

# FEATURED BUTTERFLY SPECIES



**Common Birdwing**  
**Scientific Name:** *Troides helena cerberus*  
**Family:** Papilionidae  
**Host plant:** Dutchman's Pipe (*Aristolochia tagala*)  
**Wingspan:** 170-180mm (one of the largest butterflies in Singapore)  
 It is an iconic species, listed as vulnerable in Singapore Red Data book. Conservation of this species is one of the inspirations behind the trail. The butterfly is essentially a forest species, but will be attracted to the trail where its host plant has been planted. It is capable of flying long distances and at great height, almost bird-like.



**Painted Jezebel**  
**Scientific Name:** *Delias hyparete metarete*  
**Family:** Pieridae  
**Host plant:** *Dendrophthoe pentandra* (Mistletoe, a semi-parasite on trees)  
**Wingspan:** 70-80mm  
 This insect is a lofty flyer usually seen at canopy level. Its flight pattern has been described as nonchalant and graceful, with a slow flapping of the wings. The reason for its 'devil may care' attitude displaying red and yellow on its underside hindwings is its toxicity accumulated during its earlier stages as a caterpillar. The dominant colour on the forewings is still white. It is a frequent visitor to open woods and gardens.



**Orange Emigrant**  
**Scientific Name:** *Catopsilla scylla comelia*  
**Family:** Pieridae  
**Host plant:** Bushy Cassia (*Cassia biflora*)  
**Wingspan:** 60-70mm  
 The Orange Emigrant, together with its close cousin, the Lemon Emigrant is often encountered in parks and urban areas. This chrome-yellow colour butterfly is slightly smaller than the Lemon Emigrant but has similar characteristics—medium sized, robust, flies swiftly 2-3m above ground with energetic and rapid 'jumping' flight maneuvers.



**Chocolate Pansy**  
**Scientific Name:** *Junonia hedonia ida*  
**Family:** Nymphalidae  
**Host plant:** Red Flame Ivy (*Hemigraphis alternata*), Creeping Ruellia (*Ruellia repens*)  
**Wingspan:** 40-50mm  
 It is one of the most common butterflies in Singapore. It loves bright sunny grassy spots and can be seen flying in the usual gliding fashion and basking in the Sun with its wings opened flat making it easy to photograph.



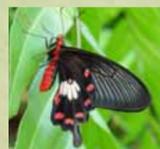
**Striped Albatross**  
**Scientific name:** *Appias libythea olferna*  
**Family:** Pieridae  
**Host plant:** Purple Cleome (*Cleome rutidosperma*)  
**Wingspan:** 50-55mm  
 This species was rarely seen in Singapore in the 1960s and 1970s but is now a common urban butterfly because its host plant is an early colonizing weed. It is a fast and erratic flyer. It also demonstrates sexual dimorphism which means the male (picture on the right) and the female are different in appearance. The male is white above with a black border and the undersides have dark dusted veins. Females are heavily dusted with greyish yellow on both the upper and undersides.



**Common Palmfly**  
**Scientific Name:** *Elymnias hypermnestra agina*  
**Family:** Nymphalidae  
**Host plant:** Yellow Cane Palm (*Dypsis lutescens*), Coconut (*Cocos nucifera*)  
**Wingspan:** 60-70mm  
 It is a common insect in the forest as well as urban areas particularly abundant where palms thrive. Its flight can be best described as a slow flapping and gliding motion. The Palmfly has a propensity to rest on leaves after each short flight.



**Plain Nawab**  
**Scientific Name:** *Polyura hebe plautus*  
**Family:** Nymphalidae  
**Host plant:** Red Saga (*Adenantha pavonina*)  
**Wingspan:** 70-80mm  
 The butterfly has a strong and erratic flight. It has a habit of perching on a lofty leaf or branch, surveying the grounds below. It flies rapidly in the vicinity, often coming back again and again to the same preferred perch to rest. The caterpillar has a four-horned head that gives it an almost 'dragon-like' appearance.



