

## Magnificent Monarchs



### Monarch Butterfly Life Cycle

There are four stages in the butterfly life cycle; egg, larvae (caterpillar), pupa (chrysalis) and adult. The entire process is called complete metamorphosis and takes about 30 days.

Monarch butterflies go through the four stages during one life cycle and through four generations of butterflies in one year. Adult monarch butterflies live two to six weeks, and then die.

In February and March, butterflies come out of hibernation and find a mate. They migrate north and east.

In March and April, they lay eggs on milkweed plants. The caterpillars that hatch are the first generation of monarchs for the year.

The second generation of monarchs are born in May and June. The third generation is born in July and August.

The fourth generation of monarchs are born in September and October. They go through the same metamorphosis. But they do not die after two to six weeks. These monarchs live six to eight months. Eastern monarchs migrate to Mexico to hibernate for the winter. Western monarchs migrate to Southern California. When spring arrives, they come out of hibernation and the whole cycle begins again.

### Monarch metamorphosis

From egg to adult, metamorphosis takes about 30 days.

Egg – The female monarch lays 100-400 eggs in her life. The tiny eggs are the size of a pencil point and hatch in three to four days.



Larvae (caterpillar) – When the caterpillars hatch, they first eat their eggshell and then begin eating milkweed leaves. As they eat and eat, and grow and grow, they become too large for their skin, and molt, or shed their skin. The caterpillars usually eat their molted skin first and then continue eating milkweed leaves. These growth times between molting are called instars. Monarch caterpillars go through five instars, each lasting one to three days. Caterpillars grow 3000 times their hatch size in just 10-14 days! Caterpillars do not have bones. They have over 1,000 muscles to help them crawl.



Pupa (chrysalis) – At the end of the fifth instar, the caterpillar eats the stem of the milkweed plant, using the sticky substance in the stem to spin a silk button. It attaches its bottom end to a branch or other safe place and hangs upside in a ‘J’. Within 24 hours, the caterpillar will enclose itself in a chrysalis. The chrysalis is inside the caterpillar and it unzips itself into it, wiggle dancing until it is completely enclosed in the chrysalis. The caterpillar remains in chrysalis for 8-15 days. The chrysalis darkens or becomes transparent shortly before the butterfly emerges. When the butterfly emerges, its wings are crumpled and wet and may need up to six hours to dry, before the butterfly can fly.



Adult butterflies do not grow. They emerge from their chrysalises fully grown. Adults can mate almost immediately and begin laying eggs within one to two days. Butterflies use their vision to find flowers and receptors on their feet to taste. They sip flower nectar through their straw like mouths for energy.



Male or female? The male monarch has thinner black webbing within his wings and two small black spots on the hind wings. The female has thicker webbing and no black spots. Now you know!

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