

A Guide to Bukit Timah Nature Reserve Trail



This is Singapore's largest surviving primary rainforest. The 163-hectare Reserve includes Singapore's highest hill at 163m.

Bukit Timah Nature Reserve is the first forest reserve in Singapore established for nature conservation in 1883. It was also officially declared as Singapore's second ASEAN Heritage Park on 18 October 2011. Together with Sungei Buloh Wetland Reserve, it is now part of the prestigious regional network of 30 protected areas, forming the complete spectrum of representative ecosystems in ASEAN. It comprises various types of forests, including a substantial portion of Singapore's original tropical primary rainforest ecosystem, which makes up about half of the Reserve.

This nature reserve is a microcosm of the amazing biodiversity found in this part of the world and some are probably unique to Singapore. All the major plant groups in a tropical rainforest can be found here – from flowering plants, which include emergent trees, fig trees, forest shrubs, rattans, palms, lianas, vines and epiphytes, to fungi and lichen. The primary rainforest in Bukit Timah Nature Reserve is classified as “coastal hill dipterocarp forest”, which is dominated by members of the plant family, Dipterocarpaceae. Here, you can find patches of relatively pristine dipterocarp forests, interspersed with tall mature secondary forests.

As it is located within the tropical region, the nature reserve has one of the richest and most diverse ecological systems in the world. If you tread quietly and walk with eyes wide open, you will see an astonishing variety of plant and animal life.

All the walking trails begin at the visitor centre but not all of them lead to the summit of the hill. The main route is the most direct trail to the summit and along the way, you will get to see a number of big trees that line its path. This trail takes approximately 45 minutes to an hour to reach the summit, at a leisurely pace. It will take you another 30 minutes to reach the foot of the hill from the summit. There is a portion along the main route that is very steep. Nevertheless, it is suitable for reasonably fit adults and children, but not for those with walking difficulties.

You are advised to wear covered shoes, preferably track shoes and long, comfortable pants as there are some steps that require a bit of stretching. Light clothes are a good idea. Take along a backpack with a water bottle.

Look out for the interpretative signs along the main route. They tell of interesting facts about the nature reserve that one might not normally know. In addition, they assist in pointing out the majestic and unique trees of Bukit Timah Nature Reserve.

Move quietly and carefully if you wish to see native animals. Noise will only frighten them away and deprive you of the chance to see them.

