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Yellowjackets and their control

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Yellowjackets are yellow and black insects about ½-inch long (fig. 1). When found at a distance from human activity, yellowjackets should not be regarded as pests, but as colorful and beneficial parts of our insect fauna that catch mosquitoes and flies.

Yellowjackets can be life threatening to some people who have an allergic reaction to their sting. In late summer and early fall yellowjackets often keep people from enjoying parks, picnics, and other outings. More seriously, yellowjackets can be responsible for closing school playgrounds and resorts, curtailing logging operations, and interfering with fruit harvest.

Food

Adult yellowjackets do not store honey as do honeybees. They feed their larvae (developing young) meat, especially insects, and probably also nectar and honeydew (a sugary material excreted by aphids and certain other plant-feeding insects). The adults feed on the meat's juices while chewing and softening the meat for their young.

Yellowjackets attack live prey and scavenge meat from animal carcasses. Flies and other soft-bodied insects are their most common prey. For this reason, they can be considered beneficial insects. However, picnic fare such as fried chicken and soft drinks is very similar to their natural foods and may tempt them to your table.

Life history

The only members of a yellowjacket colony to survive the winter are the queens. They overwinter in sheltered locations such as under loose bark or in decaying stumps. They emerge from hibernation during the first warm days of spring, usually in April or May. Immediately after emerging, they begin to feed on nectar and insects. They also begin seeking nest sites in protected places such as abandoned rodent holes and hollow trees.

After selecting a suitable location, a queen gathers fibers of weathered wood to construct the first cells of the nest. She may also collect fibers from decaying wood or even living plants.

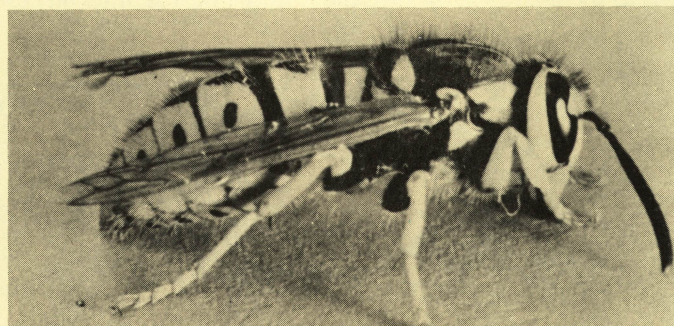


Fig. 1. Yellowjacket adult workers are normally yellow and black, sometimes white and black.

The queen nest consists of 20 to 45 cells covered by a paper envelope. The queen lays eggs in the cells as she builds them, and she forages for nectar and insects to feed the developing young.

In about 30 days, the first five to seven larvae will have developed into workers. The workers emerge and assume such duties as building nest cells and the envelope, foraging for prey and nectar, and cleaning the nest.

With the maturation of the first adult workers, the queen no longer leaves the nest. Her primary function becomes egg laying. Workers are much smaller than the queen, and under normal colony conditions they do not lay eggs. The colony grows slowly in the spring but increasingly rapidly by midsummer as successive broods of workers emerge.

In late summer, workers start building larger reproductive cells in which both males and queens are produced. When the new queens and males emerge, they leave the nest and mate. The fertilized queens hibernate. The remainder of the workers and males in the nest then die. The following spring the cycle repeats.

The nest

Yellowjacket nests can attain impressive dimensions (fig. 2). Nests the size of a soccer ball are not uncommon. This imposing size often alarms people, but a nest's aggressiveness fortunately does not match its size.

The nest is composed of two distinct sections: the thick, multilayered paper on the outside and the internal combs, which contain the cells. The paper of the nest is relatively strong and flexible. The majority of nests have three or four combs, attached one below another. Each comb contains about 2,000 cells. Yellowjackets usually build nests underground, but sometimes in protected places aboveground.

Yellowjackets build a new nest each spring and enlarge it as the colony grows. In the fall, the nest is at its largest.

