used as a carotene-rich table vegetable in Taiwan. Javanese sometimes cook and eat the green parts and inflorescence and the flowers the flowers are used for medicating the skin of horses. Water hyacinths from Lake Victoria are used to make furniture, handbags and rope .The plant is also used as animal feed and organic fertilizer although there is controversy stemming from the high alkaline pH value of the fertilizer.



E.azurea- is a rooted floating plant leaf with elongated stems ascending to the surface of the water submerged leaves cauline, distichous, alternate, sessile, linear, and ribbon (typically collected specimens without submerged leaves). Leaves petiolate with petioles strongly bent, holding roughly sheets emerging from floating stems, blades 7-17 cm, cuneate to truncate at base. The inflorescence is a densely glandular pubescent spike. Flowers white or violet (blue when dry) with a large patch of deep purple into the throat

of the tube in the top center perianth lobe and a small yellow spot just below the purple stain ; perianth lobes 13-25 mm , the erose margins and flowers from May to October, November.



Handsome white water-lilies (Nymphaea ampla) – of Guyana Commonly depicted in Meso-American art, especially the Classic Mayan period, often in association with jaguars and visionary scenes. This beautiful white flowered water lily likely held a similar importance to Central American cultures as did the Blue Water Lily to the Egyptians. A calming sedative and mild trance inducer, it is believed it was an additive to the inebriating balche drink of the Maya. As a

demulcent it is used for ulcers and skin disease. Utilize like other water lilies. Carefully harvested and shade dried.



Victoria Regia- (Victoria Amazonica) – The largest water Lily in the world is the National Flower of Guyana and it is depicted on the Guyanese Coat of Arms. A member of the genus *Victoria* placed in the Nymphaeaceae family or sometimes in the [Euryalaceae](#). The first published description of the genus was by John Lindley in October 1837, based on specimens of this plant returned from British Guiana by [Robert Schomburgk](#). Lindley named the genus after the newly ascended [Queen Victoria](#), and the species *Victoria Regia*. The

spelling in Schomburgk's description in [Athenaeum](#), published the month before, was given as *Victoria Regina*. Despite this spelling being adopted by the [Botanical Society of London](#) for their new emblem, Lindley's was the version used throughout the nineteenth century. With leaves nearly five feet across, and a flower as large as eighteen inches in diameter, few could have imagined the elusive floral wonder retrieved in January 1837 from the heart of Guyana's wildest jungles — and fewer still could have predicted the extent to which it would transform an entire continent's cultural and aesthetic sensibilities. When floating on the water it can sustain heavy weights, such as rabbit sized animals. When it blooms, its petals are white, often slight pink, with red rims.



The Legend of Victoria Regia

In olden times, on the margins of the majestic Amazon River, the beautiful young women of an Indian tribe gathered to sing and dream of life. They stayed for long hours staring at the beauty of the white moon, and the mystery of the stars, dreaming of being one of them.

As the aroma of the tropical night pulled at their dreams, the moon laid an intense light on the waters, making *Naia*, the youngest of the tribe and a dreamer, climb a tree to try to touch the moon. She didn't succeed. The next day, she and her friends climbed the distant hills to feel with their hands the smoothness of the moon,

but again they failed. When they arrived there, the moon was so high that all of them returned to the longhouse feeling disappointed and sad. They believed that if they could touch the moon, or even the stars, they would transform themselves into one of them.

The following night, *Naia* left the longhouse hoping to fulfill her dream. She took the river trails to stare at the river's waters. There was the full moon, resplendent, immense, quietly reflecting its image on the water's surface. *Naia*, in her innocence, thought the moon had come to bathe itself in the river and allow her to touch it. *Naia* dove into the deep waters and there disappeared forever. The moon, feeling pity for the young lost life, transformed *Naia* into a giant flower - the Victoria Regia - with an inebriating perfume and petals that spread on the water to receive the full light of the moon.



Odontodenia speciosa is perhaps the most beautiful of all tropical woody climbers of Guyana as lowlands slowly rises to the rich vegetation covered sand dunes, river valleys, wet savannahs, hills and untouched mountains.

It may take time to get established, but once it does the large, apricot yellow and orange, richly scented flowers are produced almost year round.