Opening hours of the Visitor Centre:
8.30am – 5:00pm

Estimated average walking time:
45 minutes – 1 hour

Distance: 1.2km

Level of difficulty: Easy to moderate

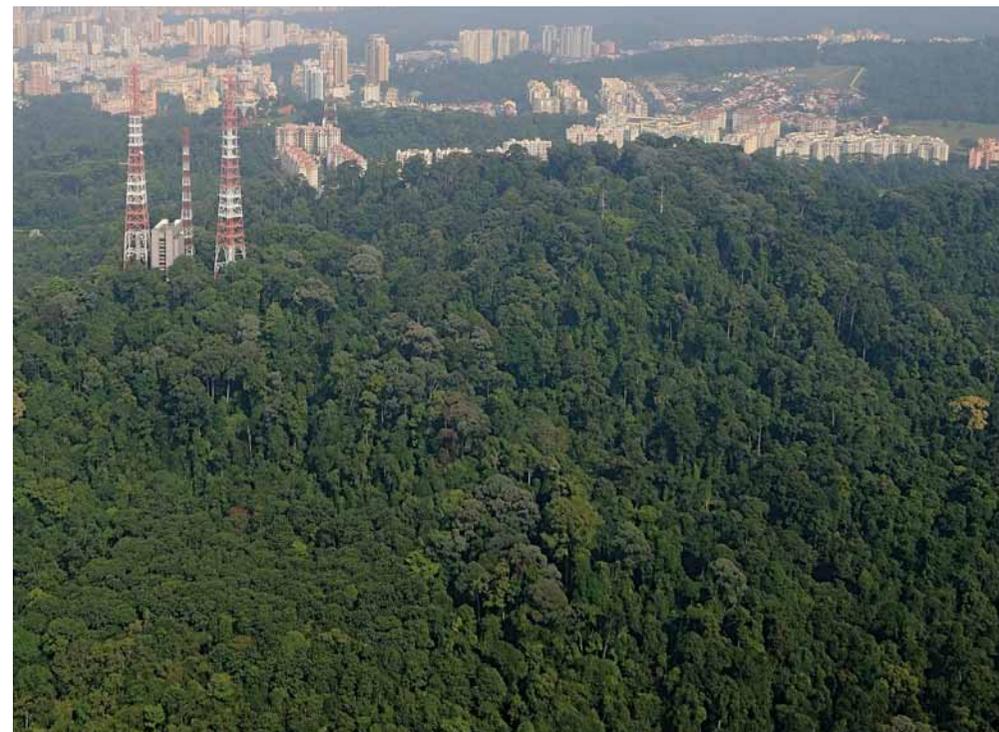


Photo by Low Choon How

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Highlights

- A tropical forest walk just minutes away from the city
- Nature in its pristine form
- An amazing variety of native plants and wildlife

How to get to Bukit Timah Nature Reserve Trail

By Bus:

To reach the Reserve by bus, alight at Upper Bukit Timah Road, opposite Bukit Timah Shopping Centre for a 10-minute walk to the Reserve. Buses serving Upper Bukit Timah Road are 67, 75, 170, 173, 184, 852 and 961.

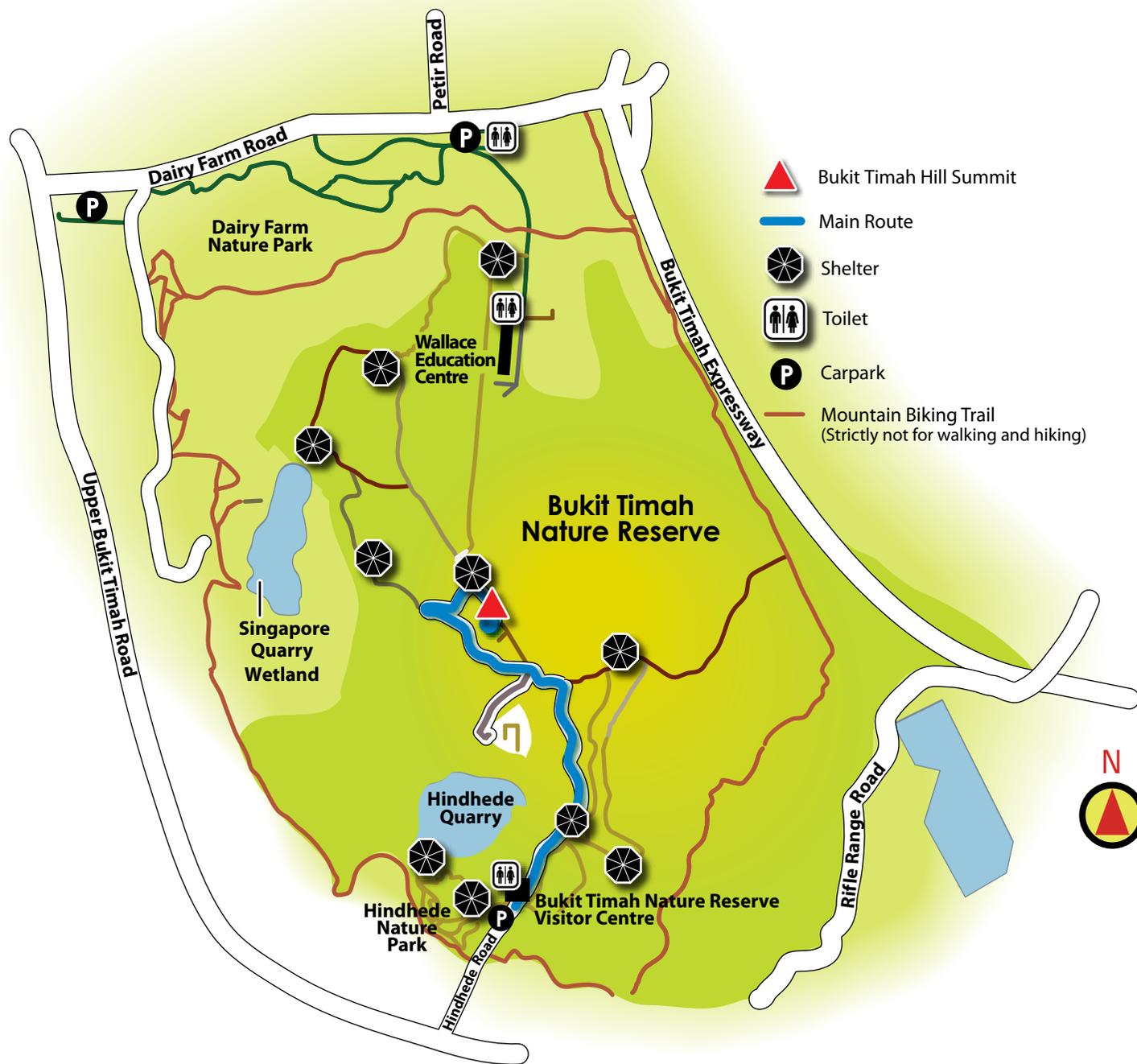
By Car:

