Pathways for Pollinators

A grass-roots movement is transforming traditional landscapes into pollinator way stations.

Amidst the historic homes, posh estates, and manicured lawns of southwestern Connecticut, a new, almost radical, movement is gaining strength. In a growing number of Fairfield County communities, lawns have been left to grow into meadows, and tall weedy-looking flowers abuzz with bees have replaced neat rows of annuals.

DAVE CRONIN/POLLINATOR PATHWAY

*Two female pearl crescent butterflies (*Phyciodes tharos*) on butterfly weed (*Asclepias tuberosa*)*

The leaders of this initiative are three women from Wilton, Connecticut—Donna Merrill, Louise Washer, and Jacqueline Algon, members of the Pollinator Pathway Steering Committee. In an interview at a small park in Wilton, the three women pointed out the border between the pocket park and the gurgling Norwalk River where they and other volunteers had removed nonnative invasive plants, such as Japanese knotweed and Asian bittersweet, and planted flood-tolerant natives under a few preexisting sycamores. Silky willow, pussy willow, ostrich fern, Solomon's seal, false indigo, goldenrod, and aster were planted to provide habitat for bees, butterflies and other pollinators and to create a demonstration project. "It's all about changing people's aesthetic," said Washer. The women water the new plantings regularly, and, to prevent invasives from returning, came back every week to hand pull them.

According to the U.S. Department of Agriculture, 75 percent of the world's flowering plants, including 35 percent of food crops, are pollinated by insects and other animals. In addition to the familiar honeybees and bumblebees, there are hundreds of other less familiar native bee species—Connecticut has over 300—that are important pollinators, including carpenter bees, sweat bees, mason bees, and digger bees.

Bees and flies are the most efficient at pollinating food crops, according to entomologist Kimberly Stoner, an agricultural scientist at the Connecticut Agricultural Experiment Station in New Haven, who advises Pollinator Pathway. But butterflies, moths, wasps, ants, and hummingbirds are also important pollinators. Unfortunately, there have been significant declines in all these pollinators in recent decades. A comparison of historic museum collections of insects to present-day collections shows that both insect diversity and abundance have decreased. Some bees, such as the rusty patched bumblebee... are no longer found in the Northeast. This once-common bee is now a federally-listed Endangered species.

"We don't entirely understand the reasons for pollinator declines," said Stoner. "But, they have occurred at the same time as the use of neonicotinoid pesticides has expanded." These pesticides, which can travel into plant nectar and pollen, are highly toxic to bees and other pollinators. Other factors contributing to the decrease in bee populations are viruses, fungal infections, and other pathogens, which can cross over from honeybees to bumblebees. Butterfly decline has been linked to the disappearance of host plants for caterpillars due to the loss and fragmentation of habitat or changes in farming practices. Some butterfly caterpillars only feed on specific plants. Milkweed, for example, on which the monarch butterfly caterpillar is totally dependent, is not typically planted in yards and is often eradicated by farmers. Once common, the monarch has recently been determined eligible for listing as an Endangered species. Another threat to pollinators is climate change, which can lead to larval host plants being unavailable at critical times and can disrupt the synchrony between pollinator activity and floral bloom time.

Donna Merrill had noticed the disappearance of bees and butterflies from her yard and wanted to do something locally to respond to these alarming trends. She had read about a project linking pollinator way stations and decided to try the idea. In 2017, she offered her neighbors between Ridgefield, Connecticut and South Salem, New York free native dogwood trees to create a corridor of pollinator habitat. The project was funded by the Hudson to Housatonic Regional Conservation Partnership, where Merrill was facilitator. After this successful pilot project, she convened the local land trust, conservation commission, garden club, nature center, and watershed association and proposed doing more to help pollinators in the Wilton area. Eighty people attended the first meeting, and interest has remained high.

