



# GREAT WHITE CABBAGE BUTTERFLY

**The threat:** The butterfly is regarded as a pest of brassica crops in several countries including Europe, Britain and India. Brassica crops include: cabbage, cauliflower, broccoli, rape, swedes, brussels sprouts and turnips. It is a potential threat to New Zealand's cultivated and native brassica plants.

## WHAT IS THE GREAT WHITE CABBAGE BUTTERFLY?

The great white cabbage butterfly (*Pieris brassicae*) was found in New Zealand in 2010. It is an unwanted pest in New Zealand.

The butterfly is regarded as a pest of brassica crops in several countries including Europe, Britain and India. Brassica crops include: cabbage, cauliflower, broccoli, rape, swedes, brussels sprouts and turnips. It is a potential threat to New Zealand's cultivated and native brassica plants.

*Pieris brassicae* will feed on a range of host plants in the plant families Brassicaceae, Capparaceae and Tropaeolaceae. These host plants are readily found in New Zealand within home gardens, commercial gardens and as weeds such as nasturtium, wild radish, wall flowers and alyssum.



*Pieris brassicae* male butterfly

## WHERE WOULD I FIND IT?

Caterpillars can be found on host plant leaves, often in groups. Pupae (chrysalises) will likely be located close to host plants on vertical structures such as fences, poles and buildings. In the pupa stage the insect can go into diapause over winter and delay emerging as an adult until light and temperature conditions are favourable. During winter, caterpillars and adults are less likely to be sighted. In New Zealand, butterflies will probably emerge from overwintering pupae in late September or October. There is a high probability of the adult butterfly finding a suitable host plant in this country. The butterflies are capable fliers and are thought to fly considerable distances.

## WHAT DOES THE GREAT WHITE CABBAGE BUTTERFLY LOOK LIKE?

**Adult butterflies:** Wingspan 55–70mm. Upperside of wings are pure white. Forewing has a black tip, and in females two black dots and a black smear.

The underside of the wings is pale yellow, dusted with grey. Very similar to the common small white butterfly but, not surprisingly, larger.



*Pieris brassicae* pupa



*Pieris brassicae* caterpillar

**Eggs:** In spring, adult butterflies will be emerging from overwintering pupae, and yellow skittle shaped eggs will be appearing on host plants. Eggs are typically laid in batches of about 30, but sometimes up to 100.

**Caterpillars:** Newly emerged caterpillars are yellow with shiny black heads. After the first moult the colour changes to yellowish-green with yellow lines running the length of the body. Fully grown caterpillars are 45mm long, olive green with a yellow line along the top of the body. Distinguishing features of the mature caterpillar are that the body is covered in splotchy black dots and patches with short black hair over the whole body. The head is bluish-grey with black patches.

**Pupae (Chrysalises):** Length 20mm. Pale green (non-diapausing) or greyish-white (diapausing i.e. overwintering), distinguished in that it is dotted with black and yellow markings. The surface of the chrysalis is shaped by ridges and blunt spikes. It is attached to the substrate by a silken girdle and pad.



*Pieris brassicae* eggs

## WHAT LOOKS SIMILAR TO IT?

Adult great white cabbage butterflies look very similar to the small white butterfly which is very common throughout New Zealand. Female small white butterflies have two black wing spots, and males one. Although the great white cabbage butterfly is slightly larger than the small white butterfly the layperson is unlikely to be able to distinguish between them.

Caterpillars of the two species, *Pieris brassicae* (great white butterfly) and *Pieris rapae* (small white butterfly) are quite distinctive as the caterpillar of the small white butterfly is a uniform velvety green colour with a faint yellow line along the top of its body, and about 30mm when fully grown. In addition, great white cabbage butterfly caterpillars often feed in groups, while those of the small white butterfly tend to be solitary.

Caterpillars of the great white cabbage butterfly are unlikely to be confused with any other caterpillars found feeding on brassicas or nasturtiums in New Zealand due to their distinctive colouring and size.

Eggs of the great white cabbage butterfly look similar to those of the common small white butterfly; the major difference is that the great white cabbage butterfly lays eggs in batches, the small white cabbage butterfly lays eggs singly or in pairs.



*Pieris rapae* (small white butterfly) caterpillar, showing clearly its uniform green colour, unlike the caterpillars of the great white cabbage butterfly.

**IF YOU BELIEVE YOU HAVE SEEN ANY EGGS, CATERPILLARS OR PUPAE IN YOUR AREA, PLEASE ADVISE MPI ON 0800 80 99 66.**

October 2012