Fear of Flying (Bugs)
By Janis Butler, Master Gardener Volunteer

Why are we so afraid of bugs? Not just flying ones, but crawling and hopping ones, too. Even those pokey millipedes in the bathroom. The best friends that we humans have on earth have six, eight or more legs, yet we lump them all together as “bugs” and swat, squish or step on them, often with no provocation.

There are some legitimate reasons: Bites, stings, infestations where least desired (in our food!). But if we examine a few facts about bugs (by which we mean insects, spiders, and other creeping, crawling, scurrying, hopping and flying “pests”), maybe we can cut them some slack.

1) Of the 100,000 species of insects in the United States, less than 1% are harmful to us in any way. Many more are critically helpful and the rest are neutral. The message? Identify before you swat, unless you’re seriously threatened.

2) Over 70% of our crops are pollinated by something other than the wind. Insects (also bats and birds) pollinate the plants we eat and serve as food for animals which we also eat. Humans can pollinate, but only with a Q-tip and a lot of patience. Not practical with 7 billion of us wanting three square meals a day.

3) Beneficial insects help control pests (ladybugs eat aphids, for example) and help with the vital task of breaking down organic matter (or we’d be buried in leaves by now). Insects are also essential for the manufacture of medicines and pharmaceuticals, silk and other textiles, honey, wax, dyes. The list is long.

That’s the good news. Now let’s talk about the scary stuff: stings and bites. We most fear bees, wasps and hornets (which are a type of wasp). These are very different insects although they sometimes look alike. They can be divided into two types: social and solitary (i.e. they live alone, not in hives or group homes). It’s the social ones who sometimes cause problems. Why?

Social insects live in large colonies. Usually in hives, which may be in the ground, or in “nests” which they construct from various materials. Sometimes these residences are used over and over again in
succeeding years. Some of them, like honeybees, are “perennial”. The insects who constructed them have a vested interest in maintaining not only those homes but also relatives who live in them. The individuals who create and inhabit these nests don’t count for much, in their terms. They’re expendable. In addition, there are valuable resources in these nests that are worth protecting. Baby bees (larvae) and food stores are a big investment that the bees will defend to insure the future of the hive.

A honeybee hive, for example, is a permanent residence with as many as 50,000 bees, so it makes sense to sacrifice a few bees to discourage intruders by stinging them. It’s a sacrifice because a honeybee dies after stinging. Backward-facing barbs on her stinger prevent her from removing it from your skin and so, in pulling away, she leaves her back end behind. It’s always a “she” who stings, since a stinger is a modified egg depositer. It’s best to get this out of your skin quickly (scraping it off with a credit card works well). Honeybees are easy to identify because they’re so common. They’re a little fuzzy but less so than bumblebees. Honeybees ae not native to the “New World” – they were brought here by the colonists – but agri-business (our food supply!) now depends on them.

The other kinds of bees, which are mostly what you see buzzing around your beebalm, are native bees, 90% of whom live solitary lives. They don’t defend their nests (tubes, stems, holes in trees, etc.) because they can’t afford to risk death from a swat. And besides, their job as parents is done once they’ve laid their eggs and provisioned the nest. They don’t continually return to feed their young. The 10% of native bees who are social — including those cute bumblebees — will sting to defend their nests. They will sting and live to sting again, but their stings are not as painful as those of honeybees and do not contain barbs.

Wasps (and hornets) are important predators of harmful insects and they also help with pollination. Most of them do us no harm. Only a few species cause trouble and, once again, it’s those who live in colonies, which they must defend. Yellow jackets and bald-faced hornets are the ones to avoid. Yellow jackets do eat beetle grubs, flies and other undesirable pests but unfortunately they also like our picnic food: meat and sugar, and they don’t mind if it’s been discarded in a trash can. They’re ground nesters, so if you see them buzzing around a patch of long grass, avoid the area. Bald-faced hornet and paper wasp nests are easier to spot (naked “honeycombs” or big, paper-maché-like structures) and thus easier to avoid. Both insects are technically wasps, live in large colonies and will aggressively defend their nests.
The bottom line is: most bees have no interest in stinging you but rather in defending their homes. Honeybees and social native bees will defend their hives/nests, so avoid them and especially avoid their nests. Don’t let your kids throw stones at their nests. Don’t mow over them. Steer clear. Don’t squeeze them in your hand. Use common sense. If you do have a honey bee nest attached to your house, contact Emma Mullen at ekm75@cornell.edu. She’ll be glad to provide information on what to do. If you have wasp or hornet concerns, call our horticulture hotline at (845) 278-6738, 9 to Noon weekdays. We need to keep bees and other insects alive so they can keep us alive!

As for allergies: most people are not allergic to stings. Only 0.3% of children and 3% of adults are allergic, usually to honeybee or wasp stings. There is no known case of anaphylactic shock from native bee stings: that’s the province of honeybees. The fear is far greater than the threat.

So let’s assume that we realize most of our insect fears are irrational. But they still elicit emotions like terror, revulsion, and panic.

Why is this? Bugs are so small compared to us. An entomologist named Jeffrey A. Lockwood wrote a book about insect phobias called The Infested Mind. A mere fear is not a phobia, of course, but the book has some revealing information about our Yikes! response. Infants are not born fearing insects… they learn it from – guess who – their parents and other adults. A mom freaks out when she sees a terrified spider scuttling madly away on its eight legs (and wishing it had more). A toddler sees mom’s reaction and adopts it as his own. And mom’s scream is amplified by the media and the movies. So in which of these ways did you and I learn to respond?:

1) Direct (bad) experience (bug in ear)
2) Modeling (mom freaks out over spider)
3) Instruction (adult tells or reads about a bad experience).
4) Media hype (Arachnophobia, Empire of the Ants)
5) Unfounded and silly rumors (earwigs get in your ears, dragon flies sew up your eyes)

What can we do about our over-reactions to bugs?
- Learn about them and their lives to differentiate between what is and is not a rational response to finding one up our sleeve. Get a book on bugs.
- Try to avoid swatting/squirting/spraying or otherwise killing any living thing until you understand that it is really is a threat.
- Realize that our future depends on maintaining a reasonable balance in nature. Killing off bugs is not a good thing to do.

Here’s the best way of all to get to know bugs better: Stop into your local Cooperative Extension and ask to have a look at a few under the microscope. Once you see the breathtaking beauty of these miniature masterpieces and realize that amazing efficiency and downright coolness of their construction, you’ll begin to see them in a new light, I promise.

For further information:
Cornell’s Pollinator Portal: www.pollinator.cals.cornell.edu

Good Garden Bugs: Everything You Need to Know About Beneficial Predatory Insects by Mary M. Gardiner.

Attracting Beneficial Bugs to Your Garden: A Natural Approach to Pest Control by Jessica Walliser.

Bringing Nature Home by Douglas Tallamy.

Attracting Native Pollinators: Protecting North America’s Bees and Butterflies by The Xerces Society

Side bar: announcement of new pollinator garden at CCE)