Cacoucia coccinea-

The long sprays of red flowers of *Cacoucia coccinea* are common at certain seasons of the year.

It is a climbing shrub with young branches, round, puberulous or villose. Its leaves are elliptical or oblong-elliptical and unequal at the base, very shortly petiolate, glabrous and flowers in gigantic upright woolly racemes. It is widely distributed throughout the river valleys of the rainforest



Bellflower (*Allamanda*) is a genus of flowering plants in the dogbane family, *Apocynaceae*. They are native to the Americas, where they are distributed from Mexico to Argentina. Some species are familiar as ornamental plants cultivated for their large, colorful flowers. Most species produce yellow flowers; *A. blanchetii* bears pink. The genus name *Allamanda* honors the [Swiss botanist](#) and physician Frederic Louis Allamand (1735–1803).



Bell-apple Passion Flower (*Passiflora nitida*) is the flower of the tasty passion fruit or Simitoo in Guyana. It is similar to *P. laurifolia*, with orange-yellow fruits that have a sweet, succulent pulp. It is a fast growing tropical vine. Its flowers are blue and red, a bit like *P. laurifolia* and *P. quadrangularis*. The fruits grow up to 4 centimeters (1.6 in). The exact hardiness is unknown, but it is tropical and should be protected



from prolonged temperatures below 50–55 °F (10–13 °C).

It is not frost hardy. *Passiflora nitida* is the cousin of almost all the *Passiflora* species like *P. actinia*, *P. flavicarpa*, *P. loefgrenii* and so on. Its propagation is by seeds.

The seedy fruit pulps are eaten fresh and very honey sweet in flavor. The bell apple is a native to the Amazon jungle region. *Passiflora nitida* is also a useful fruit in a drink called Purple Passion. *Passiflora nitida* has one of the widest geographic ranges. It grows in the tropical lowlands from Costa Rica in the north and French Guiana in the northeast, through wide parts of Brazil. It is found growing freely within the rainforest and away from the coast of Guyana

"Carrion-crow bush" (*Cassia alata*)-

Along roadways the "carrion-crow bush" (*Cassia alata*) with bright-green pinnate leaves and spikes of yellow flowers, is perhaps the most striking plant growing in extensive clumps yet unassuming.



It is an important medicinal tree as well as ornamental flowering plants in the subfamily [Caesalpinioideae](#). It also known as a Candelabra Bush, Empress Candle Plant, Ringworm Tree or "candle tree". A remarkable [species](#) of [Senna](#), it was sometimes separated in its own [genus](#).

It is often called the Ringworm Bush because of its very effective fungicidal properties, for treating [ringworm](#) and other fungal infections of the skin. The leaves are ground in a mortar to obtain a kind of "green cotton wool". This is mixed with the same amount of vegetable oil then rubbed on the affected area 2-3 times a day. A fresh preparation is made every day. Its active ingredients include the yellow [chrysophanic acid](#). Guyanese have been finding valuable medical value from laxative to antiseptic. It is used by some as a fly retardant and planted with crops to protect from pests.



Wakenaam Lilac-The beautiful Wakenaam lilac (*Jacaranda ovalifolia*) of Guyana when in flower is very attractive. This tree sheds its leaves before flowering and the masses of pale lilac flowers borne from the bare whitish branches render it conspicuous. As the flowers fall the delicate young leaves, of a pale green hue, make their appearance.

It is also known as **Jacaranda**, **Blue Jacaranda**, **Black Poui**, or as **the fern tree**. Older sources give it the systematic name *Jacaranda acutifolia*, but it is nowadays more

usually classified as *Jacaranda mimosifolia*. In scientific usage, the name "Jacaranda" refers to the genus *Jacaranda*, which has many other members, but in horticultural and everyday usage, it nearly always means the Blue Jacaranda.

Mukkamukka (*Montrichardia arborescens*) - As one proceeds up the rivers, the



vegetation becomes very mixed and the number of species large.

