

Factsheet : Bukit Timah Nature Reserve

Overview

Bukit Timah Nature Reserve (BTNR) is a 163-hectare gazetted nature reserve containing Singapore's tallest hill at 163m. Best known for its tallest hill at 163m, BTNR is indeed a unique exemplar of a forest within an urban setting. One of the largest stands of primary lowland dipterocarp forest and pockets of hill dipterocarp forests are found here. The hill dipterocarp forest type is not found elsewhere in Singapore.

This is unique as such forest type usually occurs in regions between 300 to 762m in elevation. Many plants and animals of the region were first described based on specimens collected from the hill. It is also an important nature sanctuary serving recreational, conservation, research and education purposes.

BTNR's designation as Asean Heritage Park (AHP) meets the following criteria:

Criteria	Description
Ecological completeness	Largest contiguous blocks of Primary Tropical Rainforest, with tall secondary forest and vegetation. Natural streams run through valleys.
Representativeness	Represent coastal hill variant of Lowland Dipterocarp Forest.
Naturalness	Relatively pristine Dipterocarp Forest, which was protected as forest reserve since 1884.
High conservation importance	Nationally gazetted Nature Reserve and one of the Nature Areas identified under Singapore Green Plan 2012 where strategic directions ensure nation's environmental sustainability.
Legally Gazetted Area	Since 1884, the core forest was protected as a forest reserve. Currently under Parks and Trees Act 2005, protected area of BTNR is 163 ha.

Biodiversity

BTNR contains at least 40% of the country's native flora and land fauna even though it occupies only 0.2% of the total country area. (710 sq km; Statistic Singapore, 2010)

Group	No. of Extant Species		% (BTNR vs Singapore)
	BTNR	Singapore	
Fauna			
Butterflies	200	295	68
Birds	124	364	30
Dragonflies	70	117	60
Reptiles	58	102	57
Mammals	26	58	40
Amphibians	17	28	60
Native Freshwater Fishes	15	37	40
Flora			
Vascular Plants	900	2300	40
Ferns	107	170	60

* No. of Extant Species recorded at BTNR between 1990 and 2010; does not include historical records

Interesting Species

Fauna

Native species includes the Plantain Squirrel (*Callosciurus notatus*), Colugo (*Cynocephalus variegatus*), Long-tailed Macaque (*Macaca fascicularis*), birds like the Striped Tit Babbler (*Macronous gularis*) and Greater Racket-tailed Drongo (*Dicrurus paradiseus*).

Forest Praying Mantis (*Theopropus elegans*)

- Very rare
- Females larger than males
- Not more than 5cm in length
- Looks like an ant at the first instant
- Juveniles moult to become adults
- Fierce predator that feeds on insects
- Often found on or close to the ground

Singapore Freshwater Crab (*Johora singaporensis*)

- Very rare
- Discovered in 1986 and is found only in Singapore
- Small size – half the size of one's thumb
- Found in freshwater streams
- Likes fast flowing water, neutral pH and high concentration of dissolved oxygen
- Feeds at night

Giant Hawker (*Tetracanthagyna plagiata*)

- Very rare
- Largest dragonfly species in South-east Asia with wingspan up to 16cm
- Females are larger than males
- Forest dependent species

Pangolin (*Manis javanica*)

- Also known as the Scaly anteater
- Body is covered with keratinised scales that appears like armour
- Specialised diet of termites and ants
- Has powerful sharp claws to break open termite mounds
- Not uncommon in forest areas

Horsfield's Flying Squirrel (*Iomys horsfieldii*)

- Uncommon inhabitant of the forest
- A small squirrel that can glide from tree to tree
- Feeds on a variety of forest tree fruits and seeds
- Tendency to store seeds in various places for future consumption
- Plays useful role in dispersal of seeds of forest trees

Colugo (*Galeopterus variegatus*)

- Possesses flexible membranes that act as a parachute
- Glides expertly from tree to tree
- Often seen hugging close to the tree trunk in forest
- Common forest denizen
- Feeds on forest tree leaves and fruit

Common Tree Nymph (*Idea stollii logani*)

