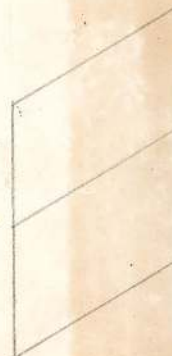
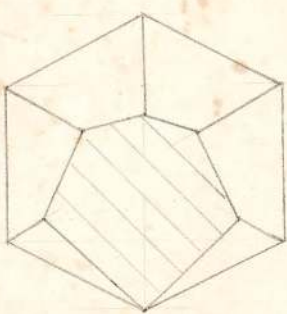


THE BOTANIC GARDENS OF CEYLON



Appropriate Technology Services

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The Botanic Gardens of Ceylon

THE BOTANIC GARDENS OF CEYLON.

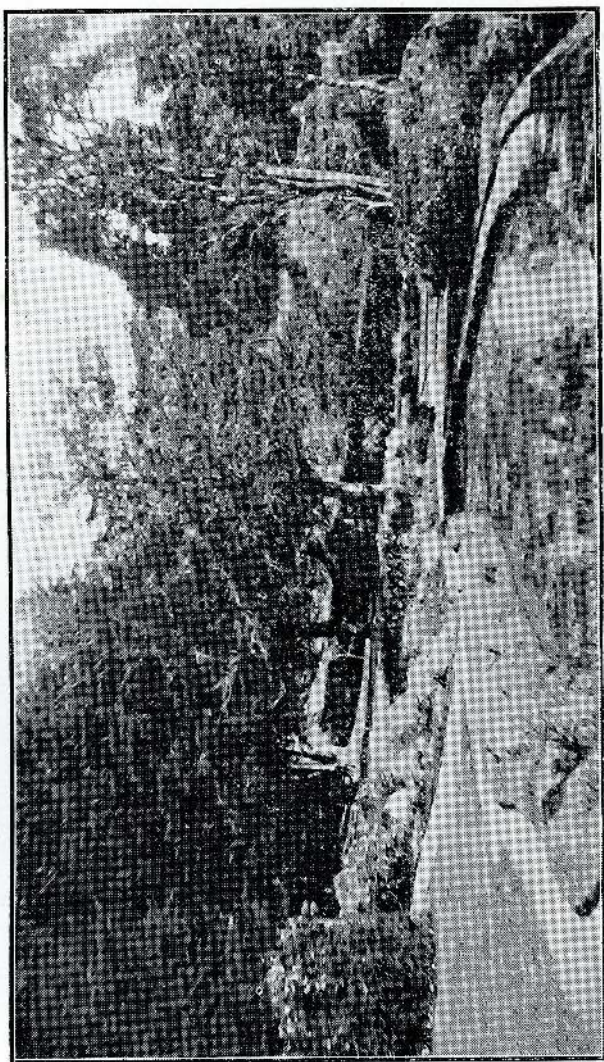
The Royal Botanic Gardens, Peradeniya.—68 miles from Colombo with the town of Kandy with good hotels 4 miles further on.

The Botanic Gardens, Hakgala.—118 miles from Colombo *viâ* Kandy and Nuwara Eliya, or 146 miles *viâ* Haputale and Bandarawela to Nuwara Eliya passing the Gardens 6 miles from Nuwara Eliya. Good hotels at Nuwara Eliya and Bandarawela.

The Botanic Gardens, Henaratgoda.—20 miles from Colombo, on the Kandy road. Resthouse for refreshments 1 mile from the Gardens near the Gampaha Railway Station.

An Itinerary for Tourists.—For those staying a week or longer in the Island an excellent itinerary would be the trip from Colombo *viâ* Kandy, Nuwara Eliya, Bandarawela and back to Colombo *viâ* Haputale and Ratnapura, a total distance of 272 miles.

*Issued by the Propaganda Officer, Department of
Agriculture, Peradeniya.*



ROCK GARDEN, HAKGALA.

The Royal Botanic Gardens, Peradeniya.

