Picture Word Cards

Engage young children with 30 hand painted picture word cards of flora and fauna that can be found in Singapore. The back of each card contains key information on the plant or animal, including fun facts that will capture the interest of the children.



- Four-lined Tree Frog
- Leopard Cat
- Long-tailed Macaque
- Malayan Colugo
- Malayan Water Monitor
- Olive-backed Sunbird
- Oriental Pied Hornbill
- Painted Jezebel
- Plantain Squirrel
- Smooth-coated Otter
- Sunda Pangolin
- Swamp Forest Crab
- White-bellied Sea Eagle
- Yellow-spotted Mudskipper

Flora featured:

- Bird's Nest Fern
- Casuarina
- Cattail
- Fish Poison Tree
- Gelam
- Meranti
- Swamp Fern
- Tembusu
- Tiger Orchid
- Vanda Miss Joaquim











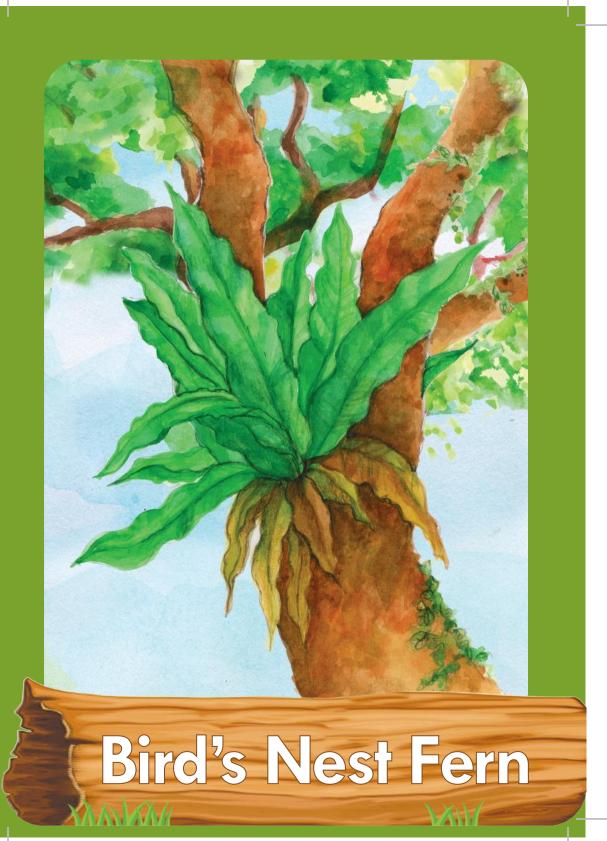




Picture Word Cards

A Pre-school Educational Resource on Singapore, a City in a Garden, and its Biodiversity







Epiphyte

Size:

Maximum height: 1.2 m

Habitat:

Lowland forests

Where to find it:

Admiralty Park, Pulau Ubin, Sungei Buloh Wetland Reserve, urban areas throughout Singapore

Description:

This fern grows on the branches of host trees. Its leaves are long and wide. It has large roots that are covered with many brown hairs. Light brown spores develop on the lower surface of the fronds.

Ecological roles:

It grows in the form of a rosette which looks like a bird's nest. Fallen leaves from the host tree are caught in the 'nest', and help to provide nutrients for the Bird's Nest Fern as they break down.

Fun Facts!

The young fronds can be eaten. Its fronds are known to have been used for easing labour pains and a lotion made from the fronds is sometimes used for treating fever.





Tree

Size:

Maximum height: 40 m

Habitat:

Coastal forests, sandy beaches

Where to find it:

East Coast Park, Pulau Semakau

Description:

Its leaves are tiny scales that surround grey-green, needle-like twigs. Its fruits are small, winged nuts that are contained in cone-like clusters that split open when they are ripe.

Ecological roles:

It can improve the condition of the soil and helps to prevent erosion. It commonly grows in coastal sand dunes.

Fun Facts!

The wood from this tree is extremely hard and dense, and is often used for constructing stilts, poles and fences in coastal areas.

People like to plant Casuarina trees in windy areas because they act as a windbreak.

It is also considered one of the best firewood species in the world.





Herb

Size:

Maximum height: 3 m

Habitat:

Freshwater wetlands

Where to find it:

Edges of reservoirs and other freshwater bodies

Description:

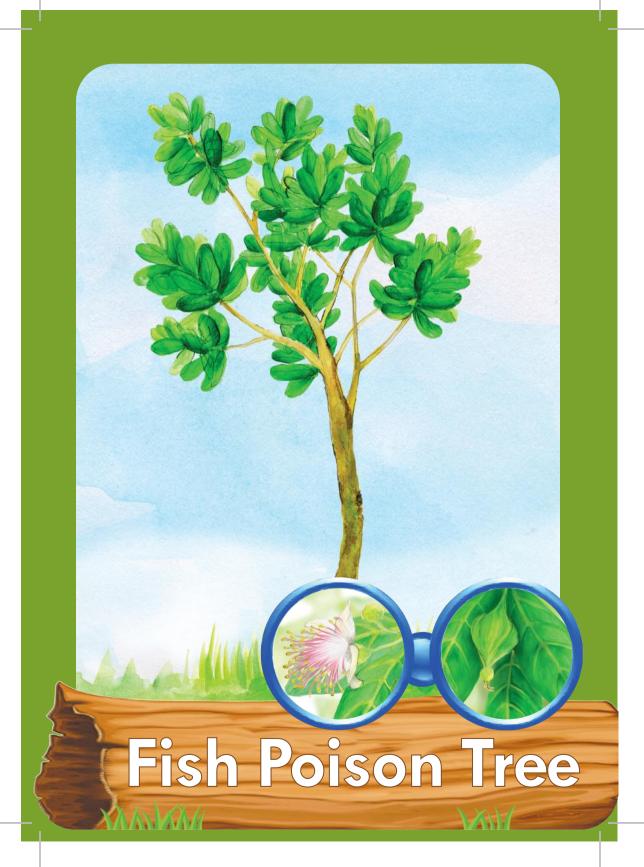
It has thick, narrow and sword-shaped leaves. Flowering stalks grow up to 2 m tall. After pollination, the slightest disturbance will send the seeds floating through the air to be dispersed by the wind.