- Uncommon and attractive looking butterfly
- Pale grey with black spots
- Wingspan of about 14cm
- Glides leisurely among the canopy

Straw-headed Bulbul (*Pycnonotus zeylanicus*)

- Globally vulnerable, nationally endangered species
- Large attractive bird with yellow coloured head
- Loud melodious calls

Asian Fairy Bluebird (*Irena puella*)

- Adult male is brilliant blue with velvety black wings
- Medium-sized bird, fairly common
- Feed on fruits of forest trees and insects like termites
- Inhabits only rainforests
- Has a clear bell-like call

Shrew-faced Ground Squirrel (*Rhinosciurus laticaudatus*)

- Uncommon
- Has a slightly elongated snout
- Forages on the forest floor and feeds mainly on insects

Flora

Seraya (*Shorea curtisii*)

- A common large emergent tree and flagship species at BTNR
- Its presence at BTNR separates it as a Coastal Hill Dipterocarp Primary Tropical Forest
- Usually confined to altitudes above 250m in the main ranges of Peninsula Malaysia, occurring between 300 to 762m
- Its bark forms boat-shape cracks on the tree trunk and there is a greyish-tinge to the leaves in the tree canopy

De Candolle's Magnolia (*Magnolia candolii*)

- A nationally endangered tree with recent finds at Nee Soon Freshwater Swamp
- Historically collected as a specimen from BTNR in 1889
- Rediscovered at BTNR in 1995 and 2009

Memecylon (*Memecylon pubescens*)

- Recent rediscovery in 2009 at BTNR from survey conducted by researchers from the Centre for Tropical Forest Science Project
- Previous records from BTNR were collected by Ridley in 1899 and Henderson in 1938

Mock Durian (*Neesia synandra*)

- Nationally vulnerable species found in lowland forests
- Rare and unusual, with a few trees found at BTNR
- Fruit look like a durian but are not edible

Kerinting (*Rhopaloblaste singaporensis*)

- A nationally endangered palm
- A small understorey palm with neatly arranged leaflets
- Found in some other primary forest patches within the Central Catchment Nature Reserve also

Six-stemmed Sonerila (*Sonerila heterostemon*)

- A nationally endangered herb
- Found on rocks and banks near streams, in shady and moist conditions
- Flowers have bright pink petals and the young leaves are dark green with white spots

Bonsai Moss (*Pyrrhobryum spiniforme*)

- A nationally endangered moss found locally only in BTNR
- Usually found on moist slanting to vertical cliff faces and also on dead logs and large boulders

BTNR's multiple roles and functions

Roles	Key points
Conservation	<ul style="list-style-type: none">- Parks and Trees Act 2005 protects its flora and fauna- Monitoring works and surveys of flora and fauna conducted regularly- Eco-Link@ BKE, a 50m wide bridge, under construction to link fragmented ecosystems of the BTNR and the Central Catchment Nature Reserve. Forested ecological corridor will enable animals to move between two nature reserves. Construction to complete in 2013. Plans for ecological monitoring to take place during first few years to monitor effectiveness before opening to public.
Research	<ul style="list-style-type: none">- Valuable tool for study of forest dynamics- Ongoing flora and fauna survey since mid-2008 to document species diversity and assess population status of biodiversity- Site of research and specimen collection venue by tertiary institutions, scientific community and private organisations- Hornbill conservation and re-introduction studies in progress

Education	<ul style="list-style-type: none"> - Programmes for schools include Kids for Nature programme to infuse conservation messages with outdoor education, Community Involvement projects, and nature education workshops for teachers to equip them with skills to conduct field trips - Individuals and Corporate groups can contribute to the greening of our nation and support nature conservation through the Plant-A-Tree programme - Public programmes include guided walks and Nature Keeper Programme targeting school children to imbue appreciation for native forests, flora and fauna. - Robust volunteer programme where volunteers conduct forest patrol, reforestation, guided tours or help in exhibitions
Recreation	<ul style="list-style-type: none"> - About 330,000 visitors annually - Visitor centre, boardwalks, information map-boards and interpretative signage enhance visitor experience

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