MAY 2018 VOL. 1

PROTECTING WINDSOR'S POLLINATORS

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Help for Our Butterflies and Bees

There are so many reasons to encourage bees, butterflies and other pollinators here in Windsor. Pragmatic reasons – more berries, more apples, more flowers – and poetic reasons – the head-filling buzz of a blooming fruit tree alive with bumblebees, the whimsical flight path of a swallowtail. But what are some ways to make life easier for hard-working pollinators?

Spring-to-Fall Blossoms: Plan your garden with an eye to having a variety of plants in flower throughout the growing season.

Roll Out the Welcome Mat: One easy step – don't be TOO tidy. Most local bees belong to solitary species that nest and lay eggs in untended areas of your garden and yard. Brush piles and old tree stumps and snags are prime real estate for them.

Avoid Pesticides: This one is harder. But cutting out pesticides preserves beneficial insects. Pay particular attention to the type known as neonicotinoids, linked to declining bee populations by researchers. Windsorites can buy plants raised without "neonics" at our community plant sale coming to Windsor's Community Market in early June.

Create a Buzz: Don't be shy about your efforts to help create a pollinator haven…share your plans, post your best bee & butterfly photos on the Windsor facebook page, and celebrate these amazing creatures.

Thanks, Bees & Co.!

What do cherries, plums, black raspberries, blackberries, strawberries, blueberries and crab apples have in common (apart from making your mouth water)? All are pollinated by native bees and other insects. Cherries and company are all in the rose family, while blueberries and their relatives are in the heath family. Both families contain many more native and often edible species.

Specialist bees are those that eat pollen from one genus or family of plants—they may collect nectar from a much greater variety. There are many sunflower bees that eat pollen only from flowers in the aster family, though those flowers may be visited by many types of bees and other insects.

Native, edible asters include sunchokes (aka Jerusalem artichokes) and sunflowers (grown for tuber, seed, or oil), as well as important medicinal plants like purple coneflower (*Echinacea* species). Because asters have many flowers packed closely together and often have a relatively flat, open shape that makes nectar easy to reach, they also support many predatory and parasitoid flies, wasps, and beetles, whose shorter tongues mean they must feed from smaller flowers. These predators and parasites eat many crop pests.

Other specialist bees depend on pollen from flowers in the heath family such as blueberries. The southeastern blueberry bee, the Maine blueberry bee (a type of mason bee), and a western mason bee, are examples.

Bumble bees, along with some of our native bees, can use their wing muscles to sonicate plants that require a special vibration to release pollen—called buzz-pollination. Flowers in the heath (blueberry, cranberry) and nightshade (tomato, groundcherry, pepper, eggplant, potato) families need sonication.

While we enjoy the delicious edibles among our native plants, our native bees and other native fauna depend on our native flora for food and shelter. Plant native and help support a very special crowd.

This excerpt was reprinted with permission from an article entitled Delectable Native Plants Attract a Very Special Crowd, found on the Xerces Society website at xerces.org

Bee Haven

Just like birds, bees lay their eggs in nests. One way to help our native bees successfully raise their young is by building them a house! This can be as simple as bundling a handful of cut bamboo stems (any hollow stem will do) or as elaborate as the bee "hotel" pictured below. To learn how to make your own bee house, and other ways to help, visit xerces.org and type the following in the search bar:

Bring Back the Pollinators: 5 Ways to Increase Nesting Habitat for Native Bees

EST. 1984 FRIENDS OF WINDSOR

Butterfly Host Plants

Here's a short list of local native plants and the butterflies that rely on them. You'll find more in the attached colorful guide.

