

## Care guide

### Orchard Caterpillars, *Papilio aegeus*



Orchard caterpillars are the larvae of the Orchard butterfly, and they are one of the easiest butterflies to raise as their food plant is very accessible. The caterpillars feed on citrus trees such as lemon, lime, mandarin and grapefruit and as a result these caterpillars can be minor pests in orchards. The butterfly is commonly known as the Orchard Swallowtail Butterfly and is quite large, with a wingspan of up to 140mm. Unusual for butterflies, this species holds its wings flat when at rest. Orchard butterflies are most commonly found in woodland areas across eastern Australia, ranging from Victoria to Far North Queensland.

The Orchard Caterpillars hatch from small yellow to cream eggs after around 3-7 days (depending on temperature). The adult female butterfly lays the eggs on the underside of the leaves of their food plant. The caterpillar's first meal is the shell of the egg it emerged from. The newly hatched caterpillars resemble bird droppings up until the time it reaches 4<sup>th</sup> instar (after it has moulted 3 times) when the caterpillar takes on a green appearance. When disturbed the caterpillar will release a pungent chemical from an organ called the osmeterium which is everted from just behind the head. This resembles a red fleshy fork. The chemical smells like rotting fruit and may be irritating. The caterpillar will moult four times to 5<sup>th</sup> instar. This is the final instar before the caterpillar will pupate and form a chrysalis. The chrysalis can be bright green to light brown in colour, and the adult butterfly will emerge after 2-3 weeks.

Adult butterflies feed on nectar which they obtain from flowers in the wild. The adult female is the larger of the two, and has black and white forewings and hindwings. The hindwings have blue and red markings. The male Orchard Swallowtail has black forewings with an arc of white spots near the tip. The hindwings have a white panel and single small red spot. The underside of the male wings are black with red spots. These butterflies will live for up to 3 months as an adult butterfly.

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**Food:** Fresh healthy leaves from a citrus tree (lemon, grapefruit, lime or mandarin). Ensure fresh leaves are always available for your insect. Don't let the leaves dry out or wilt before you change them. The leaves can be put into a jar of water to keep them fresh for as long as possible. Make sure the jar has a lid or covering with holes in it to stop the caterpillars from falling or crawling in and drowning. You can also use a small potted plant. Once you have an adult butterfly emerging, they will feed on honey water – dissolve 2 tablespoons of honey into ¼ cup warm water. Allow to cool. Use a small dish such as a bottle top. Cut out a clean, rinsed yellow sponge to the size of the bottle top. Place the sponge in the bottle top and fill with the honey water. This should be placed in a secure elevated position so the butterfly can get to it. Rinse sponge and change honey water daily.

**Water:** Caterpillars get most of their moisture via the leaves, but do sometimes require additional moisture. Mist-spray the leaves around your caterpillar once a day – it will drink the droplets if it requires extra moisture. The adult butterflies will get their moisture from the honey water.

**Enclosure:** A suitable enclosure for the caterpillars should allow for some ventilation and allow for humidity to be kept at a reasonably high level. Minimum size requirements are 30cm high x 30cm wide x 30cm deep. Place the enclosure in a spot where it gets a bit of daylight each day, but be careful it doesn't over heat in direct sunlight. For adult butterflies, you will need a larger enclosure with a minimum size 200cm high x 70cm wide x 70cm deep. Place a tall plant in the enclosure for perching on.

**Life span:** Caterpillars – 3-4 weeks. Adult butterfly – 2 - 3 months

**Temperature:** This species will do best at 25 – 30° C, but will tolerate slightly lower temperatures and have a slower growth rate.

**Humidity:** The humidity should be kept around 70-90% within the enclosure if possible. A lower humidity can result in moulting difficulties, which can result in death.

**Handling:** The caterpillars are harmless and so are able to be handled, however great care needs to be taken when coaxing them off their branches/leaves. Caterpillars have 6 true legs, and 4 pairs of sucker feet at the end of their bodies. These sucker feet can grip on quite tightly, and care must be taken not to damage them. Observation is very important, and a caterpillar should not be handled when it is approaching a moult. This is when the caterpillar will remain motionless for 1-2 days, and its head will be tucked almost underneath its body. When changing the leaves, caterpillars should be moved on the branch they are sitting on (place the old branch into the enclosure with the new leaves. You can remove any old foliage)

**Reproduction:** If you happen to have an adult male and female butterfly emerge at the same time, then mating will occur without any interference. You need to provide some fresh citrus leaves for the female to lay eggs on.

**Common issues:** The caterpillars will sometimes climb down into the water container for the leaves and drown if it is accessible, so ensure they cannot get into the water. You may like to use mesh to cover the water, or paper towel to block up any gaps. The caterpillars may also have problems moulting if the humidity is not high enough. Adult butterflies should not be handled, otherwise the scales on their wings will be shed and they can lose the ability to fly.

**NOTE:** These animals should not be released into the wild.

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