

BUGS and GRUBS

To many avid gardeners the sight of a caterpillar chewing on a favourite garden plant will often have it labelled 'pest'. When digging in the garden or compost heap, the encounter upon a huge fat grub may seem annoying and perhaps viewed as being harmful to the garden. Unfortunately, such views can result in the employment of one of a great range of tactics, all of which are aimed at the removal or the deterring of these so-called culprits.



But what are those creatures chewing on leaves or crawling in the compost heap? In most cases they are the larval stage, caterpillar or grub of the very same insects we enjoy having in garden. Butterflies that feed on a nectar supply from the many flowers in the garden or beetles flying in and around the house light at night.

The most commonly encountered larval stage of insects in the garden would be the butterfly caterpillar, usually found eating the leaf growth of many backyard plants including both native and exotic. Some moth larvae will also be found in similar situations. While most species of butterfly larvae are specific in their food plant, they do however come in a variety of shapes, colours and sizes.

A citrus tree in the backyard is a prime host for the larvae of one of our largest butterflies the Orchard Swallowtail (*Papilio aegeus*), a common northern species. Caterpillars of the Orchard butterfly are easily recognised. In the early larval stages, the young larvae resemble a bird-dropping, with their white and olive-black colour. The larger larvae are a camouflage green and brown colour enabling them to blend with both the leaf and bark growth. Both colour forms assist in avoiding predation by birds. Although these larvae also have what resemble spikes along their entire body, the touch these spikes they are soft and completely harmless.

Like most butterfly larvae when disturbed, Orchard butterfly larvae extrude two bright reddish horns from its head which emit a strong odour. Such an unpleasant odour is another useful tool used for defence against any interested predators, but is once again harmless to ourselves. The pupa or chrysalis stage of the Orchard butterfly can be difficult to detect on the tree due to the two colour forms of either totally green or green and brown camouflage.

Adults usually emerge from the pupa in around 4 to 6 weeks, sometimes longer, both male and female Orchard butterfly are distinct in their markings, making identification easy. The male is generally black with a narrow white band across the forewing while the hindwing has a large pale patch in the centre. Females tend to be larger in size with extensive pale areas on both the forewing and hindwing. A more obvious feature is a row of red spots

around the edge of the hindwing. These adults will in turn frequent the garden in search of their food supply nectar, which will be provided by the nearest flower.

What about the grubs we find when digging in the soil or compost heap? The grub most commonly found in north Queensland gardens is the Rhinoceros beetle grub (*Xylotrupes gideon*), also sometimes called the Elephant beetle. Easily identified, this translucent creamy – white grub has fine reddish hairs with a dark brown head capsule and can grow up to a length of 80mm. Such an enormous size is obtained through a diet of decomposing matter, which makes the backyard compost heap a popular breeding site. Female rhino beetles are attracted to a compost heap to lay eggs deep down in the decomposing material.



From egg, the emerging larvae feed upon this organic matter until fully grown at which stage the larva forms a cell in the soil in which it turns into a pupa. After 6 weeks the adult beetle will emerge from this cell, dig its way to the surface where it takes flight.

Considered one of Australia's most spectacular beetles, the stout black Rhinoceros beetle can reach a size of 60mm. Male rhinos are easily identified with their armorment of forked horns on their head and thorax, with the larger males possessing larger horns. Horn size is important when engaging in 'fighting' mode. As female rhino's emit a scent to attract the males for mating purposes, often more than one suitor is attracted. When two males meet around a female battle is instigated using the horns to butt and toss the other contender away, with victory usually becoming to the larger male. While these horns look daunting, they are of little concern to us, with a week-pinch the most produced from such armorment. Female rhinoceros beetles lack any such horns.

Unfortunately, the rhino beetle is often accused of biting, perhaps on the toe as we walk through the grass at night. As with most beetles the rhinoceros beetle does have biting mouth parts to feed but these mouth parts are so small in size they pose no threat to ourselves. What is really being confused with a bite is actually a result of the beetle grabbing tight with its legs which are hook ended. The usual reaction when under a rhino beetle grip is to remove the beetle by pulling it off, this only encourages a tighter grip to be undertaken by the beetle. Removal is much easier with a little gentle persuasion by patting it on its rear end. Such

Both the female and male rhino beetles can squeak loudly, but mostly the male. They produce this squeaking sound by rubbing their abdomen against the ends of the wing covers.

Although the rhino beetles does fly all year round, they are usually seen more frequently during the summer months, flying around a house light or under the street lights. Sometimes a aggregation of rhino beetles can be seen in Poinciana trees, where they are feeding on the soft bark of the young shoots. Occasionally they are also found in fruit such as paw paw which will have them accused of ruining fruit. In fact, the rhino beetle has only entered the fruit via access which has been opened by a marauding bird having pecked the fruit earlier.

Generally, the larval (grub) stages of insects fulfil a beneficial role in the garden. Butterfly larvae (caterpillar) although chewing away on some of our favourite garden plants, in most cases this is merely natural pruning process for the many trees, vines, shrubs and other plants that insect larvae use as their food plants. As for the grubs found in the garden or compost, these larvae assist in the decomposition process by returning dead plant material to the soil and aeration of the soil, a major component to any healthy garden.

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