The group is working on a pesticide-free pathway along Route 33 between Ridgefield and Wilton that provides food and habitat for pollinators. Along this route, pollinator gardens have been planted at public spaces, such as a library, cemetery, art museum, school, and a few churches. Containers were planted in front of the Ridgefield Town Hall and along Main Street. A meadow was created at a land trust property in the pollinator pathway. The Wilton Land Conservation Trust raised over $2 million, including a $700,000 state grant, to purchase a thirteen-acre field in 2020 that was slated to be developed, said Merrill, who serves on the board of the land trust. Several private landowners along the corridor have become part of the effort, and one of the goals of Pollinator Pathway is to get more to join. To this end, the group has held landowner forums to train residents how to encourage pollinators by putting in native plants and avoiding the use of pesticides. These neighborhood events "create amazing energy," said Merrill and teach citizens that "what they do in their own backyards makes a difference." "It's multigenerational," added Algon. "Children find it very appealing." Certification plaques are provided for properties on the pollinator pathways.

A mix of pollinator plants growing at The Hickories, an organic farm in Ridgefield, CT

Donna Merrill searches for pollinators in meadow protected by Wilton Land Conservation Trust

The greatest challenge to convincing homeowners to go pesticide-free is their fear of ticks, said Washer. Connecticut, after all, is where Lyme disease was first identified.

Once a landowner begins work on a pollinator-friendly garden, Pollinator Pathway's message is first and foremost, "Spray yourself and check yourself" for ticks. The group also provides tips on landscaping to reduce tick habitat, and information on new biological controls for ticks and tick boxes (bait boxes for rodents that apply a small dose of insecticide). Pollinator Pathway has also worked with a golf course in Norwalk to reduce pesticide use and to leave an unmown buffer of meadow along the edge of the course for bees.

Another project is on the Wilton Land Conservation Trust's fifteen-acre Slaughter Pond and Field. Here, fifty volunteers from ASML Wilton—the local R&D facility for the large Dutch corporation in the semiconductor industry—removed the wall

of invasives around the pond and planted 500 native shrubs such as viburnum, winterberry, and dogwood that serve as host plants for caterpillars. Deer protection tubes were installed around each shrub. Among the tall grass and flowers in the adjacent meadow, Merrill found a common buckeye (*Junonia coenia*), a brown and orange butterfly with large eyespots on its wings. The buckeye needs connected natural habitat corridors with meadows, especially along its migration route south before winter. Merrill had driven by this spot the night before and seen "the whole meadow lit up with fireflies."

HTTPS://WWW.POLLINATOR-PATHWAY.ORG/

A patch of cardinal flowers (Lobelia cardinalis) *and New England aster* (Symphyotrichum novae-angliae)

Surrounding towns have become interested in this grass-roots initiative. To date, the conservation commissions of 125 towns in Connecticut and adjacent New York State have joined Pollinator Pathway and are working on projects in their towns. A few of these municipalities are cities, such as Norwalk, Stamford, Bridgeport, and New Haven, Connecticut and Yonkers, New York. In cities, Pollinator Pathway has adapted its model to the urban environment. For example, apartment-dwellers are encouraged to participate by planting pots on balconies. In Norwalk, which lost many trees in Hurricane Sandy in 2012, Pollinator Pathway is focusing on planting trees. Trees have been planted on three city-owned properties along the Norwalk River and Norwalk River Valley Trail, according to Louise Washer, who is also president of the Norwalk River Watershed Association. Trees are extremely valuable for pollinators because they provide abundant food in a relatively small space, making foraging more efficient. Early-flowering willows and maples provide nectar and pollen when other sources are not available. Basswood, black cherry, tulip, chokecherry, dogwood, and fruit trees are other good choices. Many trees are also important hosts for butterfly and moth caterpillars.

Pollinator Pathway offers a tool kit on their website, https://pollinator-pathway.org/, with native plant lists, garden designs, pesticide alternatives, and other resources to help towns get started. It is relatively inexpensive to do these projects as long as volunteer workers are available and landowners are engaged, said Merrill. The main costs have been printing brochures and buying plants. Pollinator Pathway has received support from rotary and garden cubs and small grants from private foundations.

