

● ALTERNATIVES

# PESTICIDE-FREE SOLUTIONS TO YELLOWJACKET PROBLEMS

By CAROLINE COX

It's hard to like yellowjackets. They sting, cause violent allergic reactions in some people, harass picnickers, and have a knack for causing trouble at the wrong time. They seem persistent, clever, and difficult to manage. This doesn't mean, however, that reaching for a spray can is a good way to deal with a yellowjacket problem. Pesticide-free techniques are surprisingly effective.

If you need convincing that pesticides aren't necessary when coping with these feisty wasps, consider what happened at the Waterfront Park baseball stadium in New Jersey. One summer the stadium was infested with hordes of yellowjackets; some fans even left games early just to escape them. The stadium hired a pest control company to deal with the pests in a nonpoisonous way. Several hundred traps, and some innovative baits later, the stadium was emptied of 70,000 yellowjackets. It took just five days to get rid of most of them, and bring back a comfortable game for the fans.<sup>1</sup>

## What Is a Yellowjacket?

Yellowjackets, sometimes known as hornets, are wasps that are black and yellow or white.<sup>2</sup> Common pest species in the Northwest are the western yellowjacket, the common yellowjacket, and the German yellowjacket.<sup>3</sup>

A wasp that is commonly mistaken for a yellowjacket is the paper wasp. They are longer and more slender than yellowjackets,<sup>3</sup> and are usually unaggressive.<sup>4</sup> Their nests are a single comb, and not surrounded by a paper envelope.<sup>3</sup> For information about paper wasps, see JPR 22(2):10-11 or www.



Caroline Cox is JPR's editor.



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pesticide.org/ <http://www.pesticide.org/BeesWaspsControl.pdf>.

## Yellowjacket Nests

All yellowjackets build paper nests that are completely surrounded by a paper envelope. Most yellowjackets nest underground. They often use burrows made by rodents or other natural openings as nest sites. The German yellowjacket likes to nest inside walls of houses. There are two kinds of yellowjackets, the aerial yellowjacket and the bald-faced hornet, that hang their nests from trees or building eaves.<sup>3</sup>

Most yellowjackets defend their nest vigorously, and being near a nest means you're likely to get stung.<sup>4,5</sup> Typically, the ground-dwelling yellowjackets are the most aggressive, while those that nest above ground are somewhat less touchy.<sup>4</sup>

## Yellowjackets are Important

Yellowjackets feed their young large numbers of insects that might otherwise damage trees or crops. They also feed their young houseflies, lots of them.<sup>3</sup> What this means, according to the University of California, is that they "should be protected and encouraged to nest in areas of little human or animal activity."<sup>4</sup> If you find yellowjackets in a place where people and pets are unlikely to get close, it's a good idea

to just let them be.<sup>5</sup>

## Seasonal Behavior

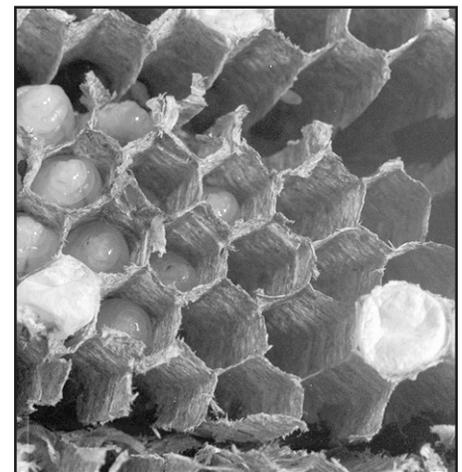
Most yellowjackets die with the first frost in the fall. The nest is abandoned and typically not used again. Only the queens find a protected spot to spend the winter. In the spring, the queens build new nests and begin laying eggs which hatch into worker wasps. All summer the number of workers increases. By the end of summer there can be thousands of yellowjackets in a nest. This is typically when the yellowjackets are most troublesome.<sup>3</sup>

## Preventing Yellow Jacket Problems

If you're expecting yellowjacket problems, there are some simple steps you can take to reduce or eliminate them.

First, don't provide these scavengers with food or drink. If you have a meal outside, keep the food and drink covered as much as possible. If you feed your pets outside, keep the pet food covered.<sup>4</sup> Keep a tight lid on garbage cans.<sup>6</sup> Eliminate any standing water.<sup>6</sup> The Sacramento-Yolo Mosquito and Vector Control District calls this kind of sanitation "the most effective method of controlling foraging adults."<sup>6</sup>

Next, try to avoid behavior that attracts yellowjackets. Avoid perfume, hair spray, or other scented body care products. Don't wear bright red, orange, or yellow clothes. Yellowjackets seem to be attracted by these colors.<sup>3</sup>



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Inside a yellowjacket nest.