**Common Rose**  
**Scientific Name:** *Pachliopta aristolochiae asteris*  
**Family:** Papilionidae (has a "Swallowtail")  
**Host plant:** Dutchman's Pipe (*Aristolochia tagala*)  
**Wingspan:** 90-110mm  
 This butterfly shares the same host plant as Common Birdwing. Its flight is slow but straight and long-sustained up to heights of 3-4m above the ground when searching for flowers or host plant. They are poisonous because of the aristolochic acids consumed by the caterpillars when feeding on the host plant.



**Autumn Leaf**  
**Scientific Name:** *Doleschallia bisaltide bisaltide*  
**Family:** Nymphalidae  
**Host plant:** *Pseuderanthemum reticulatum*, Caricature Plant (*Graptophyllum pictum*)  
**Wingspan:** 60-70mm  
 This species was discovered to exist in Singapore at the Bukit Timah Cycling trail in 1999. The upperside is spectacular orange but the underside looks like a dead or autumn leaf. It is a fast flyer and is commonly seen as its favourite host plant is now a popular urban landscape plant.



**Tawny Coster**  
**Scientific Name:** *Acraea violae*  
**Family:** Nymphalidae  
**Host plant:** Stinking Passion Flower (*Passiflora foetida*), Passion Fruit (*Passiflora laurifolia*)  
**Wingspan:** 60-70mm  
 More common in India and Sri Lanka, it has been recorded in Singapore only since mid 2000s. Literature shows that this long voyage took more than 3 decades to complete. They have a leathery body, a sluggish flight and are tenacious of life. One of the host plants is an aggressive vine growing in wasteland and cleared open areas.



**Leopard**  
**Scientific Name:** *Phalanta phalantha phalantha*  
**Family:** Nymphalidae  
**Host plant:** Weeping Willow (*Salix babylonica*), Rukam Masam (*Flacourtia inermis*)  
**Wingspan:** 50-60mm  
 A common urban butterfly found wherever its favourite host plant Weeping Willow tree is planted. The Leopard has a rather restless flight, always on the move as it flutters from flower to flower. The Leopard's wings are bright cheery orange coloured and ornamented with black spots and streaks.



**Common Mormon**  
 (Picture on right is a male Common Mormon)  
**Scientific Name:** *Papilio polytes romulus*  
**Family:** Papilionidae (has a "Swallowtail")  
**Host plant:** Indian Curry Tree (*Murraya koenigii*), Lime (*Citrus spp*)  
**Wingspan:** 90-100mm  
 This butterfly is common at forest edge and nature parks. This species is dimorphic—one of the forms resembles the poisonous Common Rose butterfly for protection from its predators.



**Blue Glassy Tiger**  
**Scientific Name:** *Ideopsis vulgaris macrinda*  
**Family:** Nymphalidae  
**Host plant:** *Tylophora tenuis* and *Hoya spp.*  
**Wingspan:** 70-80mm  
 It is common in Singapore, particularly in the coastal mangrove areas. The butterfly is also attracted to the partially dried plants of *Heliotropium indicum*. Its host plant which the caterpillar feeds on has a milky sap. This makes the butterfly distasteful to birds.



**Blue Pansy**  
**Scientific Name:** *Junonia orithya wallacei*  
**Family:** Nymphalidae  
**Host plant:** Common Asystasia (*Asystasia gangetica*)  
**Wingspan:** 40-50mm  
 It is a sun-loving species and can be found on grassy patches in open areas where its host plant grows naturally. The butterfly flies quite rapidly and occasionally engages in a spiral dance going up some height from the ground. The male (picture on the right) is the prettier of the two sexes, where the hindwing is a bright blue with orange-red spots. The female is browner on the upperside and contains less blue on the hindwing.