Ecological roles:

It can remove toxic elements from water. Dense clusters of cattails provide cover for wetland animals, and the leaves provide nesting material for some species of wetland birds.

Fun Facts!

The part that looks like a 'cattail' is a cluster of thousands of flowers. Cattails are common here, and in many other parts of the world, because their seeds are easily distributed over long distances. The underground stems and pollen can be dried and made into flour.





Tree

Size:

Maximum height: 30 m

Habitat:

Coastal forests

Where to find it:

Sungei Buloh Wetland Reserve, Singapore Botanic Gardens, Labrador Park, sandy coasts and seashores

Description:

It has a round crown with large, shiny, dark green leaves. Its flowers appear fluffy because they have many white, pink-tipped stamens. Its fruit is shaped like a lantern and turns brown from green as it matures.

Ecological roles:

It is the food plant for some moth larvae. Fruit bats and night-flying moths are attracted to its flowers and act as pollinators.

Fun Facts!

While they contain toxic substances, the fruit and seeds are edible when cooked. Fishermen use them as fish poison to disable fish so they float to the water surface. The bark, leaves and fruits have been used by some to treat backaches and sore joints. Oil can be extracted from the seeds and used as fuel for lanterns.





Tree

Size:

Maximum Height: 40 m

Habitat:

Coastal forests

Where to find it:

Pasir Ris Park, Pulau Ubin

Description:

Its trunk is spongy to the touch with white, flaky bark. It has greyish-green leaves with a leathery texture and tiny flowers with white, greenish-white or cream petals. Its fruits can be cup shaped or round, and contain many tiny seeds.

Ecological roles:

It is a known food plant for the caterpillar of the Atlas Moth. Its flowers are often visited by the Olive-backed Sunbird and Crimson Sunbird.



Fun Facts!

Kampong Glam was named after this tree, likely due to its abundance in that area in the past. The leaves are used to distill cajeputi oil for its varied medicinal uses, such as in the treatment of earaches, headaches, toothaches, burns, wounds and skin diseases. The hard timber is popularly used in carving, cabinet work, boat building and as firewood. Flakes of the bark are used for insulation and stuffing pillows.





Tree

Size:

Maximum height: 50 m

Habitat:

Primary rainforests

Where to find it:

Bukit Timah Nature Reserve, Singapore **Botanic Gardens**

Description:

Its leaves are oval or egg shaped. Its fruit is a nut that is green and egg shaped, and has three long wings and two shorter wings. It has cream or yellow flowers that occur in bunches of up to five.

Ecological roles:

It grows to a great height and emerges from above the canopy of rainforests.

🦠 Fun Facts!

The timber from this tree is suitable for making furniture. When ripe, the fruits drop from the tree and spin like small helicopters in the air as they are carried away by the wind to other places where they will grow into big trees.





Herb

Size:

Maximum height: 3 m

Habitat:

Mangrove forests

Where to find it:

Pulau Ubin, Sungei Buloh Wetland Reserve, coastal areas

Description:

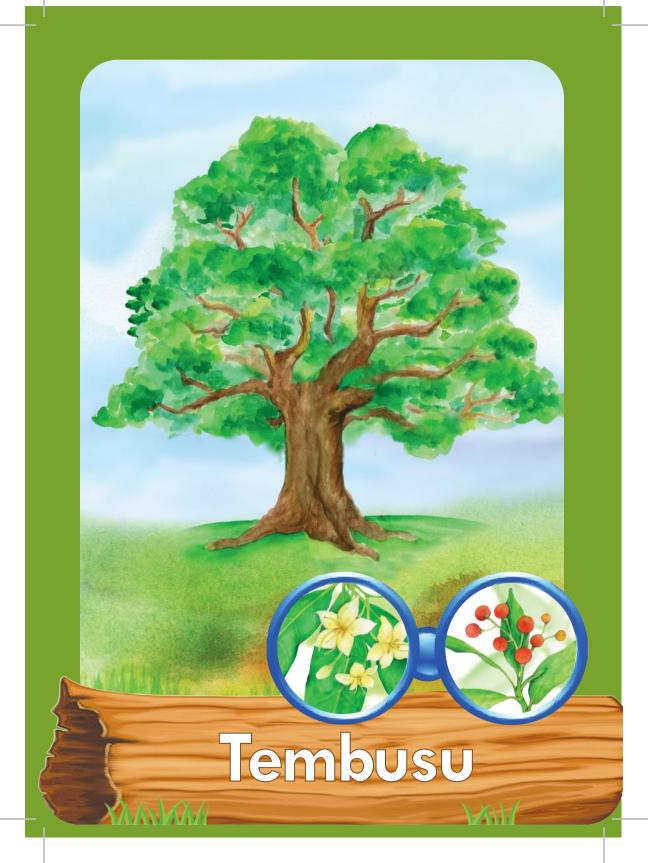
Its large fronds are divided into smaller segments. They are dark green and have a length of between 1 m and 4 m.

Ecological roles:

It grows on the landward side of mangrove forests, and its roots help to prevent erosion by holding the soil in place.

Fun Facts!

The young fronds can be consumed as vegetables. The fronds can be shredded or crushed and applied to wounds or ulcers.