THE Royal Botanic Gardens at Peradeniya enjoy a world-wide reputation. They occupy the site of the gardens of the late Kandyan King, on 147 acres of beautifully undulating land surrounded on three sides by Ceylon's longest river, the Mahaweli-ganga. Situated at an elevation of 1,570 feet, in a most equable climate, these Gardens possess an enduring charm that brings to mind the words of Francis Bacon "God Almighty first planted a Garden. And indeed it is the purest of human pleasures".

The Peradeniya Gardens are reached in less than two and a half hours from Colombo by car on the road to the ancient capital city of Kandy. The drive from Colombo to Kandy is in itself a most pleasurable one, rising within 72 miles from sea-level to 1,602 feet, and passing from the moist heat of the lowlands to the refreshing coolness of the hills. From the 56th mile the rise is very rapid, and 936 feet are ascended in the next six miles, the traveller passing through the Kadugannawa Pass which looks down upon a panoramic view of surpassing beauty. Several good resthouses on the route and one near the Gardens are available for refreshment and rest. The journey by train is even more fascinating. After leaving Rambukkana Station, 52 miles from Colombo, the train ascends 1,385 feet in the next twelve miles on a track cut on the ledges of hills which is considered a feat of engineering on one of the best scenic railways of the world.

The history of Botanic Gardens in Ceylon goes back to the year 1810, when Sir Joseph Banks, then President of the Royal Society, suggested and drew up a plan for a proper Botanic Garden in Ceylon. The first Gardens, however, were opened at Colombo and at Kalutara. Various reasons, chief of which appears to have been the interest then taken in spreading the cultivation of Coffee in Ceylon, led to the selection of the site at Peradeniya, and the institution in February, 1822, of the present Gardens. These Gardens have admirably fulfilled the original purpose for which they were meant, namely, the reception and cultivation of economic plants and the scientific investigation of the indigenous flora of Ceylon in conjunction with the introduction of plants of both ornamental and economic value. To-day the Gardens support over 4,000 species forming one of the most valuable collections of economic plants in the world.

The Royal Botanic Gardens, Peradeniya, achieved a world-wide fame very early in their history. Even as far back as 1677 Herman, later a Professor of Botany at Leyden, published drawings and descriptions of Ceylon plants. Herman's Ceylon Herbarium came in 1745 into the hands of Linnaeus, who published an account of them in the *Flora Zeylanica* arranged according to his system of classification. Thus Ceylon has the honour of possessing one of the earliest floras based on the Linnaean system and written by Linnaeus himself. The peculiarities of the Ceylon flora and the advantages Ceylon presented for botanical research were early familiar to the savants of Europe.

The scientific era of the Royal Botanic Gardens began in 1844 with the appointment of George Gardner, a botanist of repute who had travelled extensively in Brazil. Gardner was succeeded by the excellent botanist and naturalist Thwaites whose work is contained in the first complete modern tropical flora of its kind, the *Enumeratio Plantarum Zeylanica*. Trimen followed Thwaites and carried out with an unequalled thoroughness and to a great degree of completion the latter's plan of producing a full descriptive flora of the Island. The last two volumes of Trimen's monumental Handbook of the flora of Ceylon were completed after his death by Sir J. D. Hooker partly from Trimen's notes.

The chief feature of these Gardens is the large number of ornamental and useful plants both indigenous and introduced from all parts of the Tropics. The purely tropical vegetation is characterized by the great abundance of climbing plants and epiphytes. Four and half miles of drive open to cars and one and a half miles of paths intersecting the drives render all parts accessible to those desiring to explore the many beauties of these Gardens.

