



PARADISE PARK 'N' RIDE

COMMUNITY WILDLIFE PROJECT

BUTTERFLY GARDENS

About the project

The Community Wildlife Project is a Department of Planning, Transport and Infrastructure (DPTI) initiative that seeks to involve local communities in helping to improve wildlife habitat in changing urban environments. The Paradise Park 'n' Ride Community Wildlife Project has been developed by the Public Transport Projects Alliance (PTP Alliance), with a focus on butterflies and the restoration of butterfly-attracting habitat.

Butterflies are important insects that assist in the pollination of flowers, fruit and vegetables. Butterflies are also indicative of healthy ecosystems, with many plants that attract butterflies, also attracting bees and birds. Local food systems also rely on butterflies to feed bats, birds and reptiles (Department of Environment and Water, 2018, <https://www.environment.sa.gov.au/goodliving/posts/2018/12/benefits-of-butterflies>).

The project aims to contribute to butterfly habitat conservation and re-vegetation through:

- Community Wildlife Packs, sharing information and resources about attracting butterflies to local gardens
- Offering opportunities for local schools to be involved, via butterfly fauna and flora workshops run by experts, and planting butterfly gardens
- Planting butterfly and caterpillar friendly plant species within the Paradise Park 'n' Ride Project site.

How you can be involved

- Read this pack and research other resources and share information with friends and family
- Plant butterfly and caterpillar friendly plant species in your garden to help create butterfly friendly neighbourhoods
- Observe and record butterflies seen in your local area via downloading the citizen science app, Butterflies Australia, to contribute to a national information and education database (<https://www.butterflies.org.au/external/home>).

For further information please read the attached Community Wildlife Project stakeholder pack and visit the project website to download a copy of the Vegetation and Community Wildlife Project Fact Sheet.

If you have any question or would like to speak to a member of the project team, please contact the project team on the details provided below.

Yours sincerely

Paradise Park 'n' Ride Project Team



1300 705 992



paradiseparknride@ptpa.com.au



ptpa.com.au/paradiseparknride



Government of South Australia

Department of Planning,
Transport and Infrastructure

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Life-cycle of a Butterfly



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The life cycle of a butterfly is truly amazing. Butterflies have four life stages, the egg, the larva (caterpillar), the pupa (chrysalis), and the adult butterfly. Each of the four stages are very unique to individual species of butterflies.

The Butterfly Egg

It all starts when a female butterfly lays her eggs, usually on leaves or stems of plants. Inside these tiny eggs, caterpillars grow. Depending on the species, the eggs can vary in shape and texture – they can be round, oval or cylindrical, smooth, bumpy or wrinkled. The time it takes for the eggs to hatch can also vary – in some species, they will hatch within a few weeks and in others they will only hatch once the weather is warm enough.



The Butterfly Caterpillar

A very tiny caterpillar hatches from the egg. The first meal for most caterpillars is the eggshell. The caterpillar is designed to be an “eating-machine” and before it begins to pupate it will shed its skin up to five times and increase its body mass thousands of times. As the caterpillar grows, its skin becomes too tight and splits open, revealing a new, larger skin underneath. A fully grown caterpillar can be over 100 times larger than when it emerged from its egg.



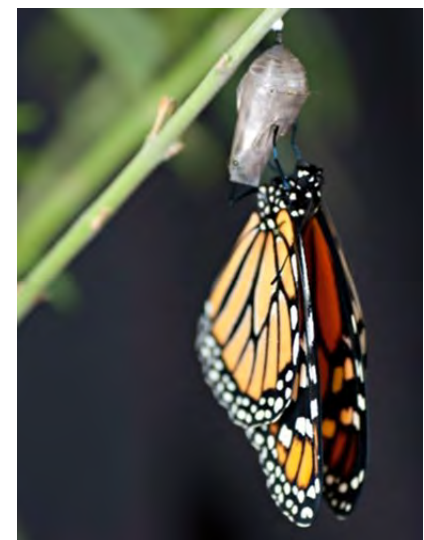
The Butterfly Chrysalis (Pupa)

Once fully grown, the caterpillar forms itself into a “pupa” (or chrysalis) – a kind of vessel in which the caterpillar changes into a butterfly. The “pupa” stage may last a few weeks to several months depending on the species. During this time, a hardened case forms around the pupa to protect it from predators and extreme weather conditions. Inside, the tissue, limbs and organs transform.



