

Beyond Butterflies and Bumblebees

Many lesser known but common insects are beneficial, indeed essential, to a healthy garden and planet

Story and photos by Judy Preston



Not just for monarchs: more than 450 insects, including this wasp, are known to rely on the common milkweed.

The grass-carrying wasp has found a niche in suburban neighborhoods by nesting in window runners. Unlike the more familiar yellowjacket, this solitary species is unlikely to sting.



These are exciting times to be a gardener, especially if you're interested in helping the planet. Doug Tallamy, an entomologist from Delaware, has almost single-handedly changed the way gardeners and others think about insects.

His message: rethink your relationship with these heretofore less-than-lovable organisms, for they make our world not only livable, but enjoyable. To ignore their plight is to do so at great risk.

Insects are the largest and most diverse group of organisms on Earth. Out of the nearly one million insects that we know about, less than four percent are considered pests. The rest go about their way making many of the things we consider important (in my case that would be the lowly midges that pollinate the cocoa plant). We rely on the collective services of insects to make the planet habitable.

Insects create the foundation for the world's terrestrial ecosystems. They break down leaf litter and wood, recycle dead bodies and aerate and mix the soil while returning essential nutrients that ultimately feed plants. These are "the little things that run the world," as the late biologist and ant specialist E.O. Wilson declared, representing the very base of the food web that so many other species—including the birds we invite to our gardens—rely on.

And humans rely on insects for pollination. An estimated three-quarters of our global food supply depends on this often-overlooked service.

Who among us is not familiar with the monarch butterfly, the bumblebee, our native ladybug? (Not to be confused with the nonnative nuisance variety.) These members of the insect world have become cultural icons, endearing for their colors and the playful roles we have assigned to them over time. The honeybee is synonymous with pollination, and yet they represent only a tiny fraction of all bees and are relative newcomers to our part of the world, having been imported in Colonial days expressly to ensure a supply of honey.

Worldwide there are an estimated 20,000 bee species, with 3,600 bee species that are native to North America. And despite our association of bees with hives, 90% of our native bees lead solitary lives (and are less inclined to sting because they're not defending a colony).

Despite the popularity of the homegrown "Pollinator Pathways" initiative that has taken many towns and garden enthusiasts by storm, just a handful of insects—pollinators and other beneficial species, remain familiar to many. But there are numerous fascinating and surprisingly common insects that can make our gardens and home grounds part of a greater understanding of the infinite possibilities that nature provides. Let's take a look at just a few.

Unlikely habitat

I stumbled upon *Isodontia mexicana* only after repeated discoveries of grass stuffed into the runners of my window screens. Through the magic of Google, and, oddly enough, the perfect common name for this insect, I found the grass-carrying wasp. These small, black insects have a thin waist (giving them another common name: thread-waisted wasp). They will use any number of pre-existing cavities to nest but have discovered that in suburban neighborhoods window runners work just fine. The collected grass lines a nest where the female wasp will provision her young with a small cricket that she paralyzes (reminding us that while nature is efficient, it can also be the stuff of Stephen King novels).

Wasps are often reviled because they are associated with the more familiar



The syrphid fly has cleverly adapted the look of more aggressive insects (bees and wasps) to discourage predators. It is a common beneficial pollinator in our gardens.

yellowjacket that will readily sting in defense of its collective nest. *Isodontia mexicana* is one of the far more abundant group of solitary wasps that will only sting if it is handled. They don't actively defend their nest. And these wasps pollinate a variety of flowering native plants, with a preference for white flowers such as those of the common boneset (*Eupatorium perfoliatum*).

Looks like a bee to me

If you spend just a short time looking closely at your garden in flower on a warm summer day, you will likely come across a syrphid fly, only you may initially assume it's a bee or wasp. That is because this insect has capitalized on taking on the appearance of another to mimic the defenses that it doesn't have, namely the ability to sting.

Look closely and you will be able to make the distinctions: this fly has only a single pair of wings, unlike bees and wasps that have two sets. They also have large eyes characteristic of flies and short antenna, unlike the species that they mimic. Commonly known as a "hover fly," you can observe them lingering over flowers, only to abruptly change course when disturbed.

Of the nearly 900 species of these flies in North America, most have the characteristic black and yellow stripes across their abdomens that help them easily blend in with their stinging neighbors. While they have no specific equipment to hold pollen, these flies nonetheless pick it up as they move about the garden seeking nectar to consume, therefore helping to ensure pollination.

Similar to our more familiar ladybug, in its larval stage the syrphid fly is an effective predator of aphids and other insects, making it a welcomed addition to any garden.



The burying beetle is a rarely seen nighttime visitor that is essential to recycling important nutrients in our gardens and home landscapes.

