



## Defenses and Survival Tactics of Some Insects

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Many insects never make it to adulthood to complete their life cycles because in the grand scheme of things, they are low on the food chain. Between birds and amphibians, mammals and other insects, there is no lack of creatures that rely upon insects to muscle up or to ensure their young survive long enough to obtain food for themselves.

But insects are not necessarily limpid little defenseless victims of a more sophisticated life form. They have strategies to overcome the odds of becoming dinner for something else. Some use camouflage, others are cryptic in manner and color, some have mastered the technique of veiling themselves with material and others simply hide.

One of the ways insects can hide in plain sight is by coloration, body form and feeding techniques. Spring caterpillars are often light green and feed on new leaves of similar color. Caterpillars that feed on mature foliage often have colorations or body forms that imitate the dead leaf spots and edges that occur later in the year.

Some caterpillars feed along leaf edges and appear to be part of the leaf itself. Careful scrutiny will reveal the ruse. Two of the prominent caterpillars, the Wavy-lined *Heterocampa* and the Lace-capped caterpillar are just two examples of this behavior.

Walking sticks are a good example of cryptic coloration and mimicry. Both the insect's shape and color allow it to blend in with leaf veins and twigs so that unless they move or cast a shadow, they are very difficult to see.

Camouflage loopers are small caterpillars that are found on the flowers of composites. They take petals from the plant's flowers and 'glue' them on to their body. They blend in so well that the only evidence of their presence will be that the flowers seem to be deformed.



Caterpillars like woolly bears, Ios, slug moths and some tussocks have defense mechanisms that utilize urticating hairs or venomous barbs to ward off potential predators. Handling these caterpillars may prove a painful experience for some people. Especially to be avoided are the saddleback slug moth and the spiny oak slug caterpillars, which are very small but able to inflict severe pain or a burning sensation that may last for several hours or even a few days. Handled gently, many of these caterpillars will not harm the handler, but use caution around any caterpillar having barbs, hairs or spines.



Another means by which insects can protect themselves is by mimicry. Many flies have coloration and markings that are very similar to wasps and bees, especially syrphid flies. These flies can also feed on the pollen of many of the plants that bees and wasps also visit. Birds will tend to avoid any insect that may have the potential to sting, so these bee mimics need not worry as they go about their everyday work acquiring pollen.

Many insects use leaf shelters as a means of hiding from predators by day. Besides caterpillars such as the spicebush swallowtail, stink bugs routinely use abandoned leaf shelters. Queen Anne's lace seed heads are an especially good place to look for caterpillars, insects, assassin or other predatory bugs and spiders late in the year.

The larvae of tortoise beetles, 3-lined potato beetles and the infamous lily leaf beetle pile their frass on their bodies to escape predators. Lacewing larva use their molted skins and other detritus to cover their body in a similar way. They can be found especially on white oak leaves in late summer appearing like a small, light tan, fuzzy pile moving across a leaf.

This is only a brief look at some ways insects survive or attempt to survive in the world. There are many other ways and means by which insects employ subterfuge and other strategies that could fill a book, but this is simply a leaf through.

For questions on insects or on other gardening topics, feel free to contact us at the UConn Home & Garden Education Center (877) 486-6271, visit our website at [www.ladybug.uconn.edu](http://www.ladybug.uconn.edu) or contact your local Cooperative Extension center.

