2MILLION

protecting our pollinators

BLOSSOMS

SUMMER 2020

DETROIT HIVES TURNS VACANT LOTS INTO URBAN APIARIES

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In This Issue

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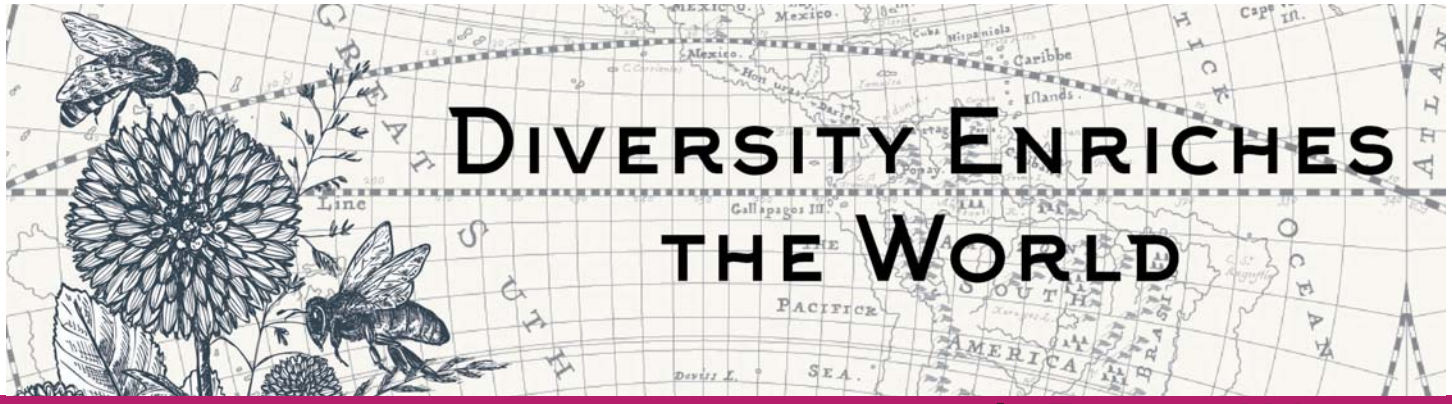
ISSN: 2689-5889 (print)
2689-5897 (online)

2 Million Blossoms is printed by Modern Litho using vegetable-based inks onto paper which has been sourced from well-managed and sustainable forests. Modern Litho is a G7® Master Qualified Printer and holds renewable resource FSC® and SFI Chain-of-Custody® Certifications. This magazine was printed using wind powered electricity.



Diversity Enriches the World

A Brief Word

2 Million Blossoms was launched, because I believe strongly in protecting the planet's biodiversity. Perhaps I am an idealist, but I feel that when people work together, small changes in belief, tiny shifts in behavior, add up to big changes over time.

I'm also a realist. Not everyone thinks like me. And that is actually a good thing. It would be a very boring world if we all thought and acted identically. Diversity—both biodiversity and human diversity—makes our world much more fascinating. This diversity has led to huge innovations in medicine, technology, and the quality of life. We've harnessed knowledge and design elements from nature, which evolved multiple solutions for very complex problems like flight, camouflage, structural stability, and breaking down plastics, just to name a few off the top of my head. We've learned from studying this tremendous diversity how to adapt and improved our ability to survive. We've stolen liberally from nature's ingenuity.

I grew up bouncing between Germany and the United States. I attended the Frankfurt International School during formative years, where my classmates came from 41 different countries. These interactions with students and teachers from different countries and different cultures had a lasting impact on me. It taught me that we all approach problems from our own cultural heritage. Just as butterflies, bees, hummingbirds, and hover flies differ in how they solved the problem of flight, humans bring an incredibly diversity of thought to the problems they face.

In a world where temperatures are rising, where resources are dwindling, where the anthropocene has brought about epic levels of extinction, we need to embrace our human diversity more than ever. Diversity in culture and diversity in thought are some of our greatest strengths, because they allow us to approach problems from many different angles.

I care deeply for America. I love the freedoms it has promised its citizens. I know launching this magazine would have been much more difficult in any other country. The United States is a place that embraces entrepreneurial freedom. It allows it citizens to reinvent themselves and dream big. It is a country founded by immigrants and it has a long history of grappling with its past. Sometimes that fight gets ugly. But I think all Americans want a safe future for their children, a place where they are allowed to dream big and pursue that goal through determination, grit, and hard work.

As I have stated from the very beginning, my goal for ***2 Million Blossoms*** is that our pages will serve as a platform for discussion. It is a place that welcomes divergent views, offers a space where we can grapple with diverse ideas, and allows readers to draw their own conclusions.

Weeds: It's the Bees Knees

I came across this thought-provoking cover image of wildflowers and weeds growing up and supporting a plethora of pollinators, designed by Detroit Hives and photographer/artist Timothy Paule. Detroit Hives turns vacant lots into urban gardens and apiaries. The caption highlights that wildflowers "provide critical habitat for pollinators, beneficial insects and wildlife, which is important for ecosystem function and pollination. Wildflowers can improve soil health, prevent erosion, improve water quality, increase yields and enhance forage conditions for livestock." Check out detroithives.org.

Beekeepers often purposefully move colonies where nature seeds herself, taking advantage of the abundant nectar. Maybe we need to learn to embrace our selfsown wildflowers—they enhance the habitat, ecosystem, and health of our nation, they prevent erosion. They grow up through cracks and push color into our lives.

The Voice of Others

Often in large groups there are a few outspoken individuals, who dominate the conversation. I've certainly been one of those, having no qualms in speaking up when I felt I could add to the conversation. But there are always a few, who stay quiet, taking it all in. I've invited Melanie Kirby, who we featured in last month's issue to share her voice.

