

Alternatives

A Washington Toxics Coalition Fact Sheet



Getting Along with Yellowjackets

by Philip Dickey and Ken Steffenson



Yellowjacket nests can be found in trees, underground, and in walls of homes.

Hearing a buzzing noise in the wall is never a good thing. Fearing an electrical problem that might soon erupt into flames, you can be excused for being only mildly relieved to discover instead the proverbial nest of hornets. In either case, you'll need to call for professional help, and you know what that means: money.

Most of the time, humans and stinging insects such as bees and wasps can coexist in relative harmony, each going about their business without disturbing the other. Occasionally, however, wasps may decide to build their nest inside the walls of your house or in a tree just outside your back door. A few wasps in the house from time to time go with the territory, but if twenty of them come swarming in every time you open a jar of apricot preserves, steps may need to be taken.

There are many species of bees and wasps that can sting. It's most often yellowjackets that can become pests and may need to be controlled. Fortunately, this doesn't always mean killing them.

Understanding Yellowjackets

The western yellowjacket (*Vespula pensylvanica*) and its cousin the eastern yellowjacket (*V. maculifrons*) pretty much cover the country, and each is the primary pest yellowjacket where it occurs. The western yellowjacket nests mostly in the ground, typically in abandoned mouse holes, but also will nest inside walls of houses. The aerial-nesting yellowjackets *Vespula arenaria* and *Dolicovespula maculata* do not forage as much for human food. Yellowjackets are usually black with jagged bands of bright yellow on the abdomen. They have a stocky body with a short, narrowed waist. Workers are about 1/2-inch long. *D. maculata*, the bald-faced hornet—not a true hornet, but really a yellowjacket—is largely black with a white face and two or three broken white stripes on the tip of the abdomen.

Yellowjackets are primarily beneficial insects that inadvertently pollinate flowers and help control many insect pests, including caterpillars, flies, and aphids. For this reason, you don't want to kill them unless absolutely necessary. They will, however, sometimes attack honey bees and their hives. During most of the year their numbers are small enough that human contact is limited. In late summer and early fall, yellowjackets become numerous and their foraging behavior can sometimes be problematic, especially in years with warm, dry springs. It's their appetite for protein and sweets in the form of salmon or ham, spilled soft drinks, and fruit that make them annoying, especially around dumpsters, food counters or outdoor dining areas, and playgrounds. Because of their contact with garbage and with flies, yellowjackets can carry dangerous bacteria such as *E. coli* and *Salmonella*.

Among stinging insects, yellowjackets are among the more aggressive, especially if their nest is disturbed or if they are trapped or swatted. Injured yellowjackets may emit a scent that can cause nearby friends and family—theirs, not yours—to attack *en masse*, especially if a nest is close by. Unlike bees, yellowjackets can sting repeatedly because

their stinger does not have a significant barb on the end.

The most common nesting places are underground, sometimes discovered by accident when mowing or cutting brush. Yellowjackets also will build nests in trees or in structures. Aerial nests are grayish brown and covered with a rounded papery shell with an entrance at the bottom. Often the first thing you will notice is the insects themselves, coming and going in a steady stream. By watching their flight patterns, you can usually find the nest.

How to Avoid Unnecessary Contact

If possible, it's best to just leave yellowjackets alone. A few common-sense strategies can help to avoid unnecessary encounters.

First, try to keep wasps out of the house by closing any possible entrances. Check caulking and weatherstripping around doors, windows, rooflines, and foundations. Caulk or cover any obvious openings with whatever materials you have—even duct tape works in a pinch. If you use steel mesh, be sure to use 1/8" mesh or less. If too many insects are getting indoors, install screens on doors or windows as needed. Before having a screened back door, I found that closing the door before preparing fish, meat, or sweet foods in the summer can prevent the inevitable short-term invasion in the kitchen. (Since then, we put on a screen door.)

If you are going to be outdoors in places where yellowjackets are numerous, it is best to avoid looking or smelling like a flower or a picnic. Don't wear perfumes, hairsprays, or other scents that may attract them. Avoid brightly colored clothing, such as red, light blue, and yellow or orange. White is least likely to attract yellowjackets.

When preparing or eating food outdoors, clean up spills quickly and be careful to keep garbage or unused food covered tightly. Yellowjackets tend to crawl into soft drink and beer cans and then sting when the can is lifted to drink. During yellowjacket season, avoid drinking soft drinks or beer directly from cans while outdoors. Keep soft drinks covered, and drink through straws. When shooing away yellowjackets, move slowly rather than jerkily.

