

# LIFE CYCLE OF THE BUTTERFLY

By the time you see a butterfly, fluttering through the landscape in search of food and a mate, you might be surprised to learn of the transformation they go through in their short life.

All butterflies and moths, with their various intricate patterns and colours, belong to the *Lepidoptera* group of **insects**. There are 34 species of butterfly and approximately 1500 species of moths in Ireland. These animals have a four stage lifecycle that includes egg, caterpillar (or larvae), **pupa** (or chrysalis), and then finally the adult form. For most species of Irish butterfly this process will take an entire year to complete, however some species can complete two or three cycles within twelve months.

The first step in the life cycle of a butterfly is the egg. Eggs are usually very small but can vary slightly in shape, being round, oval or cylindrical. Textures of the eggs also vary from one species to another. Eggs tend to be laid on the leaves or stems of plants. The lengths of time eggs take to hatch ranges from a few days to weeks, while others will wait until the weather is warm enough.

The second part of the butterfly's lifecycle is as a caterpillar. This stage tends to be a relatively shorter part of the butterfly's development and the primary focus of the caterpillar is eating. From the moment it emerges from the egg, the caterpillar will start to feed on the plant that the eggs were laid on. Caterpillars from different butterfly species feed on different plants, so it is very important that the mother lays the eggs on the plant the emerging caterpillar will feed on! If eggs are not laid on the correct plant, the caterpillar will not survive. Caterpillars need to shed their skin four or five times as they grow because their skin cannot expand. Sometimes the caterpillar can grow 100 times bigger than the initial size when they emerged from the egg.

In the journey from egg to butterfly, there is one stage between caterpillar and the final adult form, this is the pupa stage. When the caterpillar has reached its full size, it changes into a pupa, also known as a chrysalis. It is during this period the transformation from caterpillar to butterfly occurs. The pupa is usually found on twigs or other hidden areas around the **host plant**. Depending on the species, the time spent in this stage can range

from weeks to even months. Inside the pupa, the entire make up of the caterpillar is in a state of change that is known as pupation or metamorphosis.

Finally, after all other stages have completed, the once small egg is ready to emerge into the final form as a butterfly. After emerging from the chrysalis, the butterfly will be unable to fly, with its wings being too soft and also folded against its body. Once rested, blood will flow into the wings and over the next few hours the butterfly will get a feel for its new body type, and begin mastering flight. Once this happens the adult butterfly will fly off in search of food and a mate, thus starting the life cycle once again.

For information on Irish butterflies visit <http://www.irishbutterflies.com/>

**Lepidoptera** is a group of insects that includes butterflies and moths. There are approximately 180,000 species of the Lepidoptera, which is 10 per cent of the total species of living organisms. This group is one of the most widespread and widely recognisable insect groups in the world.

**Insects** are animals with 6 legs with an exoskeleton. They have a three-part body (head, thorax and abdomen), three pairs of jointed legs, compound eyes and one pair of antennae.

**Pupa** is the name of the stage in an insect's lifecycle between the larva and adult. Another name for pupa is chrysalis.

Some insect species are linked to one or more species of plants and these are called **host plants**. They lay their eggs on this plant and the larvae only feed on this plant. The plant is the insect's host plant, for example one of the host plants of the orange tip butterfly is lady's smock or cuckoo flower. The host plants of the holly blue butterfly are holly and ivy.

# QUIZ SHEET

1. How many species of butterflies are found in Ireland?

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2. What is the name of the group of insects to which butterflies and moths belong?

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3. How many stages are there in a butterfly lifecycle?

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4. What is the second part of the butterfly lifecycle called?

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5. What is the third part of the butterfly lifecycle called?

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6. What is another word for pupation?

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7. Approximately how many species of moths and butterflies are there worldwide?

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8. List the three parts of an insect's body?

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9. What kind of plant does the adult butterfly lay her eggs on?

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10. What plant does the orange tip butterfly lay eggs on?

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