Sincerely,
Kirsten S. Traynor

Detroit Hives

Nicole and **Timothy** transform vacant Detroit lots into urban bee farms.
The benefits are threefold: Conservation, Education, and Revitalization.
Find out more, by checking them out online at detroithives.org or following them at @DetroitHives
They kindly let us use their amazing artwork for our summer cover.

Byron Chester lives in Ferriday, Louisiana. "I really have the love for the bees and the art of beekeeping. Beekeeping is my life!" He's on duty pretty much 24/7 when it comes to bees, hauling both equipment and live bees. "I just want to inspire others, empower others and bring awareness to pollinators."

Catch him on Instagram:
@byron_the_beeman
or reach out
byronthebeeman@gmail.com

Mother's
FINEST
FAMILY URBAN FARMS

© J. Cole.

Mother's Finest Family Urban Farms

Our farm is located in Winston Salem, North Carolina focusing on community health, regenerative farming, and representation in beekeeping through our farm Mother **Samantha Foxx**. We offer CSA and wellness products, local honey, fresh produce, and our main goal is to supply our community with health and wellness education through food and nutrition.
www.mothersfinesturbanfarms.com and on Instagram @mothersfinesturbanfarm

Bee-ing an Ally....

Guest Editorial

by Melanie Margarita Kirby
Professional Beekeeper/Journalist/Artist/Mother & Woman of Color

The perception of color and its impression on living organisms permeates practically every facet of our individual and collective interpretations. How we interact, communicate and ultimately judge is rooted in our observations, our determination of friends or foes, and our reconciliation of pros and cons. We don't all realize that we and our societal institutions carry a subliminal or unconscious bias (prejudice) around with us every second of every day. Some of these biases are based on stereotypes which over time, have become so generalized and separate from substance, yet still referred to and revered as truth. We assume the worst and hope for the best. But, the truth is that our assumptions limit the potential, the capacity, and the success of others. It is this squelched potential, this imbalance of opportunity and speculation, that brings tears to my eyes and squeezes my heart. It squeezes with frustration and misinterpreted seclusion but, continues to beat with a resounding determination to persevere.

The first farmers and beekeepers were from northern Africa (Roffet-Salque, 2015). Do we acknowledge that? Do we appreciate the significance this has had on history, and thus on the development of beekeeping? Do we recognize the continued use of violent and forced acquisition, colonialism, and appropriation that has systematically been painted with a brush of panacea. I've tried to tell myself that I was just like "everyone else," and that "color doesn't matter." But the truth is, that I along with millions of other people around the world, are not like everyone else, and that color does indeed matter as it alters our interactions, and how we are perceived. Not only am I a woman, but I'm also a person of color who has ventured into the uncommon professional apiculture arena. Culturally I was raised in a mixed-race environment and so I tend to morph between demographics though I struggle with being considered not "Black" enough, not "Native" enough, not "Hispanic" enough and definitely, not "White" enough. For someone like myself, I feel the pain from all sides…and I find myself almost paralyzed in trying to figure out what "voice" I want to emphasize…because ultimately, I am human, and we all share that commonly.

Over the years, I've become so conditioned to justify my actions and intentions that I am guilty of overcommunicating. I worry if I'll offend people for not "fitting the mold" and, I can sense with a feeling of awkwardness and intimidation, when those around me recognize that I am not the same as them. I worry about how I am perceived, physically

and professionally. I struggle with my own observations because I overanalyze in order to keep myself in a safe space when engaging with others. And unintentionally, I've learned to ignore prejudice and racism to not dwell on what has felt unchangeable. But why should I or any other person of color justify what we feel is unfair treatment? Why should we, should anyone, have to strategize every facet of their waking life in order to not feel the stigma of potentially coming across as threatening or not enough?

It matters that we, as individual humans and as a society, acknowledge the diversity of our communities and value it as much as our biodiversity. It matters that we review and reflect on how our systems of education, food, government, medical access, business, and safety function. It matters that we take the time to reassess and recalibrate those systems that are not functioning properly, that are taking advantage of others, and that are unmindful of how chosen actions or inactions affect others. **It matters** that **we** (**all humans**) start to **bee** the change we want to see and that we do what we can to uplift those who have been oppressed, ignored, disregarded and, disenfranchised. It matters to **you,** to the **world** you want to live in, and to current and future generations. It matters, because we each matter. And until we acknowledge that every oppressed race, creed, color, ethnicity and heritage matters, as distinct and unique living beings and, as part of a larger human culture and consciousness, we will continue to limit and be limited.

To those who have felt the oppression, the prejudice, the racism, the inequality of living the Black Experience or a POC experience, we shall persevere because there is no other option. We shall persevere because we know, in our heart of hearts, that fairness in the pursuit of life, liberty and happiness must be available to all. We know that now is the time to loudly reclaim our pride in our heritage—despite it being robbed, erased and suppressed, it is time to bee all you can bee, for now and future generations. As a BOC (Beekeeper of Color), I encourage more BOCs and their allies to step forward and share their stories. The only way we can amplify our messages longing for equality is to help change the narrative and, to be honest about how we are impacted. We walk in a mosaic space that is on the fringe of society, yet we make up the very fabric that holds society together. This fringe space can help us to bridge demographics if we build it together.

I've long kept quiet because I have been afraid. I have seen what can be done to those who speak too loudly. And I can see what has become of those who have been trodden. I

choose to promote the positive…but I realize that I can and should bring more awareness to the negative in order for us to dismantle the chains and bars of racism. I choose to promote truth so that all POC have equitable opportunities to pursue our dreams, interests and to gain exposure-whether that be beekeeping, conservation, farming, journalism, research, teaching, art—you name it.