Tree

Size:

Maximum height: 55 m

Habitat:

Primary and secondary forests

Where to find it:

Central Catchment Nature Reserve, Pulau Ubin, Singapore Botanic Gardens, other gardens and parks

Description:

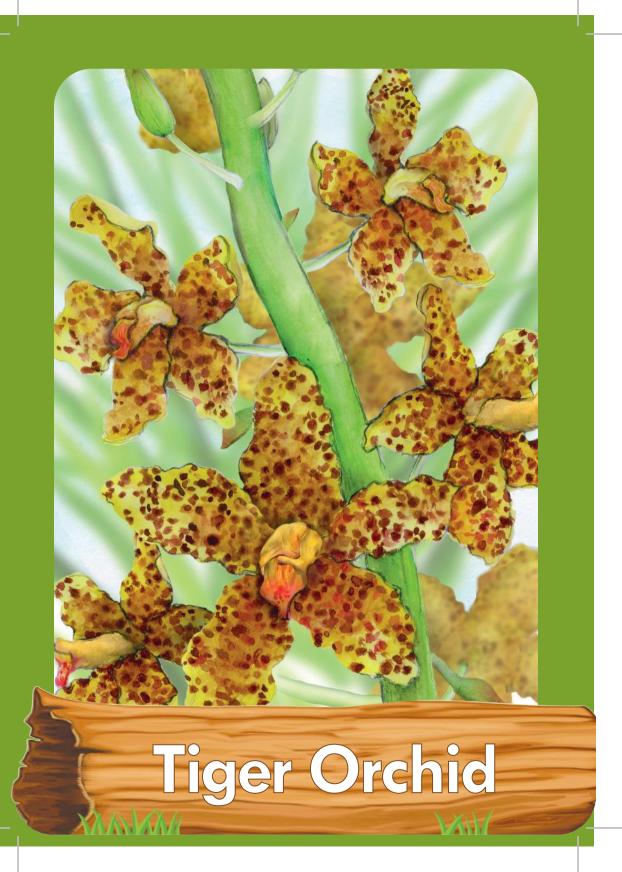
Its bark is deeply fissured, while its roots are buttress-like. Its leaves have pointed tips. Its creamy-white flowers are fragrant, and occur in clusters. Its fruits are roundish berries that turn orange or red from green.

Ecological roles:

Its flowers are visited by skipper butterflies and moths, and its fruits and seeds are eaten and dispersed by bats and birds.

Fun Facts!

Several Tembusu trees in Singapore are Heritage Trees, including the one featured on the back of Singapore's five-dollar note. That particular tree is located at the Singapore Botanic Gardens. Strong, long-lasting and resistant to termites, its timber is used to make chopping boards, bridges and boats.





Epiphyte

Size:

Maximum height: 2 m

Habitat:

Lowland forests

Where to find it:

Bukit Timah Nature Reserve, Labrador Nature Reserve, Sungei Buloh Wetland Reserve, Singapore Botanic Gardens, other gardens and parks

Description:

This plant gets the name 'Tiger Orchid' from its flowers, which resemble the markings of a tiger. They are pale greenish yellow with orange brown spots and they turn darker as they mature. Each flower is about 10 cm wide. The flower stalks can carry around 40 flowers, and the fruits are pear-shaped. The leaves are thin and strap-like, with pointed tips.

Ecological roles:

It is likely pollinated by large bees.

Fun Fact!

The Tiger Orchid is the largest orchid species in the world, and can weigh up to more than a tonne!





Climber

Size:

Indeterminate (climbers can grow as tall as their support)

Habitat:

Gardens

Where to find it:

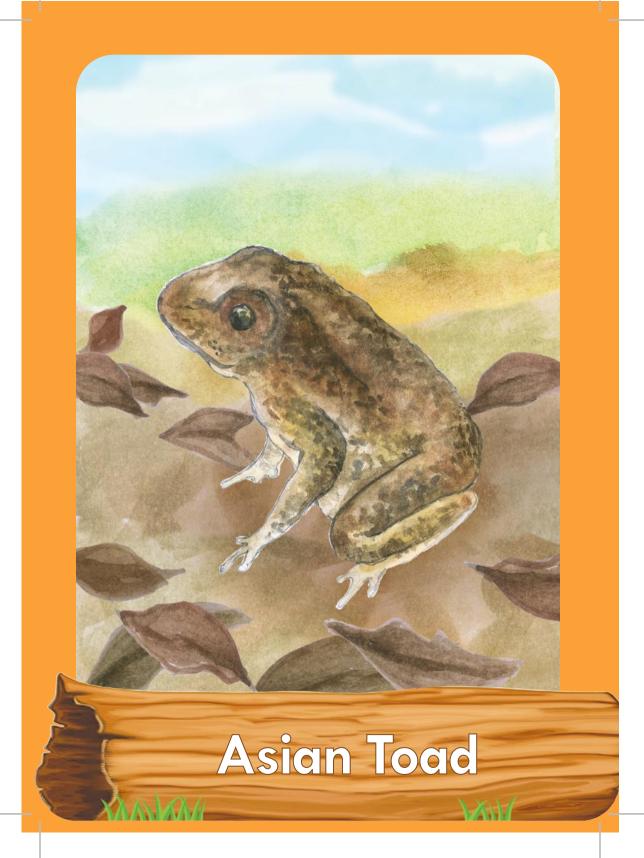
Singapore Botanic Gardens

Description:

Its flowers are about 6 cm tall and 5 cm wide. The flowers have three sepals and two petals that range from whitish in colour to light pink. Orchid flowers also have a special petal known as a 'lip'. The lip of the Vanda Miss Joaquim is shaped like an angel, is bright pink in the middle, and has an orange centre with reddish-purple spots.

Fun Facts!

Our national flower originated from the garden of Agnes Joaquim, after whom it was named. It is used as an ornamental plant.





