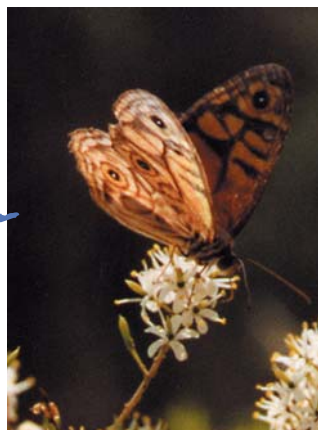


# CREATE BUTTERFLY HABITAT

Attracting butterflies

## WHY CREATE A BUTTERFLY GARDEN?

There are approximately 654 specific and subspecific species of butterfly in Australia (Sands & New 2002), with about 60 of these occurring in the Melbourne area (APSM 2002). These all belong to one of five families - Hesperidae, Papilionidae, Pieridae, Lycaenidae or Nymphalidae.



Since European settlement, many butterflies have suffered decline, largely due to habitat destruction. To be exact, 26 species (8 Hesperidae, 5 Nymphalidae and 13 Lycaenidae) are categorised as 'Threatened' ie. the threats for all known populations have been identified but are continuing and apparently severe. Furthermore, 86 species (24 Hesperidae, 3 Papilionidae, 2 Pieridae, 18 Nymphalidae and 39 Lycaenidae) are categorised as 'Lower Risk', 'Data Deficient' or threatened at a 'Municipal' level, that is, not enough is known about biology/ecology of each butterfly and/or its associated threats (Sands & New 2002).

The threatening processes that are thought or known to cause butterfly decline have been summarised by Sands and New (2002):

1. **Habitat destruction** ie. diminishing or removing the supply of places to live and the resources required for survival.
2. **Impacts of land management** e.g. salinisation, inappropriate burning regimes and drainage of wetlands.
3. **Agricultural and forestry practices** e.g. grazing and trampling of essential food plants by stock, habitat fragmentation and so on.
4. **Clearing/levelling hilltops** - this is often done for establishment of structures such as telecommunications towers and forestry lookout towers, and is harmful as many butterflies rely on hilltop congregations for mating.
5. **Pesticides** e.g. aerial spraying, Chemical application on roadside and railside vegetation, chemical runoff into waterways and so on.
6. **Weeds** ie. displacement of natural food plants and symbiotic fauna on which butterflies rely (introduced *Pinus* spp. are of particular concern).
7. **Introduced arthropods** e.g. feral honeybees compete for resources such as nectar, ants displace native ants that are important hosts for many butterfly species and so on.
8. **Climate Change** e.g. effects of rising sea level on low-lying butterfly populations.
9. **Over-collecting** ie. collecting for personal or commercial reasons.

While some of these categories overlap to some extent, they help us to understand just how much damage we are doing to species such as butterflies in Australia.

Consequently, the creation of new and protected habitats is essential for the conservation of butterflies and other fauna throughout Australia.

## HOW DO I CREATE A BUTTERFLY GARDEN?

### About the Plants

You can develop an attractive butterfly garden by planting a good range of different species from the list provided. In addition, putting in a large number of individual plants will increase the likelihood that butterflies will utilise your garden as habitat, and may increase the diversity of butterflies and other fauna that frequent your property. It will help if your plant selection includes species that flower at different times of the year so that there is a constant food supply. You will need to check with the Southern Dandenongs Community Nursery to see what species will be available at the time of your order.

Creating an indigenous garden will not only provide habitat for butterflies and other local fauna, but it will save you time and money as indigenous plants require minimal maintenance. Watering is only required during the initial establishment period after the plants have been put in the ground, and thereafter only in times of high drought or when you think it is necessary. This is because they have evolved to adapt to the environmental conditions, e.g. certain soil types, pollinators, rainfall and so on, of their natural range.

**Using plants that are merely 'Australian native' as opposed to 'locally native' (indigenous) will often require much more maintenance and do not adequately cater for local fauna.**

Plan your garden so that the layout will provide butterflies with a diversity of shaded, sheltered and sunny habitats.

### Butterflies and Plants

Butterflies usually lay their eggs on or near their preferred food source. The larva (caterpillar) eventually emerges and commences feeding. When the caterpillar is mature, it pupates, transforming into a butterfly. At this point it feeds on a range of nectar plants, mates and lays a new generation of eggs.

Although much more research is required, the following information is known:

#### Hesperidae (Skippers):

Feed mainly on sedges (*Gahnia* and *Carex* spp.), grasses (*Poa* spp.), Mat-rushes (*Lomandra* spp.) and Irises (*Patersonia* spp.).