> "I've long kept quiet because I have been afraid."

Dedicated to my fellow BOC and POC: Stay Strong my relatives…and let your voice be heard from sea to shining sea and bee-yond! If you're shy, please don't hesitate to contact me and I'd be honored to help amplify your voice, share your experience, and support your efforts for equality.

To Allies: Here is a link for a Racial Equity Tool Kit for becoming more aware and supportive of dismantling racism within the farming sector: https://www.youngfarmers.org/resource/racialequitytoolkit/

Melanie Kirby is a multi-racial professional beekeeper and queen bee breeder with Native American-Caribbean-Hispanic+ roots. She would like to thank her ancestors for fighting the good fights and giving her the strength and inspiration to embrace her passions and pursue her dreams. She also thanks 2Million Blossoms for sharing this platform to bring awareness to POC: black, red, brown, yellow, and everything in between. You can read about Melanie's recent beekeeping abroad adventures in the second issue of *2 Million Blossoms.*

The Hive is the Home

Detroit Hives is building community one vacant lot at a time

by Brigette Brown

Perched far north and nestled among the Great Lakes, Detroit is a city with a long history and deep influence. Including the surrounding region, it is also one of the most populous and largest economic metropolitan areas of the nation. The iconic city continues to have significant contributions to American culture, music, architecture, and industry.

And now urban beekeeping. Timothy Paule and Nicole Lindsey, founders of Detroit Hives, tell us their story:

Detroit Hives is a local nonprofit organization dedicated to creating sustainable communities as well as local bee populations with an ingenious solution: transforming vacant lots within urban environments into beautiful and useful pollinator-friendly spaces. They do this by purchasing abandoned lots, building apiaries, and inviting the community to use these spaces to learn about biodiversity and pollination.

Paule and Lindsey believe this work has a threefold benefit to everyone: conservation of bee populations and wildflowers; hands-on and applied education for the community; and revitalizing a sense of beauty, purpose, and belonging—both for the people and the bees—in their city.

2MB: *Tell us more about yourselves.*

Timothy Paule: Nicole Lindsey and I are both Detroit natives, born and raised in the Motor City. After attending Wayne State University I started my own photography/creative agency. Nicole finished at Oakland University with a B.A in Psychology. Before beekeeping she worked in customer service.

2MB: *How has the community responded to your unique beekeeping initiative?*


BEFORE

AFTER

Paule: With over 70,000 vacant lots in the City of Detroit, residents are looking for ways to revitalize their neighborhood. Our educational apiaries provide a sustainable solution that helps to eliminate blight, reduce crime, as well serve as an outdoor learning space for youth. Because of such, our initiative has been received well. Not only do we provide volunteer workshops for the community, but we also offer honey bee tours to educate others on the importance of pollinators. Our favorite part of beekeeping is educating our youth.

2MB: *How has Detroit Hives changed the community? The city?*

Paule: There is a history of backyard beekeeping in Detroit. But until our project with Detroit Hives, there has never been a nonprofit, nor an educational apiary, that engages the public. And unlike most cities, Detroit is considered a green city. With so many vacant lots free from harmful chemicals, our hives perform better than most rural locations.

At Detroit Hives, we believe in BEE DIVERSITY. We raise honey bees, bumble bees, as well as create pollinator habitats for all pollinators to thrive here. In addition, we have partnered with community organizations like Gleaners Community Food Bank and Peace Tree Parks to host hives at their community gardens. Since our existence in 2017, we have expanded to over 15 locations with over 17 partners and sponsors. In 2019 we founded National Urban Beekeeping Day (recognized July 19th) and currently passed a resolution with Detroit City Council recognizing Detroit as an official Bee City.

This summer, join 2 Million Blossoms and Detroit Hives in celebrating National Urban Beekeeping Day on July 19th!

Splitting The Light

by Craig P. Burrows

© Craig P. Burrows

Pair of Plains Coreopsis

On a bright day around a thousand watts of sunlight strike a square meter of the earth's surface. Split into the different spectrums just under half of that light is infrared, a little less is visible light, and a measly 8% is ultraviolet. Most humans cannot see ultraviolet light. We are unaware of this realm, but many others use it to see. Bees and other pollinators use this reflected UV light to find flowers. Many living things, including our skin, work to protect themselves from damage caused by this high-energy light.

As long as the sun's visible light shines, we are blind to this hidden world reflected from a sun-lit flower. To unveil this secret beauty, I work in darkness. I light my floral subjects with only an ultraviolet light source to manifest a glow from within. This process is called ultraviolet-induced visible fluorescence (UVIVF) and while most of us have never heard that term, we are familiar with its effect. Place a sheet of white paper or a shirt in the sun and it appears to brighten and look crisply blue white. Under blacklight the same materials will glow intensely blue.

Why is that? These materials contain fluorescent compounds. They absorb some wavelengths of light, spend some of that energy in heat production, and radiate out the light they have absorbed at a longer—and visible—wavelength.

I've turned my lens onto flowers, illuminating them with a 365nm LED source for UV. When struck with this wavelength my subjects—a flower or fruit—emit a glow that ranges from blue through infrared, regardless of its original color when struck by traditional light.

Often, I am amazed and startled by the variety of hues that show up under my light. Frequently I see some replication of the flower's original colors, but many of a flower's structures produce such an intense glow, enough to self-illuminate the rest of the flower. I never know what I will find. Each subject is a discovery. My technique peels away the overwhelming intensity of sunlight and keeps only the stunning visible fluorescence.