Amphibians

Size:

Snout-vent length: 10 cm

Habitat:

Forests, gardens, parks, other urban areas

Where to find it:

Common throughout Singapore, including Bukit Timah Nature Reserve, Sungei Buloh Wetland Reserve

Description:

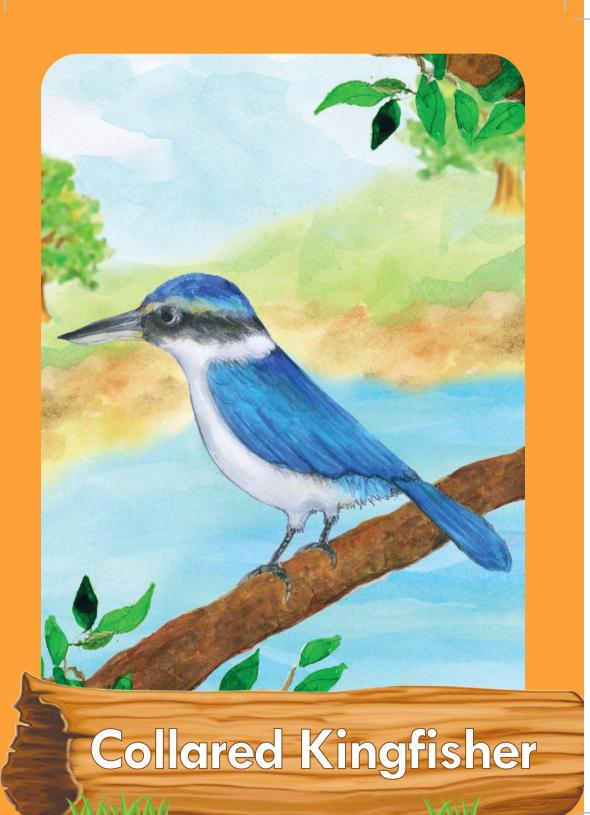
It has warty skin and a body and limbs that are grey to yellowish brown. It has raised, oval-shaped glands on the sides of its head behind its eyes. Its head has two black low ridges on top.

Ecological roles:

It feeds on many insects and snails. The tadpoles feed on aquatic algae.

↓ Fun Facts!

The Asian Toad helps some plants by controlling the populations of their pests. The tadpoles help to improve the water quality of ponds by eating the algae.





Birds

Size:

Head-tail length: 25 cm

Habitat:

Forests, mangroves, gardens, parks

Where to find it:

Bukit Timah Nature Reserve, Central Catchment Nature Reserve, Pulau Ubin, gardens and parks around Singapore

Description:

Its head and upperparts are turquoise, while its underparts and collar are white. It has a large bill with a pinkish lower half.

Ecological roles:

It feeds on insects, worms, lizards, snails, frogs, crabs, shrimps, small fish and sometimes small birds.

Fun Fact!

The Collared Kingfisher nests in tree holes and termite mounds.





Amphibians

Size:

Snout-vent length: 7.5 cm

Habitat:

Forests, urban areas

Where to find it:

Bukit Timah Nature Reserve, Central Catchment Nature Reserve, Sungei Buloh Wetland Reserve

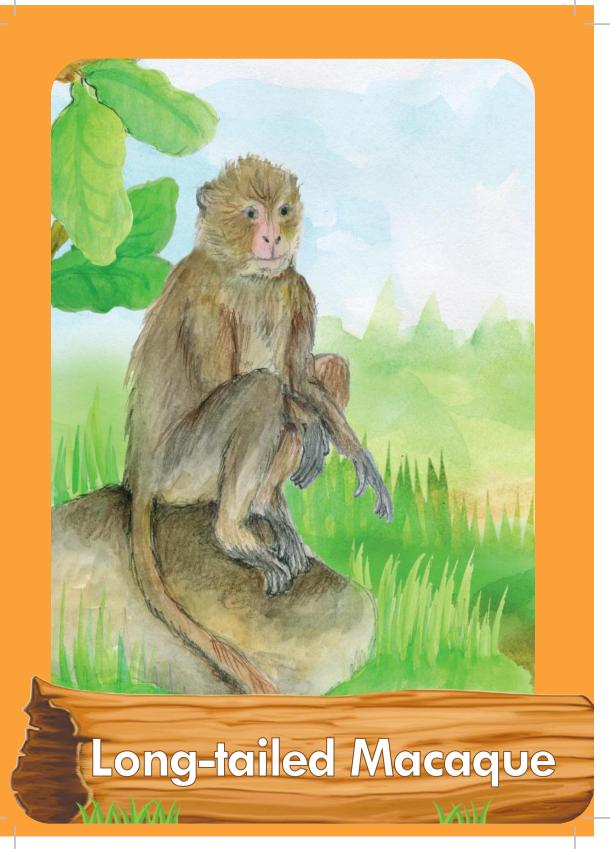
Description:

Its skin is relatively smooth.
It has long and slender limbs, and feet with flattened tips.
Its back is brown, grey or yellow, often with four thin, blackish stripes. Females are considerably larger than males.

Ecological roles:

It feeds on insects and small animals, and is preyed upon by snakes and birds.

The Four-lined Tree Frog lays its eggs in vegetation that overhangs ponds, in a foamy mass that is glued to the vegetation. When the eggs hatch, the tadpoles fall into the water below to begin their lives.





Mammals

Size:

Head-body length: 45 cm Tail length: 56.5 cm

Habitat:

Forests, gardens, parks

Where to find it:

Bukit Batok Nature Park, Bukit Timah Nature Reserve, Central Catchment Nature Reserve, Pulau Ubin, Singapore Botanic Gardens, Sungei Buloh Wetland Reserve

Description:

The upper parts of its body are olive brown. It has a greyish face and distinctive white eyelids.

Ecological roles:

It lives in large troupes in and on the edges of forests and parks. It feeds mainly on fruits, dispersing the seeds of many plants, but is an opportunistic omnivore. It is preyed upon by pythons and eagles.