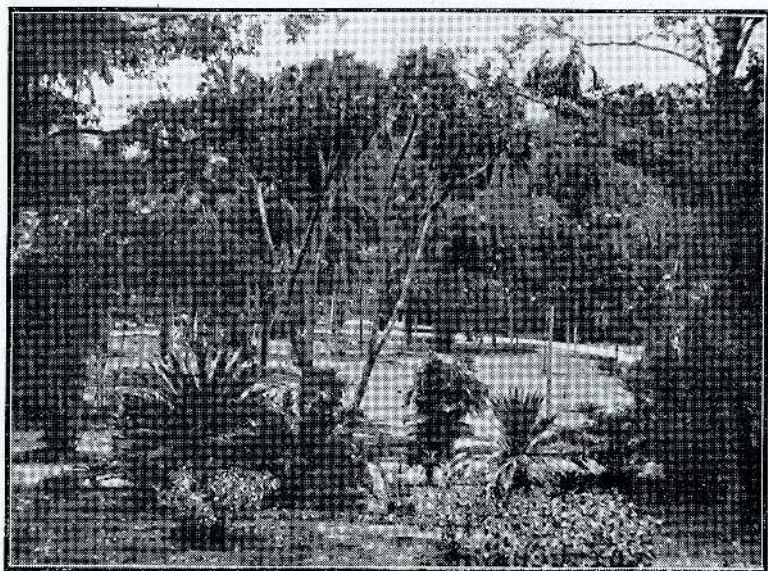
At the main entrance to the Gardens, on the Kandy side, may be seen a striking row of the "Queen of flowering trees", *Amherstia nobilis* of Burma and Malacca. These trees flower at Peradeniya from December to March, and the oldest specimens in the Gardens date from 1860 and have attained a height of 80 feet. Approaching the entrance gates and parallel to the road from Colombo is a row of the graceful Rambong Rubber trees of Assam (*Ficus elastica*), while outside and facing the gates is a large conspicuous Mahogany tree (*Swietenia Mahagoni*).

The route usually taken within the Gardens bears to the left and leads to the **South Gardens** which were formed in 1880. On the higher portions of a hill here stands the **Pinetum** containing a fine collection of Conifers, a few of which are the Bunya Bunya Pine of Queensland, the Moreton Bay Pine and *Araucaria Cookii* of New Caledonia, the Weeping Cypress of China and Sikkim and the

Himalayan Cypress, the Bermuda Cedar and the Red Cedar of N. America, The Giant Australian Kauri Pine, and many other excellent specimens of the Coniferae introduced between 1868 and the present time.

At the base of the hill is a small lake in which may be seen a collection of water plants, while on its banks stand a most graceful clump of bamboos, the sedge-like Egyptian Papyrus, and the pith tree of the Nile.

The drive to the left of the lake leads to the **Palmetum**. An avenue of Talipot Palms leading to the South Garden Palm Crescent affords from it a beautiful vista across the river and the Peradeniya



THE PALM CRESCENT, PERADENIYA.

bridge to the south, and north across the lake to Gardner's Memorial on Monument Hill. The collection of palms includes 185 species representing 80 genera and is probably the finest collection of palms in the Tropics. Most interesting of this group are the areca palm cultivated locally for its seeds which are chewed with the leaves of the betel vine, the toddy yielding Kitul palm, the handsome and feathery leaved Royal Palm (*Oreodoxa regia*) and Cabbage Palm (*Oreodoxa oleracea*) used for avenues, the remarkably attractive Sealing Wax Palm (*Cyrtostachys Renda*) with its bright red leaf sheaths, and the giant Talipot Palm (*Corypha umbraculifera*),

"Chieftan of the palm tribe", which reaches a height of 80 or 90 feet in 40 or 50 years and then terminates its life with the production of a gigantic inflorescence often 25 feet in height.

On the left as one takes the circle at the end of the same area are the cone bearing *Cycads* of fernlike habit, survivors of a flora that flourished in a bygone age. As the drive continues are seen the Amaryllidace collection containing Sisal Hemp and Mauritius Hemp, the Wild Plantain, and the Traveller's Tree with its leaf arrangement of a peculiar fanlike appearance. The Pandanus or Screw Pine collection is also of interest.

Along the river bank which now comes into view stand some of the Gardens' most graceful plants, the Bamboos. The Giant Bamboo of Burma, the Building Bamboo of Java, the common or Yellow Bamboo of Ceylon, the Dwarf or Chinese Bamboo, and many other species of both ornamental and economic value add greatly to the beauty of the landscape both here and in other parts of the Gardens.

