$OPEN\ SPACES$ by april anderson



Joe Pye weed is a great source of summertime nectar.

What's the Buzz?

IFTEEN YEARS AGO, beekeepers began to report losing 30-90% of their hives. Roughly half of these noted a condition where most of the worker bees disappeared without a trace, leaving the queen, a few nurse bees, and plenty of honey and pollen reserves. This sudden loss is called Colony Collapse Disorder (CCD).

While the number of colonies reported being lost to CCD has been declining since 2008, overall colony loss rates continue to be a major concern. The International Union for Conservation of Nature (IUCN) Red List assessments indicate "16.5% of vertebrate pollinators are threatened with extinction globally". For island species, this figure jumps to 30%. Habitat fragmentation, monoculture agriculture, increased use of pesticides, poor nutrition, and bees' decreased resistance to parasites challenge recovery. Imported honeybees are just one of a host of pollinators—but a leviathan in agriculture.

Government Initiatives

In 2017, the EPA implemented a policy to protect bees from agricultural spray and dust applications and recommended states and tribes develop pollinator protection plans and best management practices. Three years later, the EPA addressed neonicotinoids, a group of insecticides used for everything from crops and turf to flea treatments and ornamental plants. In its "Proposed Interim Decision on Neonicotinoids", it advised reducing the neonicotinoids used on crops, restricting when they can be applied (to reduce exposure to bees), and adding labels to advise homeowners not to use neonicotinoid products. As news of the plight of pollinators spread, local action began to take root.

Bee City USA

Of the four Bee City USA^{*} affiliates in Illinois, three are local, with the Village of Barrington Hills being among first communities in Illinois



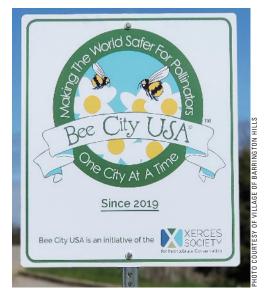
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to certify followed by the Villages of Hawthorn Woods and Port Barrington. The Bee City USA program endorses a set of commitments, defined in a resolution, for creating sustainable habitats for native pollinators, which are vital to feeding the planet. Incorporated cities, towns, and communities across America are invited to make these commitments and become certified as a Bee City USA affiliate.

The Local Buzz

After resident Virginia Brown presented the idea to the Village of Barrington Hills (VBH), Paula Jacobsen, trustee and chair of the Environment Committee, began collaborating with Brown to expand gardens at Village Hall from a Monarch Waystation garden established in 2017 to add a larger Bee City garden in 2020. Jacobsen added a native seed mix to the planted area this winter and will continue to work on a patch behind Village Hall this year.

Last spring (via contactless pick up), VBH provided five easy-to-grow native plants with overlapping bloom cycles to residents interested in



Barrington Hills is a Bee City USA affiliate.



The metallic green bee is common in North America.

starting pollinator gardens at home. On the Village's Facebook page, Jacobsen added subsequent videos to teach residents how to start pollinator gardens from seed.

Practicing what she advocates in her yard, Jacobsen has removed invasive buckthorn and created pollinator gardens which she continues to expand. "I want to be part of the group that protects what we have," says Jacobsen, explaining that "We can have a significant positive impact on pollinators with 5-acre lots."

If You Build It

Having installed pollinator gardens at 15 of their 23 parks, the Village of Hawthorn Woods has received accolades nationally with America in Bloom recognitions since 2018, and internationally with Audubon International's Sustainable Planning Award in 2020. Updating the Village's weed ordinance to allow the cultivation of sustainable pollinator plants such as milkweed, Village of Hawthorn Woods Chief Operating Officer Pam Newton shares how her community has installed thousands of plants, with one resident adding over 100 plants (including four species of milkweed). While no data has been collected, "We've heard from our residents that they've seen monarchs in their backyards," reports Newton.