I collect my floral subjects mostly from the urban and suburban environments I explore—the same environments most of us live in. Each street I traverse contains an impressive variety of plants. Quite often they originate from an entirely different part of the world.

Where I live in California, I benefit from a broad variety of plants. Our mild climate permits many tropical and diverse plants to thrive. A single street often houses immigrant plants from China, Europe, and other parts of the US. South African flora are common as we share a similar climate.

I'm drawn to these collected plants. They have inspired

Bee Balm

Blanketflower

Cucumber flower

me to diversify and grow quite a lot of my own. I specialize in growing orchids, though more recently I have been growing milkweed and several native plants from seeds. I chose milkweed specifically to provide food for monarch caterpillars and nectar for pollinators. My interest for the native plants stems from my desire to observe the habits of plants implicitly developed for this climate. These efforts in plant cultivation have acquainted me with the insect world. I've spotted quite a few native bees. Most of us are oblivious to these diverse insects unless we specifically look for them or spend quite a bit of time investigating flowers.

Until I started this project I had not realized just how extensively varied our plants are. We all take them for granted. I hope that through my work, which provides a different view of many common plants, others will experience a similar sort of revelation—be struck at their startling beauty and overcome their plant-blindness. Even if we don't identify and name all the plants we encounter, we can still connect with nature. We long for green spaces. Exploring the outdoors, science has shown, makes us kinder, happier, and more creative.

Craig P. Burrows is a 30 year-old photographer based in Southern California. He has have been practicing photography since 2010, teaching himself the art of imaging through a combination of practice, online resources, and an academic background including physics. Visit his website for more information: http://www.cpburrows.com/

Succulent

How to Tag a Monarch

by Monika Maeckle

Whenever I mention to people that I tag monarch butterflies, the question that follows is: how do you do that?

It's pretty straightforward. You need a butterfly net, a clipboard or notebook, and writing utensil or notes app on your phone to record your findings. You also need tags issued by Monarch Watch ($15 for 25 tags). I recommend a hat and camera, too.

Before you go, apply sunscreen or insect spray if you use them, then wash your hands. Monarchs and other butterflies are more resilient than we think. However, Deet, Paba, and other chemical contact with their scales, wings, and bodies should be avoided. No need to sterilize your hands or wear gloves. Just wash your hands.

We only tag monarchs in the fall. Check the Monarch Watch website for peak migration time in your area.

Since butterflies won't fly if temperatures register less than 60 degrees, late mornings and afternoons on sunny days are ideal. Right before sunset is good, too, especially when they're migrating. Monarch butterflies will often drop from the sky around dusk and look for roosting spots—usually in protected tree limbs and often near water sources.

Ready to go Tagging?

1. Locate butterfly

Millions of migrating monarch butterflies pass through the US each fall on their way to their ancestral roosts in the Mexican mountains. Peak migration starts in August in Canada and gets later as one moves south. The insects generally arrive in the mountains of Central Mexico the first week in November, just in time for Day of the Dead celebrations.

On their journey south, the butterflies fuel up, building their lipid stores to get them through the winter. So anywhere with late season flowers along the flyway should draw them, as well as other butterflies.

2. Net butterfly

Netting a monarch—or any butterfly for that matter—is more challenging than it looks. The flitting creatures exhibit extreme skittishness and their compound eyes afford a 360-degree field of vision. The slightest movement can send them sailing, so move slowly.

When I first started tagging monarchs, I chased them in flight. After slipping in the river more than once and skin-

ning my knee after tripping down the steps at my house while in hot pursuit, I resolved to only try and net monarchs when they're roosting or nectaring. I've witnessed several ace netters with excellent hand-eye coordination, quick reflexes, and a sniper's aim nab butterflies in flight, but I'm not among them.

Suggestions: wear low-key clothing that blends into the environment, move slowly, keep quiet, and sneak up on them from behind. Once you swing your net, the butterflies will scatter. It resembles fishing in that sense; when you cast your line, the fish flush, but they'll be back. After a few minutes, the butterflies will resume their activities—nectaring, resting, or roosting.

Once you have a butterfly in your net, be sure to flip the net sock over the circle of the rim—otherwise the clever insects can slip out. With the net sock folded over the net structure, they will remain in your net.

3. Collect butterfly/butterflies from net

Once the butterfly or butterflies are in the net, gently reach in and clasp an individual in your cupped hand, wings folded together if possible. The butterflies will flail around in the net, so try to calm them by folding their wings closed and gently pressing the net fabric on them. Also, try holding the butterfly upside down; it seems to calm them.

Keep the net closed so that other butterflies don't fly out as you remove the one in your grasp, then pull out your catch and take a look.

4. Examine butterfly, establish its sex

This is when you examine the butterfly to determine its sex. Open the wings gently and look for the two pheromone sacs on the lower half of the butterfly's wings. If you see two black dots, it's a male. If not, it's a female. Also, if the butterfly is extremely worn and unlikely to make it to Mexico, refrain from tagging it. Let the poor creature fly off. Note the info on your data sheet or notebook, as well as the tag number.

5. Remove tag from sheet and adhere to butterfly

Holding the butterfly between two fingers with wings closed with one hand, remove a Monarch Watch sticker from the tag sheet. I use my thumb to get them on the tip of my nail so they're easy to slip onto the discal cell of the butterfly's wing. Some people use toothpicks to lift the tag from the paper. Place the tag on the discal cell, as illustrated in the tagging sheet provided by Monarch Watch, and press firmly but gently.

Make sure you've recorded the tag number, butterfly's sex, date, and other useful data on your data sheet or notebook.

6. Release

Open your grasp and let the butterfly go. If you're so inclined, send her off with a kiss and best wishes for *a buen viaje a* Mexico.

