



## Monarch

*Danaus plexippus*

### Description

Allegedly self-introduced, the Maori name suggests it was seen before Europeans came to New Zealand, but it certainly was helped to establish by Europeans bringing Swan Plant for gardens. It was known that some people spread populations around the country. I suspect that it was introduced to both Australia & New Zealand at different times in the 1800's from California. This may explain why Monarchs don't migrate spectacularly like the eastern North American ones do. The larvae are preyed on by all Yellow & Black Wasps, (especially the Common (*Vespula vulgaris*) & Asian Paper (*Polistes chinensis*) wasps), Soldier Bugs & Praying Mantises. I have never witnessed it, but there is mention of *Pteromalus Puparum* (realised to control the White Butterfly) attacking fresh pupae. Known to chase off birds near breeding grounds. There isn't any recorded long-distance migration in New Zealand as there is in North America.

### Ovum (Egg)

Generally laid on the underside of the leaves separately. Creamy colour when laid & deepening to yellow before hatching. It is cone-shaped with 20-25 vertical ribs. They hatch in about 5-7 days. The shell is eaten by the newly hatched larva for its first meal.



### Larvae

Conspicuous Black, White & Yellow 'Tiger' stripes. Have 2 pairs of filaments, 1 pair at the front & 1 pair at the rear. The larvae live about 2-3 weeks & have 5 instars. Larvae are sought by all wasps. Most Wasps are habitual in foraging, so if you have the foodplant in a pot, just moving the pot will delay the wasps in eating all the ovum & larvae, which they'll do once they found their source of food. They most actively feed by day, but also feed on warm nights. 3rd to 5th instar larvae will chew part-way through the stem of the leaf to

let it droop, before starting to eat the leaf from the tip (or, more often, part-way down). This is to stop the plant 'bleeding' sticky sap & making feeding easier. They have no concept of social welfare as older larvae will happily munch their way through ovum & 1st instar larvae. They will also munch through a leaf or stem that holds a pupa, letting it drop to the ground (where it's unlikely to survive). Grows up to 50mm when fully grown.



### Pupa

Jade green with band of golden spots at head end. Hangs upside down by cremaster in some nearby sheltered spot. Pupation lasts between 1 & 3 weeks depending on air temp. However they will die if the temperature drops under 5°C.



### Imago

The imago has a 85 - 110mm wingspan, this depends on food supply for the larvae. Its everyday flight is a gentle gliding action, but if it feels threatened, then it can have strong, direct & sometimes rapid (up to 40km/h) flight. The American Monarchs are recorded as covering up to 100 kms per day on their migration flights. The male has narrow veins & androconial scales on the hindwings, while the female has thicker vein markings & no androconial scales on the hindwings. They take up to 4 hours to dry their wings on hatching. The imago lives about 2 months in the summer generation & up to 7 for the overwintering generation. Autumn swarming usually appears to occur when the mean temperature drops



below 10°C. This brings on the winter quiescence, where the imago is only seen in the middle of warm days drinking from flowers. more time on the wing.

#### Male



#### Habitat

The Monarch is seen as a garden Butterfly in New Zealand, but can be found anywhere in New Zealand especially the warmer urban areas where lots of people grow it's foodplants mentioned below.

#### Food Plants

It's main foodplants in New Zealand are Swan Plant (*Gomphocarpus fruticosus*), Giant Swan Plant (*Asclepias physocarpus*) & Tropical Milkweed - Bloodflower (*Asclepias curassavica*). In north America it's main foodplants are Butterfly weed (*Asclepias tuberosa*) - which is banned in NZ, Common Milkweed (*Asclepias syriaca*), Swamp Milkweed *Asclepias incarnata* & other members of the Milkweed family (*Asclepias spp*). It will however feed on Moth Vine (*Araujia hortorum* (was *Araujia sericifera*)) & Tweedia (*Tweedia caerulea*). It's rumoured that in it's final stage it will be able to eat ripe Pumpkin fruit (*Cucurbita spp*) & successfully complete metamorphosis, but people report varying results & deformities using Pumpkin. The larvae need to eat mainly Swan plant or Milkweed to successfully pupate, as this gives them the chemicals they need to have a successful metamorphosis.

#### Female

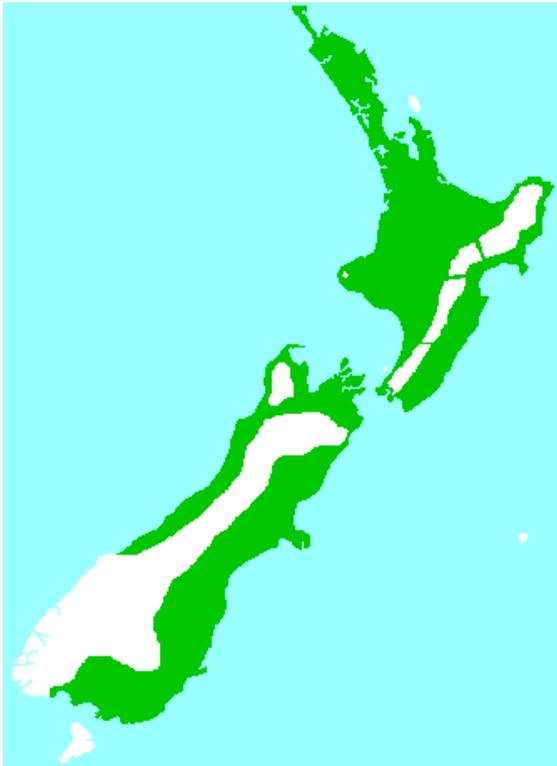


#### Status

Extensive - Found in gardens nationwide up to 1,000 metres. There has even being sightings in Stewart Island in recent years, but there is no evidence of a breeding population on the island yet.



**Distribution**



**Phenology**

	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Adult	Red	Red	Red	Red	White	Red	Red	White	Red	Red	Red	Red
Egg	White	White	White	Yellow	White	White	White	Yellow	Yellow	Yellow	Yellow	Yellow
Caterpillar	Green	White	White	White	Green	White	White	Green	White	Green	Green	Green
Pupa	Blue	White	White	White	White	Blue	White	White	Blue	White	Blue	Blue

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