From the city, drive in the direction of Upper Bukit Timah towards Woodlands, make a U-turn at the first pedestrian bridge you see, and then turn left into Hindhede Drive to the Reserve. There is a carpark at the Visitor Centre. It is open from 6:00am to 7:00pm. Alternative parking is available at Bukit Timah Shopping Centre and Beauty World Shopping Centre.

Starting your walk:

Start your walk with an orientation at the Visitor Centre. There is a small but interesting and informative exhibition. Do stop to take a look and learn about the native plants and wildlife in the Reserve before you start your walk.

There are amenities like toilets, benches and drink vending machines.



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What you can see on this trail

→ 1 Meninjau Trees (*Gnetum gnemon*)

As you walk towards the Visitor Centre, you will be greeted by two columnar trees next to the tarmac road on the left, also known as the main route. These two trees are known as **Meninjau Trees**, native to the Southeast Asia region. What is interesting is that the male and female flowers occur on different trees. Perhaps the most well-known product from this tree is the bitter-tasting belinjau crackers or *emping belinjau*. These are made from the fruits by removing the pulp and pounding the kernels flat into discs. These are then sunned, fried and eaten as 'keropok', a popular appetiser with Indonesian dishes.

→ 2 Dipterocarps

There are a total of 18 dipterocarp species in the Reserve. The majestic **dipterocarps** are best known as the tallest hardwood trees of the rainforest and most of them are emergents (rising above the canopy). These trees can grow up to a height of 40-70 metres and are commercially viable as tropical hardwood timber. The name is derived from the way the fruit looks like. *Dipterocarpus* simply means "two-winged fruit". The two common species in the Bukit Timah Nature Reserve, **Seraya** (*Shorea curtisii*) and **Keruing** (*Dipterocarpus caudatus* spp. *penangianus*), can easily be identified by their straight tall trunks and distinctive bark.

→ 3 Battle Reminders

Early in the trail, you can see a huge bronze plaque which tells the story of the Battle for Bukit Timah during World War II. Indeed, Bukit Timah Nature Reserve is not only rich in natural heritage but also history.

Pass the bronze plaque and you will see an old blue sign with the phrase "Horn please". This sign was left there as a reminder of the state of Bukit Timah Nature Reserve in the past. Bukit Timah Nature Reserve was not only ravaged by World War II but also mistreated and misused after the war. Cars used to be driven up to the summit which left Bukit Timah Nature Reserve in a bad state. Since the 1970s, no vehicles are permitted up the summit and Singapore's largest surviving original forest was allowed to regenerate. Now, it is home to more than 60% of Singapore's indigenous flora and fauna, many of which are unique flora and fauna that can be found nowhere else. These include the **Red-cheeked Flying Squirrel** (*Hylopetes spadiceus*) and a freshwater crab, the **Singapore Freshwater Crab** (*Johora singaporensis*) which was named after Singapore.