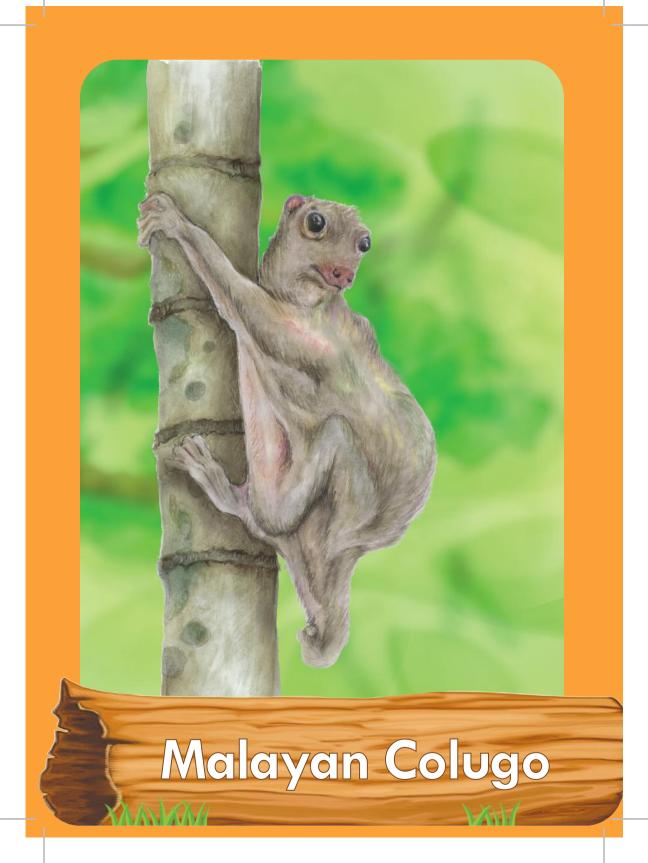
Fun Fact!

The Long-tailed Macaque is also known as the Crab-eating Macaque, as it can be seen foraging for crabs along beaches.











Mammals

Size:

Head-body length: 38 cm Tail length: 26.5 cm

Habitat:

Forests

Where to find it:

Bukit Batok Nature Park, Bukit Timah Nature Reserve, Central Catchment Nature Reserve

Description:

The upper parts of its body may be grey or reddish brown, and can have black streaks. There are whitish eye rings around its large eyes. It has a special skin membrane that extends from its neck, down the sides of its body, to its tail. It has a pointed muzzle and large claws on its feet.

Ecological roles:

It lives in trees and feeds on leaves, leaf shoots and flower buds.

Fun Facts!

The Malayan Colugo is one of the few mammals in Singapore that is able to glide from tree to tree by spreading open its skin membrane. An infant colugo clings to the underside of its mother.





Birds

Size:

Head-tail length: 12 cm

Habitat:

Forests, mangroves, gardens, parks, other urban areas

Where to find it:

Common throughout Singapore

Description:

Males have a deep metallicblue forehead, throat and breast. Females are olive green and have a yellow eyebrow. Both males and females have bright yellow underparts.

Ecological roles:

It feeds mainly on nectar and insects, and is often seen actively foraging for insects amongst foliage. It pollinates the flowers of many plants. It builds its nests in a wide variety of habitats including potted plants on balconies and even man-made objects.

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y Fun Fact!

The Olive-backed Sunbird is often mistaken as a hummingbird, because it occasionally hovers when foraging or collecting nest material. However, hummingbirds are usually found in North and South America, while sunbirds are usually found in Europe, Africa and Asia.





(Anthracoceros albirostris)

Group:

Birds

Size:

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Head-tail length: 70 cm

Habitat:

Forests, gardens, parks

Where to find it:

Central Catchment Nature Reserve, Istana Park, Pulau Ubin, Singapore Botanic Gardens, Sungei Buloh Wetland Reserve

Description:

It has a black body with a white belly. Its wings are edged in white, and the underside of its tail is also white. Its casque (a hard structure on top of the bill) is yellowish with a black patch and is larger in males than females. Its bill is also yellowish, while its face has a light blue patch.

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Ecological roles:

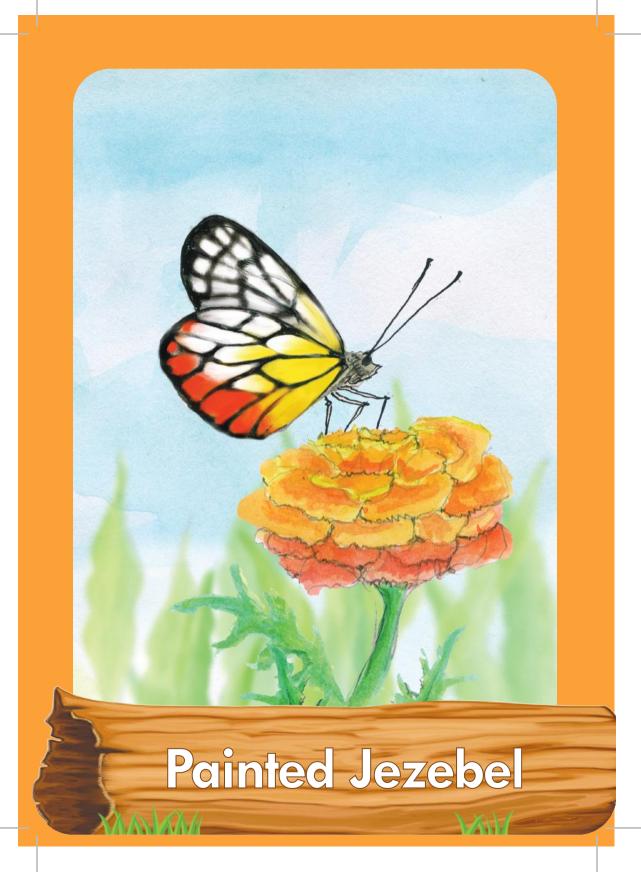
It is omnivorous, feeding mainly on fruit but is known to also eat reptiles and large insects, especially when nesting.

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Y Fun Fact!

When breeding, the female Oriental Pied Hornbill seals herself inside her nest, usually a tree hole, using a plaster made from mud and fibres.

During this time, the male hunts for food and passes the food into the nest through a narrow slit.





