



Life cycles of Small Copper and Green Hairstreak

The two butterfly species featured here are real sun-worshippers: the Small Copper and Green Hairstreak. They need warm places, sheltered from the wind but exposed to sun as much as possible. They are also very brightly-coloured, with a metallic sheen to the wings that gives them a bright, shimmering appearance in flight.

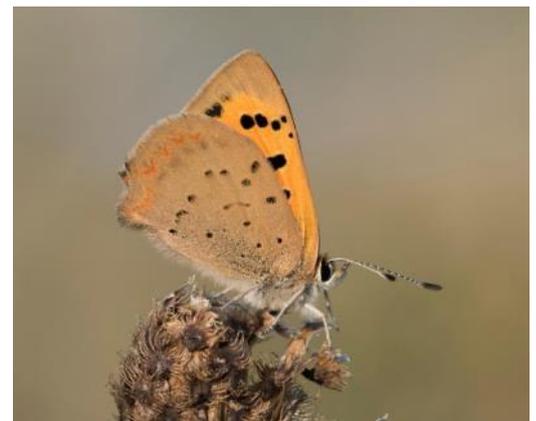
Small Copper butterflies are indeed small. With their wings open they are little bigger than a 50p coin, so they are easy to overlook. You can find them in a variety of habitats, including grassland, derelict sites, wide woodland glades, coastal sites and even gardens and parks. However at these sites they usually need some disturbance, such as exposed rocks or gravel on which they can bask, and I rarely see them in lush meadows with long grass.

Small Coppers are regarded as being very territorial, and males will establish territories and intercept other insects. It may be because of this anti-social behaviour that they are mostly seen in small numbers – I've never seen more than three at a small site, although you may find larger numbers over large sites. Females lay their eggs on a few related plants called Sorrels. The main ones are **Common Sorrel and Sheep's-Sorrel**. Common Sorrel really is quite common when you look for it – the leaves are shiny and they usually grow in dense patches, close to the ground. Note, these are different from the Wood Sorrel, which has a shamrock-like leaf and white flower.

In Scotland Small Coppers usually have two broods, in early and late summer, so we first see this species in numbers from around the middle of May. This first brood will have spent the winter as caterpillars at the base of the foodplants and began feeding again as temperatures increased. After they pupate it takes about three weeks for them to emerge as adults. When those adults mate and lay eggs, their caterpillars feed for about two months through the summer (twice as long as Orange-tip caterpillars!) and eventually form their own chrysalis. These then emerge as new adults from July onwards, and I've seen them well into September. All being well, they will have produced new caterpillars which survive the winter and emerge the following year.

When looking for Small Copper, I keep an eye out for sites which feel warm, especially south-facing slopes with exposed rocks. As they fly they glisten and it's hard to see the colouration until they land.

They often have the wings closed, and the undersides are relatively dull. But on sunny days they will open their wings and you will be treated to an intense, gem-like orange colour on the upperwings.



Small Copper adults (Photos by Bob Eade)



Common Sorrel



Small Copper caterpillar and egg (both photos by Gilles San Martin)

Green Hairstreaks are our only really green butterfly in the UK. While in other parts their caterpillars are able to feed on a very wide range of plants (include Gorse and Bramble), in Scotland they are only known from sites with **Blaeberry (or Bilberry)**.

These can be moorland, woodland or edges of peat bogs, but you will rarely find them in exposed places. For example at peat bogs I usually find them at the edges where there are trees that can protect them from the wind.



Green Hairstreaks emerge in May and fly into June. As with Small Copper, they look metallic in flight as their wings are covered in scales that reflect a lot of light. The uppersides of the wings are dull brown, but as soon as they land they close their wings, and you can see a pure iridescent green colour that changes depending on the angle of the sun. They are also territorial, and it's common to see males in 'dog-fights' as they tumble through the air and claim territories.

Green Hairstreaks (photo above by Tamas Nestor, photo below by Peter Eeles)

The first part of the scientific name of this butterfly is 'Callophrys' which means 'beautiful eyebrows' in Greek, and if you get up close you will see that this butterfly does have a fringe of white and black scales around its eyes. We have two other hairstreak species in Scotland (Purple and White-letter) which will be covered in later lessons, but they all get their names from the short 'tail' at the lower back edge of the wing.



Green Hairstreak caterpillar and egg (photos by Peter Eeles and Gilles San Martin)

Females lay eggs on the fresh, young growth of Blaeberry, and after they hatch the caterpillars feed for close to two months before pupating. Here's where our knowledge of Green Hairstreaks begins to show gaps. There is evidence that ants are attracted to secretions coming out of the pores of the pupa. The pupa can also squeak to mimic the sounds made by adult ants, by rubbing the segments of its body together. Apparently this sound can be heard by humans! But we don't know for sure what the ants do with them; pupae have been found inside ant nests, but others have been found outside in the leaf litter. It's still a mystery, but fascinating.

They remain as pupae through the winter, and emerge as adults the following spring.



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