→ 4 Fan Palm (*Licuala ferruginea*)

As you walk along, do not just look up at the majestic trees. Look down and you can spot the **Fan Palm**, which grows under the shade of the forest canopy. Its beautiful wedge-shaped fronds radiating from long stalks make it a popular ornamental plant. In the indigenous communities of the Malayan rainforest, the



Meninjau Trees 1



Bronze Plaque 3



Seraya 2



Visitor Centre



Fan Palm 4



Singapore Freshwater Crab (Photo by Tan Heok Hui)



Thorny Rattans 5

Licuala leaves are used to make roof thatches, hats, umbrellas and for wrapping food.

→ 5 Thorny Rattans

Every now and then, you will come across the **Thorny Rattans** which has sharp spikes on its stems and leaves. The spikes help the rattans cling on to trees aside from protecting them. In the Philippines, these stems are treated and fashioned into beautiful tropical furniture.

→ 6 Figs and Ferns

You can recognise a **Fig Tree** from the small spherical green fruits growing on its trunks. The fig "fruit" is in fact a tiny bouquet of flowers turned inside out, such that the reproductive parts are enclosed in a fruit-like case. The male and female flowers are arranged inside this structure to allow pollination by fig wasps, which enter through a tiny hole.

On the trunks of trees, you can see lots of ferns growing. Singapore has about 100 species of ferns,

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80 of which can be found in the Reserve. Look out for the **Staghorn Fern** (*Platynerium coronarium*) and the **Bird's Nest Fern** (*Asplenium nidus*), which can be easily spotted.

→ 7 Understorey inhabitants

The understorey layer refers to the layer between the canopy (where the majority of the largest trees are) and the forest layer (bottom-most layer). Only about 5% of sunlight shining on the rainforest canopy reaches the understorey.

Observe some tree trunks and you will see **Lichen** growing on them. These silvery, moss-like patches on trees are actually composite organisms, a combination of a fungus and an algae. They occur in places where the air quality is good and you can find plenty of these in the Reserve. The more numerous and the bigger the lichens, the better the rainforest is with regard to the quality of air.

Another understorey inhabitant of the forest is the **Leaf Litter Plant** (*Agrostistachys longifolia*). This amazing "treelet" with a single branch has long, narrow and spirally arranged leaves that trap falling leaves. As the fallen leaves decompose, the nutrients released are absorbed directly into the plant for its growth.

On the forest floor, you will see the **Bracket Fungus** liberally scattered on the ground as you walk along. This tiny fungus is a decomposer, helping to break down fallen leaves and even the toppled trunks of huge trees into small pieces.

→ 8 Insects

If you want to see any insects or animals, you really have to walk quietly and carefully. Stop a while sometimes, and look around you.

The incessant buzz of the **Cicadas** greets you the moment you step into the Reserve. "Cicada" is a direct derivation of the Latin word meaning "buzzer". These insects make the loudest of insect noises in the world. Cicadas live most of their lives underground as nymphs. When they finally emerge, their purpose is to mate and then they die after two to three days. They are an important source of food for birds.

Along the trail, you may find the inch-long **Giant Forest Ant** (*Camponotus gigas*), a native to Southeast Asian forests. These ants do not bite human beings although they do engage with their own kind in fierce battles. These insects forage mainly at night but you may still be able to spot a few of them during the day.

The Reserve is a haven for spotting spiders. Against the sunlight, you can spot their intricate webs. There are different 'shapes' of spider webs. Our commonly held image of a spider web is a two-dimensional orb-shaped one where insects fly into and get stuck as spider food. See if you can spot the tent-shaped spider webs.

The **Golden Orb Web Spider** (*Nephila pilipes*) makes the largest and strongest web among spiders. It gets its name from the golden colour of its silk. It has red shiny legs.



Common Yellow Stem Fig (Photo by Alan Yeo) 6



Leaf Litter Plant



Lichen 7



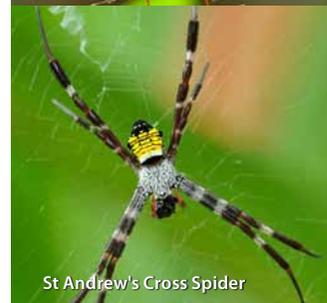
Bracket Fungus



Golden Orb Web Spider



Cicada 8



St Andrew's Cross Spider



Giant Forest Ant



Long-tailed Macaque 9

Look and see if you can spot the **St Andrew's Cross Spider** (*Argiope mangal*). This spider gets its name for the way it holds its eight legs in pairs to form an X shape. The X is called the St. Andrew's Cross because the saint was martyred on a cross of this shape rather than the conventional "+" shape.