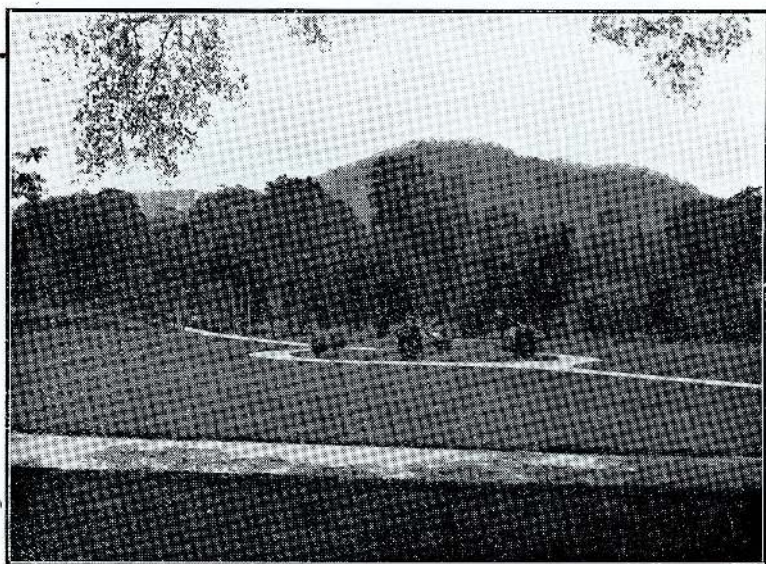
Leaving the South Gardens we enter the river drive. Monument Hill, now on the right, contains the old rockery occupied by succulent plants such as Agave, Yucca, Ananas, Euphorbias and other species. The end of the approach road to Gardner's Monument on the Hill is flanked with "Bulu" trees (*Terminalia belerica*) with their remarkably buttressed trunks. From the Monument a straight road leads to the central main avenue. This road is flanked with young Coco-de-mer or double coconut from the Seychelles. An old male tree usually bearing its bifid male inflorescences is on the right and further on the same side are some fine Kauri Pines.

A striking feature of these Gardens is its beautiful lawns, a comparatively rare feature in gardens of the Tropics. The **Great Lawn** on the right of the River Drive, now so beautifully undulating and covering 7 acres, was first given the character of a lawn about 1865. Selected trees are planted around it, and in the middle of the lawn a young *Ficus Benjamina* has graceful low spreading branches. The River drive itself here passes through a young avenue of the Yellow Cassia of Central America (*Cassia multijuga*) most attractive when in flower during the months of August and September. At the end of this avenue are fine specimens of the Moreton Bay Pine and the Banyanlike "Nuga" tree (*Ficus altissima*) with its aerial roots developed from the branches which, on reaching the ground, form independent stems on both sides of the road.

The **Great Circle Lawn**, 4 acres in extent and circled by a drive, was made before 1844. On the left of this circle is the Royal Palm Avenue planted in 1898. Beyond this to the left are Mahogany, Breadfruit and Camboe trees, the latter yielding a juice used for dyes and medicines.

At this point the best view is obtained of some very fine specimens on the opposite side of the circle, the largest specimen being that of the Padawk tree (*Pterocarpus indica*) of India and Burma, 34 feet in circumference, which in season is a mass of pale yellow flowers. On the left of the Padawk the handsome *Ficus Trimeni* has a branch spread covering 200 feet, while in the foreground are specimens of the pink flowered *Brownea grandiceps* of Venezuela and of the Moreton Bay Chestnut (*Castanospermum australe*). Behind, the land rises to the pretty mound on which stand offices and the museum.

Memorial trees have been planted around the Great Circle in commemoration of Royal visits and of events of Imperial interest. There are the Bo Tree (*Ficus religiosa*), a sacred tree of Buddhism, planted in 1875 by King Edward VII.; the Cannon Ball tree (*Couroupita guianensis*) planted in 1901 by their Majesties King George V. and Queen Mary; the Na-gaha or Ceylon Iron-wood