**Lime Butterfly**  
**Scientific Name:** *Papilio demoleus malayanus*  
**Family:** Papilionidae  
**Host plant:** *Citrus spp.*  
**Wingspan:** 80-90mm  
 It is common in gardens wherever its host plant is cultivated. A strong flyer with a rapid erratic flight from flower to flower in search of nectar. While feeding it flaps its forewings rapidly while the hindwings are almost stationary as if to balance when perched on a flower.



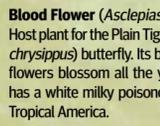
**Common Grass Yellow**  
**Scientific Name:** *Eureca hecabe contubernalis*  
**Family:** Pieridae  
**Host plant:** Peacock Flower (*Caesalpaenia pulcherrima*), 7-Golden Candlesticks (*Cassia alata*)  
**Wingspan:** 35-45mm  
 It is one of the most abundant butterflies in Singapore but when in flight looks similar to its cousins like Three Spot Grass Yellow and No Brand Grass Yellow.



## BUTTERFLY PLANTS



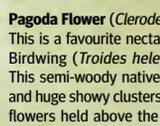
**Dutchman's Pipe** (*Aristolochia tagala*)  
 Host plant for Common Birdwing (*Troides helena cerberus*) & Common Rose (*Pachliopta aristolochiae asteris*) butterflies. This native sun-loving climber is mainly found in our forests. Flowers form a slender tube of about 7 cm long hence the common name. Fruits are like a bulb which on maturity split open resembling an inverted parachute. The plant has many medicinal uses, including removing obstructions after birth.



**Blood Flower** (*Asclepias curassavica*)  
 Host plant for the Plain Tiger (*Danaus chrysippus chrysippus*) butterfly. Its brilliant orange and red flowers blossom all the year round. The plant has a white milky poisonous sap. It is native to Tropical America.



**Crown Flower** (*Calotropis gigantea*)  
 Host plant for the Plain Tiger (*Danaus chrysippus chrysippus*) butterfly. This native plant also has a poisonous white milky sap. Leaves have a white leathery look. Insects pollinate the plant and wind disperses the seeds.



**Pagoda Flower** (*Clerodendron paniculatum*)  
 This is a favourite nectar plant for the Common Birdwing (*Troides helena cerberus*) butterfly. This semi-woody native shrub has large leaves and huge showy clusters of orange-red or scarlet flowers held above the foliage like a Japanese Pagoda – hence the name Pagoda Flower.



**Common Lantana** (*Lantana camara*)  
 Host plant for the Pygmy Grass Blue (*Zizula hylax pygmaea*) butterfly. It is also a good nectar source for many butterflies. This plant is native to Tropical America but it has become naturalized in Singapore since it is used ornamentally in many gardens and parks.



**Singapore Rhododendron** (*Melastoma malabathricum*)  
 Native to Singapore, this plant used to be a common wayside plant. It attracts many birds that like it's fruits, and plays host to butterflies like the Common Sailor (*Neptis hylas papaja*) and Horsfield's Baron (*Tanaecia iapis puseda*). The purple flowers last only one day. The fruit is edible but stains the tongue black.

The Nature Society (Singapore), or NSS, is a totally non-government, non-profit organization, registered as a Society, a Charity and an Institution of Public Character. The Society depends financially on subscriptions and donations from its members as well as donations from companies, institutions, foundations and private individuals. It is dedicated to the appreciation, conservation, study and enjoyment of the natural heritage in Singapore, Malaysia and the surrounding region. It holds regular activities for members such as nature walks, slide shows, workshops, short courses and overseas eco-trips. Members conduct censuses and surveys of flora and fauna in Singapore and attend regional and international workshops and conferences. Since the Society's proposal in the 1980s to conserve the Sungai Buloh area, followed by its Master Plan for the Conservation of Nature in Singapore (1990), it has outlined and advocated numerous conservation projects and provided feedback to government and other bodies on the effects of proposed developments in or adjacent to nature reserves and nature areas. Most recently it has engaged in nature restoration activities. The Society is also commissioned to do surveys by corporate groups in Singapore in areas under their jurisdiction.