Plants	Butterflies Hosted
Herbaceous Perennials	
Pearly Everlasting	American Lady
Wild Columbine	Columbine Duskywing
Sheep Sorrel, Curled Dock	American Copper
New England Aster	Pearl Crescent
Blue Vervain	Common Buckeye
Violets	Fritillaries
Shrubs	
Pussy Willow	Mourning Cloak Butterfly
Small Willows	Viceroy
Blueberry, Cranberry	Spring Azure, Striped Hairstreak
Trees	
Willow,Elm, Hackberry, Birch	Mourning Cloak
Cherries, Aspen, Birch, Willow	Red-Spotted Purple
Wild Cherry, Chokecherry, American Plum	Coral Hairstreak
Oaks, Walnuts, Hickories	Banded Hairstreak
Grasses	
Big Blue Stem	Delaware & Dusted Skippers
Purple Lovegrass	Zabulon Skipper

Check out 1001pollinatorgardens.org – It's local & great!

Beyond the Big B's

Among pollinators, bees and butterflies are the ones with rock-star status. Here's a look at some of the back-up singers in the pollinator band.

Ruby-throated hummingbirds migrate up from their Mexican and Central American winter homes in the spring. They move pollen in the process of drinking nectar from honeysuckle, bee balm and other plants. Scientists believe that the tubular form of some flowers co-evolved to suit hummingbirds' bills. They also scarf spiders and small insects. Each hummer will nearly double in weight over the summer season, from 3.25 grams to 6 grams, in preparation for the flight south.

The fossil record tells us that **beetles** were among the first pollinators. They remain important – especially for ancient plant species like Spicebush and Magnolia. They often eat the flowers and plants that they pollinate, which makes them messier, more destructive, and less popular than others.

Bee? Not a bee! The large insect family with the scientific name of *bombyliidae*, or **bee flies**, have evolved to look like bees to deter predators. Their disguise makes them good pollinators, being furry like bees. One visible difference is that they have two wings rather than four. Another group of imposters, flies in the genus *Helophilus*, mimic wasps.

As for actual **wasps**, they are also important pollinators. My favorite local variety, the paper wasp, builds beautiful nests that are abandoned each fall. Paper wasps also eat caterpillars, making them good garden assistants. Unlike the more aggressive yellow jackets, paper wasps are slow to sting.

My least favorite insect family, the **mosquito**, does play a role pollinating water lilies and small flowers growing in marshlands and other wet locations. Thanks, mosquitos.

--Susan Phillips

Some Helpful Resources (for all ages)

Your Windsor Library! – Stop by the featured pollinator corner, pictured below, to pick up some free seeds, check out a book &/or consider joining the Community Read.

BuzzAboutBees.net – Editor's Web Pick! This is a wonderful site for kids and adults alike.

Western Mass Pollinator Network – Visit wmassbees.org for local information, resources and practical tips.

US Fish & Wildlife Service – Go to fws.gov/pollinators for some great kid activities.

Xerces Society – Check out xerces.org, a national site with a wide range of information for all levels of interest

Pollinator Resource Corner at Windsor's Free Library
[Photo: Beth Webb]

Easy as 1,2,3…

It's likely you've heard about the recent decline of honey bees. Our *wild* native bees are disappearing, too, which is alarming because it's a more pervasive threat that gets far less attention. Pollinators are a keystone species, meaning that a large number of other species depend on their existence. If pollinators vanish, the impact on the health of our native plant communities could be disastrous.

The causes of native pollinator decline include: the loss of habitat that pollinators need for food, nesting and migration; a disruption in the synchronized timing of flower development and pollinator emergence (due to earlier and warmer springs); and the heavy toll taken by pesticides, especially those known as neonicitinoids.

"Neonics" work their way into the pollen and nectar of plants and are reported to be *many thousands of times* more toxic to bees than DDT. They're widely used and, of most concern, a common ingredient in many home garden products. Fortunately, the State of Massachusetts is now considering legislation to protect pollinators from certain classes of pesticides, including neonics. And here are a few things that *we* can do to help:

1. Learn more about the pollinators in our backyards. 2. Plant lots of flowers, using as many native species as possible. 3. Avoid using pesticides or purchasing plants or seeds treated with them. Even one of these simple steps could make a difference.

--Patty Crane

"If the bee disappeared off the surface of the globe, then man would have only four years of life left. No more bees, no more pollination, no more plants, no more animals, no more man." *— Albert Einstein*