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ONCE UPON A TIME, ALMOST ALL GARDENS WERE RATHER MANICURED.

Lawns were cut short and uniform, edges were bold and crisp, and borders were ruffled with brightly colored flowers coaxed from evenly tilled, bare earth. Gardens had to be neat and tidy. Today, the focus has shifted to creating gardens that are nurturing—that provide shelter and sustenance for both people and wildlife. Gardens are being designed with layers of vegetation that mimic actual woodlands, creating beautiful habitats for people as well as other mammals, birds, insects, and reptiles. Many gardens now have areas where ground is covered by a dense carpet of native plants that provide for wildlife. Leaves are even being left on the ground right where they fall. Some of this might, from the old way of looking at things, appear unkempt. Not any longer. The ecologically driven garden has arrived.

In an increasingly urbanized world where so much of the landscape is intensely managed, more and more of us want to have a nurturing space that's filled with life close to home—in fact, right outside our homes. And why wouldn't we? The benefits of being in spaces with a diversity of plant, insect, bird, reptile, and small mammal

life are great—and go well beyond making people feel better. A recent article in *National Geographic* by Florence Williams titled “This Is Your Brain on Nature” highlights the ways in which more wild environments (wildlife refuges, state and federal parks, biodiverse gardens) actually affect the brain. Citing work by David Strayer, professor of cognition and neural science at the University of Utah, Williams explains, “It’s the visual elements in natural environments—sunsets, streams, butterflies—that reduce stress and mental fatigue. . . . Such stimuli promote a gentle, soft focus that allows our brains to wander, rest, and recover.”

We can create such environments right outside and even within our homes. Gardeners, landscape designers, botanists, ecologists, entomologists, and horticulturists have been prominent advocates for staying connected to the places, plants, and animals we evolved with. They are helping us move toward a future where we live surrounded by abundant life.