The Society is active in book publishing. Recent titles are *The Singapore Red Data Book* (2008) a collaborative work between NSS, National Parks Board and National University of Singapore, *A Field Guide to the Butterflies of Singapore* (2008), *Wild Animals of Singapore* (2008), *The Avifauna of Singapore* (2009), *The State of Singapore's Birds* (2009) and *A Field Guide to the Birds of Singapore* (2010).

### Active Projects:

- Horseshoe Crab Rescue & Research
- Kranji Reservoir Adoption (Kranji Marsh)
- NSS Green Hub @ Ubin

Your contribution will definitely help ensure that our work can continue to benefit biodiversity in the future.

Contact us +65 6741 2036 or log on to [www.nss.org.sg](http://www.nss.org.sg)



**Plain Tiger** (*Danaus chrysippus chrysippus*) Butterfly Life Cycle

**Host plants:** Crown Flower (*Calotropis gigantea*), Blood Flower (*Asclepias curassavica*)

**Egg (1)**  
 The bullet head shaped egg is about 1.3mm in length. It takes 2.5 to 3 days to hatch.

**Caterpillar (2 and 3)**  
 It eats the egg shell from which it hatched as its first meal. Then it starts feeding on the leaves of the host plant doubling every few days from 2mm reaching to about 40mm. On the last day as caterpillar, it ceases feeding and becomes shortened while it wanders in search of the pupation site. There it spins a silk pad from which it hangs vertically to take on the pre-pupatory pose.

This innovative urban biodiversity project of the Nature Society (Singapore) or NSS has been spearheaded by members of the Society's Butterfly Interest Group, namely Gan Cheong Wee and Simon Chan, strongly supported by members of the Plant Group, Angie Ng and Shawn Lum, with volunteers extraordinaire Margaret Clarkson and Christy Davis. Our Patron, Prof. Tommy Koh, and immediate Past President, Dr. Geh Min, have given it unwavering support from its inception, whilst, as with all NSS projects, our Secretariat, Executive Committee, Council and countless members have all played important roles.

### Acknowledgements:

The Butterfly Trail at Orchard could not have taken off without the extremely generous support of our strategic partners, sponsors, supporters and volunteers named below. As an ongoing project new strategic partners, sponsors and volunteers are both welcome and necessary.

**Strategic Partners**

NATIONAL PARKS, Singapore TOURISM BOARD, ORCHARD ROAD A GREAT STREET

**Partners:**

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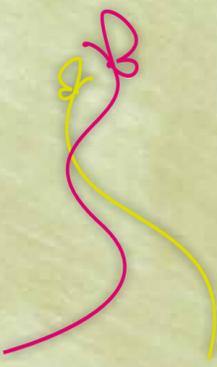
NIE iOne, Raffles Girls Secondary School, Queensway Secondary School

## ABOUT US

# THE BUTTERFLY TRAIL MAP



**Common Grass Yellow**  
One of the most commonly encountered butterflies in Singapore.



## DID YOU KNOW

Currently there are 290 species of butterflies in Singapore. The trail will attract over 50 species to the Orchard area. Compare this to birds. Singapore has 370 species of birds of which many are migrants.



**Common Rose**

## Discovering the Butterflies of Singapore

When Sir Stamford Raffles first set foot in Singapore, there existed well over 380 species. We now have 290 species, a handful of them new arrivals from neighbouring countries.

Conceptualized by Nature Society (Singapore), the Butterfly Trail @ Orchard features some 50 of the more common butterfly species that are found here. This 4 km trail meanders all the way through the Orchard Corridor between the Singapore Botanic Gardens and the Tanglin area and the Singapore Management University and Fort Canning Park. The trail has 5 sections as marked on the trail map.

**“No other animal is more typical of a healthy environment, nor more susceptible to change, than a butterfly”** (Pg 105, *The Natural History of Butterflies* by Dr. John Feltwell, 1986).

