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The Next STEP

Toward a Healthier Future

A Bi-monthly Newsletter of the Sebastopol Toxics Education Program

Yellowjackets, Wasps, and Bees ... Oh My!

Summertime's outdoor parties and barbecues can sometimes attract unwelcome guests: yellowjackets.

It might seem easy to just pull out a toxic spray at the first sight of these critters. But wait — are you even sure that it's a yellowjacket? Or that it's a threat?

You could be seeing another member of the *Apoidea* superfamily, such as a bee or paper wasp. And most of these insects are no threat to us unless we bother them or their nests.

More importantly, these creatures are vital for pollinating our food and flowers, ensuring and improving our food harvests, reducing populations of pest insects, and maintaining functioning ecosystems. And, for insects that are of concern, there are effective less-toxic management alternatives!

Your steps

1) Identify what insects you're seeing. Locally, they could be bumble bees, honeybees, mud daubers, European paper wasps, or western yellowjackets. Folks are usually most concerned about yellowjackets, as they can be aggressive and come for our food. But let's not kill essential honeybees in error! See more about how to make the ID on the other side.

2) Understand your risks and options. Of course, we don't want people on our property to be stung. So you might want to control these insects if they or their nests are near your activities, or if someone in your home is highly allergic to them.

Otherwise, maybe leave them alone, co-exist — and even watch, marvel, and learn about their activities!

3) If you see yellowjackets in an area you hang out, yellowjacket traps are an easy less-toxic remedy. You can buy or make them. **Be sure to place them *around* your outdoor eating area, not *over* it,** to capture entering intruders. Also, the earlier in the season that traps are set, the more they can help control the *overall* population.

4) Some added ways to protect yourself and others:

- Keep garbage cans well-covered and separate from outdoor eating areas. Yellowjackets can also be attracted to outside pet food dishes and ripe fruit.
- If you're allergic to insect stings, maybe wear long sleeves and pants.
- Don't swat at bees. If they land on you, you can gently flick them off.
- If yellowjackets discover you eating outside, cover your food. You can even buy handy food covers!
- Clean up soon after eating outside, including the barbecue.
- If you want to use a bug spray, use a least-toxic one made of a natural material such as mint.
- If you see a honeybee swarm, leave it alone. It's docile. There are local

*See **Bees**, over*

Flying Insects Are Essential — and At Risk

What a delight it is to watch a bee drink deep of our flowers or a butterfly dance with the light. And it can be just as annoying when we feel pestered by a fly or worried about yellowjackets.

But in these small moments we can easily forget the big picture: that **flying insects are essential to all life on earth**. This includes bees, wasps, moths, butterflies, beetles, and, yes, even flies.

Because these wisps of creation pollinate the beautiful flowers, are essential to growing so many foods that we love, help control pests, aid decomposition, and provide meals up the food chain to birds, bats, fish, reptiles, and mammals — like us!

However, **this eco-foundation is rapidly being undermined**, putting at risk the survival of humans and all the amazing life on earth.

Recently published research found that **total flying insect counts have plunged by three quarters over the past 25 years**. Previous studies revealed serious decreases in individual insects, but this new research shows that flying insects overall are also declining.

Hans de Kroon, leader of this study, calls their findings "alarming." Another member of the research team, Sussex University Professor Dave Goulson, says, "Insects make up about two-thirds of all life on Earth [but] there has been some kind of horrific decline. We appear to be making vast tracts of land inhospitable to most forms of life, and are currently on course for ecological Armageddon. If we lose the insects then everything is going to collapse."

The likely primary causes of this decline, they say, are widespread pesticide use, destruction of wild areas, and possibly climate change.

Certainly, **our regulations** need to better protect the web of life. Recently, Professor Ian Boyd, a chief scientific adviser to the UK government, wrote in the journal *Science* that, contrary to assumptions by

*See **Insects**, over*

***Bees**, continued*

beekeepers who can come and capture it for free. Find options at *www.sonomabees.org*.

5) Be informed and careful before going after nests. Educate yourself on the methods and personal protections needed for the insect you're approaching. You might feel comfortable spraying a paper wasp nest with an eco-spray. But a ground yellowjacket nest is quite dangerous and likely best left to professionals. (And look for a professional committed to least-toxic methods!)