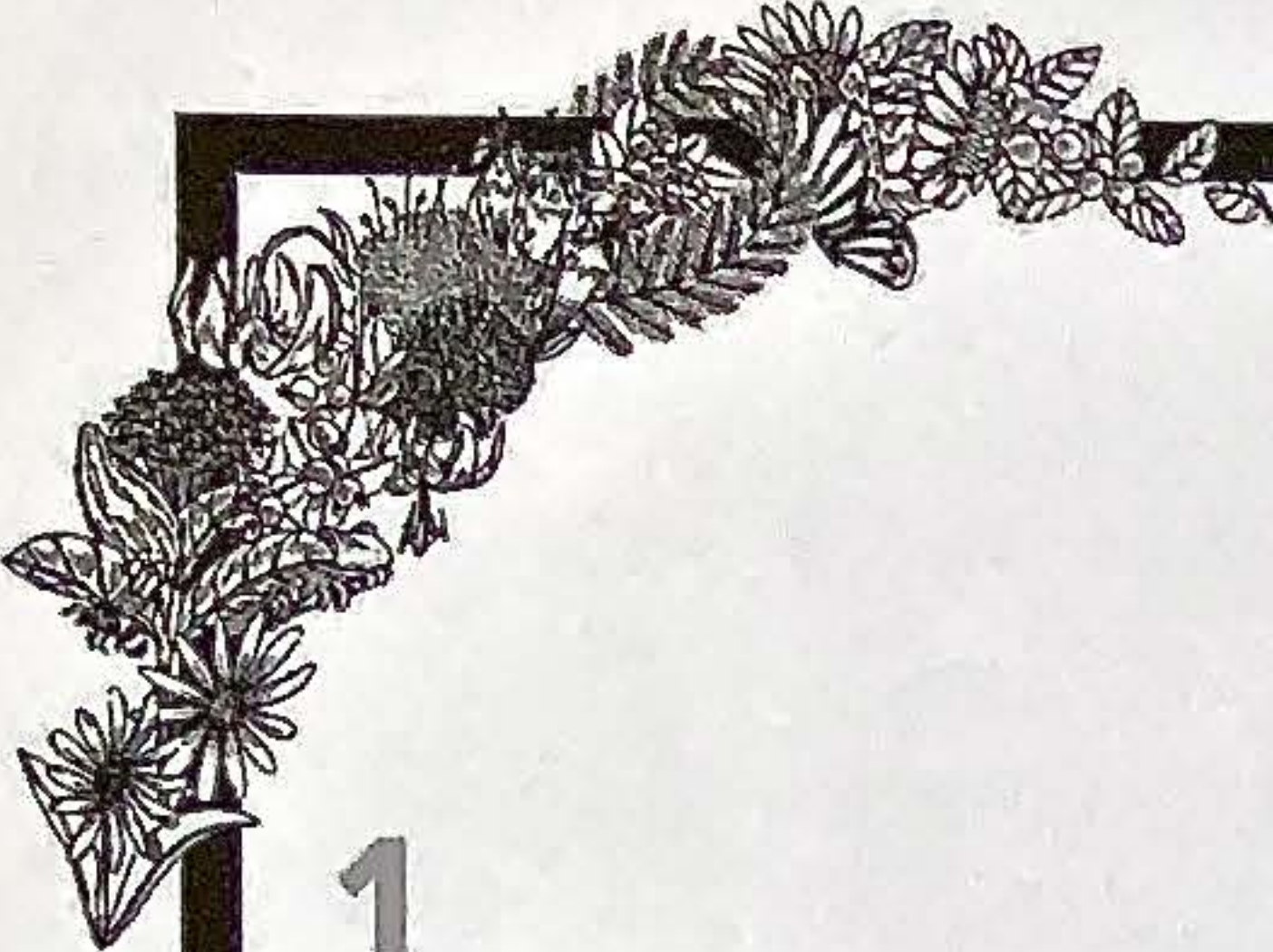
Though approaches vary around the U.S., we can learn a great deal from leaders in the burgeoning field of ecological gardening. Landscape architect Darrel Morrison gives tours in nature reserves so visitors can observe plants in their native habitats. During these tours he gleans ideas for his own gardens, which he designs in a manner he calls “stylized nature.” Richard Louv, author of *Last Child in the Woods* and *The Nature Principle*, promotes the psychological benefits of connecting with and living in more wild spaces. He helps us imagine what this could look like. Then there are the scientists who help us understand the science and benefits behind the creation of wilder gardens. In his own yard and in his books, Doug Tallamy shows us what the world could look like if we design landscapes where birds, frogs, butterflies, bees, and all the many forms of life can flourish. And this picture wouldn't be complete without designers such as Steve Martino, who has been designing refined native gardens for more than 35 years. His work shows us that ecologically focused gardens don't have to be messy; they can be architecturally exciting, horticulturally compelling, and full of life.

But what is an ecological garden exactly? And what if your yard has suffered years of damage, leaving it far from being an ideal habitat for you or wildlife? Can the wounds be reversed? And how do we make gardens that are designed for and accessible to people? We turned to experts—18 leading designers, scientists, authors, and advocates who are leading the charge in the development of ecologically informed gardens. In the pages that follow, you'll find out how they answer these tough questions and what you can do to fill your garden with biodiversity and beauty.

Christy Ten Eyck transformed this front yard from a lawn and asphalt driveway into an oasis with bird- and butterfly-friendly native plants and a rainwater-harvesting garden of fruit trees, herbs, and vegetables. See more images at gardendesign.com/teneyck.