Yellowjacket numbers can be greatly reduced by deploying several (perhaps four) traps around the perimeter of a deck or patio. The inverted-cone style commercial traps are quite effective. A cheaper alternative for controlling yellowjackets temporarily during a picnic is to hang a piece of meat or fish over a tub of soapy water. Like many picnic goers, the insects get greedy. They tend to pull off pieces of food heavier than they are. Weighted down with their prize, they plunge into the water and drown.

In the unlucky event that you do contact a nest or get stung near one, try not to panic—easy for me to say, sitting here at my computer—but back away slowly until you're at least eight feet away, then run like crazy. According to experts, yellowjackets fly at 6-9 miles per hour, so if you are in reasonably good condition and can run faster than that for 100 feet, do it. They rarely pursue for more than that distance.

Nest Removal

If a nest is in a location that poses unacceptable risk, it may need to be removed. Since yellowjackets only use their nest for one year and do not return to it the following season, you may decide that you can just wait it out.

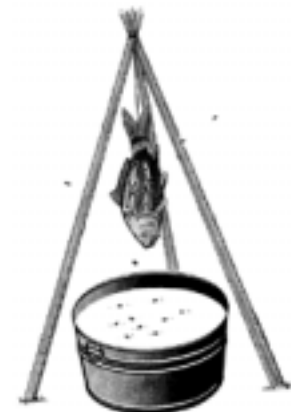
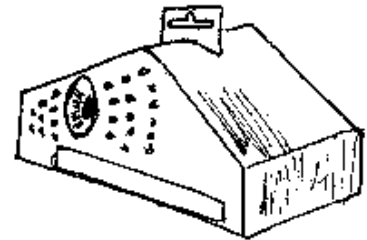
Aerial nests can sometimes be removed intact with the insects inside. Ground nests and structural nests can sometimes be vacuumed out. As a last resort, a poison can be injected to kill the nest. Nests in the walls of homes are the most problematic. These nests can be quite large, and if the insects run out of nesting space, they can actually chew through walls and swarm into the living space of your home. All of these removal activities are best done by professionals, since the risk of personal injury is high.

If any do-it-yourself readers wish to go after a nest themselves even after this warning, I would suggest first reading a more thorough article on the subject. An excellent one can be found in the Winter 1998 issue of *Common Sense Pest Control*. On the Internet, look for WSU Extension Bulletin EB0643 on yellowjackets and paper

Yellowjacket Traps



Two popular types of yellowjacket traps. Tube-shaped trap (left) lets fewer wasps escape after first few hours. Also, fewer wasps escape if traps are baited with meat than if sweet materials are used. Traps should be put in the freezer for several hours before opening to rebait.



One of the most effective traps to use at a picnic. Yellowjackets bite off more than they can carry and drop to the water from the weight. Source: WSU Extension Bulletin EB 0643.

wasps at <http://cru.cahe.wsu.edu/CEPublications/eb0643/eb0643.html>.

Nest removal is quite a bit like bank robbery: it's critically important to plan your strategy carefully and know what you are going to do if things start going wrong. Protective clothing is not optional, it's essential. It's also useful to know important little details such as the fact that underground nests are likely to have more than one entrance. On a cool day or at night, all of the occupants will be at home and relatively docile, but that can change quickly if you bungle the job.

Some pest control companies may be willing to physically remove certain accessible nests, and attempt vacuuming others. Trey Shelton of Pest Control Northwest told us that ground nests can be vacuumed, but they would usually require two visits to complete the job. This is because many of the worker yellowjackets will be out of the nest when the first vacuuming is performed and will return and attempt to rebuild their ranks.

Another option is to put the critters to a beneficial purpose. Doug Cheney can vacuum out aerial nests and those in the ground, and he then sells the collected yellowjackets to a pharmaceutical company. There the venom is extracted and used to make medications for people allergic to wasp stings. Cheney is only available in the Puget Sound area. There are times when he can't sell the venom and must then charge for wasp removal services. He is especially busy in the peak yellowjacket season of June through September. See the box at left for contact information. If you live elsewhere, check the Yellow Pages or Internet for similar services.

Seattle Area Resources

Douglas Cheney does least-toxic removal of wasp nests. See text for more information. Cheney's number is 425-485-0103.

Puget Sound Beekeepers Association maintains an extensive list of beekeepers who can remove swarms of bees (honey bees only) for free, provided the bees are not too embedded in structures. The list is available on their website: <http://www.psbees.org/swarmlst.htm>

Chemical Control

Judging from the plethora of wasp and hornet sprays on the market, you might think that these products are easy to use and the best way to solve a yellowjacket problem. Well, just because the can says it can spray up to 20 feet, doesn't mean you're going to be able to hit the nest from that distance when your hands are shaking. Nuking a wasp nest at midday, when half of the foragers are out foraging, can mean that you will have a bunch of really angry yellowjackets on your hands (and your face and arms). The three most important rules to remember if you decide to spray the nest are:

1. Do it in the evening when the wasps are inside and more docile
2. Wear protective clothing
3. Don't plug the hole. You want any stray wasps to go inside so they will contact the poison.

