

Yellowjacket Wasps

Yellowjacket wasps often become a nuisance, especially from August through October, as they build up in large populations and scavenge for human food (carbonated beverages, cider, juices, ripe fruits and vegetables, candy, ice cream, fish, ham, hamburgers, hot dogs, etc.) at picnics, cookouts, outside restaurants, bakeries, campsites, fairs, sports events and other outdoor get-togethers. Many are attracted in large numbers to garbage cans and other trash receptacles. Others fly in and out of nests built around homes, buildings and areas where people live, work and play, causing fear and alarm. Although yellowjackets are considered quite beneficial to agriculture since they feed abundantly on harmful flies and caterpillars, it is their boldness (sometimes aggressiveness) and painful stinging ability that cause most concern. Nevertheless, unless the threat of stings and nest location present a hazard, it is often best to wait for Mother Nature, with freezing temperatures in late November and December, to kill off these annual colonies. Stinging workers do not survive the winter and the same nest is not reused.

Identification

A typical yellowjacket worker is about 1/2-inch long, short and blocky, with alternating black and yellow bands on the abdomen while the queen is larger, about 3/4-inch long. (The different black and yellow patterns on the abdomen help separate various species.) Workers are sometimes confused with honey bees, especially when flying in and out of their nests. Yellowjackets, in contrast to honey bees, are not covered with tan-brown dense hair on their bodies and lack the flattened hairy hind legs used to carry pollen. **Yellowjackets have a lance-like stinger without barbs and can sting repeatedly** whereas honey bees have a barbed stinger and sting only once. Some have yellow on the face. Mouthparts are well-developed for capturing and chewing insects with a tongue for sucking nectar, fruit and other juices. Nests are built in trees, shrubs or in protected places such as inside human-made structures (attics, hollow walls or flooring, in sheds, under porches and eaves of houses), or in soil cavities, mouse burrows, etc. Nests are made from wood fiber chewed into a paper-like pulp.

Life Cycle and Habits

Yellowjackets are social wasps living in colonies containing workers, queens and males. Colonies are annual with only inseminated queens overwintering. Fertilized queens occur in protected places as hollow logs, in stumps, under bark, in leaf litter, in soil cavities and human-made structures. Queens emerge during the warm days of late April or early May, select a nest site and build a small paper nest in which eggs are laid. After eggs hatch from the 30 to 50 brood cells, the queen feeds the young larvae for about 18 to 20 days. Larvae pupate, emerging later as small, infertile females called workers. By mid-June, the first adult workers emerge and assume the tasks of nest expansion, foraging for food, care of the queen and larvae, and colony defense. From this time until her death in the autumn, the queen remains inside the nest laying eggs. The colony then expands rapidly reaching a maximum size of 4,000 to 5,000 workers and a nest of 10,000 to 15,000 cells in August

and late September. At peak size, reproductive cells are built with new males and queens produced. Adult reproductives remain in the nest fed by the workers. New queens build up fat reserves to overwinter. Adult reproductives leave the parent colony to mate. After mating, males quickly die while fertilized queens seek protected places to overwinter. Parent colony workers dwindle, usually leaving the nest and die, as does the foundress queen. Abandoned nests rapidly decompose and disintegrate during the winter. Nests inside structures will persist as long as they are dry. Nests are not used again. In the spring, the cycle is repeated. (Weather in the spring is the most important factor in colony establishment.) Although adults feed primarily on items rich in sugars and carbohydrates (fruits, flower nectar and tree sap), the larvae feed on proteins (insects, meats, fish, etc.). Adult workers chew and condition the meat fed to the larvae. Larvae in return secrete a sugar material relished by the adults. (This exchange of material is known as trophallaxis.) In late autumn, foraging workers (nuisance scavengers) change their food preference from meats to ripe, decaying fruits since larvae in the nest fail to meet requirements as a source of sugar.

The German yellowjacket first appeared about 30 years ago and has now become the dominant species over the Eastern yellowjacket. It is bold, aggressive and, if provoked, can sting repeatedly and painfully. The German yellowjacket builds a grey, brittle, papery soccer or football shaped nest in structures with the peak worker population between 1,000 to 3,000 individuals between May to November. The Eastern yellowjacket builds a tan, fragile papery soccer or football shaped nest underground with the peak worker population between 1,000 to 3,000 individuals between May to November similar to the Common yellowjacket. Nests are built entirely of wood fiber (usually weathered or dead) and are completely enclosed (football or soccer shaped) except for a small opening (entrance) at the bottom. The nest may be located below the soil or aerial with the paper envelope covering containing multiple, horizontal tiers of combs (10 or more) within. Larvae hang down in combs.

