



Lime swallowtail caterpillar starting to make its chrysalis.

The lime swallowtail

Nature's rainbow palette

There is music in nature if we care to listen... the drumming of a woodpecker, the gurgling of a stream, the call of a magpie robin, the buzzing of a bee. There are also patterns and colours if we care to observe... the tail feathers of pheasants, the bark of trees, the palette of a rainbow. Then there are myriad kinds of behaviour if we look closely... the beautiful nests that baya weaver birds weave, the way cubs play with their mother's tail and ears.

Kalpavriksh, an environmental action group, brings you a slice of all this in a series titled 'Magic garden.' The series is being contributed by various people across India, all of whom work in the field of conservation. They are lucky to have had special moments in nature... an encounter with a particular species, something extraordinary about a place that they have visited, the sudden surprises that nature has sprung on them. This is what they will describe in this series.

An occasional movement of the chrysalis – a jerky movement – lets me know that the caterpillar is alive and kicking inside

By Sanjay Sondhi

From as far back as I can remember, the natural world has fascinated me. As a young child, I was fortunate to live in a house with a large garden. I loved to watch nature's antics in my backyard – squirrels scamper up trees, caterpillars munch on leaves, lizards curl up on branches of bushes and seeds of the sal tree twirl, as they fall from the branches above. While the simple sights of nature were always enjoyable, the creature that was special and provided me with the greatest pleasure was the butterfly. A few decades of nature watching have passed, but my special love for butterflies has not abated!

Now, I live in Dehradun, and I am fortunate to have a small garden here, too. Many of the plants in our garden are food for butterfly caterpillars. Are you familiar with the life cycle of the butterfly?

Life cycle

The butterfly life cycle begins with the male and female butterflies mating. The female butterfly then lays its eggs on a plant. The eggs hatch, and small caterpillars emerge. These caterpillars are hungry; they munch on the plant's leaves and munch and munch some more, growing quickly! The skin of the caterpillars does not grow; hence as the caterpillars grow, they need to shed their skin (called moulting) as they grow. They are so hungry, that they eat their own skin, too! Waste not is their principle (something that we humans, would do well to emulate!).

Sometimes, the caterpillars



Lime swallowtail butterfly.

change colour as they grow. In a few weeks, the caterpillar is ready to pupate (make a chrysalis or cocoon). The caterpillar attaches itself to a stem, and weaves a chrysalis (or cocoon) around itself. For the next few weeks, remarkable changes occur inside the chrysalis, invisible to the human eye. The only sign that these changes are happening is an occasional movement of the chrysalis – a jerky movement to let me know that it is alive and kicking inside! In a few weeks, the adult butterfly emerges and flits away to continue nature's amazing story.

Lime plant

In our garden, the plant that attracts a lot of attention is the lime plant. This plant is the food plant for the caterpillars of many butterflies called swallowtails. Many of these large pretty butterflies nor-

mally have tails (though some do not).

I keep my eyes peeled for butterflies hovering about the plant; if I am lucky, I get to see a swallowtail lay its eggs on the plant. A few months ago, I saw a lime swallowtail butterfly lay its eggs on the lime plant.

The lime swallowtail is a petite yellow butterfly, with black markings. A few red, blue and orange spots on its wings complete this butterfly's 'make up'! Over the next few weeks, I watched the progress of the butterfly's life

cycle on the lime plant. An exciting moment for me was when I saw the large green caterpillar attach itself to a stem and begin to spin its chrysalis!

A few weeks later, while I was not fortunate enough to see the adult butterfly emerge, an empty chrysalis was an indication that the butterfly had emerged safely. Every now and then, I watch the delightful lime swallowtail flit by me in the garden, and I wonder, "Is this the butterfly that I watched grow up on my lime plant?"

You can watch this butterfly in your very own garden. The lime swallowtail is widely distributed throughout India, and if you keep your eyes peeled, you are sure to spot it near your home. And if by any chance, you have a lime plant in your garden, step out and take a peek – you might just spot a caterpillar or two that you can observe grow up into your very own 'friendly neighbourhood' butterfly!