

# Tempering Our Fear of Wasps

by Holly Kocet

Wasps are often vilified for their reputation of being aggressive. As with all insects, knowledge is power: knowing which of these insects to avoid and which are harmless. Many wasps we see are actually innocuous mimics, unable to sting. Understanding this makes outdoors a lot less threatening.

Wasps are predators that hunt insects for their young. They **provide a valuable service to us, keeping insect populations in balance and managing pests.** Along with other beneficial insects (i.e. lady beetles, lacewings), they are **important and useful for biological control.** And while wasps do not actively collect pollen, they can carry and drop pollen grains while hunting or sipping flower nectar, thus contributing in their own way to pollination.



Wasps hunt insects for their young

As with bees, **most wasps are solitary and do not build hives.** With no hive to defend, solitary wasps have no need of aggression. Most utilize pre-existing cavities in dead wood made by beetles. A few make mud nests like the Potter Wasp, (*Eumenes fraternus*). The Umbrella Wasp (*Polistes sp.*) is a paper wasp that constructs uncovered combs frequently suspended beneath the eaves of houses. Braconid wasps (*Braconidae sp.*) are a large family of parasitic wasps. While their long ovipositor appendage (egg-laying) may appear threatening, they cannot sting. These wasps are hugely important for controlling many agricultural pests. The “tomato” hornworm is a perfect example of a pest controlled by a parasitic wasp. If, in your garden, you find a large green hornworm with rows of white fuzzy cocoons on its backside, you should let it be. The wasps inside have already saved that tomato plant and, once hatched, assure protection for the rest of your tomatoes.

**Social wasps build hives with very large colonies.** Defense of the colony is of paramount importance and they will aggressively defend it as we would defend our own homes. Social wasps are beneficial insects preying on many insects including blow flies, house flies and caterpillars. A recent study showed wasps in a single colony collected 225 flies in just one hour’s time.

According to the CT Agricultural Experiment Station, social wasps we are most likely to encounter in CT are the Common yellowjacket, Eastern yellowjacket, German yellowjacket (*Vespula sp.*) and the Aerial yellowjacket (*Dolichovespula arenaria*). The Bald-faced “Hornet”, misnamed, is actually a species of yellowjacket. With all these wasps, knowing where these nests are located and how to avoid them can reduce incidence of wasp encounters.

Some yellowjackets nest underground in abandoned rodent burrows. Most of these wasps are helpful for controlling pests but a few have a tendency to crash cookouts, especially drawn to sweet beverages. Especially in late summer, when the job of hunting insects for young is done, workers spend their time seeking sugary substances like the juice of decaying apples that have dropped from the tree. During this time, wasps still fly in and out of the nest until there are several hard frosts when all but the mated queen dies. The queen then finds a protected spot such as a rotting log where she alone hibernates until spring.

Other yellowjackets create aerial paper nests. These football-shaped nests consist of layers of paper “manufactured” by the queen and workers from wood and plant fibers. The nests continue to expand over the season to accommodate the growing colony. Aerial yellowjacket nests are often found in bushes only a few inches off the ground but can be also be hung in small trees. Bald-faced wasps like to build nests a bit higher, in trees or large shrubs. They are especially valuable in controlling garden pests.

When a nest is in an out-of-the-way location and left undisturbed, they are not a threat to humans. Their very existence is not cause for alarm since wasps (like bees) have absolutely no interest in people. A wasp’s reaction when threatened is solely for its safety and survival of the colony. This may be of little comfort for the person who accidentally brushes against a nest or for those at risk of allergic reactions.

There are, however, some simple precautions we can take for reducing incidence of negative encounters. They include:

**1) Avoid Attracting Wasps** - When outdoors, place covers on soft drinks, clean up food scraps quickly, and keep garbage can lids tightly closed. It is also a good idea to avoid hairsprays, perfumes and colognes when spending time outdoors.

**2) Avoid their Nests** - Be vigilant when mowing and take caution when working around leaf litter where ground nests are likely to occur. And, always check for aerial nests prior to pruning shrubs so not to surprise a nesting colony. When found, often a simple barrier such as wire fencing is enough to provide for your safety and that of your family and pets. In the event this is not possible, some knowledgeable beekeepers understand wasp behavior and their place in nature. They can offer advice and even relocate aerial hives since they already have the protective garb. The use of insecticides or other toxic substances is often unnecessary. However, if unavoidable, a state licensed professional should be consulted.

It is important to note that whether in-ground or aerial, **wasp nests are only used for one year.** When a queen emerges in spring from the safety of hibernation, she starts a brand-new hive in a different location. So, you needn’t worry that a particular nest will always be troublesome. **By fall’s end, whether in-ground or aerial, the nests will be empty and never again reused.**

### An important Distinction

Many people do not make the distinction between bees and wasps. In reality, they are very different creatures. Bees (family *Apidae*) are our number one pollinator. There are over 300 species of native bees in Connecticut, most of which live solitary lives. The Bumble Bee (*Bombus sp.*) is our only truly social native bee. The managed European Honeybee (*Apis mellifera*) is also a social bee-ing.

Bees are usually thick-bodied and most have branched pollen-collecting hairs. Wasps (family *Vespidae*), on the other hand, are generally smooth-bodied and slender at the waist. These two distinct insect families also



Aerial Yellowjacket paper nest



Brachinid Wasp eggs on Hornworm

have very different behaviors. Over time, bees have adopted a vegetarian diet and as such, collect pollen for their offspring. So, unlike their insect-hunting wasp cousins, bees spend most of their time on flowers. Most are ground nesters but a few nest in cavities, utilizing hollow plant stems or pre-existing holes in trees or logs. Bees do not make paper nests. All bees are docile and rarely sting. But whether bee or wasp, solitary or social (hive-makers), both insect families are hugely valuable for the services they provide within an ecosystem and to the quality of our lives.

**Sources:** CT Agriculture Experiment Station, Xerces Society for Invertebrate Conservation, Kaufman Field Guide to Insects of North America, Bugguide.com