

Yellowjackets & Hornets



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At first glance, yellowjackets, hornets, and other wasps look very much alike. Their disposition and habits, however, may be very different. Some are aggressive and will sting; others are beneficial and prey on insect pests. Some, such as the yellowjackets and hornets, are social and build nests which by summer's end may contain thousands of individuals. Others, like the digger wasps and scoliid wasps, are solitary and don't have large colonies. Correct identification is the first step in determining which, if any, control measures to use.

Identification

Yellowjackets and hornets are in the insect family Vespidae. A key character of wasps in this family is that they fold their wings lengthwise when at rest. The wasps known as yellowjackets actually include many different species. Most yellowjackets, true to their name, are yellow and black. Species are best differentiated by the pattern of the yellow and black markings on the abdomen. One notable exception to the black-and-yellow color scheme is the baldfaced hornet. The light markings on individuals of this species are white rather than yellow.

Yellowjacket and baldfaced hornet workers are about 1/2-inch in length; queens are somewhat larger at 3/4-inch. The European or giant hornet is one of the largest members of the family at a whopping 1 inch.

Biology and Habits

The major difference between yellowjackets and hornets lies in their food preferences and their aggressiveness towards people. Early in the summer, yellowjackets are not normally aggressive towards people unless their nest is threatened. During this time, workers capture other insects as prey to feed to the larvae. In late summer through early fall, August through October, yellowjackets become troublesome and dangerous. Their food preference switches from proteins to sweets, and they scavenge at garbage cans and picnic tables. This is when workers are more likely to sting, even when away from the nest.

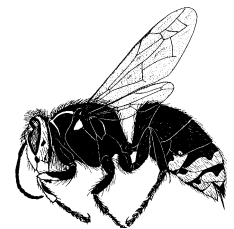
Baldfaced and giant hornets are not scavengers and generally are not aggressive toward people unless

someone threatens their nest. They feed only on live insects and are highly beneficial since they kill large numbers of caterpillars and flies.

Yellowjackets and hornets are social insects, with colonies made up of a queen, workers—which by the end of summer can number in the thousands—and immature stages that are cared for by the workers. All yellowjackets and hornets build their nests from chewed wood pulp, but different species prefer different nest locations. *Vespula vulgaris*, the common yellowjacket, usually nests underground or in hollow trees. *Vespula germanica*, the German yellowjacket, typically nests in walls or attics of buildings.

The baldfaced hornet *Dolichovespula maculata* builds round, exposed paper nests, usually high in trees and often up to a foot in diameter. Colonies can contain up to 400 workers. The European or giant hornet, *Vespa crabro*, builds its nests in hollow trees, house attics or walls; colonies can contain from 200 to 400 workers. It is one of the few wasps attracted to lights at night. The European hornet is active from April through August. European hornets do not scavenge around food like yellowjackets. They generally will sting only if their nest is threatened. They do, however, sometimes damage woody ornamentals, such as lilac and dogwood, by girdling the bark to obtain sap.

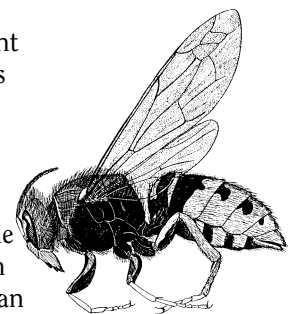
In West Virginia, yellowjackets are active from



Baldfaced hornet



Common yellowjacket



Giant hornet



Nest of baldfaced hornet

April through October, and colonies last only for a single season. All members of the colony, except for overwintering queens, die with the onset of cold weather. Queens that survive establish new colonies in the spring, usually beginning in May. In warmer climates perennial colonies are not unusual.

Prevention Methods

Prevention should begin with simple nonchemical tactics. Keep screen doors and windows in good repair. Gather up ripe or rotting fruit that has dropped from fruit trees. Try to observe what food the yellowjackets are after and make it less available to them. Use garbage cans with tight-fitting lids and keep them closed.

Personal Protection Against Yellowjackets

A yellowjacket's sting can cause a life-threatening allergic reaction in some people. If you are allergic to stings, there are some avoidance techniques you can use. You can lessen your attractiveness to yellowjackets if you forego the use of hairspray, perfume, or aftershave and don't wear bright-colored clothing, especially bright yellow, light blue, red, or orange. Good choices are white or light tan fabrics which are unattractive to them. Wear shoes when walking through lawns. Keep car windows closed whenever possible. Be cautious when working in the garden or trimming hedges, and avoid apple orchards. If you do end up in an area where yellowjackets are present, don't swat them—this will only increase your chance of being stung. Try to remain calm and walk away. Never crush a yellowjacket. A dying yellowjacket worker releases an alarm pheromone that alerts its nest mates. In just a few seconds, you could find yourself surrounded by angry wasps.

Control Strategies

Integrated pest management for yellowjackets should center around reducing accessibility of food, combined with trapping and treatment of nests. If yellowjackets crash your next picnic, serve drinks in cups with lids and straws; don't leave empty plates, cups, or drink cans lying around; and keep serving platters covered.

Commercially available yellowjacket traps may help to reduce the yellowjacket population. Place the traps at the perimeter of your recreation area 30 minutes before the guests arrive at an outdoor event, such as a cookout. Protein baits, such as meat scraps or dog food, work best in early summer. Sweet baits,

like jelly, ripe fruit, or grenadine syrup, should be used in late summer and early fall. Replace the bait with fresh bait every day, first submerging the trap in water to kill any yellowjackets inside.

Because of the different preferences in nesting sites, different nest removal strategies are necessary for different species. Since baldfaced and giant hornets are not scavengers and are beneficial, a nest located high in a tree where there is little chance that anyone will be stung, should be left alone.

Commercial wasp and hornet aerosols are available to treat yellowjacket nests. These should be applied to the nest itself, not to individual yellowjackets. Many of these contain pyrethrins or pyrethroids. In addition, some contain a "freezing" agent that stuns the wasps to prevent them from stinging. Be very careful if you decide to use one of these and be certain to follow label directions. Apply them at night when all of the yellowjackets are in the nest. It's best to select a cool night when the wasps will be less active. Do not attempt this method at all if you are allergic to bee and wasp stings. If a yellowjackets' nest is located inside the wall of your house, it is often better to seek help from a professional.

In the past, gasoline was often used to control ground-nesting yellowjackets. This method is not recommended, however, due to the possibility of soil contamination, destruction of vegetation, and risk of fire.

Community Integrated Yellowjacket Management

A community-wide yellowjacket control program should begin with a garbage management program. If garbage cans with swinging, wasp-proof lids are used in recreation areas and garbage dumpsters are emptied frequently and cleaned regularly, areawide spraying for yellowjackets should not be necessary. Garbage management can be supplemented with a mass trapping program. Mass trapping throughout an area will often reduce the yellowjacket population to acceptable levels if enough homeowners are willing to participate.

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