#### Papilionidae (Swallowtails):

Feed on a range of shrubs, trees, scramblers and climbers, particularly those with broad leaves and some sort of scent e.g. *Pimelea humilis* and *Acacia melanoxylon*.

#### Pieridae (Whites and Yellows):

Feed on a variety of trees and shrubs e.g. *Eucalyptus* spp., *Acacia* spp. and *Melaleuca* spp.

#### Nymphalidae (Nymphs, Browns & Danaids):

Mainly feed on grasses e.g. *Austrodanthonia* spp., *Poa* spp. and *Microlaena stipoides*.

#### Lycaenidae (Blues and Coppers):

Feed mainly on shrubs, particularly *Acacia* spp. and peas e.g. *Goodia lotifolia*.



# INDIGENOUS PLANTS

for your butterfly garden

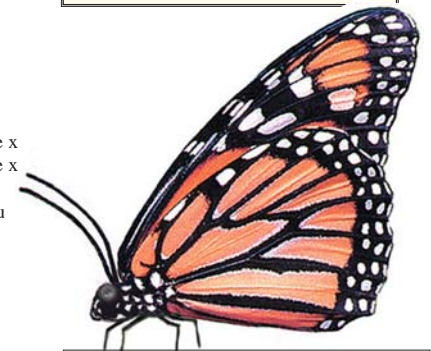
Scientific Name	Common Name	Form	Size (HxW)	Role	Flowers	E.R.
<i>Acacia dealbata</i> subsp. <i>dealbata</i>	Silver Wattle	Tree	7-30 m x 6-10 m	F	Spr	b c
<i>Acacia mearnsii</i>	Black Wattle	Tree	8-25 m x 5-10 m	F	Spr-Sum	e
<i>Acacia melanoxylon</i>	Blackwood	Tree	6-30 m x 4-16 m	F	Win-Spr	a b c k
<i>Atherosperma moschatum</i>	Southern Sassafras	Tree	10-25 m x 2-5 m	F	Aut-Win	e p
<i>Austrodanthonia setacea</i>	Bristly Wallaby-grass	Herb	0.6 m x 0.4 m	F	Spr-Sum	a
<i>Austrostipa semibarbata</i>	Fibrous Spear-grass	Herb	0.3-1 m x 0.6	F	Spr	e
<i>Banksia marginata</i>	Silver Banksia	Tree	2-10 m x 1-5 m	N	Spr-Aut	e j
<i>Brachyscome cardiocarpa</i>	Swamp Daisy	Herb	0.10-0.3 m x 0.2 m	N	Win-Spr	d
<i>Brachyscome multifida</i> var. <i>multifida</i>	Cut-leaf Daisy	Herb	0.1-0.4 m x 0.2-1 m	N	Year round	c k q
<i>Brunonia australis</i>	Blue Pincushion	Herb	0.1-0.5 m x 0.1-0.15 m	N	Spr-Sum	c e l
<i>Bursaria spinosa</i> subsp. <i>spinosa</i>	Sweet Bursaria	Shrub	2-6 m x 2-3 m	N F	Spr	e
<i>Carex appressa</i>	Tall Sedge	Herb	0.5-1.2 m x 0.5-1 m	F	Spr-Sum	d h
<i>Chrysocephalum apiculatum</i>	Yellow Buttons	Herb	Prostrate-0.3 m x 1-2 m	N	Year round	e
<i>Craspedia variabilis</i>	Common Billy-buttons	Herb	0.3 m x 0.5-1 m	N	Spr	c g
<i>Cyperus lucidus</i>	Leafy Flat-sedge	Herb	0.6-1.5 m x 1.5 m	F	Spr-Sum	c g
<i>Elymus scabrus</i>	Common Wheat-grass	Herb	0.8 m x 0.4 m	F	Spr-Sum	e
<i>Epacris impressa</i>	Common Heath	Shrub	0.5-1.5 m x 0.2-0.6 m	N	Aut-Spr	c e j
<i>Eucalyptus baxteri</i>	Brown Stringybark	Tree	3-40 m x 4-20 m	F	Sum-Aut	e
<i>Eucalyptus cephalocarpa</i>	Silver-leafed Stringybark	Tree	8-20 m x 5-15 m	F	Aut-Spr	c h
<i>Eucalyptus cypellocarpa</i>	Mountain Grey-gum	Tree	10-65 m 2-30 m	F	Sum-Win	a b c
<i>Eucalyptus goniocalyx</i>	Long-leaved Box	Tree	8-20 m x 6-15 m	F	Aut-Win	k s
<i>Eucalyptus macrorhyncha</i>	Red Stringybark	Tree	10-35 m x 10-20 m	F	Sum-Aut	e n r
<i>Eucalyptus melliodora</i>	Yellow Box	Tree	10-30 m x 8-25 m	F N	Spr-Aut	e t
<i>Eucalyptus obliqua</i>	Messmate	Tree	4-70 m x 6-35 m	F	Spr	c e m
<i>Eucalyptus ovata</i>	Swamp Gum	Tree	8-30 m x 8-20 m	F	Aut-Win	c h j
<i>Eucalyptus radiata</i>	Narrow-leaved Peppermint	Tree	10-30 m x 6-20 m	F	Spr-Sum	e
<i>Eucalyptus regnans</i>	Mountain Ash	Tree	25-95 m x 15-30 m	F	Sum-Win	c e u
<i>Eucalyptus rubida</i> subsp. <i>rubida</i>	Candlebark Gum	Tree	10-25 m x 10-20 m	F	Spr-Sum	e n
<i>Eucalyptus viminalis</i>	Manna Gum	Tree	10-50 m x 8-15 m	F	Sum-Aut	a
<i>Gahnia clarkei</i>	Tall Saw-sedge	Herb	1.5-4.5 m x 1-3 m	F	Spr-Sum	c i
<i>Gahnia radula</i>	Thatch Saw-sedge	Herb	1-2 m x 0.5-2 m	F	Year round	c k
<i>Gahnia sieberiana</i>	Red-fruit Saw-sedge	Herb	1.5-3 m x 2-3 m	F	Spr-Sum	c k
<i>Glycine clandestina</i>	Twining Glycine	Herb	Climber 0.3-2 m x 1 m	F	Spr-Sum	c e k
<i>Glycine latrobeana</i>	Purple Glycine	Herb	0.3 m x trailing	F	Spr-Sum	c e