A myriad of other insects like grasshoppers, stick insects and beetles can be found in the low undergrowth.

→ 9 **Long-tailed Macaques** (*Macaca fascicularis*) Look among the trees and try to catch sight of common inhabitants of the forest – the **Long-tailed Macaques** with their characteristic, extraordinarily long tails. They are fascinating to look at but remember, do not feed them because by doing so, you will affect their feeding pattern and alter their behaviour. They will become bold and attempt to snatch bags and other items from people.

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→ 10 Birds

The Reserve is home to a variety of birds. If you are observant, you will be able to spot some of them. The **Greater Racket-tailed Drongo** (*Dicrurus paradiseus*) is easy to spot. It is distinctive in having elongated outer tail feathers. It is often perched among the trees in mid-canopy and can mimic a range of calls of other birds. Other than being a very good imitator, it is also very clever. You can easily spot a Greater Racket-tailed Drongo near the Long-tailed Macaques as this very smart bird will follow the monkeys through the forest, feasting on the insects that are disturbed by their movements.

If you stop to listen to the calls of the birds and insects, you may just hear a liquid two-note call that sounds like "glue-it". That is the call of the **Asian Fairy Bluebird** (*Irena puella*), a bird of about 24-27 cm.

You can always recognise a **Red-crowned Barbet** (*Megalaima rafflesii*) by its bright red cap stretching from the bill to the nape. It has light blue markings on the chin and throat whilst the rest of the bird is generally bright leaf-green. It feeds on fruits from trees and vines. Not so common in Singapore, the Red-crowned Barbet is found only in the Bukit Timah and the Central Catchment Nature Reserves.

The ground is sometimes just the place to spot the **Emerald Dove** (*Chalcophaps indica*) where it is often searching for fallen fruit. It also eats the seeds and fruits of a wide variety of plants.

If you listen to the symphony of forest sounds, you may just hear their call - a low soft cooing consisting of about six to seven coos starting quietly and then rising. They also call a nasal "hoo-hoo-hoon".

→ 11 Animals

Every now and then, stop quietly where you are and just observe the forest, the trees afar and near you and the forest floor. Keen observers may spot the **Malayan Colugo** (*Cynocephalus variegatus*). Look out for any unusual 'bump' on tree trunks. It could turn out to be the tree-dwelling mammal.

Colugos are sometimes called 'flying lemurs' but they are in fact not related to lemurs. They can glide long distances as they possess a thin membrane stretched to the ends of the tail and each limb. They eat leaves and young shoots. In the day, they tend to cling to the trunks of trees, hide in tree holes or stay at the top of trees. They are more active at night.

Unlike the colugo which can stay still on a tree trunk for a long time, squirrels are often seen hopping from tree to tree. Two kinds of squirrels can be found in the Reserve - the **Plantain Squirrel** (*Callosciurus notatus*) which is orange with black and white stripes, and the grayish **Slender Squirrel** (*Sundasciurus tenuis*).

If you are very lucky, you may see the extremely rare **Malayan Pangolin** (*Manis javanica*), also known as the **Scaly Anteater**. There are also a variety of snakes here such as the **Reticulated Python** (*Python reticulatus*) and **Paradise Tree Snake** (*Chrysopelea paradisi*) but it is difficult to see them as they are



sensitive and tend to shy away from the presence of people. With careful observation and keen eyes, you may come across them as well as geckos that are often crawling on tree trunks and also **Common Sun Skinks** that bask in the sunlight on the more exposed areas of the forest floor.

Finish your walk back at the Visitor Centre. You can freshen up in the restrooms and grab a cold drink from the vending machine before heading out to your next appointment.

We hope you have enjoyed your walk on this trail. For another intimate encounter with flora and fauna, embark on the Walking Trail at the TreeTop Walk. To obtain another DIY trail-guide on a walking trail in one of Singapore's parks, visit www.nparks.gov.sg/eguides.