Group:

Insects

Size:

Wingspan: 8 cm

Habitat:

Forests, mangroves, gardens, parks, other urban areas

Where to find it:

Common throughout Singapore

Description:

The tops of its wings are white with black veins and margins. Its hind wings are bright yellow on the bottoms and red along the edges. It likes to fly high up in the tops of trees.

Ecological roles:

The Painted Jezebel has a close relationship with the Common Malayan Mistletoe, a plant that grows on some trees. The adult butterflies pollinate the flowers and lay their eggs on the leaves, which provide food for the caterpillars once they hatch.

★ Fun Fact!

Scientists believe that the bright colours on its wings protect the Painted Jezebel by warning predators to stay away.





Group: Insects

Size:

Wingspan: 1.8 cm Head-abdomen length: 3 cm

Habitat:

Freshwater habitats, gardens and parks

Where to find it:

Common at most ponds in public parks around Singapore

Description:

Males are bluish with dark bands on the thorax. Females are brownish with green markings on the thorax.

Ecological roles:

The larvae feed on mosquito larvae and other small animals. Adult damselflies feed on insects including mosquitoes.

> Fun Fact!

Do you know how to differentiate a damselfly from a dragonfly? When at rest, the dragonfly spreads out its wings like an aeroplane, but the damselfly rests with its wings folded up.





Group: Birds

Size:

Head-tail length: 50 cm

Habitat:

Forests, grasslands, mangroves, gardens, parks, other urban areas

Where to find it:

Many locations throughout Singapore

Description:

Its body is chestnut with a white head and breast. Its wings are also chestnut but the tips are black.

Ecological roles:

Strictly carnivorous, it scavenges for food and is often observed feeding on dead fish and crabs in freshwater and coastal wetlands. It occasionally hunts live prey such as fish and rodents.

Like most other birds of prey, the Brahminy Kite sometimes rides on spirals of hot air, so that it does not need to flap its wings so much. When it does so, it looks like it is circling in the sky. This is known as thermalling.





Group: Insects

Size:

Wingspan: 2.5 cm Head-abdomen length: 3.5 cm

Habitat:

Freshwater habitats, gardens, parks, urban areas

Where to find it:

Most ponds in public parks around Singapore

Description:

Its body is reddish and its wings are almost entirely brownish red. The males have a brownish-red thorax and abdomen. The females are duller in colour and have clear wings.

Ecological roles:

The larvae feed on mosquito larvae and other small animals. Adult dragonflies feed on insects including mosquitoes.

₩ Fun Fact!

Dragontlies provide natural control of mosquito populations, and help to prevent mosquito-borne diseases such as dengue.





Group: Fish

Size:

Head-tail length: 6.5 cm

Habitat:

Forest streams

Where to find it:

Bukit Timah Nature Reserve, Central Catchment Nature Reserve **Description:**

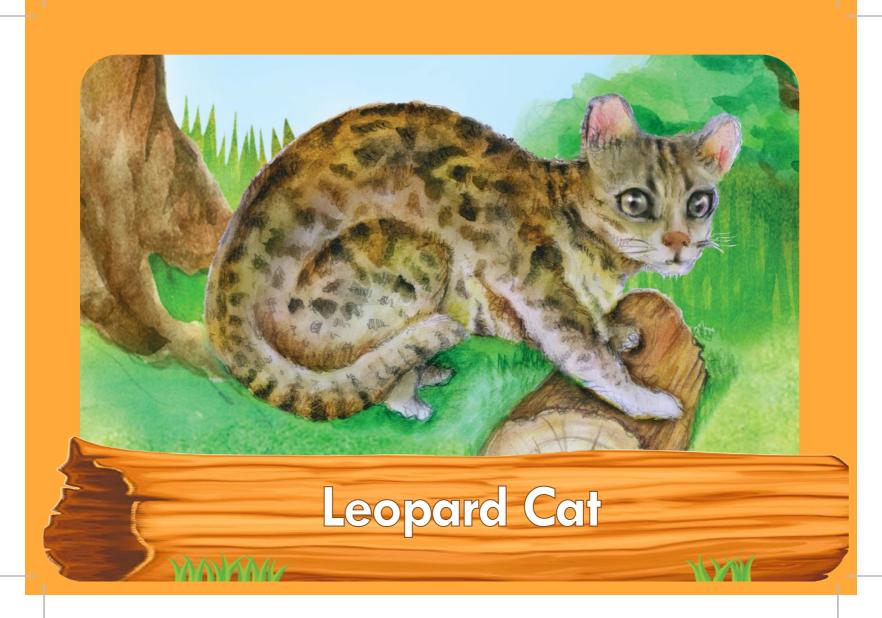
It has a brown and slender body with scales that are iridescent blue or green (they seem to change colour when you look at them in different light or from different angles). Adults have two black horizontal stripes.

Ecological roles:

It feeds on small aquatic insects and worms.

→ Fun Facts!

Young Forest Fighting Fish are protected by their father, which carries the eggs and fry in its mouth. These fish can change their colours too, depending on their mood, such as when they are stressed or aggressive.





Size:

Head-body length: 56 cm Tail length: 26 cm

Habitat:

Forests

Where to find it:
Pulau Ubin

Description:

The upper parts of its body and tail are reddish or yellowish with black spots. It has a round head with a short muzzle and large, rounded ears. The backs of its ears are black with white spots.

Ecological roles:

It is strictly carnivorous, feeding mainly on small vertebrate animals such as frogs, lizards, rats and birds. Although they usually live alone, they can also be found in pairs or in small family groups.

Fun Fact!

The Leopard Cat's name comes from the leopard-like spots on its body. However, it is much smaller than a leopard. It is about the size of a domestic cat.