<i>Goodia lotifolia</i> var. <i>lotifolia</i>	Golden Tip	Shrub	1-5 m x 1-5 m	F	Spr	e v
<i>Hakea sericea</i>	Bushy Needlewood	Shrub	2-5 m x 1-3 m	N	Win-Spr	a
<i>Hakea ulicina</i>	Furze Hakea	Shrub	1-3 m x 1-2 m	N	Win-Spr	a e
<i>Helichrysum leucopsidum</i>	Satin Everlasting	Herb	0.1-0.5 m x 0.6 m	N	Spr-Aut	a e
<i>Helichrysum scorpioides</i>	Button Everlasting	Herb	0.3 m x 0.2-0.3 m	N	Spr-Sum	e
<i>Imperata cylindrica</i>	Blady Grass	Herb	1 m x spreading	F	Sum	c e
<i>Indigofera australis</i>	Austral Indigo	Shrub	1-2 m x 1-2 m	F	Spr	a e
<i>Kennedia prostrata</i>	Running Postman	Herb	Prostrate x 1-2.5 m	F	Aut-Spr	e
<i>Kunzea ericoides</i> ®	Burgan	Shrub	2-5 m x 2-4 m	N	Sum	a
<i>Leptospermum continentale</i>	Prickly Tea-tree	Shrub	1-4 m x 1-2 m	N	Spr-Aut	a n
<i>Leptospermum lanigerum</i>	Wooly Tea-tree	Shrub	2-6 m x 1-3 m	N	Spr-Sum	c
<i>Leptospermum myrsinoides</i>	Silky Tea-tree	Shrub	0.5-2.5 m x 1m	N	Spr	a f
<i>Lomandra filiformis</i> subsp. <i>coriacea</i>	Wattle Mat-rush	Herb	0.15-0.3 m x 0.15-0.2 m	F	Spr	a c e x
<i>Lomandra filiformis</i> subsp. <i>filiformis</i>	Mat-rush	Herb	0.15-0.5 m x 0.15-0.2 m	F	Spr	a c e x
<i>Lomandra longifolia</i> subsp. <i>longifolia</i>	Long-leaf Mat-rush	Herb	0.5-1 m x 0.5 - 1.2 m	F	Year round	e w
<i>Melaleuca ericifolia</i>	Swamp Paperbark	Shrub	2-9 m x 3 m	N	Spr	c k u
<i>Melaleuca squarrosa</i>	Scented Paperbark	Shrub	2-5 m x 1-2 m	N	Spr-Sum	c
<i>Microlaena stipoides</i>	Weeping Grass	Herb	1 m x 0.6 m	N	Spr	c e
<i>Patersonia occidentalis</i>	Long Purple-flag	Herb	0.2-0.4 m x 0.3-0.6 m	N	Spr	h j
<i>Pimelea axiflora</i> subsp. <i>axiflora</i>	Bootlace Bush	Herb	1-3 m x 1-2 m	N	Spr	c e
<i>Pimelea curvifolia</i> var. <i>sericea</i>	Curved Rice-flower	Herb	0.15-0.3 m x 0.2-0.6 m	N	Spr-Sum	e
<i>Pimelea humilis</i>	Small Rice-flower	Herb	0.1-0.5 m x 0.3-0.1 m	N	Spr	c e
<i>Pimelea ligustrina</i>	Tall Rice-flower	Herb	0.5-2.5 m x 1-1.5 m	N	Year round	c e
<i>Plantago debilis</i>	Slender Plantain	Herb	0.4 m x 0.2 m	F	Spr	d x
<i>Plantago gaudichaudii</i>	Narrow-leaf Plantain	Herb	0.3 m x 0.2 m	F	Year round	a e
<i>Plantago varia</i>	Variable Plantain	Herb	0.08-0.3 m x 0.2 m	F	Spr-Aut	e
<i>Poa ensiformis</i>	Purple-sheath Tussock-grass	Herb	1.5 m x 1 m	F	Spr-Sum	d h t
<i>Poa labillardieri</i>	Common Tussock-grass	Herb	1.2 m x 1 m	F	Spr-Sum	a
<i>Poa morrisii</i>	Velvet Tussock-grass	Herb	0.8 m x 0.6 m	F	Spr-Sum	c e
<i>Poa sieberiana</i> var. <i>sieberiana</i>	Tussock-grass	Herb	0.9 m x 0.4 m	F	Spr-Sum	e n
<i>Poa tenera</i>	Slender Tussock-grass	Herb	0.2 m x spreading	F	Spr-Sum	c e
<i>Pomaderris aspera</i>	Hazel Pomaderris	Tree	3-12 m x 2-4 m	F	Spr-Aut	c e u
<i>Senecio glomeratus</i>	Annual Fireweed	Herb	0.5-1.2 m x 0.5 m	F	Spr-Sum	c
<i>Senecio hispidulus</i> var. <i>hispidulus</i>	Rough Fireweed	Herb	0.2-1.3 m x 0.5 m	F	Spr-Sum	c
<i>Senecio laetus</i>	Variable Groundsel	Herb	0.1-1 m x 0.3-0.5 m	F	Spr-Sum	e
<i>Senecio linearifolius</i>	Firewheel Groundsel	Herb	1-2 m x 1-1.5 m	F	Spr-Aut	c
<i>Senecio minimus</i>	Shrubby Fireweed	Herb	0.5-1 m x 0.8 m	F	Spr-Sum	c e
<i>Senecio quadridentatus</i>	Cotton Fireweed	Herb	0.4-1 m x 0.5-1 m	F	Spr-Sum	a
<i>Senecio velleioides</i>	Forest Groundsel	Herb	0.5-1.5 m x 0.5-1 m	F	Spr-Sum	c e
<i>Stackhousia monogyna</i>	Creamy Candles	Herb	0.1-0.3 m x 0.1-0.3 m	N	Spr-Sum	c e
<i>Themeda triandra</i>	Kangaroo Grass	Herb	0.7-0.9 m x 0.75 m	F	Spr-Sum	a n
<i>Xanthorrhoea minor</i> subsp. <i>lutea</i>	Small Grass-tree	Herb	0.6 m x 1 m	N	Spr-Sum	e k

