



# Washtenaw County Conservation District

MAY 2019

## Call to Action for Bumblebees

By Lauren Bien, owner of Ypsilanti Native Plant Nursery

In mid-April, I went into my hoop house to check on overwintered plants. A spot of yellow shone—a bumblebee on lupine flowers, blooming early due to a months-ago germination test. Somehow, this bee had sensed the flowers hidden in an opaque chamber. It sat motionless, tiny grapple-claws hooked on petal edges.

Despite such tenacious foraging, Michigan bumblebees are vanishing. One study by MSU post-doctoral research student Thomas Wood stated that in the last 20 years, half of 12 common bumblebee species have declined by more than fifty percent. The pressures bumblebees face likely include habitat loss and fragmentation, pesticide use, honeybee competition, low genetic diversity, climate change, overgrazing, and nonnative pathogens on commercially-raised bumblebees used in greenhouses (bumblebees are major pollinators of Michigan vegetable and fruit crops, many of which honeybees cannot physically pollinate).

The hoop house bee was *Bombus impatiens*, the common eastern bumblebee. The genus name “*Bombus*” derives from an ancient Greek onomatopoeic word for “a deep, hollow sound; hum, buzz.” The species name “*impatiens*” refers to the bee’s supposedly favored plant genus. *B. impatiens* was named in 1863 by Philadelphia fire insurance agent Ezra Cresson (1838-1926) who left school after the eighth grade to become a self-taught entomologist and co-found the American Entomological Society.

*Continued on page 2...*

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Photo by Lauren Bien

As Cresson studied bees, their first environmental pressures emerged. 19th-century farmers cultivated clover, to harvest the seed for a cash crop or as a “green manure” to plow into fields. Federal agricultural census forms for 1850-1880 tallied clover production. Farmers knew that such leguminous plants as peas, beans, alfalfa, and clover enriched the soil—somehow. “It is known that plants exert a vital action on the soil,” noted a July 1846 article in *Michigan Farmer magazine*. *“Inexplicable as is this mysterious power, it must be great . . . [p]erhaps no plant is more remarkable for this action than clover.”* The clover likely provided bee resources, despite grain field habitat loss. In 1885 Dutch microbiologist Martinus Beijerinck deciphered the nitrogen fixation process. Nitrogenous fertilizers appeared around the turn of the century, to join such highly toxic pesticides already in use as Paris green and lead arsenate. Crop productivity

increased; the clover fields soon vanished.

The bee I’d seen was likely a fertilized queen, recently emerged from her hibernaculum. She hadn’t eaten since fall, and needed a nest site. Bumblebee species can nest in grass tufts, a birdhouse, compost pile, tree cavity, or under a hedge. Usually the nest is underground, ideally in an abandoned rodent nest. The queen stocks it with nectar and pollen and lays her first eggs; these will become female spring foragers. In late summer, she lays eggs that hatch into short-lived male workers. The final group of females leaves to mate, eat, and hibernate. Bumblebee nests are used for one year. In late fall, only a few workers and the queen remain. Her role is complete; what was a nursery becomes her tomb.

Perhaps one of her daughters finds a spot nearby for her hibernaculum. Bumblebees need bare, well-drained ground for their life cycle. Tilling or pesticides can destroy the colony. An area for winter hibernators and the summer colony is a vital habitat feature to incorporate in even a small yard.

Another vital habitat component is native plants. Many bumblebees are generalists, and feed on various flowers, preferring violet, blue, or yellow perennials. Bumblebee species have either long or short tongues, so a planting should include flowers both tubular (penstemon) and more accessible (asters). The best Great Lakes area natives, according to the Xerces Society’s “Conserving

Continued on page 3...

Bumble Bees” guide, in order of bloom, are wild geranium, penstemon, lupine, butterfly weed, bee balm, field thistle, narrowleaf mountain mint, tall blazing star, showy goldenrod, bottle gentian, and New England aster. The penstemon species listed, *Penstemon cobaea*, is not native to Michigan; choose a native species such as *P. digitalis* or *P. hirsutus* instead.

The most critical times of year are early spring, when famished queens seek food, and late fall, when

new queens stock up. Flowering shrubs and trees such as pussy willow and redbud bloom before most herbaceous plants. Goldenrods and asters provide fall food. Many bee-friendly natives fit well in rain gardens.

Well-known author and ecologist Doug Tallamy stresses the importance of “bringing nature home” to our suburban backyards. Remember bumblebees as you select native plants this year.

## 2019 Conservation Award Nominations

We are looking for nominations for our annual conservation awards! Please consider nominating someone who has show excellent land stewardship and is deserving of one of the following: 2019 Small or Beginning Farmer of the Year, 2019 Tree Conservationist of the Year and 2019 Conservation Farmer of the Year by August 2019. Send nominations to Megan at [megan.deleeuw@macd.org](mailto:megan.deleeuw@macd.org) or 734.205.1219.

