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Common Name: **Yellowjackets**

Scientific Name: **Vespula species and Dolichovespula species**

YELLOWJACKETS



Introduction. Yellowjackets receive their common name from their typical black and yellow color pattern. They are worldwide in distribution with about 16 species occurring in the United States and about 8 species in Ohio.

Recognition. Adult workers measure 3/8 to 3/4 inch long, depending on the species, with their respective queens about 25% longer. The abdomens are usually banded with yellow and black and some species with white and black. The worker abdominal color pattern is usually distinctive for each species.

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Similar Insects. (1) Baldfaced hornets, (*Dolichovespula maculata*) are mostly black with ivory-white markings. (2) European hornets, (*Vespa Crabro*) are very large (up to 1 3/8" long), and are brown, yellow and rust-colored. (3) Honey bees (*Apis mellifera*) are more hairy and the abdomen is brown and orange, not banded with yellow and black; (4) Drone flies and flower flies (Diptera: Syrphidae) may resemble yellowjackets and bees but have only one pair of wings.

Representative Species.

1. The German yellowjacket, *Vespula germanica*, occurs throughout most of the United States except in the far south. It is arguably Ohio's most abundant yellowjacket. The nests are constructed in attics, above eaves, in soffits, false ceilings, and in deep boxesills of bay windows and cantilever construction.
2. The eastern yellowjacket, *Vespula maculifrons*, is common east of the Great Plains and abundant in Ohio. The soccer ball-size nests are constructed in the ground and wall voids of buildings.
3. The common yellowjacket, *Vespula vulgaris*, is found throughout most of the United States and is less frequently found in Ohio than the German and eastern yellowjackets.
4. The aerial-nesting yellowjacket, *Dolichovespula arenaria*, is more common in the northern half of Ohio and builds an exposed paper nest (similar to that of the baldfaced hornet) in shrubs, trees and on sheltered structural surfaces.

Biology. Yellowjackets are social insects and live in colonies. The adults are represented by workers which are sterile females, queens (fertile females), and males which come from unfertilized eggs and usually appear in late summer.

Typically, only inseminated queens overwinter and do so in sheltered places. In the spring, they use chewed-up cellulose material to build up a paper carton nest of a few cells which will eventually consist of 30 to 55 cells covered by a paper envelope.

One egg is laid in each cell and the queen feeds the developing larvae chewed up insects, spiders, and nectar. After about 30 days, the first 5 to 7 workers emerge and shortly thereafter take over all the work except for egg laying. The nest will eventually consist of a number of layered paper combs (attached one below another) and are usually covered with a multi-layered paper envelope. Nest size varies from 300 to 120,000 cells, averaging 2,000 to 6,000 cells, and usually contains 1,000 to 4,000 workers at its peak. Later in the season, larger reproductive cells are built in which queens will be reared; males are usually reared in old worker cells. The colony is then entering the declining phase. The newly emerged queens and males leave the nest and mate.



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Only the inseminated queens hibernate and survive the winter. The founding queen, the workers, and the males all die.

Habits. Depending on the species, the overwintered queen will usually select either a subterranean or aerial nesting site. Most of the pest species are ground nesting. However, the German yellowjacket usually nests in buildings while the eastern and common yellowjackets occasionally nest in buildings.

Those nesting in the ground typically select areas bare of vegetation or else clear an area around the entrance. There are nest entrance guards to protect the colony. Yellowjackets are very slow to sting unless the nest entrance is approached and then they are quite aggressive. Each can sting a number of times, inflicting much pain. Some people become hypersensitive to their stings and future stings can become life-threatening. Those nesting in or on buildings are only a problem when the nest or nest entrance is located near human activity. Overwintering queens may enter the living space during the winter seeking warmth, or in the spring when they are looking for a nest site or just trying to get back outside.

Control. Yellowjackets are considered beneficial insects because their food consists mostly of pest insects and spiders. However, if their nest is located close to occupied buildings, recreational areas, or within structures, then control is warranted. During the day, a careful inspection by a Varmant Guard technician will reveal where the nest entrance is for each colony to be controlled. If it is a ground nest, then the entrance hole will be treated with an appropriately labeled pesticide dust. If the nest is located in a wall void, then the void will be treated via the entrance hole or a temporary injection port. Ideally the wall void nest area should be opened up and cleaned out to prevent future secondary pest problems and decay odor and stains.

Cultural Control & Precautionary Measures. People and pets should be kept away from yellowjacket nest entry points. Entry holes should not be closed off until the colony has been destroyed and no further activity is noticed. Only gaps through which yellowjackets gain entry to indoor living spaces should be sealed immediately, as they are discovered. If yellowjackets chew through a wall or ceiling from the nesting cavity and become a health threat to the occupants, that room or area of the residence should be evacuated and isolated pending the arrival of a Varmant Guard technician, who will remedy the situation.



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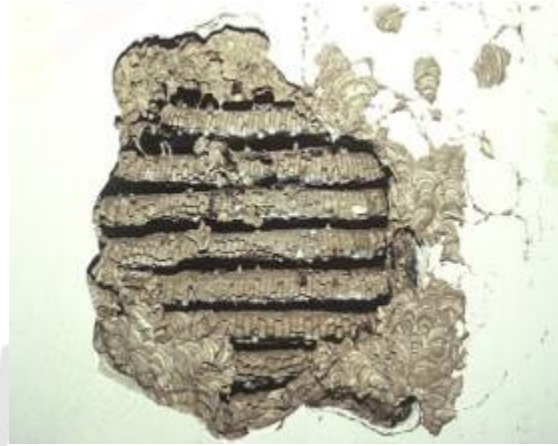
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German yellowjacket nest in attic eave.



Eastern yellowjacket nest in wall void.