



Yellowjackets – Beneficial Insects but Unwelcome Guests

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The picnic table is all set. Burgers are sizzling on the grill, the corn is plucked from boiling water and the chilled sangria has just been poured. Your two invited guests are helping themselves to chips and homemade salsa when at least a half dozen uninvited guests, decked out in snazzy gold and black outfits, start investigating the savory salsa and glasses filled with sweet sangria.

Welcome to yellowjacket season. For months now, yellowjackets and other wasps have been patrolling our yards and gardens in search of luscious protein morsels (aka pest insects) to feed their ever-increasing broods. Mostly we humans fail to recognize their expansive pest control abilities. Now that they are seeking rewards for their pest patrols, we feel threatened as they are often a force to be reckoned with.

Yellowjackets belong to a group of predatory social wasps comprising mainly two genera, *Vespula* and *Dolichovespula*. They are pretty recognizable by their distinctive yellow and black markings. But most memorable would be their sting. Once encountered, its painful and long-lasting agony quickly leads to future avoidance. All females are capable of stinging and when threatened, will sting repeatedly with their lance-like, barbed stingers.

Despite their protective nature, yellowjackets are social creatures, at least among their own kind. Much like honeybees, they live in colonies where each individual has its own tasks to perform.

The colony starts with an overwintering queen. Before the cold days of winter set in, she will seek out a protected area - perhaps in a hollow log, a stump, leaf litter, in cavities in the ground, or even in man-made structures. As late spring days get warmer, the queen will emerge and search for a nest site. She will build a small paper nest out of wood fibers and saliva and lay her eggs in the hexagonal brood cells she created. Typically, about 30 to 50 brood cells are forged by the queen, with an egg laid in each.

When the young hatch, the queen will feed them for about 3 weeks at which time they pupate and metamorphose into small, infertile females known as workers. These workers now take over the roles of caring for and feeding the larvae as the queen continues to lay eggs. The

yellowjacket diet is quite diverse consisting of sugars, proteins and carbohydrates and includes fruits, tree sap, flower nectar as well as insects, meat or fish. Yellowjackets are often found feeding on animal carcasses and are valuable decomposers. They also consume a huge number of garden pests including caterpillars and other destructive insects.

What is quite interesting is the food exchange between the larvae and the workers, referred to as trophallaxis. The busy worker bees supply the hungry larvae mainly with sources of protein and, in return, the larvae provide the workers with a sugary secretion. As summer comes to an end, a colony may have 5 to 10 thousand workers, but the number of larvae that they need to tend to dwindles. These worker bees have come to expect their sugar high and when not supplied by the larvae, they look for substitutes, hence their rude appearance at your late summer outdoor events. The yellowjacket workers also seek out nectar from flowers and in doing so, are effective pollinators.

Once the colonies reach peak size in late summer or early fall, reproductive cells are built and eggs laid for new queens and male yellowjackets. These adult reproductives leave the colony, mate, and the queens are fertilized by the males, who die shortly afterwards. The new queens seek out winter shelter and, if they survive, will start their own colonies anew come spring. The old queen along with her workers die as fall frosts overtake them. In more southern parts of the U.S., yellowjacket colonies can grow for many years and obviously would pose a great danger if disturbed. Here in the Northeast, we are still fortunate that most winters are cold enough to kill off the previous year's yellowjacket colonies.

I won't tell you that I have not felt the wrath of an angry yellowjacket. I have, several times. Still I do my best to allow any colonies to perpetuate themselves as long as they are not a threat to any of us sharing the property with them. Please try to do the same as all bees and wasps have been in decline due to multiple human-induced activities and measures. For the most part, if you leave them alone, they will reciprocate.

For more information about yellowjackets and other wasps or bees, or for other gardening questions, feel free to contact us, toll-free, at the UConn Home & Garden Education Center at (877) 486-6271, visit our website at www.ladybug.uconn.edu or contact your local Cooperative Extension center.



