

## **THE FAMOUS AND THE INFAMOUS: BEES AND WASPS AND WHY THEY STING**

Susie Quinlan Hill, Frederick County Master Gardener

Two years ago my son made a confession. “Mom, when you start talking about nature stuff my eyes fuzz over”. While I appreciated his honesty, the nature lover in me regularly overrides his opinion of my monologues. For example, Grady and his friend Maceo were recently in the back seat of my car when I overheard Maceo telling a story. I tuned in just as he was saying that he has a friend who got stung in the throat when a bee got into his can of soda. I disregarded Grady’s opinion completely and launched into an explanation of the difference between bees and wasps and what provokes them to sting.

There are many kinds of bees, both solitary and social. Bees tend to be non-aggressive and will only sting if provoked or in defense of the hive. They avoid using their stingers because using the stinging apparatus will pull out a female’s guts if she has to use it. The stinger is what a female uses to lay eggs, her ovipositor. Obviously, that means that males cannot sting.

My husband was a beekeeper for fifteen years. In all that time, I was never once stung while minding my own business in the yard. Vibrating or threatening the nest is a different matter completely. Honeybees will sting in defense of their colony. I once dropped a box of bees with a most unpleasant ending for myself. I also found that opening the hive and stealing honey when I wasn’t feeling calm was a good way to get stung. These situations are the exception and most people find that a honeybee is a relatively docile creature that is famous because of its contribution of honey and its ability to effectively pollinate large quantities of food crops.

I heard Grady groan. He was probably rolling his eyeballs in his head too. “Grady- be quiet. What your mom is saying is interesting,” Maceo corrected him, compelling me to continue.

Unlike bees, female wasps have a pointed stinger that can be used more than once. There are many wasps that are important bio-control agents in agriculture and are virtually unknown because they are solitary and non-aggressive. There are, however, more than one type of wasp that nest where the hives can potentially be disturbed, creating a situation where stings are more likely to occur. These include the solitary paper wasp and social wasps; yellow jackets, bald-faced hornets, and European hornets. There is a sound reason that commonly known wasps are infamous.

Paper wasps are an example of a solitary wasp. They build circular open nests, usually under eaves. Recently, however, I had one building a nest inside my mailbox. I didn’t realize it until my seventeen-year old, Katy, dropped the F-bomb in rapid succession after trying to get the mail. If my mail carrier and I didn’t have to open the mailbox I would most definitely leave it alone.

Since the nest would regularly be disturbed I decided to remove it, first killing the female who was building the nest with a bee and wasp spray. I dislike having to do that for two reasons. First, spraying aggravates the insects before they die. Second, The spray is a neurotoxin called an acetylcholinesterase inhibitor. I think the word is cool but not its effects. Essentially, the chemical prevents stimulating nerve signals from shutting off and causes insects to seize to death. When I have a paper wasp in my mailbox, I don’t mind that part so much. What I do mind is inhaling the toxin myself. The nerve poison affects

humans in the same way as insects but it would require a much larger dose of the spray for me to fall to the ground in a seizure. I prefer to inhale perfume.

While I find the potential of a sting from a paper wasp intimidating, it is the social wasps that are infamous amongst the general public. Of these, the yellow jacket is most well-known because they show up at picnics when they are foraging for carbohydrates. Individuals will not sting unless they feel threatened, as in the case of Maceo's friend, where a yellow jacket found itself riding a soda wave into someone's stomach. To avoid stings, individual wasps, whether they are eating your pie of gathering nectar, should be left alone.

The nests of social wasps look like large paper spheres. Sometimes the nests are built in the ground. If nests are in a place where they will not be vibrated or disturbed, they should be left alone. In the fall, all of the individuals will die off except the queen. She will leave the nest to overwinter and build a nest in a different location next spring.

If contact with the nest cannot be avoided, for example, if a nest is next to a door or in the ground where mowing has to occur, contact a professional pest control company. Vibrating or disturbing nests will agitate the wasps and can result in multiple stings that are both painful and potentially dangerous for some individuals. Itching, redness, and localized swelling are common histamine reactions. Itchiness of the palms and bottoms of feet, constriction of the airway, or swelling of the tongue indicates a life-threatening allergic reaction that requires immediate medical attention.

Every time I get stung it seems to hurt more than I remember. I always ask my kids to save bad words for special occasions and I try to apply the same rule to myself. Katy getting a sting instead of the mail qualifies as one such situation. As I approached that paper wasp nest, I felt adrenaline in my veins just knowing the possible outcome. I'm not sure if I said any bad words myself, but if I did, that wasp was the only one to hear. And she's not telling.



Honeybees pollinate agricultural crops and are famous for their honey

*For more information about the Frederick County Master Gardener/Horticulture Program, visit: <http://extension.umd.edu/frederick-county/home-gardening> or call Susan Trice at the University of Maryland Extension Frederick County office, 301-600-1596.*

*Find us on Facebook at <http://www.facebook.com/mastergardenersfrederickcountymaryland>*

*The University of Maryland Extension programs are open to any person and will not discriminate against anyone because of race, age, sex, color, sexual orientation, physical or mental disability, religion, ancestry, national origin, marital status, genetic information, political affiliation, and gender identity or expression.*