

Yellowjackets of Marin and Sonoma Counties

FAQs

1. What is a yellowjacket?

- **Easy answer:** Yellowjackets are aggressive, stinging wasps that are yellow and black.
- **More detail:** The term “yellowjacket” is a colloquial name (not a scientific classification) generally referring to an aggressive, stinging wasp with a yellow and black banded abdomen. These highly social wasps build large nests with a paper covering. There are several local species that fit this description— all are members of the insect Order Hymenoptera, Family Vespidae, and most are members of the genus *Vespula*. Yellowjackets are not actually bees, even though people often call them “meat bees”.

2. What is a wasp?

- **Easy answer:** Wasps are stinging insects that are related to bees and ants. Many have a thin or “thread-like” waist.
- **More detail:** Wasps are broadly described as flying, stinging insects from the Order Hymenoptera that have a slender/constricted “waist” and are not bees or ants. A lengthy description would be needed to differentiate between the several families of wasps and other closely related members of this Order. Individual wasp species vary greatly in social habits, body size, body markings, diet, behavior, and nesting habits. Unlike honey bees, most wasps feed their young food derived from animal material (insects and spiders are common prey items for many wasps). Many wasps are considered beneficial because they prey upon or parasitize other insects.

3. Are all yellowjackets wasps? Are all wasps yellowjackets?

- **Easy answer:** All yellowjackets are wasps, but there are many wasps that are not yellowjackets.

4. What’s the difference between yellowjackets and honey bees?

- **Easy answer:** Yellowjackets are more aggressive than honey bees and will gather food people were planning on eating, like hamburgers and hot dogs. Honey bees get their food from plants and will usually leave you alone if you leave them alone.
- **More detail:** Yellowjackets are wasps and honey bees are not. Both groups are members of the insect order Hymenoptera and do share a number of obvious similarities (like the females’ ability to sting), but there are a number of important differences:
 - Most wasps (including yellowjackets) feed their young from animal sources (such as other insects or meat), while bees feed their young from plant sources (such as pollen and honey).
 - Most bees (unlike wasps) have body hairs specially adapted for collecting pollen, and tongue-like mouthparts adapted for sucking up nectar. Yellowjackets can use their mouthparts to “drink” nectar from flowers, but are also able to use their strong mandibles to chew and tear up food and even small pieces of wood from which they construct their nests. Yellowjackets are not adapted for collection of pollen.
 - Yellowjackets build their nests from material derived from wood, while honeybees secrete wax from which they construct cells to lay eggs and store honey.
 - Honeybees make honey, yellowjackets do not.
 - Honeybee colonies can persist for several years, while yellowjacket colonies typically die out each fall/winter.

5. What is a hornet?

- **Easy answer:** There is a type of wasp called the bald-faced hornet that common in Marin and Sonoma Counties. It is white and black and usually builds large nests high up in trees. Bald-faced hornets can sting, but usually do not

forage for food at picnics, lunch areas, etc. Instead, they hunt for other insects and will even attack and eat large numbers of yellowjackets.

- **More detail:** True hornets are wasps from the genus *Vespa*. The European hornet (*Vespa crabro*) was introduced into New York in the mid-1800s and has become established in the northeastern United States, but not in California. The bald-faced hornet (*Dolichovespula maculata*) is common locally, and makes large, conspicuous aerial nests, but is not a true hornet. This is an example of how use of common names for insect identification (instead of scientific names) can be confusing and misleading.

6. Are some kinds of yellowjackets more dangerous than others?

- **Easy answer:** Although all yellowjackets can be dangerous, ground-nesting yellowjackets cause more problems than yellowjackets that nest high up in trees.
- **More detail:**
 - All female yellowjackets can sting, so all yellowjackets should be considered potentially dangerous. Some people are very sensitive to stings, and even one sting can be a serious health threat to those individuals.
 - The Marin/Sonoma Mosquito & Vector Control District (MSMVCD) considers ground-nesting yellowjackets to be especially dangerous because they can be very aggressive, sting repeatedly, and build large colonies that are often hidden underground. Ground-nesting yellowjackets forage for food from humans at picnics, BBQs and outdoor lunch areas, so interactions with humans are common. Because their nests are often hidden underground, people often accidentally disturb nests (while gardening, hiking, etc.) and are immediately attacked.
 - Although aerially-nesting yellowjackets can sting, they are usually not as aggressive as ground-nesting species when left undisturbed. Unlike ground-nesting species, they typically do not forage for food at picnics, BBQs and outdoor lunch areas. Additionally, their nests are less likely to be accidentally disturbed because they are usually located up high. MSMVCD does not control aerial-nesting yellowjackets or other aerial-nesting wasps.

