

## Life cycles of brown butterflies: part 2: Ringlet and Meadow Brown

This is the second part of the series on Brown butterflies. This is the largest group of butterflies here, with nine species, so there will be a further lesson with the final three species.

This lesson covers the two most common and widespread of the brown butterflies – the **Ringlet and Meadow Brown**. Both of these species are found in areas of long grass, which their caterpillars feed on. While they are regarded as being widespread, and the grasses they feed on aren't rare, they are still absent from many urban areas because of the over-management of greenspaces. Their populations are regarded as safe in the UK and Ireland, but are good indicators of grassland which is slightly more diverse than that found in most parks and gardens.

**Ringlet:** The Ringlet can be regarded as a rainy-day butterfly! It can be found flying even in drizzle, so it seems perfect for our damp climate. However the Ringlet is also a species on the move, and in recent years the range has been expanding so that it's now found throughout much of Scotland except parts of the North-west.

The Ringlet gets its name from the golden rings found on the undersides of the wings, which can shine in the sunlight on sunny days. The rest of the wings have a fairly uniform brown appearance, with fine black dots on the upperwings.



From a distance they look somewhat like Meadow Brown, but seeing the two species together helps confirm some of the differences, including the larger size of Meadow Brown and the presence of some lighter brown or orange markings in the Meadow Brown. I find that ringlets look alternately silvery and brown in flight, as their wings flap. They also have a different flight pattern – with Ringlets being described as 'bobbing' along in their flight, whereas Meadow Browns are more direct and stronger in flight.

In Scotland, Ringlets emerge in June, and can often be seen in large numbers into the hundreds, before the numbers suddenly drop away in mid-July. Their flight time overlaps with Meadow Brown, but Meadow Brown emerge a few weeks later and fly well into late summer.

Ringlets prefer damp meadows with some shelter from the wind provided by woodlands or other features. Females lay their eggs around a variety of coarse grass species such as **Cock's-foot, Common Couch and meadow-grasses**. In contrast to the great care taken by other species, the female Ringlet simply ejects eggs which often



Ringlet pupa and caterpillar (Peter Eeles)

land on the ground and aren't attached to any surface. The caterpillars are nocturnal, only feeding at night and hiding at the base of the grass stem in the daytime. They feed for about two months, before hibernating as a caterpillar through the winter at the base of the plants. They then resume feeding in spring, and pupate near the base of the plant before emerging as adults.



Ringlet upperwing (Tim Melling) and underside (Tamas Nestor)

**Meadow Brown:** can be found flying with Ringlet, but will prefer dry grasslands and can be found in open, windswept places where Ringlets normally can't be found.

Meadow Browns are more variable in appearance than Ringlets. The amount of orange markings on the upperwings varies most, with females having more extensive orange patches. The undersides of the forewings of both sexes is mostly orange, but this is hidden at rest by the plain brown hindwing. Therefore in flight they can look orange, but this effect is less noticeable at rest.



Meadow Browns are more widely-distributed than Ringlets, being found in most of Scotland except the most mountainous areas and Shetland.

While most butterflies have some kind of courtship between males and females (with males doing the work), Meadow Browns have been more well-studied than others. When a male is courting a female, he will fly above her and shower her with scented pheromones from special scales on his wings in an area known as the 'sex brand' which is darker in appearance than the rest of the wings. It's only then that the female will allow him to mate! Early butterfly researchers observed this, and described the pheromones as smelling like an old cigar box, and others have described it as smelling of old socks, or wet hay.



Meadow Brown female (top, Pete Withers), and male (bottom, Tim Melling)

Mated females flutter over long grass and land to deposit eggs singly. At first the caterpillars feed on fine-leaved grasses, but older caterpillars can eat coarse grasses like **Cock's-foot**. The caterpillars feed for several months, until autumn. Like Ringlets, they spend the winter as caterpillars and resume feeding the following spring before pupating attached to a grass stem.



They have a much longer flight period than Ringlet, going from June to late August here.