Finally, you'll want to avoid taking action that angers yellowjackets. Stay away from their nests as much as possible.<sup>4</sup> Don't swat at yellowjackets that approach you since this can provoke them to sting.<sup>4</sup> Don't let children throw rocks or other items at nests.<sup>3</sup>

### Trapping Yellowjackets

Traps can be an effective, pesticide-free technique for managing yellowjackets. Trapping experts have some tips for making this technique work well:

- Traps can either be purchased or homemade. Examples of sources for commercial traps are <http://www.yellowjackettraps.com>, <http://www.rescue.com>, and <http://saferbrand.com>. They are widely available at garden and hardware stores.
- Homemade traps are usually made from a five gallon bucket. Fill the bucket with soapy water and hang a protein bait a couple of inches above the water. You can put a wide mesh screen over the bucket and bait so that pets or other animals don't eat the bait.<sup>4</sup> The yellowjackets grab a piece of the bait too heavy to fly with, then fall down, get trapped in the water, and drown.<sup>3</sup>
- Using the right bait in a trap is critical. Protein baits are most effective in the spring and summer. The foraging yellowjackets need the protein in order to feed their young.<sup>7</sup> According to Gerry Wegner, technical director for a pest control company, most professionals agree that canned white chicken meat is the most successful protein bait, preferred over pet food and fish.<sup>7</sup> Lunch meat is also a successful protein bait.<sup>4</sup>
- In the late summer and early fall, the yellowjackets prefer sweet baits. Gerry Wagner has found that carbonated beverages like root beer, orange soda, and citrus soda are most effective.<sup>7</sup> The highly successful trapping program at the Waterfront Park baseball stadium used a mixture of beer and diluted Italian soda syrup.<sup>1</sup> Commercial baits are also available.<sup>5</sup>
- There are several ways to kill wasps after they're trapped. You can put traps in the freezer or put them inside a plastic bag in the hot sun for

several hours. You can also submerge them in a bucket of soapy water.<sup>2</sup>

- Traps need to be emptied and refilled with bait at least weekly.<sup>7</sup>
- If you're trapping to reduce yellowjackets at an event, start trapping at least two weeks before the event.<sup>7</sup>
- Trapping queens in the spring can reduce the number of nests later in the season.<sup>4</sup>

### Removing a Nest

Removing a nest is a chore that should be tackled only by professionals with expertise in working around stinging insects and protective clothing.<sup>2</sup> Aerial nests can be removed at night by enclosing them in a plastic bag and pulling them loose.<sup>8</sup> Other kinds of nests can be vacuumed out.<sup>2</sup> Some companies provide this service inexpensively because they sell the wasps as a source of venom to pharmaceutical companies.<sup>2</sup>

### If You Think Pesticides are Necessary

NCAP does not recommend the use of pesticides. However, we recognize that you may feel that you have no other options. If you feel that yellowjacket pesticides are necessary, consider using one of the products that the U.S. Environmental Protection Agency has classified as minimum risk pesticides.<sup>9</sup> For examples, see <http://www.saferbrand.com>, <http://www.bioganic.com>, or <http://www.ecosmart.com>. These "minimum risk" products do not have



A German yellowjacket nest hanging under a roof.

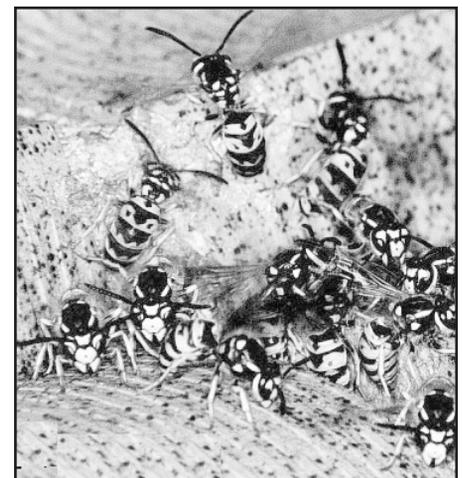
a registration number and identify all ingredients on the labels of the products.<sup>9</sup>

### Summary

Although they are useful insects, yellowjackets can also be a painful pest. You can solve your yellowjacket problems without pesticides by reducing attractive food or drink and trapping when necessary. ♣

### References

1. Goldstein, M. 1996. Program hits home run. *Pest Control* (August):44-46.
2. U.S. EPA. Office of Pesticide Programs, Undated. IPM for schools: A How-to manual. Chapter 19. IPM for yellowjackets and hornets in schools. <http://www.epa.gov/pesticides/ipm/schoolipm/chap-19.pdf>.
3. Landolt, P.J. and A.L. Antonelli. 2003. Yellowjackets and paper wasps. Washington State Univ. Cooperative Extension Publ. EB0643. <http://cru.cahe.wsu.edu/CEPublications/eb0643/eb0643.pdf>.
4. Univ. of California. Agriculture and Natural Resources. 2001. Yellowjackets and other social wasps. *Pest Notes* Publ 7450. <http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7450.html>.
5. Oregon State Univ. Extension Service. 1995-2006. Garden hints: Life's a picnic for yellow jackets this time of year. [http://extension.oregonstate.edu/news/story.php?S\\_No=124&storyType=garden](http://extension.oregonstate.edu/news/story.php?S_No=124&storyType=garden).
6. Sacramento-Yolo Mosquito and Vector Control District. Undated. Vector information. Information about vectors: Mosquitoes, yellowjackets, wasps, bees, spiders, rats, etc. Frequently asked questions about yellowjackets. <http://www.fightthebite.net/vectors/yellowjackets.php>.
7. Wegner, Gerry. 2003. Yellowjacket IPM: A baiting and trapping strategy works, if you time it right. <http://www.pestcontrolmag.com/pestcontrol/article/articleDetail.jsp?id=61907>.
8. Sugden, E.A. Undated. Managing yellow jackets in the Puget Sound region. <http://courses.washington.edu/insects/454Students/Resources?WASPS.htm>.
9. 40 *Code of Federal Regulations* 152.25.



Yellowjackets crowding around the entrance to their nest.

Univ. of Nebraska-Lincoln Entomology Dept.