COURTESY TEN EYCK LANDSCAPE ARCHITECTS

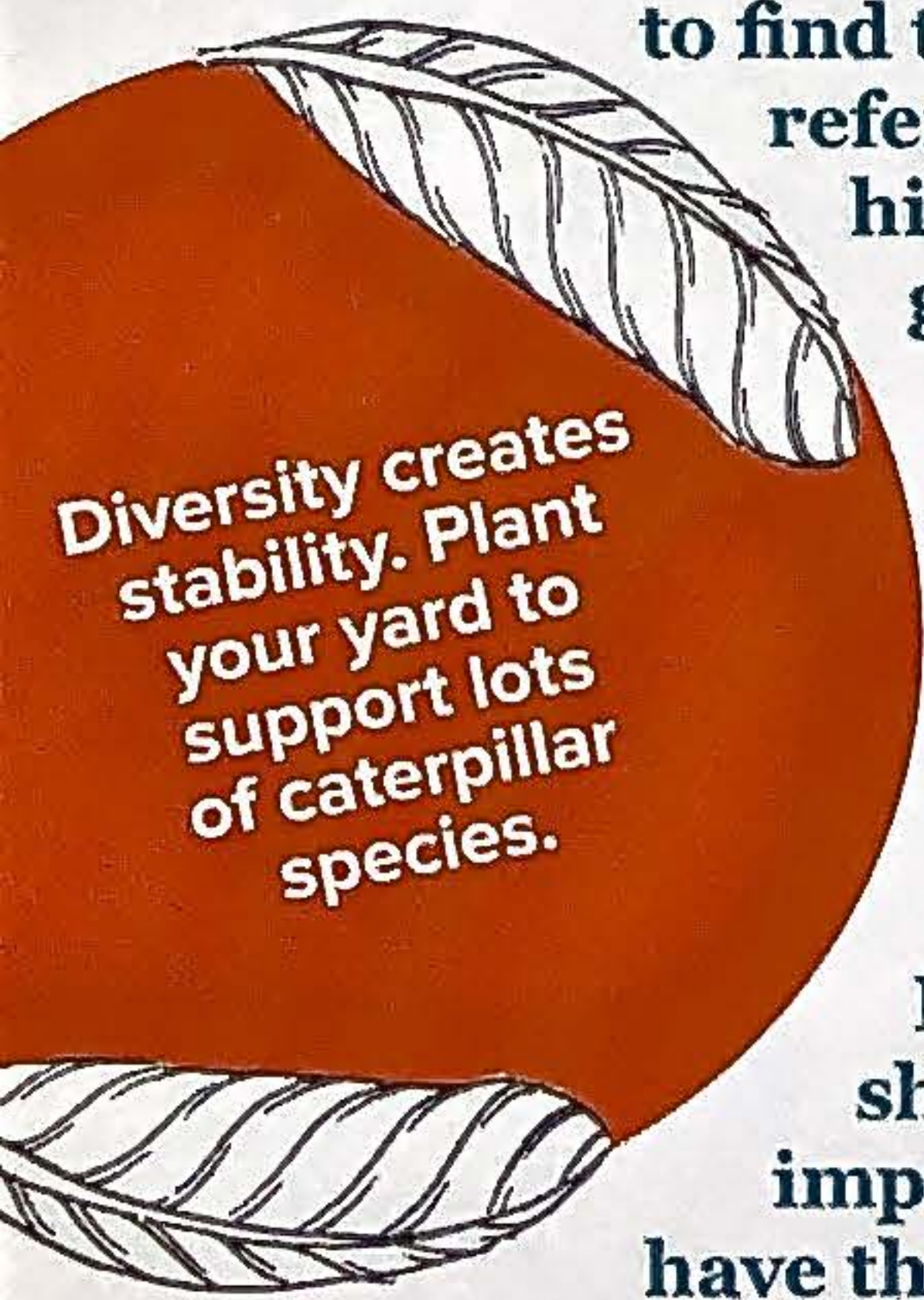


1 THE SCIENTIST

doug tallamy
Oxford, PA

Doug Tallamy is best known for his books *Bringing Nature Home* and *The Living Landscape*, the latter coauthored with Rick Darke. When he's not writing, researching, or heading up the entomology department at the University of Delaware, Tallamy travels the country speaking to homeowners, gardeners, and designers about how to turn their gardens into wildlife sanctuaries. When interviewing the luminaries for this story, we weren't surprised to find that most of them

referenced Tallamy or his books as their go-to sources for ecological gardening information. So we invited him to write the essay that kicks off this story. Here, Tallamy shares why it's so important that we have the right trees, shrubs, and perennials in our public spaces and gardens.