Native shrubs with deer protection tubes at Slaughter Pond

Pollinator Pathway subscribes to the findings of University of Delaware professor of entomology and wildlife ecology Douglas Tallamy, who had been speaking to local land trusts, garden clubs, and other community groups in the Connecticut area before the COVID-19 pandemic. "Nature preserves are not large enough to meet our ecological needs, so we must restore the natural world where we live, work, and play," according to Tallamy in his book, *Bringing Nature Home: How You Can Sustain Wildlife with Native Plants* (2007, Timber Press). Tallamy's research has shown that native plants support pollinators and food webs far better than introduced ornamentals, since they evolved together. For example, native dogwood (*Cornus florida*), supports an entire food web and is host to the spring azure butterfly (*Celastrina ladon*), while the Japanese dogwood (*Cornus kousa*) hosts no North American butterfly. Because a high percentage of the U.S. is privately owned, Tallamy feels that residential landscapes need to be redesigned to support diverse pollinators and complex food webs, store carbon, and protect water quality. He advocates planting half the area now dedicated to lawn with diverse plantings of native woody and herbaceous plants.

"Bee lawns" are another idea. Research in Springfield, Massachusetts, found that when lawns are not treated with pesticides, and are mowed every two or three weeks instead of weekly, they grow a diversity of small flowers, such as dandelion and white clover, that provide nectar and pollen to bees. Sixty-five different species of flowering plants were counted in seventeen lawns allowed to grow longer.

Pollinator Pathway is working with the Northeast Organic Farming Association of Connecticut's Ecotype Project and its participating farms and nurseries to grow native plants to provide a source for homeowners as well as larger pollinator habitat restoration initiatives.

All of these efforts are beginning to make a difference for pollinators in Connecticut and adjacent New York, and they are spreading, evolving into a grassroots movement connecting land and people across the Northeast. In Connecticut, the map of towns that have joined now extends east almost to the Rhode Island border, said Merrill, and in New York the initiative reaches into New York City, Long Island, and up the Hudson River Valley. Pollinator Pathway has helped groups in central Connecticut and Massachusetts, including the Boston area. Towns in New Jersey and in the Philadelphia area are starting pollinator corridors.

"They are using us as a stepping stone but know their own communities," said Algon. Other groups, such as the Western Massachusetts Pollinator Networks and northern New Jersey's Northeast Earth Coalition, which had been doing similar work, have now joined forces with Pollinator Pathway Northeast. Over 1,775 landowners have signed up on Pollinator Pathway's website, pledging to create pollinator habitat on their properties. The project has the potential to make a major contribution to boosting pollinator populations in the region. "With the global anxiety level so high, this is a very empowering thing to do," said Washer. "It's a good feeling to know that you can help in your own community."

Adapted from "Creating Pathways for Pollinators" by Susan Shea, published in the Summer 2020 issue of *Northern Woodlands*.

***Susan Shea**, naturalist, conservationist, and freelance writer based in Vermont, is a contributor to* Natural History. *Her most recent article, "Saving Wild Orchids," appeared in the May 2020 issue.*

A Butterfly Walk

With his sunhat and long net, Victor DeMasi looked the picture of a lepidopterist. Indeed, he is a curatorial affiliate at the Yale Peabody Museum of Natural History and a contributor to the Connecticut Butterfly Atlas. DeMasi began his butterfly walk, one of the local events for 2019 National Pollinator Week, by showing off his collection of almost forty species of mounted butterflies, all captured on his property in Redding, Connecticut. He spoke about the significant role butterflies play in pollinating certain plants.

A dozen people followed as he led them through a brushy meadow on the Redding property of Laurie Heiss. DeMasi left the path and pushed through the tall grass to stalk each butterfly that was sighted, sweeping his net back and forth until he caught it. The first butterfly captured was a skipper, named for its quick, darting flight. He also pointed out a monarch, a viceroy, a dusky-colored wood nymph, and a red admiral, with its striking red bands and white spots on black. This meadow provides excellent habitat for butterflies and the surrounding woodland has host trees for caterpillars. On one designated day each year, DeMasi and Heiss count the number of butterflies on her property for the National Butterfly Count.

Victor Demasi helps Laurie Heiss identify a butterfly.

DeMasi talked about the importance of meadows to butterflies and bemoaned the expansion of lawn that has taken place in Connecticut as the state has developed. But there are signs that this trend may be changing. "It's now considered cool to have a meadow." he pointed out.