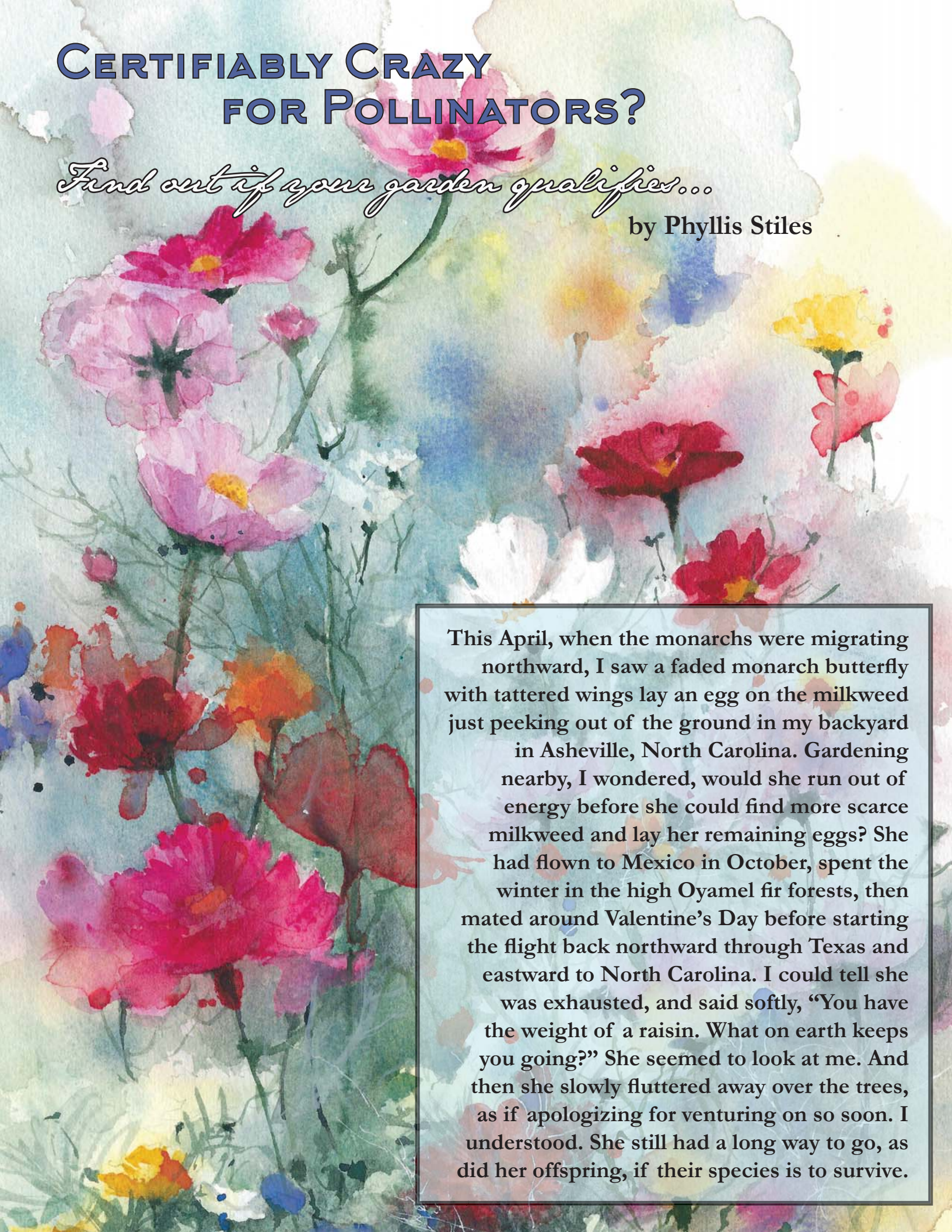
Send your data to Monarch Watch by December 1 so it can be entered into the tag recovery database. In the spring, check to see if any of your monarchs were recovered in Mexico.

Monika Maeckle is a writer in San Antonio, Texas. She founded the Texas Butterfly Ranch website and the city's Monarch Butterfly and Pollinator Festival. She is working on a book.
www.texasbutterflyranch.com

Certifiably Crazy for Pollinators?

Find out if your garden qualifies...

by Phyllis Stiles



This April, when the monarchs were migrating northward, I saw a faded monarch butterfly with tattered wings lay an egg on the milkweed just peeking out of the ground in my backyard in Asheville, North Carolina. Gardening nearby, I wondered, would she run out of energy before she could find more scarce milkweed and lay her remaining eggs? She had flown to Mexico in October, spent the winter in the high Oyamel fir forests, then mated around Valentine's Day before starting the flight back northward through Texas and eastward to North Carolina. I could tell she was exhausted, and said softly, "You have the weight of a raisin. What on earth keeps you going?" She seemed to look at me. And then she slowly fluttered away over the trees, as if apologizing for venturing on so soon. I understood. She still had a long way to go, as did her offspring, if their species is to survive.

Sadly, my little orange visitor's experience is all too common. Generally speaking, America's ornamental landscapes are filled with monocrop turf lawns and non-native plants, often from other continents. Plants and pollinators co-evolved over millions of years in mutually beneficial relationships. Non-native plants frequently don't meet pollinators' nutritional needs.

At least 25% of the world's 20,000 bee species specialize on the pollen of certain plants, dependent on it for feeding their offspring. While manicured lawns are much admired, they provide little food and few, if any, host plants for butterfly and moth eggs. The resulting caterpillars often go hungry and nesting sites are hard for pollinators to find. A 2005 NASA-sponsored study estimated that lawns cover 128,000 square kilometers (or 32 million acres) of the United States' continental land mass, an area substantially larger than the farmland used to grow irrigated corn. The amount of habitat turned into inhospitable lawn is estimated to grow by hundreds of thousands of acres each year.

