

Silkworms are the caterpillar stage of the silkworm moth's life cycle. In temperate countries such as Japan, silkworm moths naturally reproduce only once a year, laying their eggs at the end of summer and hatching in the spring. Each summer, a single female moth will lay around 500 eggs. When silkworms hatch, they are about 3 mm long and black. During the caterpillar or larval stage of life, silkworms do nothing but eat, molt, and grow larger and whiter. After 28 to 50 days, the caterpillars stop eating and turn slightly yellow. At this point, they have molted four times and are about 76 mm long. The change in color is the sign that they are ready to spin their cocoons and enter the pupal stage. Silkworm growers have the silkworms spin their cocoons in a lattice of small cubicles, a process which takes about three days. The cocoon is made mostly from two proteins: fibroin, which is the main component of silk thread, and sericin, which acts as glue to hold the thread together. The cocoon is spun from a single strand of silk roughly 1,400 meters in length, which is secreted from a spinneret located in the silkworm's mouth. After one to two weeks, the silkworm moth will emerge from the cocoon to mate, and the next generation's life cycle will begin.