



Yellowjackets, paper wasps & bald-faced hornets

Yellowjackets, paper wasps, and bald-faced hornets are types of social wasps (living in colonies) that can be a nuisance in the Pacific Northwest. Despite their stings, wasps are considered beneficial insects because they capture huge quantities of flies, caterpillars, and other insects to feed their young. Bees, which are not wasps, are also beneficial insects because they pollinate plants while feeding on flower nectar. Bees are typically not aggressive, so their nests should be encouraged and not be disturbed.

The steps to take to handle wasp nests are the same for yellow jackets, paper wasps and hornets, but they should only be controlled when absolutely necessary. Thurston County's wasp control approach focuses on nests, and not individual wasps. Nests are used for one season, so if it is possible, place a warning sign near it and avoid the nest area until after a hard frost when the colony will die and no control efforts are needed.

Description: Yellowjackets, paper wasps, and bald-faced hornets live in colonies, each having one nest per year. Each colony produces males and new queens which mate in the fall. After mating, only the new queens hibernate and the workers, males, and the old queen die with the first frost. In spring, a solitary queen emerges from hibernation, builds a small nest and raises the first generation of workers. After these workers emerge, they collect food while the queen lays eggs. The larvae are fed pre-chewed insects caught by the adult workers, while the adults feed on nectar and fruit pulp.



Yellowjacket wasps (*Vespula germanica*) look smooth, shiny, and have bright yellow and black markings on the sides of the head, thorax, abdomen, and legs. They are stout and fly with their legs close to the body. Along with eating insects, they are also scavengers and can be pests at barbecues, picnics and near garbage cans. Yellowjackets build paper covered nests in wall cavities, in tree branches, and in the ground (the hardest to locate), which can be home to thousands of wasps.



Paper wasps (*Polistes dominulus*) are similar in appearance to yellowjackets, although they typically appear darker. They are also more slender and have longer legs than yellowjackets that hang down when they fly. Paper wasps build small paper comb nests that are not enclosed in a papery covering and house about 250 wasps. Their nests hang upside down by a small stem, lending them the occasional name of umbrella wasps.



Bald-faced hornets (*Dolichovespula maculate*) are mostly black with white patterns on the face, first antennal segment, and posterior tip. They build large nests covered with a thin papery envelope that is easily torn to release many angry wasps ready to defend their home. Nests are found in trees, lower shrubs, or attached to buildings and are about the size of a basketball by the end of the summer.



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Impacts:

While yellowjackets are considered beneficial insects, they can become a problem by late summer, not only when defending a nest, but also as they may be aggressive away from the colony. Some evidence suggests that drier weather in the late summer and early fall results in more aggressive yellowjackets. Paper wasps and bald-faced hornets will also defend a disturbed nest. All three wasps have stingers without barbs (hooks) allowing them to sting repeatedly. Insect stings can cause a life-threatening, allergic reaction in some individuals. Nest control or removal by anyone with a known allergy to insect stings is not recommended.

Control Options:

Thurston County's integrated pest management emphasizes cultural, biological, and manual control methods to keep pests and vegetation problems low enough to prevent damage. When chemical control is considered, the least toxic product is recommended when no other control methods would be effective or practical.

► Cultural / Habitat

Take measures not to attract wasps; remove outdoor food sources, cover garbage cans tightly, bury fruit and table scraps deep in compost piles, and clean barbeques promptly after each use.

The easiest and best alternative to leaving a nest alone is to call a nest removal professional that can use the venom for medications. These experts use specialized vacuums to remove the wasps and take them away alive. Businesses that remove wasp and bee nests for free serving western Washington (as of 2010) include:

- Mike Juhl serves the counties of: Thurston, Mason, Grays Harbor and parts of Pierce and Lewis. Contact Mike at (360) 866-1834 or www.hornetnestsfreeremoval.com
- Doug Cheney serves the counties of: Snohomish, King, Kitsap and northern Pierce. Contact Doug at (425) 485-0103

► Biological

There are currently no known biological controls that have proven effective in controlling wasps.

► Chemical Techniques

Hiring a professional pest controller is recommended if the nest is located in an area where wasps may enter the home during or after chemical treatment (attics, crawl spaces, etc.). Underground nests are best dealt with by a nest removal professional (manual control) or a professional pest controller (chemical control).

Some of the least toxic and least hazardous wasp control products are classified by the EPA as "minimum risk pesticides". All of these products for wasp control are "contact" insecticides, which means the wet solution must come into contact with the wasp for it to be affected. Since wasps that are not directly sprayed will not die, including the ones that fly from the nest while you spray it, repeat applications may be required to kill all the wasps. Contact insecticides are not recommended for underground nests because wetting the entire nest would likely be impossible.

Using insecticides on nests requires protective clothing and eyewear, both to protect from stings and to protect from the insecticide.

Identify or create a quick-escape route before you begin. Follow all the directions on the insecticide label.

- Chemically controlling nests is safest on a cool night when most wasps are in the nest and moving slower.
- Generally the spray is directed into the nest opening and sprayed until the entire nest is wet.
- Yellowjackets may be attracted to the light of a flashlight, so use a red covering over the light if needed.
- Do not cover up or fill in the holes to a nest.
- Watch for returning wasps and reapply product until they are all gone.

The minimum-risk wasp sprays available in Washington State contain the following active ingredients (ask your local retailer for product availability):

- Rosemary oil and peppermint oil
- Rosemary oil and phenyl propionate
- Mint oil and sodium lauryl sulfate

READ AND FOLLOW ALL LABEL PESTICIDE DIRECTIONS AND RESTRICTIONS. All chemical control products can cause harm if not used properly.

Timing: Consider placing yellowjacket traps out in spring to capture and prevent yellowjacket queens from establishing nests. In early summer, look under eaves and in high use areas for wasp nests and remove any nests in unacceptable places while they are still small. In late summer re-bait yellowjacket traps and look again for nests, especially before doing any brush removal or outdoor home repair projects.



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