Our country continues to develop almost every available acre of land or convert it to agriculture. The native pollinators lose ever more habitat, perpetuating their troubling species declines. According to the Xerces Society for Invertebrate Conservation, 28% of America's 47 native bumble bee species are at-risk right now and western monarch populations have declined by a stunning 99%. Eastern monarch populations have declined by 84% since 1997, according to Monarch Watch. At this rate, our generation may be the last to witness the monarch's miraculous 3,000-mile migration from Canada to Mexico. Where are butterflies, bees, moths, beetles, and other pollinators supposed to find pesticide-free nectar, protein-rich pollen, and safe nesting sites?

The American lawn is a food desert for pollinators

How about our yards, places where pollinators used to flourish just a few hundred years ago? Most pollinators adapt to urban and suburban life just as well as to rural, and they don't even require much space. A multi-year survey of New York City's parks and forested areas discovered over two hundred species of bees! Indeed, unlike migrating monarchs, most insect pollinators never travel very far from where they emerged as adults. The good (or possibly bad) news is that all of their nutritional, nesting, mating, and overwintering needs have to be met within a radius of a few hundred yards or miles.

Monarch egg discovered on milkweed sprout

Each person who controls a small piece of land has the capacity to welcome pollinators through their management practices. Providing for pollinators doesn't have to cost them any more time or money than they currently expend. Admittedly, it may take a little more thought and require changing their weed management, plant selection, and purchasing practices. Why not divert the time and funds we spend on creating and maintaining a respectable, if not weed-free, lawn, to incorporating the plants that were on our continent before European settlement? That would be a lot of new pollinator habitat, giving new meaning to the "land of opportunity!"

But who likes change? Experience shows humans are reluctant to change. We have become accustomed to seeing the same trees, shrubs, and flowers throughout our neighborhoods. Most of the commonly used plants are readily available at the big box stores for quick, easy purchases. Mowing our lawn is a time-honored tradition. Many homeowners' associations and municipalities even fine residents who don't keep their lawns mowed short enough; some for fire prevention and rodent control reasons, and many simply for aesthetic reasons. Some impose harsh fines for having plants that get too tall.

What would it take for Americans to break with convention and, as author of *Bringing Nature Home*, Dr. Douglas Tallamy says, "Garden as if life depended on it"?

Granted, paradigm shifts don't usually occur overnight, but they occur when enough of the population adopts them to cause a tipping point in social conventions. Research shows a wide range in how much of the population must act to reach a tipping point. A study published in Science in 2018 showed conventions can change when about one quarter of

the population adopts them. By contrast, the now famous Erica Chenowith study at Harvard University showed at least 3.5% of the population must engage in non-violent civil resistance to achieve radical change. With a population of 328 million people, this would mean we need to convert **at least** 11.5 million gardeners to practices that enhance pollinator habitat.

Thankfully we're not starting from scratch. Working with the Xerces Society for Invertebrate Conservation, the Pollinator Partnership, and others, the Million Pollinator Garden Challenge has already registered more than a million gardens. More and more individuals are consciously welcoming pollinators to share their space, both big and small. It's a patchwork quilt of color that varies across the country and around the world, but often shares critical elements like a reduction in pesticide applications, an increase in native plants, and providing nesting places.

Want to Start a Local Pollinator Habitat Certification Program?

Seeing is believing. What if communities could see attractive ornamental landscapes buzzing with pollinators? What if signage announced that what they were seeing was pollinator-friendly landscaping? What if the proud owner of that landscape enjoyed telling passers-by about why their landscape was different and how they achieved a landscape they could maintain and share with pollinators and other wildlife?

A local pollinator garden or habitat certification program is a great way to generate interest in gardening for pollinators. Certified gardens create models people can see with their own eyes, debunking the myth that pollinator gardens are inherently messy and unattractive. The people and institutions who influence gardening decisions could be great allies in promoting pollinator garden certification programs and expediting the adoption of new gardening practices. Think Master Gardeners, garden clubs, retail and wholesale plant vendors, nurseries, landscapers, and landscape designers.

A wide diversity of existing certification programs offer a spectrum of program design possibilities, from simple and easy actions to those requiring substantial staff and volunteer time.

Let me share a few of these with you.

Xerces: Bring Back the Pollinators

The Xerces Society's Bring Back the Pollinators Pledge program uses the honor system and requires applicants to accept four commitments: grow pollinator-friendly flowers, provide nest sites, avoid pesticides, and spread the word. The program reaches a national audience from community gardens, to suburban backyards, to farmland. Each applicant appears on a map of certified habitat locations. Xerces offers a wealth of resources for enhancing pollinator habitat online and a sign as a thank-you gift for a donation.