The Butterfly

Once the butterfly is ready to emerge, the case around the pupa splits open. But it's not time for take off just yet, as the wings are at first wet, soft and wrinkled against its body. The butterfly waits for its wings to dry, and pumps a liquid called hemolymph into them so that they become big and strong. Once fit for flight, this brilliant bug then takes to the air in search for flowers to feed on and for other butterflies to mate with. And that's the cycle complete – and ready to start all over again!



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PLANTS THAT ATTRACT BUTTERFLIES

The following images depict five types of butterfly-attracting plants that grow in Metropolitan Adelaide, and overleaf the butterflies they can attract.

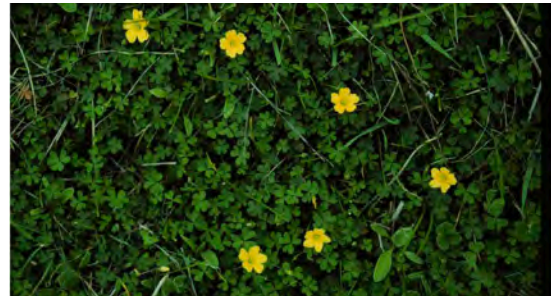
Common name - Native Sorrel

Scientific name - *Oxalis perennans*

Flowers - all year

Attracts - Chequered Copper

Visit - <http://plantselector.botanicgardens.sa.gov.au/Plants/Details/69>



Common name - Billy Button

Scientific name - *Craspedia globosa*

Food type - Caterpillar food and butterfly nectar

Flowers - Summer & spring

Attracts - Australian Painted Lady

Visit - <http://plantselector.botanicgardens.sa.gov.au/Plants/Details/84>



Common name - Tall Scurf-pea

Scientific name - *Cullen Australasicum*

Food type - Caterpillar food and butterfly nectar

Flowers - Spring

Attracts - Common Grass Blue, Long Tailed Pea Blue & Chequered Swallowtail

Visit - <http://plantselector.botanicgardens.sa.gov.au/Plants/Details/804>



Common name - Berry Saltbush

Scientific name - *Atriplex semibaccata*

Food type - Caterpillar food and butterfly nectar

Flowers - Summer & Spring

Attracts - Saltbush Blue

Visit - <http://plantselector.botanicgardens.sa.gov.au/Plants/Details/2565>



Common name - Weeping Rice Grass

Scientific name - *Microlaena stipoides* var. *stipoides*

Food type - Caterpillar food and butterfly nectar

Flowers - Summer & Spring

Attracts - Common Brown & White-banded Grass-dart

Visit - <http://plantselector.botanicgardens.sa.gov.au/Plants/Details/2565>



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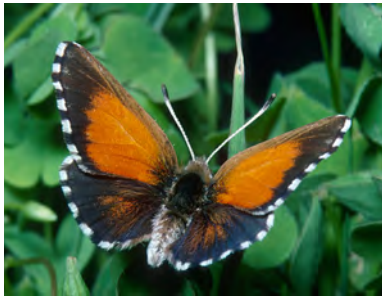
BUTTERFLY GARDENS



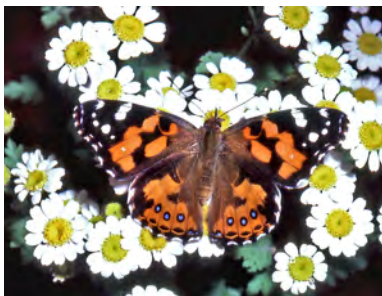
BUTTERFLIES

The images below show the types of butterflies and their caterpillars that you can attract to your local area with the correct vegetation.