## Embassy Trail (Royal Thai Embassy)

This section starts past the Nassim Road Green hotspot and has 2 alternative routes.

The first route continues along Orchard Road. Walk past the Royal Thai Embassy and International Building to a one-of-a-kind rooftop garden at the 8th floor of Shaw House. This mature garden with many tall trees will be a butterfly garden soon. Cross under the Orchard and Scotts Road junction to ION Orchard.

The second route runs along the Cuscaden Road. This stretch is quieter; a lovely green stroll at a slower pace. Admire the mini experimental garden behind the Four Seasons Hotel. Loop back along Orchard Boulevard to Paterson Road, turn left at Wheelock Place and back down to Orchard Road. Then cross under to ION Orchard and join the first route.

## Orchard Central Trail

Turn left at Killiney Road and walk down to Orchard Central Building where you'll find the highest Butterfly Garden on the 11th and 12th levels of the building, along with stunning city views.

After enjoying the rooftop greenery and cooling breezes, head back to ground level, cross Killiney Road, and walk towards Penang Road Open space, located next to the Killiney Road Post Office. Once a patch of green land, this hotspot has been planted up with 2,600 butterfly host and nectar plants in October 2010, sponsored by Far East Organization.

Continue your stroll along Penang Road to reach another beautifully landscaped garden at Istana Park, a haven for butterflies and humans alike! 2,900 butterfly host and nectar plants were planted here in November 2010, sponsored by Ricoh Asia Pacific.

Butterfly species you can spot here—Common Palmfly, Plain Tiger, Orange Emigrant, Lime Butterfly and Striped Albatross and many small ones like Pygmy Grass Blue and Pale Grass Blue.

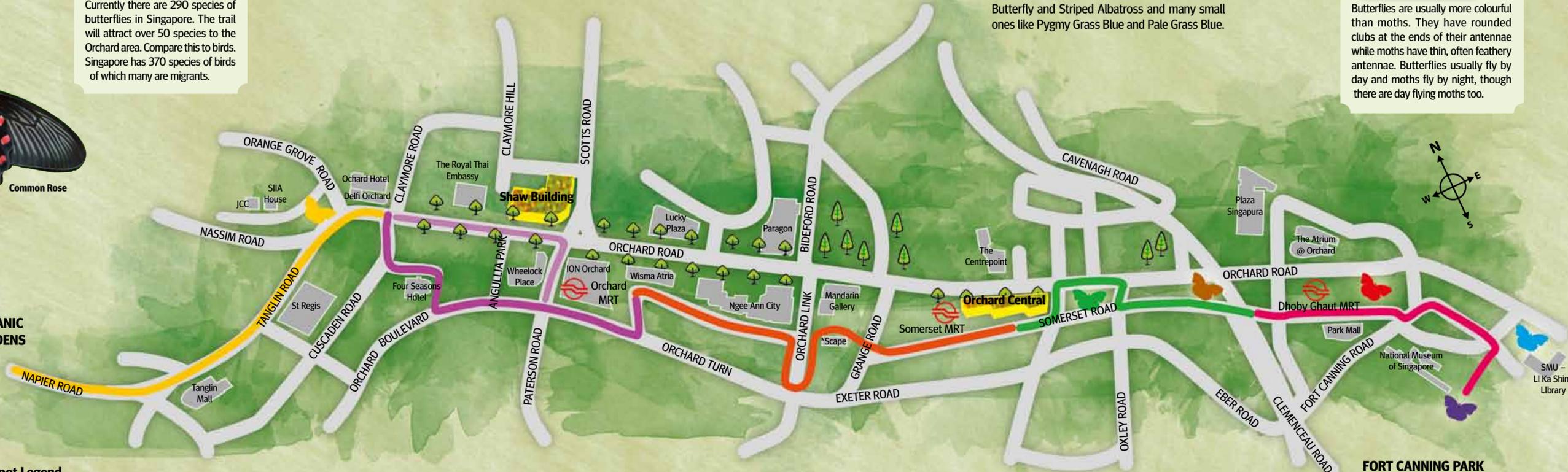


**Common Mormon**

## DID YOU KNOW

Butterflies are usually more colourful than moths. They have rounded clubs at the ends of their antennae while moths have thin, often feathery antennae. Butterflies usually fly by day and moths fly by night, though there are day flying moths too.

