



When fully grown at an age of about ten weeks, the Chalkhill Blue larva resembles a green slug with yellow markings. It then descends to the base of the food plant to pupate amongst other plant debris on the soil surface. After about four weeks, the adult butterfly emerges. The males are a pale silvery blue on the upper wing while the females are a dull brownish colour. When they are not flying, they may be found sitting with their heads pointing downwards on the stems of grasses and other plants.

Related reading: For a list of butterflies, see the Brading Down *Checklists* leaflet. See also the leaflet on the Down's *Ecosystem*.



Cowslips are the main food plant of the Duke of Burgundy Fritillary Butterfly
© Nick Greatorex-Davies

The life-cycle of a butterfly



Sarah Halstead

Can you label the different stages?



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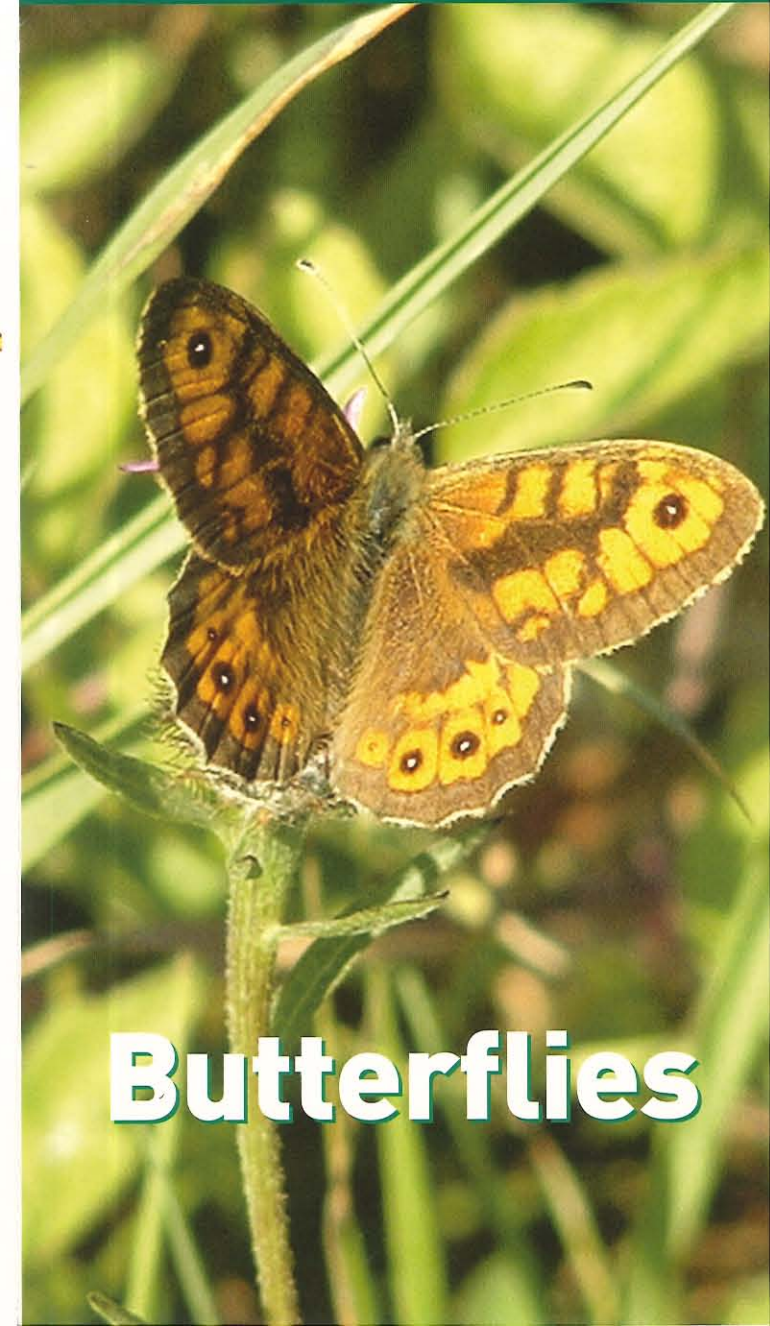
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Isle of Wight
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Brading Down



Butterflies

Why is the Down important to butterflies?

Of all the animals you are likely to see on Brading Down, the most conspicuous are butterflies. Why are there so many different and unusual types?

The natural world is always in a delicate balance: every living thing lives off some other living thing. Some animals (man included) eat a varied and wide range of food, so if one type disappears, another will be found to take its place.

Some animals, however, need a specialised diet to survive and, if this disappears, then so will the animals. For example, Giant Pandas eat mainly bamboo shoots. No bamboo – no Pandas! Nearer to home, Brading Down can show how delicate the balance is, especially in the case of butterflies, which often require special food supplies ...

How plants relate to butterflies on Brading Down

The great range of plants on the Down provides a selection of food to support even these fussy insects. The leaflet in this series about the *Character* of Brading Down explains that downland has the greatest number of different plants per square metre than any other habitat. Butterflies often require a different species (type) of food plant at different times in their lives. A butterfly's caterpillar eats a different plant from the same adult species. In this way, adults avoid competing with their offspring for limited supplies of the same food plant.

As well as relying on specific food plants, a butterfly sometimes also relies on another animal to help during its life-cycle. As recently as 1979, the Large Blue butterfly became extinct in Britain largely because land was ploughed and ant hills were destroyed. It has now been re-introduced into a few areas.



Chalkhill Blue Butterfly © Andy Horton

The Chalkhill Blue butterfly, a distinctive species found on Brading Down, has a very similar relationship to ants as did the Large Blue. So let's have a look at its life-cycle and how it relies on the world of the Down all around it ...

The Chalkhill Blue

These butterflies may be found in large numbers during late July and August when their food plant, Horseshoe Vetch, is abundant. The adults are active fliers but may often be found basking in the sun or sucking moisture from wet mud or animal dung.

The female lays her eggs singly on the stems and leaves of various plants in August but they do not hatch until the following April. During this time, the fully developed larva hibernates within the egg. When the larva hatches, it starts to feed on the waxy leaves of Horseshoe Vetch; most feeding takes place after dusk. Like the larvae of other blue butterflies, they have a honey gland on their tenth segment which secretes droplets of a sweet fluid very attractive to ants.

Ants constantly associate with the larvae, attending and caressing them, and carry them to the plants near their nests. In this symbiotic relationship, the ants gain from the sugary secretions, while the butterfly larvae gain from the protection of the ants which keep parasitic insects at bay. This type of relationship is even more highly developed in other blue butterflies such as the Large Blue. ▶

Bird's-foot Trefoil: a favourite food plant for butterflies

Horseshoe Vetch: food plant of the Chalkhill Blue Butterfly