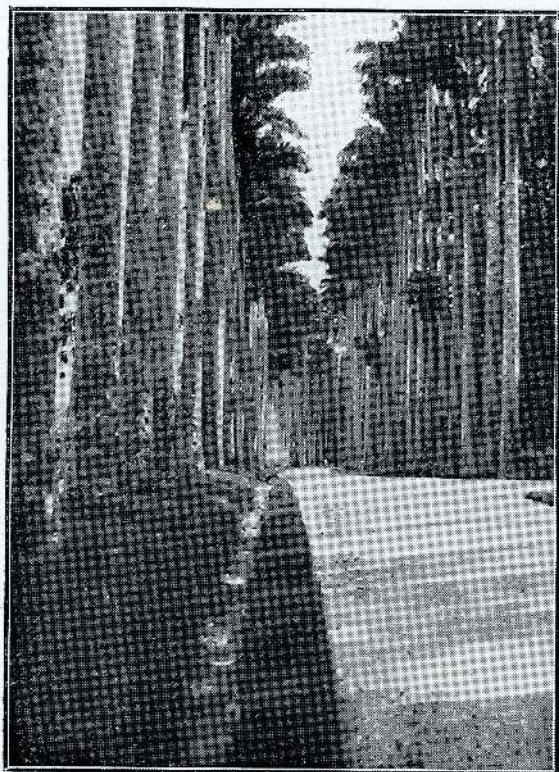
GREAT CIRCLE LAWN, PERADENIYA.

tree (*Mesua ferrea*) planted by the late Czar in 1891; an indigenous ornamental tree, the "Munamal" (*Mimusops Elengi*), planted in 1922 by His Royal Highness the Prince of Wales; and the beautiful *Tabebuia rosea* planted in 1919 to commemorate Peace and the cessation of the Great War.

At the end of the Great Circle, opposite and in line with the Royal Palm Avenue, is the Main Central Drive. A feature of this Drive is its wide borders, some 1,400 yards in length, which are planted with a considerable variety of plants of botanic interest.

On the left of the Central Drive after passing the Great Circle is the Fernery. Past the Fernery is the Liana Drive presenting a striking appearance of tropical vegetation, the many tall trees here being draped with fine climbers including species of *Calamus*, *Monstera deliciosa*, *Philodendron* sp., the *Securidaca volubilis* of Tropical South America with small bright purple flowers in large panicles, and the Snake or chain climber (*Bauhinia anguina*), a remarkably wide spreading climber with flattened serpentine stems curved in alternate directions and climbing by means of hooked tendrils.

The most modern feature of the Gardens is the floricultural section; including the Octagon-house, the Orchid house, the Flower-garden



CABBAGE PALM AVENUE.

(begun in 1896), the Pergola and espaliers for climbers, the collection of Hibiscus, Caladiums, Crotons, and fine-flowering varieties of Cannas. The Octagon-house contains a choice selection of rare and ornamental shade-loving plants, while the collection of Orchids includes most Ceylon Orchids and many foreign species. An attractive collection of Bougainvilleas occupies the top bank of this section, where may also be seen a large old India Rubber tree (*Ficus elastica*), the last of the original introduction of 1835.

The **Spice Collection** adjoins the Flower Garden. Fine old Nutmeg trees dating from 1840, Cinnamon, Cloves, Allspice (*Pimenta officinalis*), Cardamom, Cassia Bark, West Indian Mastic, small beds of oil grasses, and aromatic herbs are among the large and representative collection to be seen here.

A drive bordered by a magnificent row of the Giant Talipot palm of Ceylon (*Corypha umbraculifera*) leads down to the river. Here stands a row of Cannon-ball trees (*Couroupita guianensis*) with their handsome flowers produced on the stems and branches and with fruit not unlike cannon-balls. Beyond these are two magnificent avenues, one on a road to the left, of the Palmyra palm so characteristic of the landscape of the North of the Island and of South India, and the other on the River Drive, of the Cabbage palm (*Oreodoxa oleracea*) planted in 1905 and now of immense height and resembling a beautiful colonnade.

The Gardens possess many other beautiful features including avenues, numerous tropical flowering trees that add colour to the landscape, and an **Arboretum** of 55 acres planned in systematic order.

The Botanic Gardens, Hakgala.

