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# A Guide to Rain Forest Walking Trail at Singapore Botanic Gardens

Singapore Botanic Gardens' Rain Forest is one of the oldest remnants of primary rainforests in Singapore. It is located in the heart of the city, and is only a hop away from Singapore's busiest shopping precinct, Orchard Road.

The 6.2 hectares of rainforest is home to 314 species of flora and gives an indication of the wonderful richness of tropical plants. The Singapore Botanic Gardens' Rain Forest is a national treasure not only for its rich biodiversity, but also because it is part of the original site of the Botanic Gardens founded in 1859.

More than 80% of its plant species are rare or endangered not only in the Gardens but also in Singapore. Hence it is critical that these species are conserved within one of the last remaining primary forests of Singapore.

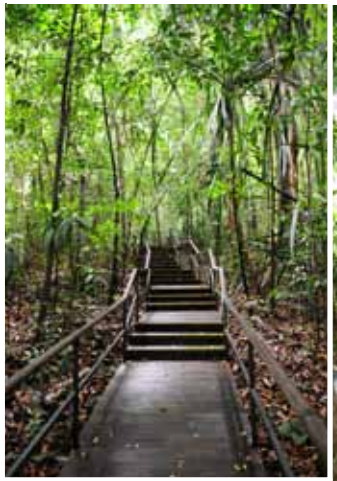
The rainforest is a multi-layered wonder. There are three layers of trees in a rainforest – the emergents (45m), the canopy tree layer (35m) and the lower tree layer (25m). Then there is the understorey layer that is made of plants able to survive heavy shading imposed by the canopy above. As you discover different species of trees and plants in the rainforest, try to tell which ones belong to which layer.

This is a boardwalk trail and therefore makes for easy walking. Look out for the signs which will point you to paths that are accessible via wheelchairs. It is a trail also suitable for families with young children and seniors.

## Tips for your safety and enjoyment:

- Stay on the path
- Take nothing but photographs
- Bring out what you have brought in
- Be as quiet as possible
- Enjoy the majesty and ambience of the forest

**Distance:** 600m
**Time taken:** 30 – 40 minutes
**Opening Hours:** 5am to midnight daily
**Admission:** Free



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# Rain Forest Walking Trail at Singapore Botanic Gardens

## Highlights

- A stroll through an ancient rainforest in the heart of the city
- Well-marked trails and shady trees
- An accessible living laboratory and museum of natural history

## How to get to Singapore Botanic Gardens

**By Foot:**
Access to the Gardens is easy through its major entrances: Tanglin Gate, Nassim Gate, Cluny Park Gate and Bukit Timah Gate.

**By MRT:**
The nearest MRT station is Botanic Gardens MRT Station.
From the station, you may enter the Gardens through Bukit Timah Gate.

**By Car:**
Car parking facilities are available at the Botany Centre, Visitor Centre, Bukit Timah Core, Jacob Ballas Children's Garden and along Tyersall Avenue.

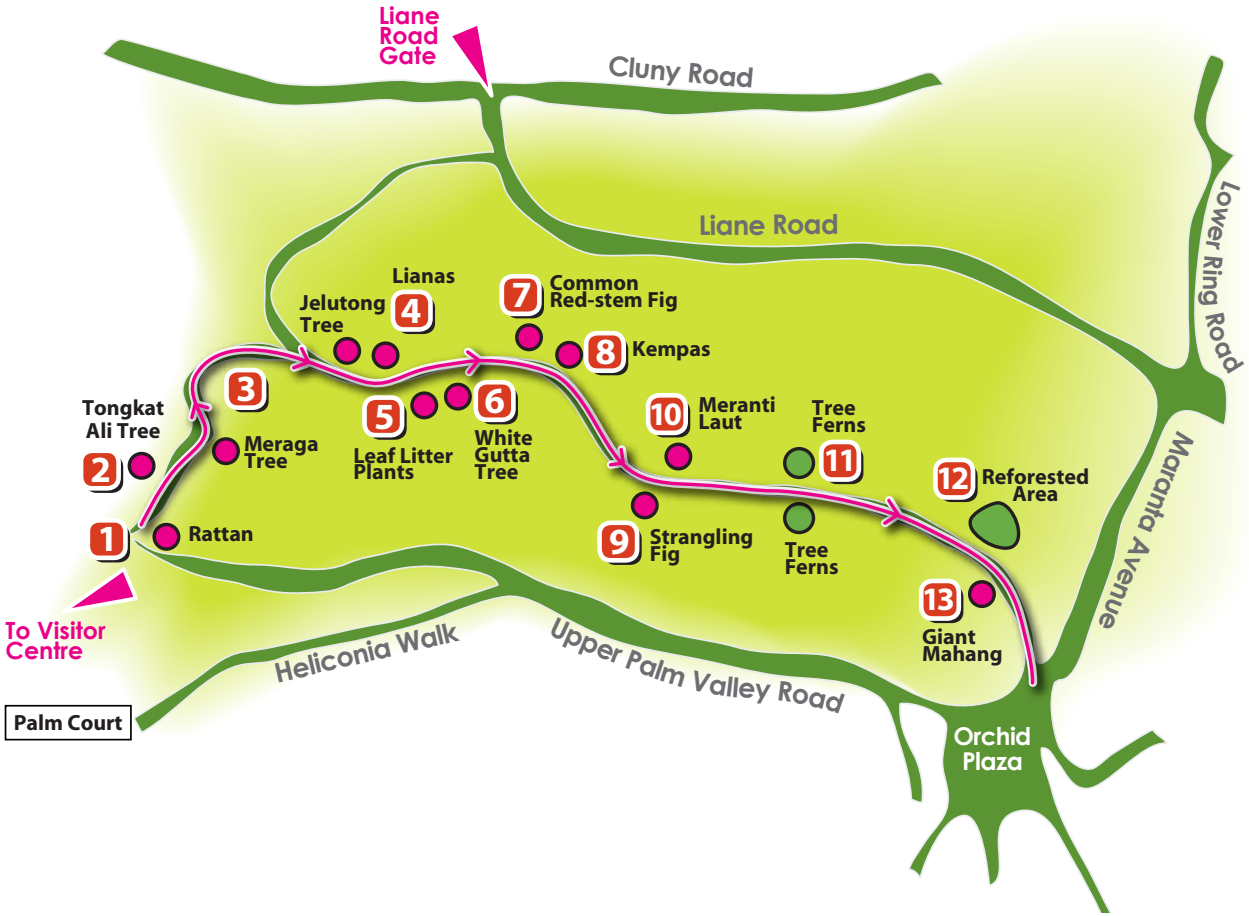
**By Bus:**
*Via Holland Road*
**SBS Transit** 7, 105, 123, 174
**SMRT** 75, 77, 106