Even when following these steps, however, there is risk of being stung.

Several of the chemicals available in the past for wasp control have been taken off the market or are rarely used now. Chlorpyrifos has been identified as a risk to children's health and is no longer available for home use. Most wasp products today are made from pyrethrins, pyrethroids, or a combination of the two. Pyrethrins are insecticides derived from dried flowers of a kind of chrysanthemum. They are potent neurotoxic insecticides and have the advantage of a short lifetime in the environment. Their function in wasp killers is basically to knock the wasps senseless long enough for the more persistent ingredients to finish them off. This is important with flying insects that might otherwise escape before encountering a lethal dose. Pyrethroids are synthetic insecticides that typically last much longer than natural pyrethrins. Some are suspected carcinogens or reproductive toxicants. Both groups of chemicals are extremely toxic to fish, but contact with water should be unlikely in wasp control unless the nest is located near water. Avoid using a pyrethrin/pyrethroid spray if there is any chance that a poorly aimed spray could end up in the water.

Recently, some new wasp control products based on plant oils have been introduced. Victor® Poison-Free™ Wasp & Hornet Killer is based on mint oil. This product is exempt from EPA registration because all of the active and inert ingredients in the product are on EPA's list of minimum-risk pesticides. (To qualify for this exemption, all ingredients must also be listed on the product label.) EPA created the exemption to reduce the regulatory burden and to promote development of "more natural and benign

methods of pest control.” Although exempt products may have some hazards, EPA has stated that “use of these pesticides poses insignificant risks to human health or the environment.”

Another new ingredient for wasp control is eugenol, a natural oil found in many plants and a major constituent of clove oil. Eco PC Jet Contact Insecticide uses eugenol and 2-phenethyl propionate as active ingredients. Although both ingredients are on EPA’s exempt list, the product does contain additional ingredients not listed on the label and is a registered pesticide. Eco PC products are intended for professional pest control operators and are not sold to the public.

If you decide to purchase a wasp killing product, you might consider the Victor product. We have no scientific information yet on its effectiveness in the field, but one of our staff successfully eradicated a ground nest using the product. ■

Disposal of Pesticides

If you have pesticides, including wasp and hornet sprays, that you no longer intend to use, they should be taken to a household hazardous waste collection site. These products should not be put in the trash unless empty. Statewide in Washington, call the Department of Ecology’s toll-free number 1-800-RECYCLE or your local health department or solid waste agency for instructions. In Seattle or King County call the Health Department’s Hazards Line at 206-296-4692 or 888-TOXIC-ED.

For Further Reading

Akre, R. and A. Antonelli. *Yellowjackets and Paper Wasps*, WSU Cooperative Extension Bulletin EB 0643. (<http://cru.cahe.wsu.edu/CEPublications/eb0643/eb0643.html>)

Olkowski, W. and H., S. Daar. *Common Sense Pest Control*. The Taunton Press, Newtown, CT. pp. 650-662.

Stein, D. *Dan’s Practical Guide to Least-Toxic Home Pest Control*. Book Publishing Company, Summertown, TN. 1994.

The Washington Toxics Coalition is a non-profit organization dedicated to protecting public health and the environment by preventing pollution. Please write or phone for information: WTC, 4649 Sunnyside Ave N, Suite 540, Seattle, WA 98103. Phone: 206-632-1545. Visit our Internet Web site at www.watoxics.org.

Yellowjacket Don’ts

- ❖ **Don’t** kill yellowjackets that aren’t bothering you.
- ❖ **Don’t** wear perfume, hair sprays, or other scents to picnics or on hikes.
- ❖ **Don’t** wear brightly colored clothing, especially bright yellow, light blue, orange, and fluorescent red in yellowjacket areas.
- ❖ **Don’t** try to remove nests yourselves if you are allergic to stings.
- ❖ **Don’t** try to kill or remove a nest without proper equipment.
- ❖ **Don’t** pour gasoline or motor oil into underground nests.
- ❖ **Don’t** try to deal with a nest during the daylight.
- ❖ **Don’t** leave garbage cans uncovered. Make sure lids fit well and can is washed out periodically.
- ❖ **Don’t** throw rocks at yellowjacket nests.
- ❖ **Don’t** stand upwind of a yellowjacket nest with a ham sandwich or a piece of salmon.

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