ON the western side of Ceylon the land rises rapidly to the hills of the Central Province which surpass in height and in grandeur of scenery the highest peaks of Wales. The type of vegetation changes equally rapidly passing from the Rice fields and Coconut groves of the lowlands through Rubber in the mid-country to the hills of Ceylon's Tea-land clothed in an ever-green mantle. Panoramic views of majestic beauty succeed one another as the ascending road winds its way over the hills until it reaches the plateau on which stands Nuwara Eliya, the hill Sanatorium, at an elevation of 5,700 feet.

Six miles south-east of Nuwara Eliya under the shadow of Hakgala Rock (6,981 feet) lie the Botanic Gardens of Hakgala at an elevation of 5,581 feet above the sea. These Gardens, 55 acres

in extent, were opened in 1861 for the special purpose of experiments with Cinchona, an industry which helped Ceylon's planting interests to tide over the period between the collapse of Coffee and the establishment of the Tea industry. In 1882 the ornamental layout of the Gardens began and trials were made with a large number



TREE FERNS, HAKGALA.

of exotic trees, shrubs, and plants now found acclimatized over large areas of the up-country of Ceylon, and indeed accepted as normal adjuncts of the landscape.

The special feature of these Gardens is their very varied vegetation. The entrance is through an avenue of Monterey Cypress planted in 1881. A large number of Conifers and other trees of temperate climes are found in the Gardens. There are Cedars from Japan, Australia, and the Bermudas noted for their wood; Cypresses from Mexico, California, Persia, the Himalayas, and China; and Pines ranging from the *Araucaria Cookii* of New Caledonia to specimens from the Canary Islands, and the Himalayas. There are also a 40-year old English Oak (*Quercus pedunculata*), the *Rhodoleia Championi* of China with its shiny leaves and bright red flowers, a New South Wales Turpentine tree (*Syncarpia glomulifera*) introduced in 1890, the Caoutchouc Tree (*Ficus macrophylla*) of Australia with its glossy leaves and light gray bark, and many other representatives of the stately trees of the Temperate Zone.

On the left of the drive is a handsome specimen of the Camphor Tree (*Cinnamomum Camphora*) of China and Japan. Camphor grows well in Ceylon above 4,000 feet but has not proved a commercial success.

The Gardens possess a large selection of flowering trees and plants. In the **Lower Flower Garden** are specimens of the Flame Bush (*Streptosolen Jamesonii*), the *Cestrum elegans* of Mexico with its red flowers and dark red berries, the Rock Abelia (*Abelia rupestris*) of China, the Red-hot Poker or Torch Lily (*Kniphofia aloides*) from the Cape of Good Hope, the Chinese Rose Mallow or Shoe Flower (*Hibiscus rosa-sinensis*), Fuchsias, Heliotrope, &c. The **Rose Garden** contains a collection of Roses imported from England and Australia. On the fence surrounding this garden is a pink rambler "Euphrosyne" which is in flower almost all the year round, while in the centre of the garden stands a handsome palm (*Phoenix canariensis*) from the Canary Islands.

The **Upper Flower Garden** contains the greenhouses. A specimen of the Seville or Marmalade orange, a native of Cochin China, bears heavy crops of fruits in September. One of the best up-country flowering shrubs is seen in the Shubby Trumpet Flower (*Tecoma stans*) of the West Indies. Beds and borders in this garden are devoted to annuals which flower during March to May.

The **Fernery** is one of the most characteristic sections of these Gardens. Shaded by tall trees, all of them natives of Ceylon, the setting here is most attractive. The Woolly Tree Fern of India and Ceylon (*Alsophila Crinita*), the *Hemitelia Walkerae* peculiar to Ceylon, the Silver Tree Fern (*Cyathea dealbata*) of New Zealand,

and the *Dicksonia antarctica* of Australia and Tasmania are only some of the Tree Fern Tribe that are to be seen here. To the left of a stream that adds to the charm of this group is seen a full collection of the up-country ferns of the Island including the *Polystichum aculeatum* which is peculiar to Ceylon and produces its spores on the upper surface of the fronds.