Chequered Copper - *Lucia limbaria*



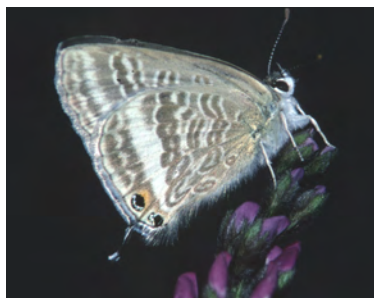
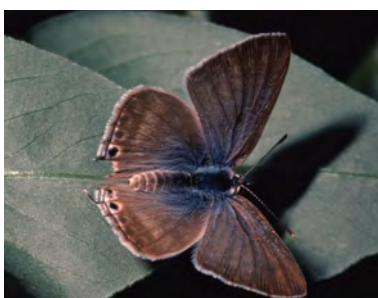
Australian painted lady - *Vanessa kershawi*



Common Grass-blue - *Zizina otis labradas*



Long-tailed Pea-blue - *Lampides boeticus*



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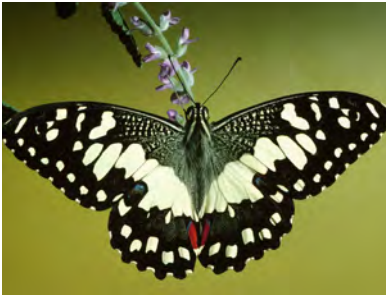
BUTTERFLY GARDENS



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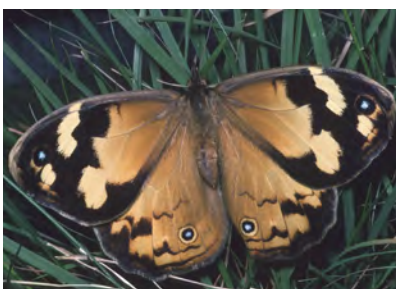
Chequered Swallow-tail - *Papilio demoleus sthenelus*



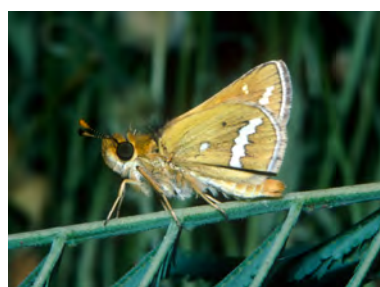
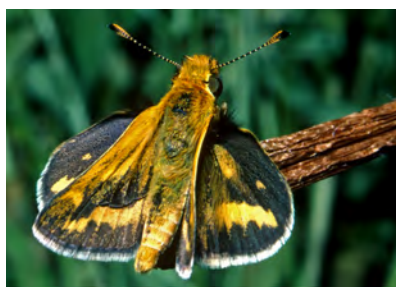
Saltbush Blue - *Theclinesthes serpentata serpentata*



Common Brown - *Heteronympha merope merope* (Female)