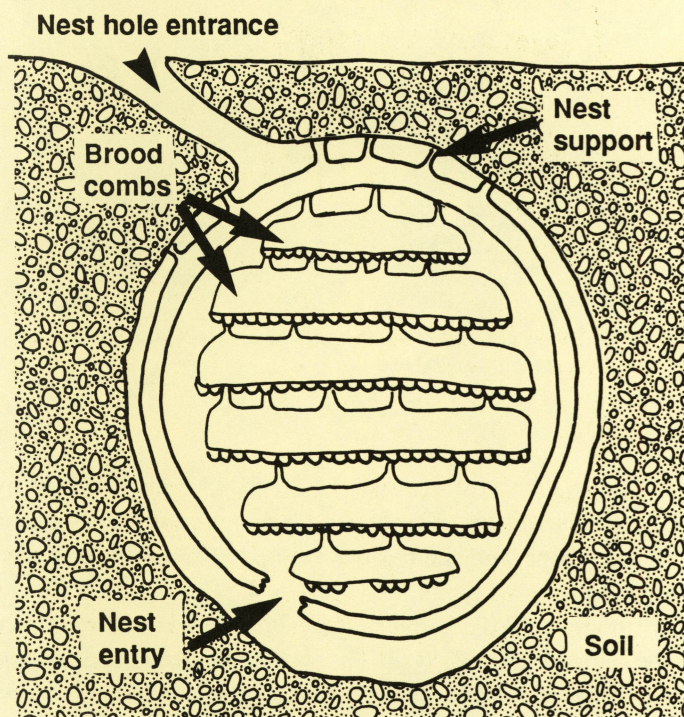


Fig. 2. Depending upon the species building them, yellowjacket nests in Idaho can range from 4 inches to 2 feet in diameter.

Locating a nest

Finding the nest may seem quite difficult, but a little time and patience will allow you to find it. First, bait the yellowjackets with cat food or tuna fish, and watch an individual that is loaded with food fly away. Then, go to where you lost sight of the insect, wait until another flies by, and repeat the process until you see the nest hole in the ground. Mark the area and come back after dark to treat the nest.

Caution around the nest is absolutely necessary; accidentally disturbing the nest or squeezing an individual will result in stings. When a colony is disturbed, masses of yellowjackets swarm from the nest to protect it. Unlike honeybees, whose stingers remain in the victim with the first penetration, female yellowjackets can sting numerous times.

Chemical control

Even though yellowjackets are beneficial insects, nests built near areas of human activity may need to be controlled. Colonies may be killed with one of several aerosol products that contain a quick knockdown insecticide such as resmethrin, DDVP, pyrethrin, allethrin, bioallethrin, tetramethrin, phenothrin, or cypermethrin. These insecticides are commonly sold in stores as a "hornet and wasp killer" and may have a special nozzle designed to propel the insecticide in a thin stream to distances of up to 20 feet.

Residual insecticides such as propoxur, chlorpyrifos, diazinon, or bendiocarb do not have the quick knockdown for daytime treatment, but they last longer than the quick knockdown insecticides.

If possible, exterminate colonies during the coolest part of the day, usually late at night or very early in the morning when the workers are least active and the maximum number is in the nest. Direct the initial spray stream into the entrance hole of the nest, then thoroughly wet the nest by pouring the insecticide down the hole. Plug the entrance. It usually takes a day or two for all the workers to die because some foraging workers do not return to the nest at night. When they do return, the insecticide rapidly kills them.

Safety precautions

When provoked, yellowjackets defend their colony with their lives. There is a good chance that they will swarm out and attack you in defense of their nest. If you decide to spray the nest, use the following safety precautions:

- Cover yourself with thick clothing, including your head, face (with netting), neck, and hands.
- Spray the nest during the coolest part of the day, usually late at night or very early in the morning.
- If you are allergic to yellowjacket stings, do not risk spraying the nest yourself. Some people react violently to the stings of bees, yellowjackets, and hornets. Symptoms can include swelling, nausea, dizziness, difficulty with breathing, and shock. Symptoms may be immediate or delayed for several hours. For most people without allergies, a sting causes pain followed by swelling and itching.
- Restrain children from throwing rocks at nests. Rock throwing not only agitates the yellowjackets but makes them much more likely to sting upon future encounters.

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