Xerces habitat sign
© Matthew Shepherd

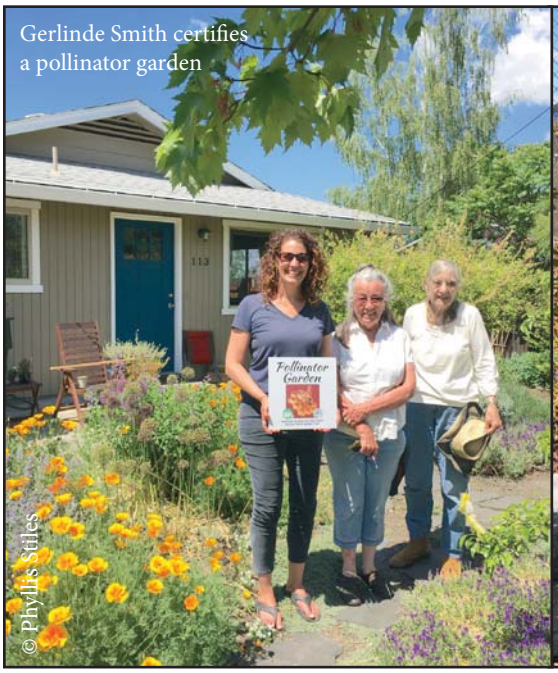
Penn State Pollinator Garden Program

For Pennsylvania gardens, the Penn State University's Master Gardeners Pollinator Garden Certification Program is very explicit and requires a modest application fee and site visits by Master Gardeners prior to certification. Applicants are asked to check off the native plants in their garden from a list. Other spring, summer, and fall bloom lists must be checked off indicating that they are planted in clusters of at least three plants. They require removal of invasive plants that currently includes 21 species. Their "reducing pesticide use" section offers seven techniques, all of which must be checked off beginning with "Clearly identify the pest before taking action" and ending with "Avoid Systemics." A garden description section offers a variety of options from "home" to "government building or park." The application ends with a request for at least four photos and a signature attesting to the accuracy of the information supplied.

Monarchs Across Georgia

Monarchs Across Georgia's Pollinator Habitat Program requires applicants to implement at least nine conservation


Aesclepias tuberosa with monarch caterpillars
© Phyllis Stiles



Gerlinde Smith certifies a pollinator garden

Gerlinde Smith and Dolly Warden at skate park garden

practices and include the following four features in their garden. They must have at least two plants each of two different milkweed species for monarchs and five host plants that provide food for the caterpillars of five additional butterfly species. Host plants may also be counted as nectar plants. There must be four nectar sources for butterflies and other pollinators in each of three seasons when butterflies are active: spring, summer, and fall. Plants that bloom in more than one season can be counted in all seasons during which they provide nectar. Gardens must include an appropriate water source for butterflies as well as a basking site, and shelter from weather, predators, and human activity. Lastly, native bees must have places to raise young. Most of Monarchs Across Georgia's applicants are from Georgia, but anyone in the United States can apply regardless of location. Their certificate costs $10, and an optional sign is available for $28.

Bee City USA® Affiliate Garden Certification Programs

I founded Bee City USA in 2012 to make Americans more PC—"pollinator conscious" that is. Bee City USA's mission is to galvanize communities to sustain native pollinators by providing them with healthy habitats, rich in a variety of native plants and free to nearly free of pesticides. In 2018, Bee City USA became part of the Xerces Society for Invertebrate Conservation, which has the largest pollinator conservation program in the world. Today, there are more than 200 Bee City USA and Bee Campus USA affiliates spread across 42 states. In addition to providing ongoing education and creating habitat on public and private land, each affiliate commits to developing a local native plant list and a list of suppliers for those plants. Three programs started by Bee City USA affiliates offer pollinator garden certification program models worthy of replication.

Bee City USA – Talent, Oregon

In 2014, Talent, Oregon, became the second Bee City in the USA, taking the movement coast to coast. Talent's Bee City USA committee is thrilled each time they certify a new garden and enjoys praising the garden owners publicly through the certification program. This is a joint effort between the Talent Garden Club and the Bee City USA – Talent committee. Garden owners complete an application and a worksheet that are reviewed during a site visit. Once approved, they receive a 12" x 12" metal sign that costs the applicant $12. In addition to Talent's thirty certified private gardens, they also have a monarch waystation and eight public gardens located everywhere from the roundabout in the center of town and at city hall, to the police station, the post office, the historical society, and the skate park. The garden club, under club member and the Parks and Recreation commissioner Gerlinde Smith's guidance, is leading the pollinator garden effort, recruiting two volunteers for each public garden to be "garden stewards." Stewards commit to checking the garden each week to weed, water, and plant as needed. To confirm their garden continues

to meet certification requirements, the team emails or calls garden owners each year.

Bee City USA – Ashland, Oregon

Prospective pollinator gardeners complete an application and submit it for a visit by Bee City USA - Ashland volunteers. Since the program began in 2016, Bee City USA – Ashland, Oregon, has certified 63 gardens. In 2019, Ashland hosted their third Annual Pollinator Garden Tour, featuring 18 certified gardens and selling 175 tickets. The "ticket" is actually a booklet with a color picture and description of each garden, along with a map. The Bee City Ashland team is also creating a Pollinator Garden Pocket Park on a city-owned parcel within the Riverwalk community. Photos of the transition, still in progress, can be found on the Bee City USA - Ashland page. The City of Ashland's Conservation Division even provides a reimbursement of up to $3,000 to homeowners who remove their irrigated lawn and replace it with a low-water use landscape, such as a pollinator garden.


Ashland 2019 garden Tour participants
© Kristina Lefeverch

Bee City USA – Asheville, North Carolina

Learning from the pioneering programs above, the home of the first Bee City USA affiliate, Asheville, North Carolina, unveiled its pollinator garden certification program this spring. Asheville GreenWorks leads Asheville's Bee City USA program. In order to encourage the novice pollinator gardener, but also to recognize veteran gardeners, the program offers four tiers (Egg, Caterpillar, Chrysalis, and Butterfly) with progressively higher requirements. Expectations for each tier include avoiding pesticides; removing invasive species; incorporating caterpillar host plants and native wildflowers, trees, and shrubs that bloom in spring, summer, and fall; and providing nesting and overwintering sites and materials. Applicants are invited to supply photos. Just by visiting the webpage and completing the online application, an applicant will learn what pollinators need and find resources to answer their questions. Those resources include wildflower, tree and shrub plant lists, suppliers of the plants on the lists, bloom time lists, and quick starter lists for the "Egg" and "Caterpillar" tier applicants. There is an application fee of $10 to help cover the staff time involved in reviewing the application and a sign is available for purchase for $35. Within a few weeks of the program's announcement (during the COVID-19 virus stay-at-home period), we already had 15 applicants! We are asking local plant suppliers to help us promote the program, and we hope to host a pollinator garden tour in 2021 showcasing the best gardens. In the future, certified gardeners will be encouraged to host small neighborhood gatherings to talk about gardening for pollinators.