Diversity creates stability. Plant your yard to support lots of caterpillar species.

My wife and I recently enjoyed a family visit in Portland, Oregon, a city known for its leadership in energy-efficient building design, for boasting the largest urban park in the U.S., and for general ecofriendliness. Portland is Green with a capital G and many would argue that it is our greenest city.

It didn't take long, however, to notice that there seemed to be very few indigenous species among Portland's abundant street trees. Asian favorites like Callery pear, ginkgo, and zelkova; European species like Norway maple, littleleaf linden, and horse chestnut; and even trees from eastern North America like sweetgum, red oak, and black locust seemed to be everywhere. Lest I was imagining it, I talked my granddaughter Sofia into helping me inventory Portland street trees—1,176 of them, anyway—in the Sellwood-Moreland and Hawthorne neighborhoods while I was visiting family in the area. Sellwood-Moreland is a historic neighborhood near downtown Portland and the 140-acre Oaks Bottom Wildlife Refuge. Hipster-centric Hawthorne, in southeast Portland, surrounds the walkable commercial district along Hawthorne Boulevard.

After wandering the sidewalks for five days, we had results. Of those 1,176 trees, 100 were indigenous to the Pacific Northwest. The rest were introduced from other ecosystems. That means 91.5 percent of Portland's street trees lack the evolutionary history with Portland wildlife required to contribute meaningfully to local food webs. If our small survey represents trees in all of Portland's built landscapes, then Portland street trees are an example of how to create an attractive city with very few birds, butterflies, or other desirable wildlife.

I am not picking on Portland. In terms of environmentalism, the city

has led the way in many respects, and I have little doubt that Sofia and I would find similar results if we surveyed trees in other cities. The point is that even our greenest cities miss this most critical aspect of nature-conscious urban design.

Clearly, our perception of what is "green" is incomplete. Despite being literally green, plants are often shunted to the side in "green" discussions where the focus is on green design and energy-efficient buildings. We assume that all plants are created ecologically equal, but that's not the case.

I attribute this curious omission to the inherent beauty of plants. Worldwide, there are so many plants with stunning color and habit that they have been the primary medium of landscape art for centuries. As a consequence, we have viewed them only in terms of entertainment, rather than as the essential backbone of the natural world that supports us.

Unfortunately, there are consequences to designing landscapes that ignore the ancient relationships that comprise nature, particularly those that enable plants to pass on to animals the energy they have captured from the sun. Again, Portland serves as a great example.

Every time I come to Portland, I find a silent city. The avian chatter we experience in our suburban Pennsylvania yard does not follow us to Portland. I can count all of the bird, butterfly, and moth species I have seen there on one hand, and many of those are present because they live on human garbage (crows and scrub jays) or can rear their young on earthworms (robins). The local bushtits, black-throated grey warblers, Bewick's wrens, towhees, fox sparrows, varied thrushes, and black-capped and chestnut-backed chickadees that could be abundant if their needs were met are rarely spotted.

Above all, the great drivers of terrestrial food webs—the insects that eat plants—are largely absent from Portland's managed landscapes.

Quite simply, when native plants are excluded, the wildlife—in fact, the whole intricate ecosystem—starts to disappear.