White-banded Grass-dart - *Taractrocera papyria papyria*



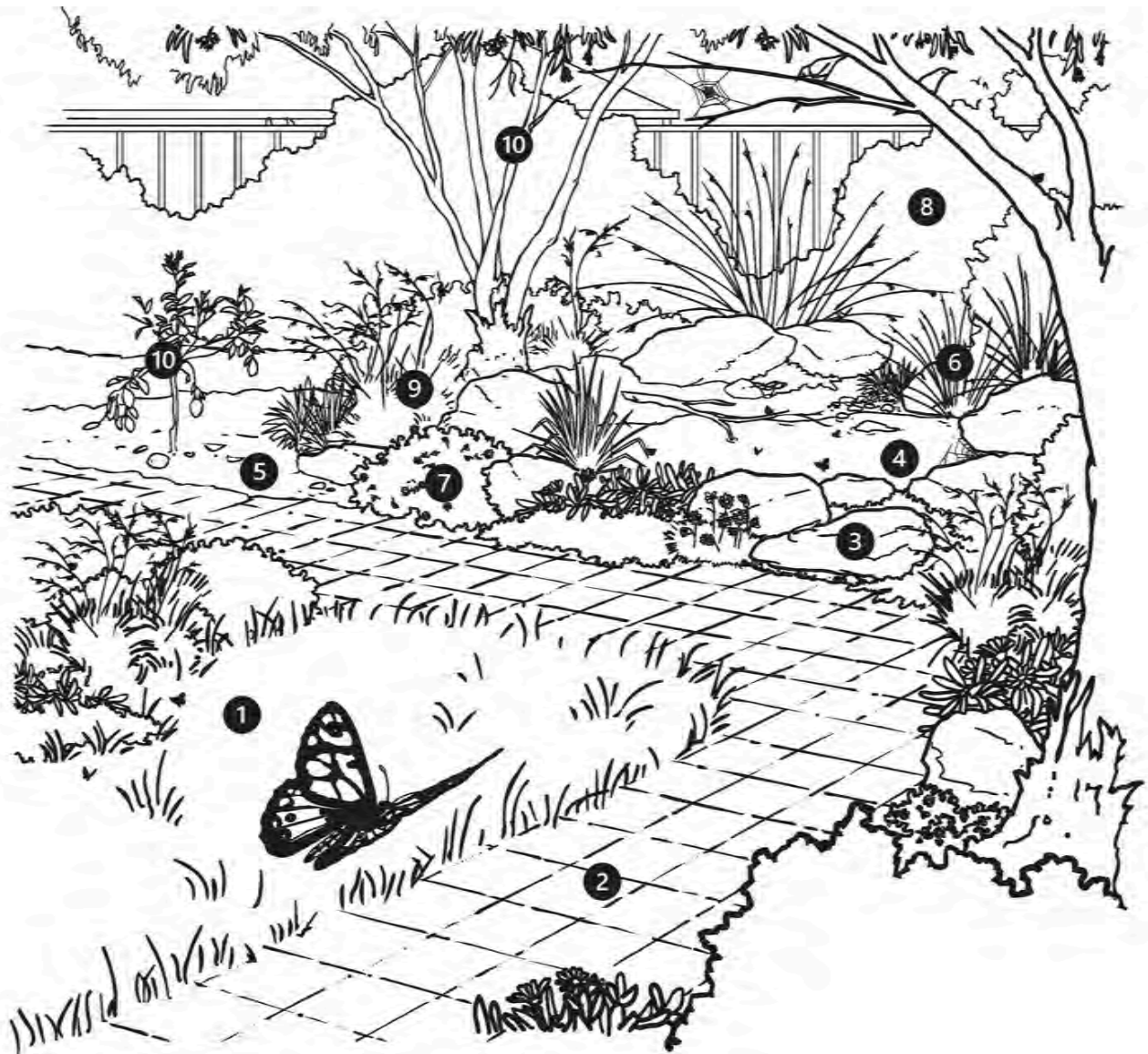
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BUTTERFLY GARDEN



PLANTING A BUTTERFLY GARDEN

A butterfly garden attracts and caters for butterflies and their caterpillars. The gardener may need to consider location, aspect, climate, rainfall, shade, sun and soil types. The guiding principles of a successful butterfly garden are outlined below:



A well designed butterfly garden will complement the patrolling, feeding, protection, resting and mating behaviors of butterflies, and result in a natural, sustainable, low maintenance garden.

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BUTTERFLY GARDEN



STEPS TO BUILD YOUR BUTTERFLY GARDEN

1. **Grassy area** - ideal for breeding many of the skipper species of butterfly.
2. **Paved pathway** - provides opportunities for butterflies to bask in the sun, prior to flight.
3. **Rocks** - placed in both sunny and shaded areas provides opportunities for butterflies to bask in the sun, prior to flight.
4. **Pond or 'frog bog'** - a shallow area of damp mud or sand on the perimeter allows butterflies to drink and refuel.
5. **Bare un-mulched area** - provides butterflies the opportunity to bask in the sun, also essential nesting site for native bees.
6. **Sedges** - used by many butterfly species as caterpillar food plants.
7. **Ground layer plants** - provides both caterpillar food and butterfly nectar.
8. **Shrubs (various sizes)** - essential components of a well-structured garden. Helps to provide shelter from wind and sun for butterflies. Many provide caterpillar food or butterfly nectar.
9. **Grasses** - used by many caterpillar species as caterpillar food.
10. **Trees (including citrus)** - provide shade and shelter from wind for butterflies. Flowering varieties can provide butterfly nectar and citrus provides both caterpillar food and butterfly nectar.

*Resource - read the full article 'planting a butterfly garden' from the book (pg17):
Attracting Butterflies to your Garden: What to Grow and Conserve in the Adelaide Region, Hunt et al.
Available from: <https://butterflyconservationsa.net.au/shop/>*



If you feel you must use herbicide or pesticide in your garden, limit the area of exposure and the amount you use or research natural options.