The **Rock Garden** forms another attractive feature. In small ponds float the blue and yellow water lilies, while the Egyptian Papyrus or Nile Paper Reed and other water-loving plants are also represented. Ceylon plants including several ground Orchids occupy the lower part of this garden, the paths of which are edged with the pretty blue-flowering Sinhalese Skull-cap (*Scutellaria oblonga*).

In the **Fruit Plots** a wide range of up-country fruits are on view, a few examples of which are Peach, Guavas, Cherimoyer, Citrus of various kinds, Fig, Loquat, Pear, Persimmon, Banana, Passion-fruit.

Above the Rock Garden will be found the CAMPHOR, ACACIA, CONIFER, and EUCALYPTUS PLANTATIONS, and on the patnas beyond are the FOREST TIMBER and SCENTED GERANIUM PLOTS. Fifty species are represented in the Eucalyptus Plantation, many of which have grown into handsome specimens. The Acacia or Black Wattle of Australia planted in 1915 has a bark rich in tannin.

A pretty glimpse of the three peaked Hakgala Rock that towers 1,400 feet above the Gardens is obtained from the UPPER POND. On the left of this is the **Bulb Garden** in which are to be seen bulbous and other plants such as Gladiolus, Lilliums, Dahlias, Montbretias, Zephyranthes, Watsonias, Amaryllis, Cyrtanthus. On the pillars and rails round this garden are several pretty climbers from Brazil, the Himalayas, Guiana, and the West Indies.

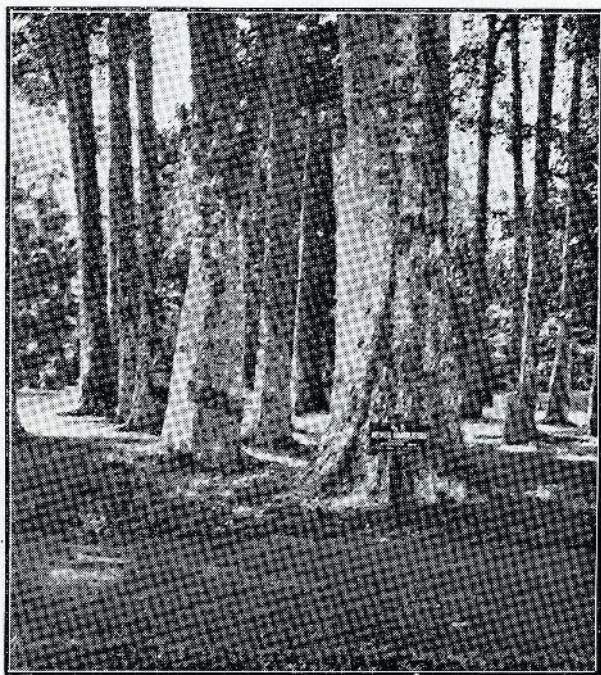
The Botanic Gardens, Henaratgoda.

THE Henaratgoda Gardens are situated 20 miles from Colombo. The drive from Colombo by car is done in 40 minutes on the Kandy road through rustic scenes of rice fields and coconut groves. A resthouse near the Gampaha Railway Station, 1 mile from the Gardens, is available for rest and refreshment.

The Gardens were opened in 1876 for the reception of the original Para Rubber (*Hevea brasiliensis*) sent through Kew and raised from seeds obtained by Sir Henry Wickham from the Tapajos plateau in the valley of the Amazon. The No. 2 tree of this first

plantation has become world-famed, and has yielded 392 lb. of dry rubber in 4 years and 9 months. Sixty descendents of this famous tree have been under tapping experiments since 1923

The Gardens, 36 acres in extent, are also noted for a wide and varied collection of exotic palms, flowering trees, and shrubs



HISTORIC RUBBER TREES, HENARATGODA.

introduced from such distant countries as China, Tropical America, The Philippines, and from our closer neighbours, Java, Malaya, the Moluccas, and India.

In the Palm Circle are seen 24 different species of these most graceful members of the Vegetable Kingdom. The Palmetum displays a further collection of ornamental palms including the Sealing Wax Palm (*Cyrtostachys Renda*) with its numerous stems and bright red leafsheaths, the graceful *Rhopaloblaste hexandra*, the fan leaved *Livistonia*, the Cabbage Palm and the Royal Palm (*Oreodoxa regis*), the Coquito Palm of Chili, and specimens of the Climbing Palm which provides the rattan of the furniture maker.