Sting Prevention

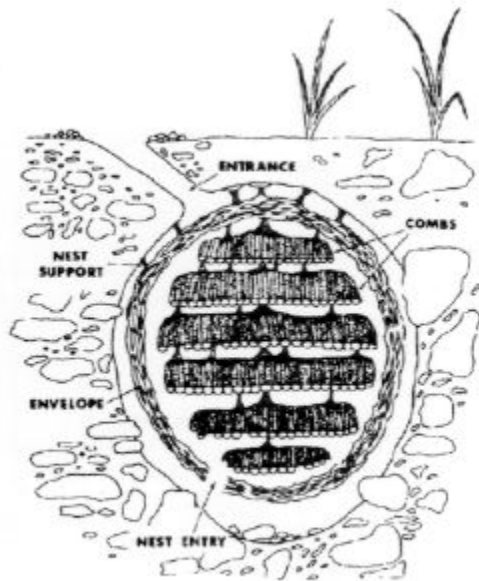
It is always best to avoid unnecessary stings. Should a yellowjacket wasp fly near you or land on your body, never swing or strike at it or run rapidly away since quick movements often provoke attack and painful stings. When a wasp is near you, slowly raise your hands to protect your face remaining calm and stationary for a while and then move very slowly (avoid stepping on the ground nest), backing out through bushes or moving indoors to escape. Wasps and bees can fly about six to seven miles per hour so humans can outrun them. However, by the time one starts running, there could quickly be a dozen or so painful stings caused by the rapid movement. There is an old saying that "one who stands still and shoots an aerial nest with a shotgun need not fear, instead it is the person that rapidly runs away who gets all the stings." **Never strike, swing or crush a wasp or bee against your body since it could incite nearby yellowjackets into a frenzied attack. Wasp venom contains a chemical "alarm pheromone," released into the air, signaling guard wasps to come and sting whomever and whatever gets in their way.** Unfortunately, many serious accidents have resulted when one runs away from attacking wasps and into the path of automobiles.

When eating outdoors, keep food covered until eaten, especially ripe fruit and soft drinks. Any scent of food caused by outdoor cooking, eating, feeding pets or garbage cans will attract many bees and wasps (especially yellowjackets in late summer and early autumn).

Pick fruits as soon as they ripen. Pick up and dispose of any fallen fruit rotting on the ground. (Overripe pears and apples on the ground attract many yellowjackets.)

Individuals should avoid attracting insects by not wearing perfume, hair spray, hair tonic, suntan lotion, aftershave lotions, heavy-scented soaps, shampoos and other cosmetics when visiting areas where bees and wasps are prevalent. Avoid shiny buckles, earrings and jewelry, bright, colored, flowery prints (especially bright yellow, light blue, orange, fluorescent red), black, wool, and loose-fitting clothing that may trap stinging insects.

Beekeepers wear light-colored (white or light tan) cotton clothing, bee gloves, bee veil, long sleeves and coveralls to reduce unnecessary multiple stings. Wear a hat and closed shoes (not sandals or barefoot). There are no jackets (clothing) impregnated with chemicals repellent to yellowjackets. Hypersensitive persons should never be alone when hiking, boating, swimming, golfing, fishing or participating in any outdoor activity since help may be needed to start prompt emergency treatment measures if stung. It is wise to carry or have an identification bracelet or necklace, such as "Medic Alert," to alert others when sudden shock-like (anaphylactic) symptoms or unconsciousness (fainting) occurs after one or more stings. Medic Alert tags can be purchased from Medic Alert Foundation, Box 1009, Turlock, California 95380 (Telephone 209-668-3333).



Underground Nest

Treatment of Stings

After being stung, immediately apply a poultice of a meat tenderizer to the wound. If the sting is not deep, this will break down the components of the sting fluid, reducing pain.

Also, a commercial prescription preparation such as ANA Emergency Insect Sting Kit and Insect Sting Kit can be used. Antihistamine ointments and tablets, taken orally, appear effective in reducing reactions to stings. However, people who are highly sensitive to stings should consider a desensitization program in an allergy clinic. Consult a physician about medical kits such as Epipen, which contains chlortrimeton (antihistamine) tablets and aqueous epinephrine (adrenalin) ready for injection, a tourniquet and sterile alcohol swabs for cleaning the injection site.