7. How do I find a ground nest (without stepping on it)?

- **Easy answer:** Don't encourage kids to go looking for active nests, but do encourage kids to be on the lookout for nests.
- **More detail (for adults):** A good time to survey an area for ground nests is in the morning when many of the yellowjackets make a series of short "orientation" flights. During this time, yellowjackets fly very short distances around the nest so they can remember the nest location. While searching an area for nests, methodically and slowly walk through the entire area that you have access to, constantly scanning for any movement/activity. If it is early in the spring, nests will likely be very small with few workers, and therefore it may be very difficult to detect the nest location.

8. What should I do if I find a ground nest in Marin or Sonoma County?

- **Easy answer:** Move away from the nest, and tell a responsible adult right away.
- **More detail: (for adults)** If you locate a ground nest, clearly mark the area (with a flag, cone or some other obvious object) and call the District at 800-231-3236. Do not place anything directly over the entrance and keep people and pets away from the nest. If you mark the location of the nest, District staff will eliminate the nest free of charge. It is important to note that occasionally, species that typically nest underground will nest above ground in structures, vegetation, or other enclosed areas that provide suitable cover. The District only eliminates easily accessible, underground nests and does not remove nests located in structures. Some private pest control companies will perform structural removal of yellowjackets for a fee.

9. Is it ever necessary to remove aerial wasp nests?

- **Easy answer:** Sometimes these nests have to be removed so that people do not get stung.
- **More detail:** Even though aerially-nesting wasps are generally considered beneficial insects, residents may determine that a nest needs to be removed if it is built in a location that increases the likelihood of people accidentally disturbing the wasps (such as near a door, window, walkway or other high-traffic area). MSMVCD does not remove aerial nests, but some private pest control companies will remove these nests for a fee.

10. Are there male yellowjackets?

- **Easy answer:** Yes.
- **More detail:** All workers are females, and most encounters with yellowjackets are with workers when they forage or defend their nest. Male yellowjackets do exist, but are less likely to be seen by the casual observer because they do not leave the safety of the nest until late summer or fall when they search for a mate. Males do not forage for food or nesting materials, do not have a stinger, and die shortly after mating.

11. What does the queen do?

- **Easy answer:** The queen's main job is to lay eggs.
- **More detail:** After mating in the fall, queens find a sheltered location to spend a quiescent winter. In the spring, queens choose a site to build a nest, gather nesting materials, begin construction of the nest, lay eggs, care for young, and even defend the nest from other intruding queens. Once some offspring grow into adult workers, a queen's primary role shifts to laying eggs and preventing her workers (daughters) from laying eggs. After a queen mates in the fall, she stores the acquired sperm for the rest of her life, and uses it as needed. Fertilized eggs will develop into females, while unfertilized eggs develop into males (males are not produced until later in the summer). Queens constantly attempt to prevent workers from laying eggs (it is thought that pheromones have an important role in this). Yellowjacket workers have not mated and therefore can only produce unfertilized eggs which will develop into males. If queens cannot prevent workers from laying eggs, there will be an over-abundance of males, and the colony will suffer because males do not forage and cannot defend the nest.

12. What happens to the nest? Will it be re-used in the following year?

- **Easy answer:** The nest will be abandoned in the fall when the colony naturally declines. Nests are generally not re-used.
- **More detail:** Towards the end of the summer or fall, queens will begin to lay eggs that will develop into males and queens. At this point in time, the nest may have become so large that the queen can no longer effectively maintain reproductive control over her daughters (workers), and many males may be produced (the unmated workers can only produce eggs that will develop into males). With so many mouths to feed, and declining food resources, yellowjackets may become extremely aggressive. The colony has now begun to decline. If the nest is underground, the fall rains will eventually destroy the colony, and it generally will not be re-used the following year. Males and newly emerged queens will leave for their mating flight before the colony is destroyed.

13. Do nests ever survive the winter?

- **Easy answer:** In Marin and Sonoma Counties, most yellowjacket nests do not survive the winter. In other parts of the world where winters are very mild, it is more common for yellowjacket nests to survive for more than one year.
- **More detail:** If the nest is constructed within a structure or other protected location where it is not flooded or frozen, and if food sources are available throughout the winter, the nest may become perennial and grow to enormous size. Perennial colonies have been found that were home to multiple queens and hundreds of thousands of workers.

14. Are there any local animals that eat yellowjackets?

- **Easy answer:** Yes. Skunks are known to dig up and consume yellowjacket larvae, often destroying the nest in the process. Sometimes nests that have been visited by skunks are not completely destroyed, and the remaining yellowjackets may become very agitated and aggressive. Other larger insects (such as bald-faced hornets) are known to attack and eat yellowjackets. Some birds may also consume yellowjackets.

15. How far do yellowjackets fly from their nests?

- **Easy answer:** Yellowjackets usually forage less than ¼ mile from their nest, but they can fly farther if they need to.
- **More detail:** According to one study, approximately 80% of western yellowjacket (*Vespula pensylvanica*) workers foraged within 1100 feet of the nest, and 95% foraged within 1800 feet. Western yellowjackets are extremely common in Marin and Sonoma counties.

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