## Native Plant Expo and Marketplace

This year, we are excited to coordinate the first annual Washtenaw Native Plant Expo and Marketplace at the Washtenaw Farm Council Grounds. Come by any time from 9am to 2pm to browse native plant wares from our partner organizations and companies. Over 15 businesses and organizations will be there offering a variety of native plants, seeds, tools, resources, and programming to expand your native plant landscapes or get started from scratch! Pre-orders placed with the Conservation District are also available for pickup at the event.

### Our Partners:

Washtenaw County Water Resources  
Washtenaw County Parks & Recreation  
Huron River Watershed Council  
Wildtype Native Plant Nursery  
Designs By Nature, LLC  
Ypsilanti Native Plant Nursery  
Plants with Purpose  
PlantWise  
Creating Sustainable Landscapes  
Wild Ones  
Southeast Michigan Land Conservancy  
Perennation  
Michigan Wildflower Farm  
And more!

## MAEAP Update: A Thanks to All

By Nicholas Machinski

Unfortunately, there are no verified farms to tell you about this month. This is not because of a lack of participation in the program, I'm actually busier than ever with MAEAP. I've actually been out for several weeks on paternity leave, far from the vacation I usually take this time of year.

Though, it has been nearly seven weeks since we welcomed our baby boy, we are still working on getting a schedule down and trying to get sleep when we can. He can be extremely fussy at times and my coffee intake has doubled, but things are going great. He has his entire life and the whole world ahead of him. And that is in large part, to you.

I've thanked many farmers through this newsletter before, for the practices they employ to help keep our water clean. I know many of you are not farmers, but you care about conservation. You are planting native plants in your yards, volunteering at the District or through the parks. You are concerned about what is in your water, what is happening to the environment around you and asking what you can do to help. You may not realize what you are doing, but you are making sure that the resources and beauty that we have in the world around us will be there for the next generation, my son's generation.

There is a lot left to do. A report out from the U.N. claims that we stand to lose 1 million (yes, million) species within the next few decades. A disturbing headline, no doubt, but I know that won't stop any of you from doing the good work that you are already doing, and nor will it stop me. Because (as any parent knows) it isn't about me anymore, it's about him.

Thank you all, for all that you do.

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### Board of Director Elections

This January, several positions on the conservation District's Board of Directors will be up for election at the annual meeting in January. Those who are invested in Washtenaw County conservation efforts and local government are encouraged to run!

Conservation Districts' closest government relatives are school districts. Both have elected boards who hire a superintendent/manager. The board's role is to steer the district in big picture terms, providing the vision that the District Manager then carries out.

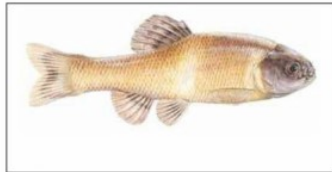
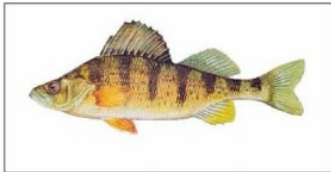
Here in Washtenaw County, our conservation district has a unique task. We must provide conservation resources to both rural and developed areas, which can be a challenge. These areas' conservation needs can be quite different but we are finding solutions. For example, we recently began offering trees in smaller bundles of ones and tens at the tree sale to better assist urban residents. This would not be possible without the help of our board, who works hard to ensure that our district is heading in the right direction to best serve ALL residents of Washtenaw County.

*Continued on page 5...*

As a board member, responsibilities include preparing for and attending monthly meetings, assisting with tree and native plant sales, and attending board director trainings or events when needed. Board members also bring their own knowledge and experiences to the table, whether it be farming, forestry, urban landscaping, or other conservation efforts. Running for the board of directors means you could use your experience in choosing how conservation efforts are carried out in Washtenaw County. We'd love your help! Contact us for more information.

## Fish Day 2019

Fish Day 2019 will be on Saturday, June 1st from 12PM to 3PM at the Washtenaw Farm Council Grounds (5055 Ann Arbor-Saline Rd). Fish stock is available for pre-order sourced



from Harretta Hills Trout Farm. Species available include Rainbow Trout, Hybrid Sunfish, Largemouth Bass, Channel Catfish, Yellow Perch, and Fathead Minnows. The minimum order for any species is 25 fish. Oxygen bags and oxygen will be provided for fish transportation. Please bring one five gallon bucket for every 25 fish purchased to put the bags in. For more details on fish species, pricing, permit requirements and to place your order, please visit <https://harriettahills.com>

### Upcoming Events:

**May 15, 2019 Pesticide review class** from 8am – 5pm on May 15<sup>th</sup> at 705 N. Zeeb Rd. The class counts as a Phase 1 MAEAP event and will count as 8 credits. Please call 734-997-1678 to register for the class. Registration cost is \$20 at the door.

**June 1, 2019: Native Plant Expo & Marketplace**, Farm Council Grounds from 9AM-2PM. Free to public.

**June 1, 2019: Fish Stock Distribution**, Farm Council Grounds from 12-3PM. Pre-order at <https://harriettahills.com/live-fish/fish-day/>.