*Via Bukit Timah Road*
**SBS Transit** 48, 66, 151, 153, 154, 156, 170, 186
**SMRT** 67, 171

## How to get to the Rain Forest Trail

At the Gardens' major entrances, look out for mapboards and directional signs to the Rain Forest Trail. The walk takes about 5 minutes from Nassim Gate, 20 minutes from Tanglin Gate and Cluny Park Gate, and 15 minutes from Bukit Timah Gate.

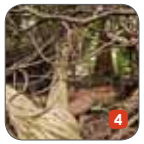
To get to the rainforest, it is most convenient to park your car near the Visitor Centre (Nassim Gate) and walk towards Palm Court. Look for the signboard with information about the Trail.



Rattan

Tongkat Ali Tree

Forest Giants


Lianas

Leaf Litter Plants

White Gutta Tree

Common Red-stem Fig

Kempas

Strangling Fig

Meranti Laut

Tree Ferns

Reforested Area

Giant Mahang

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## What you can see on this trail

As you enter the rainforest, you will see the understorey layer showcasing the forest floor with leaf litter, small herbs, fungi, ferns and palms.

## Forest Plants

→ 1

### Rattan *(Myrialepis paradoxa)*

*Myrialepis paradoxa*, known as Rotan Kertong, is in fact a cane palm or rattan that is used in thatched basketry. Many rattans have spikes on their spines which act as hooks to aid in climbing over other plants and to deter animals from eating them. Try to look out for other understorey plants along the boardwalk.

→ 2

### Tongkat Ali Tree *(Eurycoma longifolia)*

The Tongkat Ali Tree (*Eurycoma longifolia*) is also found in the understorey layer. It is known to many of us as an aphrodisiac. What is not so commonly known is that it is also a general tonic and is known to help improve blood circulation.

→ 3

### Forest Giants

Look out for the forest giants along the boardwalk.

The Meraga Tree (*Pertusadina euryncha*) has an attractive latticed bark. The timber is used for making tool handles and laminated boards.

The Jelutong Tree (*Dyera costulata*) has a straight trunk with distinct grooves. This hard timber tree is used to make chopsticks and pencils. Its latex was used in the past to produce chewing gum.

Many of these tall trees have thick buttress roots which help to support them. Try to spot as many giants as you can as you explore the rainforest.

→ 4

### Lianas

Apart from giant trees, you will see plenty of lianas as well. These are climbing vines with thick woody stems. They are commonly referred to as Tarzan's vines. Ninety percent of all lianas are found in the tropics, mostly within rainforests. Look out for the *Entada spiralis*, a forest liana found along the boardwalk.

→ 5

### Leaf Litter Plants *(Agrostistachys longifolia)*

Many species of Leaf Litter Plants such as *Agrostistachys longifolia* can be seen here too. They have an interesting way of gathering additional nutrients by trapping falling leaves from surrounding trees between its own leaves. The dead leaves then decompose to become additional nutrients for these plants.