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The Community Wildlife Project Team has compiled a list of further resources for you to follow up. This is a 'taster' list of some butterfly related links and information, but we encourage you to conduct your own research too - as there is a lot available!

RESOURCES

LOCAL (SA and AUS) BUTTERFLY ASSOCIATED ORGANISATIONS:

Bring Back the Butterflies - www.bbbutterfly.org/contact/

Butterfly Conservation SA - www.butterflyconservationsa.net.au

NRM - www.naturalresources.sa.gov.au/adelaidentloftyranges/home

Butterflies Australia, citizen science app - www.butterflies.org.au/external/home

Trees for Life - <https://treesforlife.org.au>

Botanic Gardens of South Australia - <https://www.botanicgardens.sa.gov.au/home>

South Australian Butterflies & Moths - <https://sabutterflies.org.au>

Adelaide Sustainability Centre - <https://www.adelaidesustainabilitycentre.org.au/butterfly-habitat-garden/>

PLANT AND SEED SUPPLIERS:

Seeds of South Australia - <https://spapps.environment.sa.gov.au/seedsofsa/>

Blackwood Seeds - <https://fleurieulink.com.au/product/blackwood-seeds/>

Provenance Indigenous Plants - <http://www.provenance.net.au/>

State Flora Nursery - <https://www.stateflora.sa.gov.au/home>

Coromandel Native Nursery - <http://www.natives.net.au/>

Trees For Life Betty Westwood Nursery - <https://treesforlife.org.au>

ATTRACTING BUTTERFLIES TO YOUR GARDEN

Backyards for Wildlife - www.backyards4wildlife.com.au

NRM - <https://plantselector.naturalresources.sa.gov.au>

Butterfly Conservation SA plants by postcode - <http://butterflyconservationsa.net.au/butterflies/attract/find-plants/>



A group of
butterflies is called
a kaleidoscope

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GARDENING TIPS AND TRICKS:

Botanic Gardens South Australia:

video tutorials - <https://www.diggers.com.au/garden-advice/video-tutorials/>

tips and tricks - <https://www.botanicgardens.sa.gov.au/online-resources/gardening-tips-tricks>

NRM, urban biodiversity - <https://www.naturalresources.sa.gov.au/adelaidemtloftyranges/plants-and-animals/native-plants-animals-and-biodiversity/urban-biodiversity>

Sustainable Gardening Australia, growing seeds - <https://www.sgaonline.org.au/growing-herbs-vegetables-flowering-annuals-from-seed-2/#:~:text=Seeds%20generally%20germinate%20somewhere%20between,leaves%20but%20are%20called%20cotyledons>

The Diggers Club, workshops - <https://www.diggers.com.au/shop/events/>

Sophie's Patch, growing butterfly gardens - <https://sophiespatch.com.au/2017/08/21/habitat-for-butterflies/>

VISIT BUTTERFLY GARDENS AT:

Wittunga Botanic Garden - <https://www.botanicgardens.sa.gov.au/visit/wittunga-botanic-garden>

Adelaide Botanic Garden - <https://www.botanicgardens.sa.gov.au/visit/adelaide-botanic-garden>

Adelaide Zoo - <https://www.adelaidezoo.com.au/>

Cleland Conservation Park - <https://www.clelandwildlifepark.sa.gov.au/cleland-experiences/Butterfly-experience?BestBetMatch=attracting%20butterflies%20to%20your%20garden|7f1e71a5-7182-46b3-9258-d8ce836fcd60|87068855-16e7-4ca2-81c6-a3ef00971e88|en-AU>

BOOKS:

- *Attracting Butterflies to your Garden: What to Grow and Conserve in the Adelaide Region*, Hunt et al
- *The Native Plants of Adelaide - Returning the vanishing natural heritage of the Adelaide Plains to your garden*, Phil Bagust and Lynda Tout-Smith
- "Backyards For Wildlife Booklet ", download from www.backyards4wildlife.com.au



The Community Wildlife Project Team acknowledges the Kaurna people as the Traditional Owners of the Country where Paradise is situated today and pays its respect to Elders past, present and emerging.