## BOTANIC GARDENS



## Hotspot Legend

- Nassim Road Green
- Dhoby Ghaut Green
- Penang Road Open Space
- Stamford Green
- Istana Park
- SMU

## DID YOU KNOW

Caterpillars are picky eaters that will only feed on one or two plant species. If they find themselves on the wrong plants, they will not eat at all, and will die before they can transform into adults.

## Tanglin Trail

The Singapore Botanic Gardens is where you can spot a wide range of butterflies. Try to spot the patch of Dutchman's Pipe (*Aristolochia tagala*) climbers near the Evolution Garden! This plant is the host for the Common Birdwing butterfly. From the Botanic Gardens venture along Napier and Tanglin Roads and you will arrive at the Butterfly Garden at Nassim Green off Tanglin Road. Over 900 shrubs and trees were planted at this garden in June 2010 to kick off the first phase of the Butterfly Trail.

Butterfly species you can find here are— Blue Glassy Tiger, Common Palmfly, Common Rose, Lemon Emigrant and Leopard.

You may be lucky and encounter the Common Birdwing flying high up in the tree canopy. Its host plant has been carefully planted around the Nassim Road Green hotspot.

## DID YOU KNOW

The best time to observe butterflies is when it is bright and sunny! On a typical day, this means from mid-morning to mid-afternoon (9:30am – 3:00pm). Butterflies need the warmth of the Sun to regulate their body temperatures.

## Orchard Trail

Orchard Road got its name from the many fruit orchards, nutmeg and pepper plantations in the area during the 1830s - 1840s. Its residents were plantation owners, some of whom like Scott, Oxley, and Cuppage, are familiar to us as street names today. Today, the area has become an upbeat lifestyle hub.

Take a small detour to enjoy the green haven behind Ngee Ann City. This may be converted into a butterfly garden in the future. Cross Orchard Link, wander through \*Scape Youth Park, and along Somerset Road.

Another future butterfly trail hotspot will be the stunning green commons next to the Skate Park and behind Orchard Central mall.

Butterfly species you can spot in the Orchard Trail include the Autumn Leaf, Painted Jezebel, Lesser Grass Blue and Tailed Jay.

## Fort Canning Trail

You will come face to face with a profusion of leafy green in this section. Walk past Dhoby Ghaut Green into a charming garden with walkways created by the National Parks Board. Cross the road at the old Orchard Road Presbyterian Church, past the little green space opposite Cathay Cineplex. Continue along Stamford Road to Singapore Management University (SMU). Enjoy a leisurely walk through SMU's Campus Green, and circle back to Stamford Road at the crosswalk to the National Museum of Singapore. You have almost arrived at the most active hotspot of the trail—The Stamford Green. Walk towards the escalator, which climbs a hill to Fort Canning Park. Pause and admire the butterfly-attracting greenery on your left before riding the escalator up to Stamford Green.

Stamford Green was planted with over 2,100 butterfly host and nectar plants in Nov 2009 by Ricoh Asia Pacific and National Parks Board. Today this is an established garden with an abundance of butterflies like Leopard, Blue Pansy, Peacock Pansy, Plain Tiger, Striped Albatross and Tawny Coster.

## DID YOU KNOW

Butterflies live typically 2-3 months. 2-5 days for the egg to hatch, 2-3 weeks as a caterpillar, 2 weeks in pupa stage and about 3 weeks as an adult butterfly.

**Common Birdwing**  
A rare species that we attempting to attract along the trail.



**Chocolate Pansy**