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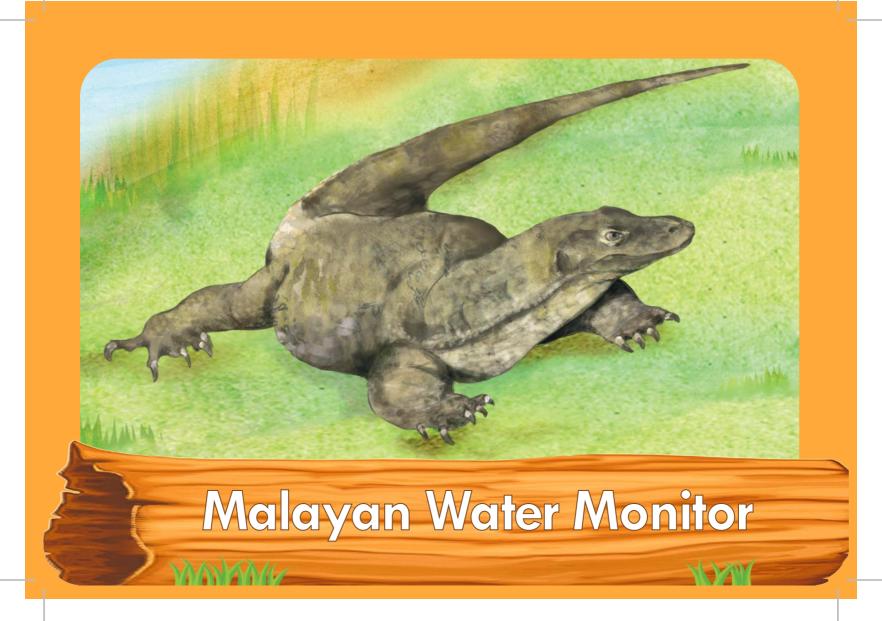
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Group: Reptiles

Size:

Head-tail length: 3 m

Habitat:

Forests, mangroves, gardens, parks

Where to find it:

Central Catchment Nature Reserve, Pasir Ris Town Park, Pulau Ubin, Singapore Botanic Gardens, Sungei Buloh Wetland Reserve

Description:

Its body is greyish brown to black. It has thick, leathery skin with small nonoverlapping scales. Its tongue is slender and forked. Its snout is long and slender, with nostrils positioned close to the tip.

Ecological roles:

It mainly inhabits terrestrial areas near water and is a good swimmer and diver. It can also climb trees. It feeds on small animals and fish.

₩ Fun Fact!

The Malayan Water Monito is often mistakenly identified as an Iguana or Komodo Dragon.

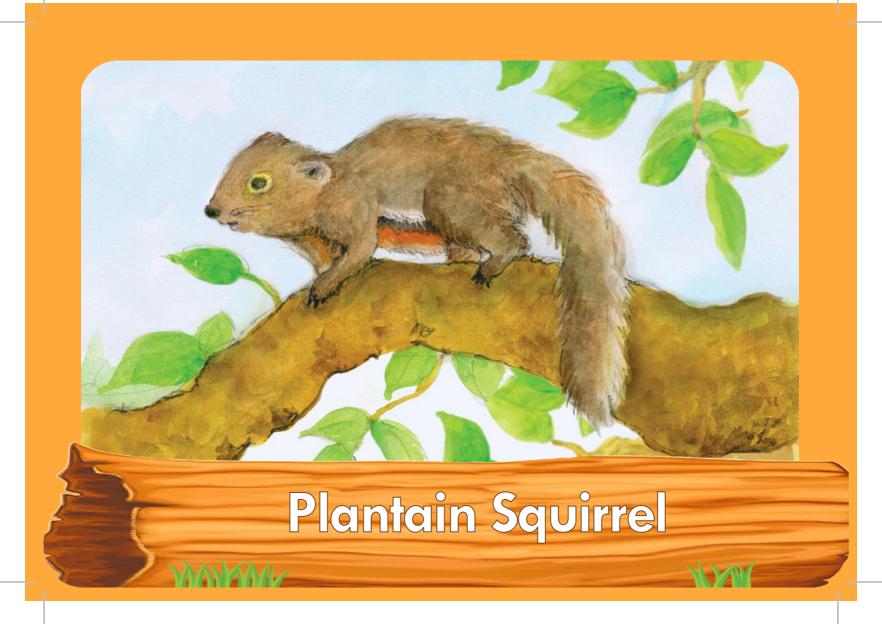














Size:

Head-body length: 22 cm Tail length: 21 cm

Habitat:

Forests, gardens, parks

Where to find it:

Bukit Timah Nature Reserve, Central Catchment Nature Reserve, Singapore Botanic Gardens, Sungei Buloh Wetland Reserve, most gardens and parks

Description:

The upper parts of its body and tail are olive brown. Its belly and the insides of its limbs are reddish brown. There are black and white stripes on the sides of its body. It has a long and bushy tail, and eyes that are ringed in white.

Ecological roles:

It feeds on both plants and animals, and is preyed upon by snakes and birds.

♥ Fun Facts!

The Plantain Squirrel has some similarities with birds

– its chirping calls are often mistaken for bird calls and it even creates a spherical nest of twigs and leaves, which is known as a drey.





Size:

Head-body length: 65 cm Tail length: 45 cm

Habitat:

Mangroves, mudflats

Where to find it:

Pulau Ubin, Sungei Buloh Wetland Reserve, some gardens and parks

Description:

The upper parts of its body are brown and buffy, while its throat and the sides of its neck are cream coloured. Its fur is short. smooth and sleek. It has a long and sleek body with short limbs and a flattened tail. Its fingers and feet are fully webbed, with claws that are prominent.

Ecological roles:

It is strictly carnivorous, feeding mainly on fish but also eating crustaceans and other small animals.



Smooth-coated Otters are tamed and trained to assist fishermen.



















Size:

Head-body length: 65 cm Tail length: 56 cm

Habitat:

Forests

Where to find it:

Bukit Batok Nature Park, **Bukit Timah Nature** Reserve, Central Catchment Nature Reserve, Pulau Ubin

Description:

Its body and tail are covered with brown scales. It has long claws on its feet. It wraps its long, tapered tail around its body when it is disturbed, to protect its non-scaly underparts.