The overnight clean-up crew

The burying beetle is a nighttime garden guest not often seen, explaining its lack of familiarity. But its recycling services are essential in our gardens and indeed all our terrestrial ecosystems. Its Latin name, *Nicrophorus tomentosus*, provides a clue: 'carrier of the dead.' Before you question why you would ever want such a character in your yard, remember that nature is the ultimate recycler: nothing is ever wasted.

This small red-orange and black beetle cleans up small dead rodents and birds, helping to explain why you probably don't see many of those in your yard, either.

Familiar names are telling: burying beetle or sexton beetle (historically church sextons' duties included digging graves) are both used for this species. This is because under the protection of darkness both the male and female will locate (via small clubbed antennae outfitted with the far-reaching capability of detecting a dead animal) and painstakingly bury a carcass to beat the competition. From there, these beetles will slow the decay of flesh with special secretions, while removing fur or feathers, using this to line the "nest."

I discovered this beetle quite unexpectedly when I decided to see how

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quickly a dead bird in my yard would be taken by a predator. Exploring at night with a flashlight, I was surprised to see movement in the sandy soil around the carcass, only to uncover this insect in the slow process of excavating a hole below it.

With the exception of social insects such as ants and honeybees, parental care is considered rare in insects. In this species, however, both parents remain to digest and regurgitate the food source for the larvae to feed on.

You Can make a Difference

Expanding our understanding, appreciation and tolerance for insects has never been more important. In 2019 the United Nations issued a report on the status of global insect life. Among its conclusions: while global trends are not fully understood, rapid declines have been well-documented in those areas studied. These include the results of investigations from Germany and Puerto Rico looking at global data, all of which point to “*a serious, dramatic decline of insect abundance.*”

Some among us will remember there was a time when summertime was synonymous with clouds of insects in the car headlights at night, and windshields needing to be cleaned regularly. The alarming silence of our summers—both visual and auditory, is a palpable red flag.

But our backyard and community landscapes can be home to a wide assortment of beneficial insects, especially if we commit to sustainable garden practices such as planting native species, backing off on pesticides, and acknowledging that leaves and other organic debris aren't waste. They are the very source of food and shelter that provide for nature's most abundant, and often overlooked species—the insects.

MORE INFORMATION:

The Xerces Society for Invertebrate Conservation, <https://xerces.org>
Wild Ones: Native plants, Natural Landscapes, <https://wildones.org>
Connecticut Chapter: wild.native.plants@gmail.com
Heather Holm, Bee and Pollinator Books: <https://www.pollinatorsnativeplants.com>

WHAT YOU CAN DO:

PLANT NATIVE PLANTS THAT INSECTS HAVE EVOLVED WITH

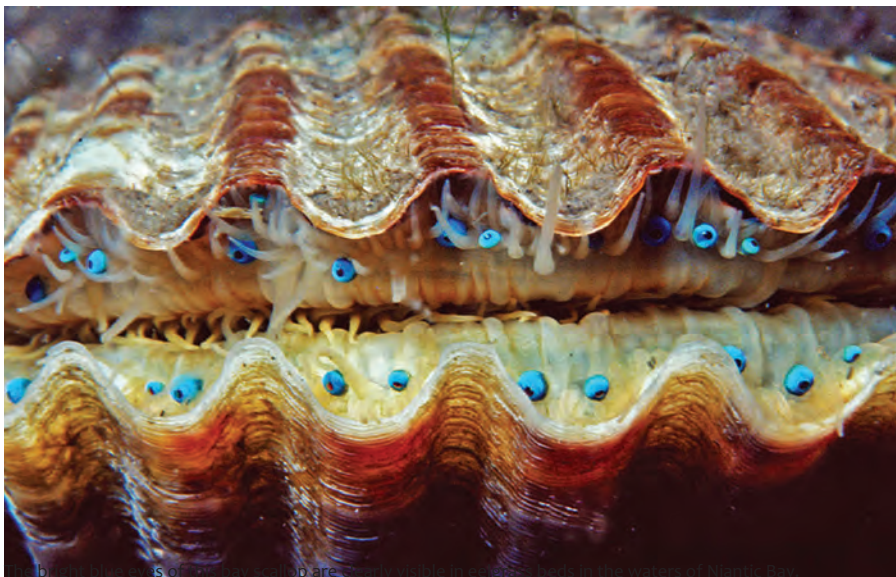
LEAVE THE LEAVES: THEY PROVIDE IMPORTANT FOOD AND HABITAT FOR INSECTS

BUY ORGANIC COTTON; CONVENTIONAL COTTON USES LARGE AMOUNTS OF INSECT HARMING PESTICIDES

HOLES IN YOUR LEAVES MEANS YOU'RE SHARING WITH INSECTS

REPLACE OR REDUCE YOUR LAWN WITH A DIVERSE GARDEN OR WILDLIFE HABITAT

SPREAD THE WORD!



The bright blue eyes of a bay scallop are clearly visible in the eelgrass beds of Niantic Bay. Photo: Robert Bachand



TALK TO US

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