## E.R. KEY (Environmental Requirements)

- a adaptable to a range of conditions
- b prefers deep soils
- c prefers moist soils
- d moisture is essential
- e prefers well drained soils
- f tolerates poor drainage
- g prefers boggy areas
- h tolerates occasional inundation
- i tolerates permanent inundation
- j tolerates soils that are wet in Winter and dry in Summer
- k tolerates dryness once established
- l tolerates extended dry periods
- m tolerates short dry periods
- n prefers dry soils
- o dry soils are essential
- p prefers cool soils
- q prefers clay soils
- r prefers clay loam soils
- s tolerates poor (low nutrient) soils
- t prefers moderate nutrient soils
- u prefers high nutrient soils
- v intolerant of alkaline soils
- w tolerates shade once established
- x shade is essential

## Role KEY

- F - Plant that provides a food source for caterpillars.
- N - Plant that provides a nectar source for butterflies or moths.
- Ⓢ - The taxonomy of this species has been reviewed.



## \*IMPORTANT:

If you need to remove introduced plants before establishing your indigenous garden, please seek advice from your local Shire/Council to determine if a permit is required, or if any other restrictions apply.

Disclaimer: This document is intended only as a guide. It is the responsibility of readers to meet all necessary legal requirements and to ensure that safety precautions are considered first and foremost.

## References

- APSM (Australian Plants Society Maroonah) (2001) *Flora of Melbourne*. Hyland House, Melbourne
- Sands DPA and New TR (2002) *The Action Plan for Australian Butterflies*. Environment Australia, Canberra

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V I C T O R I A

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