

The Lifecycle of a Silkworm

A silkworm moth lays roughly 500 eggs, each around one millimeter in length. Newly laid eggs are yellow, but as the larvae inside grow, the eggs become greyish-blue. In Japan, the eggs are laid at the end of summer and hatch in early spring because the cold of autumn and winter keeps the larvae dormant. After hatching, they will go through five stages of growth, known as “instars.”

When the silkworm larvae hatch, they are helpless and unable to find food on their own. Fresh out of their eggs, they are covered in black hair and are around 2 to 3 millimeters long. If placed on top of mulberry leaves, the newly hatched silkworms will immediately begin eating. After about three to four days of constant munching, they will appear to fall asleep and will molt, emerging with new, smooth, white skin. This is the second instar, during which the silkworms will continue eating mulberry for two or three more days before beginning their second molt. They again appear to sleep, shedding their stomach, torso and head.

By the third instar, the head shape is clearly visible, but the silkworms are still considered immature. After their third molt, the silkworms are noticeably longer, and the “eye” marks along the body are clearer. Sixteen or seventeen days after hatching they enter their fourth sleep and molt, becoming larger and more mobile. During the fifth instar, a silkworm’s appetite is at its peak and it consumes 80 percent of its lifelong food intake during this period. At this stage, the silkworms weigh a remarkable 10,000 times their hatch weight, and their body size has increased 25 times.

In the final stages of maturation, their bodies become semi-transparent and they stop eating mulberry leaves, evacuating all food from their body. The silkworms raise their heads up off the leaves and start to “dance,” swaying from side to side.

The swaying silkworms are picked up and put into frames called *mabushi*. To protect themselves during their transformation into moths, the silkworms work nonstop for two days, wrapping themselves in 1,300 to 1,500 meters of silk. Within this silk cocoon each silkworm will shed its skin for the last time and become a pupa. Fifteen days after creating the cocoon, the moth emerges. Silkworm moths cannot fly and do not eat, but they will mate and deposit their eggs, after which their short life comes to an end.