

BEAUTIFUL monster

David Chapman charts the lifecycle of a giant moth that has a striking way of intimidating predators



A few years ago, I was leading a group of people on a walk through some heathland on the cliff tops of Cornwall. It was May and, although the coast path was looking bright and colourful with beautiful pink thrift and bright yellow kidney vetch in

full flower, just inland the heath was looking brown and lifeless.

The various heathers found here wouldn't come into flower until July and August – until then we had to be content with the woody stems, small dark leaves and spent seed heads from last season's bounty.

Looking carefully among the grasses close to the heather we spotted an emperor moth (*Saturnia pavonia*).

This was a female of the species, a huge moth by British standards, but she was still and lifeless.

We could see that she was tatty and worn, her wings badly damaged, and >>



Above: an emperor moth caterpillar spinning its cocoon

Far right: a mature emperor moth caterpillar on the look out for food

looking closer still we found that she had been laying eggs, which were attached to the stems of the vegetation all around her. It seems that she must have been busy the previous night but that this was her final act. Although I was delighted to have spotted my first emperor moth, on

reflection it was quite a sad moment. More recently, I decided to take a much closer look at the emperor moth and so collected a few caterpillars to watch as they progressed through their lifecycle.

The most notable stage must be around August when the caterpillars are very large, maybe as big as 6cm long. They have a habit of crawling about on paths through heath and moorland, often pausing to bask. Not only are they big, but they are also colourful, their vivid green background colour complemented by black rings around their bodies which have yellow or sometimes pink spots within.

The caterpillars, which can be seen across the UK, feed on the leaves of plants such as heather, blackthorn, hawthorn and bramble. They have a voracious appetite and grow quickly, but during August they eat their last ever meal before crawling into an area of thick vegetation to pupate.

Their first task is to spin protective cocoons around themselves. These vary

in colour from white to brown and are papery but tough. The final stage is to 'close the door', through which the adult moth will eventually emerge. The caterpillar creates a closed circle of teeth-like spines around the opening which helps protect it from predators. The following April, the moth forces its way out through the cocoon's trap door and climbs up nearby vegetation. There it hangs upside down while blood pumps into its wings.

The emperor moth must be one of Britain's most beautiful species. Both males and females have four eye-spots on their wings which are used to intimidate potential predators. When under threat, the moths can vibrate their wings to appear like four-eyed monsters! The females have a wingspan of about 8cm, while the males are slightly smaller but more colourful, boasting orange hind wings and large, feathery antennae.

Female emperor moths are inactive during daylight hours. The males, though, fly about and pick up the females' pheromones using their large antennae – it is thought that a male can detect a potential mate from up to seven miles away.

The female lays her eggs at night but dies soon afterwards. Within weeks the eggs will hatch and the tiny, dark, spiny caterpillars will start the whole process again.

I am delighted to say that from the four caterpillars I collected two years ago, I raised about 60 last year. These pupated over winter so that I could successfully release them all to the same location where their parents had been born. ■

WATCH OUT: PEACOCK BUTTERFLY

It is possible to confuse the male emperor moth with some types of butterfly, most obviously the peacock which also has four eye-spots on its wings. Some peacocks have a different strategy for surviving the winter, hibernating as adult butterflies. This enables them to start flying during any warm spell, even as early as February. By the time we get to April there should be plenty on the wing and soon they too will be laying eggs.