Flowering trees form another section, and are introductions from far away Mexico, Brazil, New Guinea, and Malaya. Here are the *Tabebuia rosea* producing masses of mauve flowers in April, various *Cassias* resplendent from March to September with their bright masses of yellow and pink flowers, the "Potato tree" with blue and white flowers throughout the year, and many others of the flowering trees which brighten the tropical landscape.

Trees yielding products of economic value present another wide range. The Satinwood tree of Ceylon and India which yields a handsome bright-coloured hard wood with a satin-like lustre, the straight stemmed lofty Hora tree of Ceylon whose wood is used for railway sleepers and pit-props in plumbago mines, the Red Sandalwood whose deep red heartwood yields a drug and an excellent dye are noteworthy. Oil yielding plants are also well represented by the "Chaulmoogra" (*Taraktogenos* and *Hydnocarpus*) oil plants of Burma (used for leprosy), *Aleurites* species which yield the Chinese wood oils used for paints, lubricating and lighting, the Domba tree of Ceylon, the Margosa tree valuable in Ayurvedic medicine, the Croton oil tree (*Croton Tiglium*), and many others.

The road across the rustic bridge that gives entrance to the Gardens leads through an avenue of Livistonia palms. The Great Lawn is planted round with many trees of stately appearance or of graceful spreading habit, and affords facilities for sports. The Calabash, a small tree of Tropical America, the pretty umbrella shaped Divi-divi (*Caesalpinia coriaria*) of Mexico and Brazil, and the graceful clump of King Siamese Bamboo (*Bambusa Siamensis*) add to the beauty of this lawn, while lofty trees behind give it a graceful setting. Among the latter are the Upas tree (*Anliaris toxicaria*) of Ceylon, Java, and the Moluccas, the Copaiba (*Copaifera Officinalis*) of Central America, a tall tree with a yellow smooth bark and a spreading head, and the Brazil Nut tree (*Bertholletia excelsa*), a native of Guiana.

In the Flower Garden a few choice flowering specimens of ornamental climbers are found. The *Congea tomentosa* of Burma produces large sprays of loose mauve-pink velvety bracts resembling petals and lasts for several months. The *Passiflora vitifolia* produces bright scarlet flowers, while the *Bignonia magnifica* is a very showy woody climber producing large magenta coloured flowers. The pretty Fernery too deserves mention.

A very representative collection of Orchids well repays inspection. *Cattleyas*, *Phalaenopsis*, *Coelogynes*, *Dendrobiums*, *Oncidiums*, *Phaius*, *Calanthes*, and others are housed to full capacity in the Orchid House, while on the outside lawn are the hardier *Arundinas*, *Spathoglottis*, *Vandas*, *Epidendrums*, the Giant orchid and many others.

The Bamboo collection consisting of the Giant Bamboo, the Dwarf Chinese Bamboo, and the local yellow Bamboo, a collection of plants of economic value including Tea, Cacao, Cocaine, Sappan, Cotton, Coffee, Quinine or Red Bark trees, and several trees of great interest are in the Gardens. The visitor should not fail to see the Madara trees (*Cleistanthus collinus*) and the Coco-de-mer or double coconut (*Lodoicea Sechellarum*). The former is a rare tree of classical interest to the Sinhalese. The Coco-de-mer is a dioecious palm of the Seychelles with a huge bilobed nut, of which there is only a female plant in these Gardens. It is fertilized by pollen brought from the male plant at Peradeniya.

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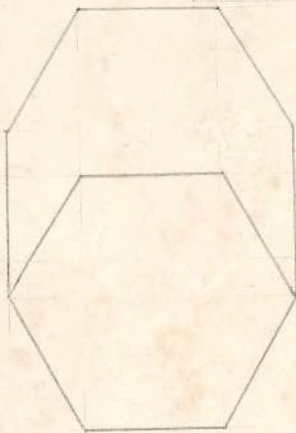
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