Ecological roles:

Using its sticky tongue, it feeds on ants and termites from nests excavated using its powerful claws. It has few natural predators in Singapore.



Fun Facts!

hunted for its skin, scales and infant rides on its mother's back at the base of its tail.



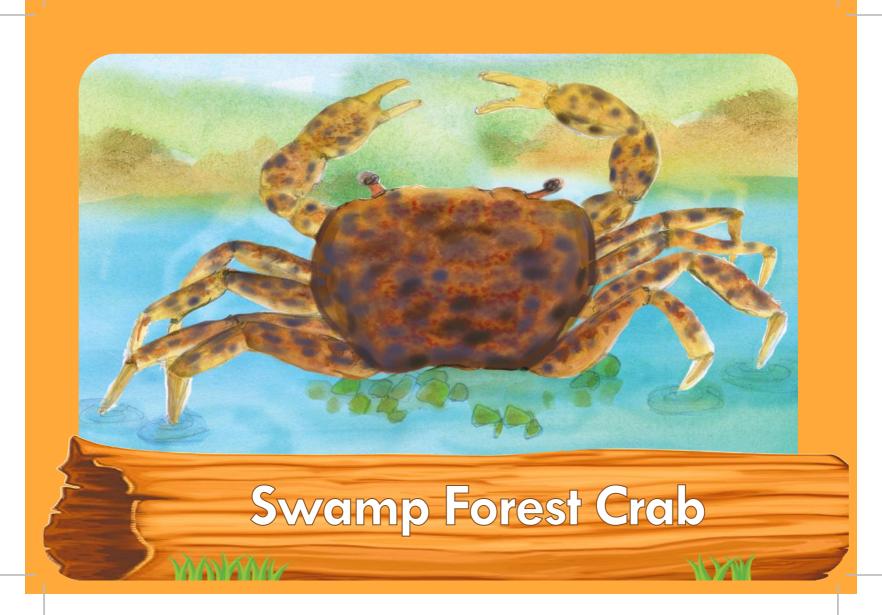














Group: Crustaceans

Size:

Carapace length: 4 cm

Habitat:

Freshwater swamps

Where to find it:

Central Catchment Nature Reserve **Description:**

Its hard upper shell is known as a carapace. Its two front legs are called pincers, and the rest are known as walking legs. Its shell is covered in a network of orange and reddish brown, which provides good camouflage in the swamp. When it is young, the shell is spotted. As the crab grows, the spots gradually change into distinctive reticulated patterns, hence its scientific name.

Ecological roles:

It digs burrows in the sides of muddy banks. It feeds on plant matter predominantly, but also scavenges for animals when the opportunity arises.



The Swamp Forest Crab is only found in Singapore and nowhere else in the world.

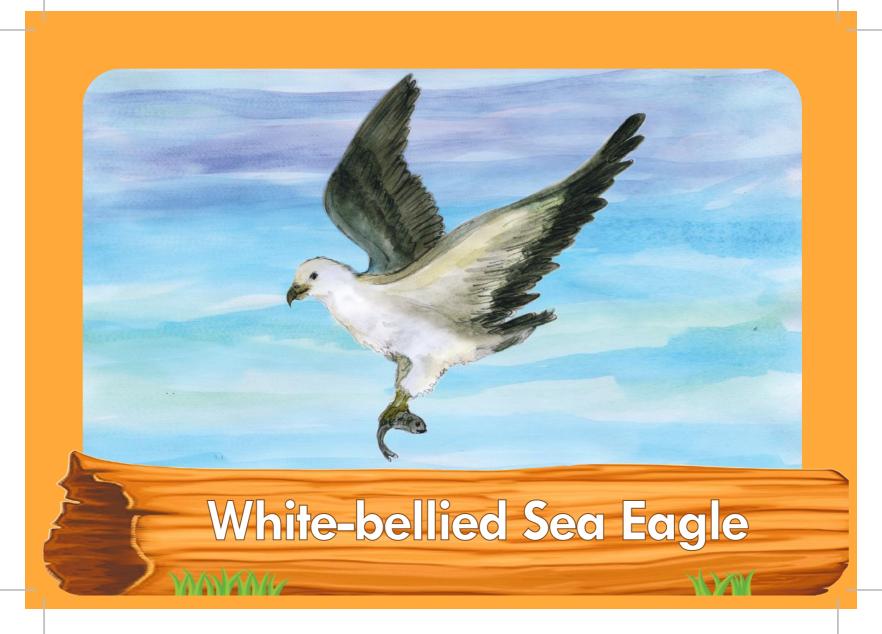














Group: Birds

Size:

Head-tail length: 70 cm

Habitat:

Freshwater and coastal habitats

Where to find it:

Bukit Timah Nature Reserve, Central Catchment Nature Reserve, Pulau Ubin, all coastal parks **Description:**

Its head, underparts and wedge-shaped tail are white with greyish upperparts.

Ecological roles:

It feeds primarily on fish but is also known to eat sea snakes.

Fun Fact!

The White-bellied Sea Eagle is a good hunter. When it has spotted a fish, it will fly low over water, then prepare to strike by holding its feet far forward. It strikes in a quick backwards motion, while flapping its wings at the same time to lift itself up in the air immediately after it has grasped the fish in its talons.





Group: Fish

Size:

Head-tail length: 13 cm

Habitat:

Mangroves, mudflats, sandflats

Where to find it:

Pasir Ris Park, Pulau Ubin, Sungei Buloh Wetland Reserve

Description:

Its cheeks and body are grey with scattered yellowish spots. Its upper body has brownish spots. Its first dorsal fin is brownish red with a broad black band and narrow white margin. Its second dorsal fin has a black stripe in the middle.

Ecological roles:

It feeds on crabs and insects, and digs burrows in mud.



The Yellow-spotted
Mudskipper is said to be
nocturnal, leaving its burrow
at night to forage and
returning to the burrow
in the morning.