



The Nine Spotted Ladybug/Lady Beetle

Coccinella novemnotata

The Seven Spotted Ladybug

Coccinella septempunctata

The Ladybug belongs to the *Coccinellidae* family of beetles. (Note that they are beetles, not bugs, their name notwithstanding.) They are also known as Lady Beetles or Ladybird Beetles. There are about 5,000 varied species of Ladybugs in the world. They inhabit every continent except Antarctica. There are many assorted colors and patterns of Ladybugs, but the most commonly seen in North America is the Seven Spotted Ladybug, with its red body and of course 7 black spots.

Actually, despite their dominance in the landscape, Seven Spotted Ladybugs are recent arrivals on our continent and widely invasive, having been introduced to gardens in the 1980's as a means of pest control. Ironically, they have decimated the indigenous Nine Spotted, which are in fact the officially designated NY State Insect.

Ladybugs can adapt to many environments. They live in cities, in your home, forests, grasslands and The Great Swamp.

Ladybugs have red and black polka dot hard wing covers called elytra. They have two sets of wings; the elytra are on the first set and the flying set is located underneath. They have compound eyes and 6 short legs. Their abdomen is protected by their elytra. Ladybugs have a pronotum, a feature that looks like a head band which protects their head, making only one

part of their head visible. They use their antennae to taste and smell, and they can also smell through their feet! Ladybugs can fly at speeds of up to 37 miles per hour and at an altitude of as high as 3,600 feet. With their wings beating 85 times per second they can fly continuously for approximately 2 hours. When it is cold outside Ladybugs will hibernate.

Ladybugs are omnivores; they will eat mites, fruit flies, plants, and aphids. They can eat 50 to 75 aphids a day. They use their powerful mandibles to chew their food.

There are four stages to a Ladybug's life cycle, which means they undergo complete metamorphosis. The four stages are egg, larval, pupa, and adult. The process from egg to adult takes 3 to 8 weeks.

Egg Stage: Ladybugs release chemical cues to attract a mate. After mating the female finds a location that is protected from predators, usually the underside of a leaf and near a food source such as aphids so when the eggs hatch the babies will have access to ready nourishment. She will lay 5-50 oval shaped eggs. The eggs hatch in about 3 to 10 days. In her lifetime a Ladybug can lay 1,000 eggs.

Larval Stage: The tiny creatures (larvae) that emerge from the eggs are dark, with long spiny bodies. During this stage they constantly feed on aphids and soft-bodied insects. As they grow they molt (shed their skin) 3 or 4 times. This stage lasts 2 to 3 weeks.

Pupa Stage: Ladybugs do not spin cocoons like butterflies do. Instead, they attach themselves to a leaf or stem by their tail end. Depending on the species the pupa can be yellow, orange, or black. This stage lasts for about 1 week. During this time, its body is restructured and transformed into an adult.

Adult Stage: When the adult emerges from the pupa it has a pale, soft shell. It takes a few hours for the exoskeleton to harden and develop into its patterns and colors. An adult can live for several months to 1 year.

Predators are birds, tree frogs, ants, dragonflies, wasps, and spiders. When threatened by predators they secrete an oily bad-tasting toxic fluid from their legs; their coloring serves as a warning to would-be predators that a mouthful will be anything but tasty! Ladybugs will also play dead.

Other common threats to ladybugs are climate change, use of pesticides and loss of habitat through development.

Conservation status: Not listed even though the Nine Spotted Lady Beetle is quite rare (and the designated NY State Insect)

Mythology:

Ladybugs have long held a significant role in our culture. They are associated with luck, love, fertility, and prophecy. They are featured in many stories, poems, and nursery rhymes.