Pollinator Garden Signs

Pollinator garden signs are a fantastic educational tool 24/7 and 365 days of the year. When pedestrians stop to read my Xerces pollinator habitat sign nestled in my front flower bed, I greet them and tell them about how we need insects and pollinators to feed birds and other creatures. I let them know that pollinators help nearly 90% of flowering trees and plants reproduce. That's why we welcome pollinators into our yard by planting a variety of locally native plants and not using pesticides. I find that they're always delighted to speak with the gardener and, in turn, they share stories about their own yards and communities.

Some organizations provide signage for certified gardens, while others make signage available for purchase. Another option is to provide artwork for certified gardeners to

Ashville garden sign
© Peter Menzies

Betsy Savely in her certified garden

produce their own signs. Regardless, garden signs may offer some education, or even have a QR code, and refer the viewer back to a website (as exemplified by the Xerces sign). Some include the logo of the certifying group, while others simply include a picture of a pollinator. Some programs encourage having children paint signs about pollinators and flowers to engage them in pollinator conservation. This is a great addition, however, there is power in being part of something larger. Seeing the same sign in location after location is a repetitive invitation to join the movement and connect pollinator habitat corridors in the process.

Pollinator Garden Tours

Just eight certified pollinator gardens should provide enough destinations to host a pollinator garden tour. My husband, an avid gardener, has even allowed our garden to be included in the Asheville GreenWorks' pollinator garden tour a few years ago. As though I needed to be reminded of the need for a paradigm shift when I was helping plan that tour, I found it difficult to locate many native plants in my own neighborhood—not even milkweed for monarch butterflies.

Using my husband as an example again, he has traditionally avoided touring other people's gardens because it makes him feel like his garden doesn't measure up. Gorgeous and pollinator-friendly are not mutually exclusive garden goals. With large budgets and manpower, anyone can create a stunning landscape. Ideally, gardens that support pollinators also are beautiful and tidy. But in the end, we want visitors to feel educated and empowered, more than awestruck and overwhelmed. That's why we created reusable "factoid signs" (available on the Bee City USA Resources page under "Pollinator Garden Certification Programs") many years ago to produce and place at strategic locations along garden tours. Of course, the factoids should be customized to local conditions.

Sourcing Locally Native Plants

Most trees, shrubs, and other plants in American yards are chosen because they are attractive, inexpensive, widely available, and easy to grow, not because they support wildlife. So, not only do we need to change perceptions of what constitutes an attractive yard, we need to convince plant growers to grow native plants when most of them don't even know what was in their area before European settlement. As demand for native plants grows, some nurseries will be convinced growing native plants is profitable. Many local native plant lists are available from Native Plant Society chapters and elsewhere. The Xerces Society's most popular book is *100 Plants to Feed the Bees*. Xerces' website also offers downloadable plant lists by region. The Audubon Society has done an excellent job of educating growers on which plants are especially important for birds in their area. Native plants that support birds also support pollinators! In addition to the Audubon Society's attractive info sheets targeted at plant growers and birders that are available to download, their online plant list is sorted by zip code and has a picture of each plant detailing the plant's attributes—shrub or tree, fruit, nuts, evergreen, butterflies, and caterpillars.

Time for a Change

Norms have changed throughout history. Something that was once taboo, if not illegal (think Prohibition making the sale of alcohol illegal just 100 years ago), later becomes both widely supported and legal.

I dream that one day soon America's managed landscapes will be connected pollinator playgrounds.

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More Information

Bumble Bee Conservation, Xerces Society webpage: https://www.xerces.org/bumblebees

Million Pollinator Garden Challenge, http://millionpollinatorgardens.org/about/

Xerces Society's Bring Back the Pollinators Pledge, https://xerces.org/pollinator-conservation/pollinator-protection-pledge

Pennsylvania Master Gardener Pollinator Gardener Certification Program, https://ento.psu.edu/pollinators/public-outreach/cert

Monarchs Across Georgia, https://www.eealliance.org/pollinator-habitat-certification-program

Asheville GreenWorks/Bee City USA – Asheville, North Carolina, Pollinator Garden Certification Program, https://www.ashevillegreenworks.org/pollinator-garden-certification.html

Bee City USA -Talent, Oregon, http://www.cityoftalent.org/SIB/files/BEE%20CITY%20USA%20TALENT%202019.pdf

Bee City USA – Ashland, Oregon Pollinator Garden Nomination and Tour information, www.ashland.or.us/beecity

The Audubon Society, https://www.audubon.org/native-plants

Phyllis Stiles founded Bee City USA® in 2012. She is director emeritus of Bee City USA and Bee Campus USA which became part of the Xerces Society in 2018. To date, more than 200 cities and campuses in 42 states have joined the Bee City USA network. In 2015, the North American Pollinator Protection Campaign named Stiles "Pollinator Advocate of the Year for the United States." Stiles has spent her career at universities and non-profit organizations serving communities from West Africa to the Mississippi Delta, in fields ranging from natural resource and farmland protection to fund development. Stiles retired from Bee City USA at the end of 2019, but continues to advocate for pollinators.