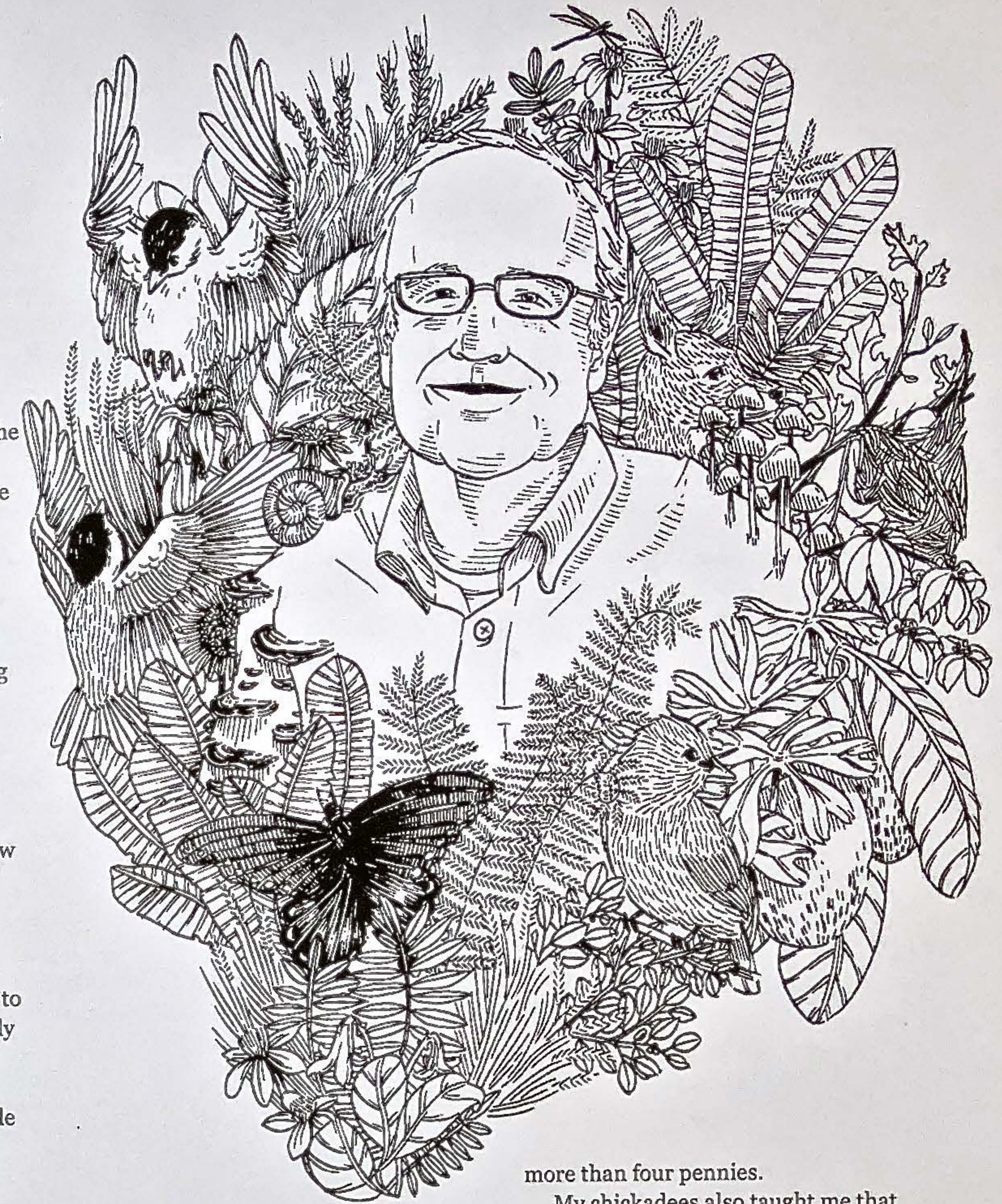
Not long ago, we could exempt our built landscapes from contributing to local ecosystem function with few consequences because there were enough healthy ecosystems nearby to compensate. Our watersheds were basically healthy, the air was clean, our fellow earthlings were diverse and numerous, and most of the terrestrial carbon remained sequestered safely in the soil. No longer. We have diminished the natural areas that made our world livable in so many places that we now need to restore ecosystem function everywhere we can, including in our gardens.

We must raise the bar of what we ask of our landscapes. In the past we have asked them to be beautiful, and pursuing that desire for beauty has brought us a great deal of pleasure. But we can no longer be satisfied with gorgeous landscapes that are not also designed to produce the ecosystem services we all require. Our yards and gardens must now be beautiful and functional.

We can have decorative landscapes that also manage our watersheds. Our gardens can be neat and support the biodiversity we need for our ecosystems to function. They can be artfully or formally designed and sequester the carbon we have pumped into the atmosphere. Equally important, our yards can provide a sequence of flowering plants from spring until fall to sustain, rather than exterminate, the pollinator populations that service not only our crops but 90 percent of all flowering plants.