In Port Barrington, pollinator-friendly gardens were installed around the Village Hall, and shoreline stabilization work at Nichols, Friendship, and Pregenzer Beach Parks incorporated pollinator species. Last year's decrease in human activity (associated with the coronavirus pandemic) combined with a mild winter reduced bee loss. But more support is needed.

"Ensuring the quality of our habitats through continued management of high-quality remnants and restoration of degraded habitats is the best way to 'take care' of our native bees," explains Lake County Forest Preserve Manager of Restoration Ecology Pati Vitt, adding that, "Management provides nesting habitat and food resources."

How You Can Help Bees



Sunflowers have been linked to improved bee health.

- Plant a pot of flowers on your patio or create a pollinator garden. Provide nectar and larval food, including clusters of flowers that bloom from spring through fall. Consider adding Golden Alexander, penstemon, Ohio spiderwort, serviceberry, or red maple to help early spring pollinators. Include milkweed, purple coneflower, blazing star, bergamot, Mexican hat, native sunflowers, and Culver's root to help summer pollinators. Don't forget to select fall-blooming plants, such as ironweed, aster, and goldenrod. "We can have pockets of success," says CFC Board Member Patty Barten, "but overall, we need everybody to get onboard."
- 2. **"Keep your yard a little less tidy,"** advises Taron. Since roughly 70% of native bees create burrows in soil, leave some open soil. Retain a brush pile with dead wood and hollow stems or add a bee house for leafcutter and mason bees, as they make up about one-third of all native bees. Mow high to leave clover for early spring pollinators. Mulch (rather than rake) leaves in fall to provide winter cover.
- 3. **Minimize the use of chemicals.** Accept that some plants may be defoliated by the larvae of butterflies you're trying to attract. Don't spray chemicals directly on flowers when pollinators are active. "Find nurseries that limit the use of insecticides (especially neonicotinoids), which are generally used on seeds, but can also persist in plant tissues as they grow," adds Vitt.
- 4. **Volunteer.** Take pictures of the bees, flies, wasps, beetles, and butterflies you find and share them with scientists through BeeSpotter, Bumble Bee Watch, Monarch Watch, or iNaturalist. Participate in the Illinois Butterfly Monitoring Network. Help maintain pollinator gardens in your community by watering, and weeding throughout the growing season.

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The rusty patched bumblebee emerges early in spring and is one of the last species to go into hibernation. It needs a constant supply and diversity of flowers blooming throughout the colony's long life, April through September.

Citizens for Conservation (CFC), like LCFP, adjusts the seed mixes they use to improve habitat diversity and longevity for specific species. "As you increase the flowering plant diversity and provide a diverse array of resources, you have pollinators come," states Vitt. Last year Forest Preserve District of Cook County Wildlife Biologist Laura Rericha documented 49 species of native bees (including a new species record for Illinois) at one Lake County Forest Preserve!

Stinging Misconceptions

"Of the tremendous species diversity, a remarkably small number [of pollinators] are considered nuisance species," said Chicago Academy of Sciences/Peggy Notebaert Nature Museum Chief Curator, Doug Taron. At a site where he monitors butterflies each summer, Taron notes, "There are sand wasps that will start buzzing around me while I'm doing my survey work. They are hunting flies attracted to me, but they are part of the atmosphere," says Taron. "I've come to think of them as my monitoring buddies." Vitt and Stewardship Ecologist Kelly Schultz concur that most bees aren't aggressive. "Unless you step on them or grab them with your hands, they are not going to hurt you," agrees Jacobsen. The key is to stay away from their nests and leave them alone.

"Most bees are really, really tiny," says Taron, describing "honeybees as the elephants and bumblebees as the great blue whales of the bee world." Oligolectic bees gather pollen from particular species, while generalists are less likely to be so limited. Caring for a pollinator garden provides the opportunity to appreciate the wealth of life supported by native plants throughout the growing season and bolster ecological health.