

How Our Beneficial Insects Spend the Winter



During the cold winter months, many insects make themselves at home in your backyard. How they do this depends upon the insect. Insects do have mechanisms that help them survive the cold - chemicals in their bodies act as a kind of antifreeze plus they can slow their metabolisms way, way down.

You may ask, don't insects like butterflies migrate south in winter? While this is true of the Monarch butterfly who migrates to Mexico to escape our frigid temperatures, most species of butterflies and their moth cousins stay right here.

Wooley Bear caterpillar – photo courtesy of Bugwood.org

Overwintering Adult Insects. A few butterflies and moths overwinter as adults. Mourning Cloaks and Question Marks spend the winter hiding in spaces behind loose bark or in fallen leaves. These are the first butterflies to emerge in spring. Other insects that overwinter as adults include Lady Beetles and some wasps. These are beneficial insects that control many garden pests such as aphids and hornworms. Winter shelter for them includes attic spaces, woodpiles, tree cavities and leaf litter.

Eggs or Caterpillars. Most butterflies choose other life stages in which to spend the winter. The Karner Blue and Coral Hairstreak are examples of butterflies that overwinter as eggs that hatch in spring. Fritillaries, Crescents and many Skippers hatch in the fall and spend the winter as caterpillars. The familiar and adorable Wooley Bear caterpillar braves winter to emerge in spring as the Isabella moth. Moths are not only important pollinators of night-blooming flowers but their caterpillars are critical food for birds. **Leaf cover is very important for butterflies and moths that overwinter in these life stages.**

A Hibernacula? By fall, caterpillars of the Swallowtail butterfly have grown to just the right size for their bodies to transform into a pupa or chrysalis, their winter home. Viceroy and Red-spotted Purple butterflies employ a different strategy. Their caterpillars chew a leaf and roll it into a tent-like structure called hibernacula which they fasten to a stalk. Both strategies allow these butterfly caterpillars to spend the winter comfortably inside these protective structures. They will burst out in spring as beautiful butterflies.

Cavity Nesters. Stalks and stems left standing are important for many insects. Several bee species utilize hollow plants stems like goldenrod or in blackberry and raspberry canes. Others choose pre-existing holes in trees or logs left by beetles. Our most notable cavity nester is the Mason bee, a valued pollinator of a many orchard fruits. Carpenter bees excavate their own tunnels in rotted wood. They are very efficient pollinators of many agricultural crops.

Hiding Underground. When many adult insects die off, their offspring will overwinter close by. This is the case with Fireflies. Only noticeable a few weeks in summer when adults are aglow to signal mates, they spend the majority of their lives in the soil or at the surface as eggs and larvae. It is in this larval stage that Fireflies control pesty snails and slugs.

Most Native Bees are Ground Nesters. Native bees are hugely important for pollinating a variety of crops and all of our native flowering plants. Many species that include Squash bees, Andrena bees and Bumble bees, pollinate everything from pumpkins and melons to tomatoes and blueberries. Most native bees live solitary lives. Females prepare their brood chambers before departing, each species with a particular site preference. In the case of the social Bumble bee, only the fertile queen overwinters. She must survive to start a new colony. Her only refuge is a shallow depression in the soil. **Leaf cover is extremely important for her protection.**

Overwintering as Nymphs. Not many insects are active during winter. However, immature Dragonfly, Stonefly and Mayfly nymphs are feeding and growing under icy ponds and streams. They are indicators of water quality. Nymphs and adults are both predators of pests and food for other species. Dragonflies are especially important for controlling mosquitoes.

All of these beneficial insects are harmed by pesticides, effectively sabotaging nature's pest control. It's not always obvious how insects overwinter but given the opportunity they thrive. Thank goodness for these creatures that enrich our lives in so many ways.