Amongst the most conspicuous plants are the giant aroids- the mukkamukka (*Montrichardia arborescens* and *M. aculeata*). These are common to all the rivers and are found in low, muddy and shallow places. They can be recognized by their shining- arrow-head shaped leaves and arum-like flowers and grows taller than a man. *Montrichardia* is a [genus](#) of flowering plants in the [Araceae family](#). It contains two species, *Montrichardia arborescens* and *Montrichardia linifera*, and one extinct species *Montrichardia aquatica*. The genus is helophytic

and distributed in tropical America (West Indies, Belize, Brazil, Colombia, Costa Rica, French Guiana, Guatemala, Guyana, Honduras, Lesser Antilles, Nicaragua, Panama, Peru, Puerto Rico, Surinam, Trinidad, Tobago, and Venezuela). The extinct species *M. aquatica* is known from fossils found in a Neotropical rainforest environment preserved in the [Paleocene Cerrejón Formation](#) of Colombia.



Orchid at Karanambu Lodge Rupununi- Deep in the heart of Guyana

Orchids comprise one of the most abundant and varied of flowering plant families. There are over 20,000 known species and orchids are especially common in moist tropical regions including Guyana. Although temperate orchids usually grow in the soil, tropical orchids are more often epiphytes which grow non-parasitically on trees. Orchid flowers vary considerably in shape color and size, although they share a common pattern of three petals and three petal-like sepals. The lower petal has a very distinctive appearance.

On the lower beaches of Guyana Rivers, orchids are not as conspicuous as they are higher up within the canopy. As a rule, the flowers are smaller. Several species of **Epidendrum**, **Gongora** and **Catasetum** are common, while the red flowered **Rodriguezia secunda** is to be found in the eastern portion of the Guyana, and the beautiful **Ionopsis punculatus**, with its panicle of numerous white and mauve flowers; (these delicate lowers remain a long time without fading), and the pretty **Oncidium iridifolium** in the North Western District. Among the epiphytes, bromeliads are frequent, and in some places the wild pine (**Bromelia spicata**) and the " old man's beard" (**Tillandsia usneoides**) are commonly met with in large numbers.

Orchids found in the tropical rainforest have roots with a large surface area for quick absorption of nutrients and water. Their secondary stems hold water so the plant can withstand periods of drying. Tropical rainforest orchids survive in the forest because they produce hundreds of thousands of tiny seeds. The balloon-like seed coat combined with the small seed size enables orchid seeds to be dispersed over great areas through wind currents.



Ferns are very old plants in the scheme of things, millions of years older than flowering plants. Over 300 million years ago they formed a very important part of the earth's vegetation (and have helped in the creation of our present day oil supplies), and over ten thousand species of fern are known today.

The wet tropics are home to about half of the world's fern species, from the delicate, lacy **maidenhair** (*Adiantum*) to the dramatic **staghorn** (*Platycerium*).

There are many exotic ferns which most people would enjoy, but which are difficult to get hold of and grow because they need special conditions to make them think they are at home in their native forest or fern gullies. Filmy ferns with transparent leaves just one cell thick are exquisitely beautiful, but need a constant temperature of about 45C, very high humidity and grow best in subdued light.

Tree ferns are very attractive plants, but they are now virtually impossible to obtain as many of them are rare and considered endangered. In Guyana there is the *Cyathea* tree fern growing in the Mount Roraima range, but the right conditions could not be reproduced on the coast without a great deal of expense. They are best left where they are in peace in their ancient, damp secluded and safe environment. However, there are many ferns left which are readily available and which can give the ordinary gardener a sense of their beauty and value.

A glimpse of what nature has provided for a billion years, stretching across wet lands, hills, valleys and mountains of Guyana-a biodiversity fount of thousands of native flora to enjoy, benefit from, ecosystems to understand and to preserve.

In these archives, drugs like quinine, muscle relaxants, steroids and cancer drugs are found. More importantly, are the new drugs still awaiting discovery - drugs for AIDS, cancer, diabetes, arthritis and Alzheimer's. Many secrets and untold treasures await discovery with the medicinal plants used by shamans, healers of our indigenous people of the Rainforest. Guyana offers a botanical marvel amidst magnificent scenery in a relatively small yet diverse country. Wonderful plants that lives within the minds of the diaspora with the sweet fragrance of precious memories of our roots.