6) A County program will eliminate your yellowjacket ground nests for free — if you identify and mark the nest. Its goal is to protect the public from harmful interactions. Learn more at *www.msmosquito.com/programs-services/yellow-jacket-control-program*. Or call 800/231-3236.

SOURCES: www.gardeners.com/how-to/yellow-jackets/7700.html • www.msmosquito.com/sites/default/files/Yellowjacket%20FAQs_0.pdf • www.pressdemocrat.com/lifestyle/9077426-181/get-to-know-your-wasps • www.treehugger.com/animals/why-we-should-learn-love-wasps.html

***Insects**, continued*

regulators around the world, **it is *not* safe to use toxic pesticides at industrial scales** on the land.

In the meantime, says de Kroon, "**We need to do less of the things that we know have a negative impact**, such as the use of pesticides and the disappearance of farmland borders full of flowers."

SOURCES: www.theguardian.com/environment/2017/oct/18/warning-of-ecological-armageddon-after-dramatic-plunge-in-insect-numbers • www.theguardian.com/environment/2017/sep/21/assumed-safety-of-widespread-pesticide-use-is-false-says-top-government-scientist

Making the ID

Here are some of the bees and wasps we have around here, and tips for distinguishing between them!

■ **Bumble bees** are yellow, black, and ***fuzzy***. They build nests in the ground, dense grass, or abandoned mouse nests. They pollinate flowers and are generally peaceful. They'll only sting if they feel cornered or their hive is disturbed.

■ **Honeybees** are ***orangish-brown***. They make hives in hollow trees and rock crevices. They're not aggressive and don't search for something to attack. They'll only sting if swatted or their colony seems threatened.

■ **Mud daubers** are long, slender, and usually ***black***. They create individual mud nests inside of structures. They're considered beneficial because they control spiders — including black widows! They aren't aggressive and don't defend their nests, but might sting if they feel individually threatened.

■ **European paper wasps** have black and yellow bands, with ***orange antennae***, narrow waists, and ***trailing rear legs.*** Their papery celled nests are like upside-down umbrellas and can be under eaves or in cavities. They control many pest insects including flies. They're relatively non-aggressive and don't scavenge, so they're less-likely to interact with our activities. They can defend if we're close to their nests.

■ **Western yellowjackets** have yellow and black bands, with ***black antennae*** and narrow waists. A type of wasp, they're ***shorter and more compact than paper wasps.*** Their paper-covered nests can be like hanging globes under eaves or tree branches, or in underground holes. They like to eat slugs, aphids, flies, spiders, decaying animals, and more. And they scavenge near our picnics and trash cans, looking for protein and sweets. Be most cautious around them. They can chase you if their nest is threatened, and can sting more than once. They're especially dangerous in ground nests; watch out for a lot of insects emerging from a hole in the ground.

See pictures of these and more at *www.pestworld.org/news-hub/pest-articles/stinging-insects-101*.

Rescuing the Bees

So how can we support the bees (and other pollinators) that are critical to our food crops, wild areas, and ecosystems? Here are some ideas:

■ **Shift our minds to see the value and key role of bees and other pollinators.** Don't just be generally fearful. Learn what's actually a risk, protect yourself appropriately — then focus on the joys of nature's ways. Encourage others, including children, to do the same.

■ **Skip toxic pesticides at home and work; they can harm many beneficial creatures.** Find least-toxic alternatives to meet your needs. This newsletter and Index can help! (See box below.)

■ **Create a welcoming refuge for bees.** Research and plant flowers that they love, even if just in pots.

■ **Support groups working to protect bees and other wild creatures.**

Got a pest problem?
Or a toxics question?

The STEP Online Index can help! It makes it easy to look up your topic of interest and find our well-researched, condensed, and useful information — to help you get up-to-speed and into action. It also makes it easy to share this information!

www.healthyworld.org/STEP

ABOUT STEP

The Next STEP (TNS) is published six times a year by the **Sebastopol Toxics Education Program** (STEP). **STEP is a project of the City of Sebastopol**, implemented by local citizen volunteers. **STEP's mission** is to support city residents in reducing their toxic use and exposure, creating a healthier and safer Sebastopol for everyone.

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