→ 6

### White Gutta Tree *(Palaquium obovatum)*

The White Gutta Tree (*Palaquium obovatum*) is also known as the Nyatoh Putih. The leaves are a coppery colour particularly on the underside and the tree can produce impressive spreading plank buttresses. With the spirally arranged obvate leaves, buttressed trunk and upward pointing limbs, this tree is fairly easy to recognise in the mid-canopy layer.

Jelutong Tree

Meraga Tree 3

Lianas 4

Leaf Litter Plants 5

Rattan 1

Tongkat Ali Tree 2

White Gutta Tree 6

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→ 7

### Common Red-stem Fig *(Ficus variegata)*

The Common Red-stem Fig (*Ficus variegata*) is a tall tree with many clusters of fruit-like bunches. These fruit-like bunches are in fact inflorescences known as 'syconia'.

→ 8

### Kempas *(Koompassia malaccensis)*

The Kempas (*Koompassia malaccensis*) can grow up to more than 45m tall and 100cm in diameter. It is a decorative hardwood that is commonly used as flooring. It is compact and hardy, comparable to some heavy hardwoods and suitable for structural usage and has been widely used in the building industry.

→ 9

### Strangling Fig *(Ficus kerkhovenii)*

No visitor to this trail can pass by the Strangling Fig (*Ficus kerkhovenii*) without taking a second look. This fig starts its life up in the tree canopy instead of on the ground. Its seeds, dispersed by fruit-eating birds and bats, germinate on the branches of rainforest trees, sending down numerous aerial roots to the ground. These roots then thicken as they are anchored into the forest floor, while more strangling roots are produced, engulfing the host. Eventually, the host tree dies of strangulation while the Strangling Fig stands in its place.

→ 10

### Meranti Laut *(Shorea gratissima)*

The Meranti Laut (*Shorea gratissima*) is another forest giant from the Dipterocarp family. Dipterocarps are the tallest trees in the rainforest, reaching more than 45m in height and 1.5m in diameter.

→ 11

### Tree Ferns

Tree ferns are aplenty here. They are the largest native ferns in Singapore, reaching around 3m tall. Look under their leaflets and you can see tiny brown dots which are the spore cases, enclosing thousands of spores.

→ 12

### Reforested Area

The rainforest is also planted with saplings of rare native trees such as Meranti Laut (*Shorea gratissima), Diospyros pilosanthera* and *Hopea ferruginea*. This is to ensure that the next generation of trees is ready to take over some of the declining mature trees, with a bit of help from us humans.

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→ 13

## Giant Mahang *(Macaranga gigantea)*

The Giant Mahang (*Macaranga gigantea*) can be recognised by its very large leaves with three main lobes and two smaller ones near the leaf base. Its is also known as Elephant's Ears because its large leaves resemble elephant's ears. In some parts of the world, the leaves are used as food wrapping.

## Forest Animals

The rainforest is not just a botanical wonder but also a showcase for some tropical animals.

The **Common Treeshrew** (*Tupaia glis*) is a small, slender animal with a long snout and a longish tail. Its coat is dense and could be in shades of olive, brown and grey with the underside being pale in colour. It has sharp claws which are used for climbing.

Among the tree foliage, look for the **Common Tree Frog** (*Polypedates leucomystax*) whose colour ranges from uniform green to olive brown with or without white dots and blotches. It is also called the Four-lined Tree Frog and is usually brown or grey with or without four dark longitudinal lines on its back. The Tree Frog has really long slender legs.

If you are really observant, you may just spot the **Common Gliding Lizard** (*Draco sumatranus*) camouflaged against the trees. It is a lizard with elongated ribs and skin flaps on the sides of its body. When opened, these skin flaps allow it to glide between trees. It is primarily a tree dweller but the female comes down to the forest floor to lay eggs. These lizards feed on small insects.

The **Common Flameback** (*Dinopium javanense*) has distinctive golden yellow wing coverts. Like other woodpeckers, this species has a straight pointed bill and a stiff tail to provide support against the tree trunk. Its long tongue can dart forward to capture insects. With its green body, the pink neck of the **Pink-necked Green Pigeon** (*Treron vernans*) really stands out. Look for this bird near Tembusu trees as it is fond of the Tembusu fruit. Listen out for its bubbling squeaking calls which sound like "ooo-ooo, cheweeo-cheweeoo-cheweeoo".

***We hope you have enjoyed your walk on this trail. To obtain another DIY trail-guide on a walking trail in one of Singapore's parks, visit www.nparks.gov.sg/eguides.***

*Photos are by Lim Yaohui, Cai Yixiong, Serena Lee and Derek Liew.*
*Photo of the Common Treeshrew is by Shirley Ng.*

Common Flameback

Giant Mahang
13

Common Gliding Lizard

Common Treeshrew

Common Tree Frog

Pink-necked Green Pigeon

*Updated as at December 2011. Information is correct at the time of printing.*