A few years ago I watched and photographed a pair of Carolina chickadees while they were nesting in our yard. I learned much from this entertaining pastime: for example, that chickadees typically hunt for food within 50 meters of the nest. They don't have the time or energy to fly 5 miles down the road to forage in the nearest woodlot. This simple fact means that if we don't provide what these birds need to reproduce right in our gardens, they will have to breed elsewhere—but every day there are fewer "elsewheres" available.

I also learned that chickadees



more than four pennies.

My chickadees also taught me that they don't need just an abundance of caterpillars; they need many types of caterpillars to successfully reproduce. In one 3-hour period, the parents brought 17 different caterpillar species to the nest.

Why is the caterpillar diversity in our yard important to chickadees? Insurance. If our yard only supported one or two caterpillar species, there would be a real risk that the chickadees would run out of food during years when those particular species were not abundant. But if there are 17 species, or 34 species, or 134 caterpillar species thriving on the spring plantings in our yard, the combined abundance of different caterpillar species would be sufficient for chickadees to meet

feed their chicks almost exclusively caterpillars—not seeds, not berries, but caterpillars. Indeed, a lot of caterpillars. In one stretch of 27 minutes, mama and papa chickadee collectively brought 30 caterpillars to the nest. In fact, if you were to diligently count all of the caterpillars chickadee parents bring to their young during the 16 days the chicks are in the nest, you would find it takes an astounding 6,000 to 9,000 caterpillars to raise one clutch of nestlings, depending on the size of the brood. Think about that: Thousands of caterpillars are required to create a few tiny birds, each weighing no

DOUG'S TO-DO'S

10 WAYS TO START BUILDING A GARDEN FOR WILDLIFE

Plant an oak There are native oaks for just about every state in the U.S. These trees form the hub of a native garden, providing habitat and food. In most counties, oaks support more than 450 species of moths and butterflies. Moths and their caterpillars are important food for birds.

Add a bird bath Keep it shallow! Birds will not use a bath where the water is deeper than their legs. A bath 1 inch deep by 15 inches diameter will attract avian friends. If you have access to a large stone, you can carve a shallow bird bath into it for a natural look.

Create a layered planting or border If you have the space (it can even be as small as 10 by 10 feet), build a multilayer planting: Add a row of canopy trees (maples, hollyleaf cherry); weave in medium-sized trees and tall shrubs (willows, toyon); tuck in shrubs (sweet pepperbush, manzanita); fill in with herbaceous plants (native grasses, salvias); carpet with groundcovers (spring ephemerals, checkerbloom).

Build a native arbor Use branches of native trees to build organic allées and arbors that are nice to look at and good for wildlife. You can grow native *Halesia diptera* over an arbor for a formal look or a native vine for an informal feel.

Plant native fruit trees Pawpaws, persimmons, black cherries, and serviceberries support birds, caterpillars, and butterflies—and supply delicious produce for you.

Add groves or thickets If you have an underutilized space, plant groves of native trees, berry bushes, or coyote brush to provide food for yourself and the birds. For a clean look, plant a single species.

Screen with native hedges When creating a screen, plant native shrubs such as Alabama snow wreath or coffeeberry to provide habitat and food for wildlife. Don't hesitate to use several species that work together, including an occasional red cedar or incense cedar for accent.

Encourage pools and ponds Add a pool or pond in an area of your garden where water collects naturally. Even a small one can support several species of frogs as well as toads, spring peepers, turtles, and more. Line it with water lovers like willows, buttonbush, winterberries, sedges, and rushes.

Make a meadow Even a small 5- by 10-foot meadow garden can supercharge a garden with wildlife. Adding a mix of native milkweeds and umbellifers can help fill a garden with activity from butterflies, bees, and birds.

Grow vines Native vines are a secret weapon of wildlife gardening—especially in a small garden, where letting natives climb up arbors, over trellises, and along fences maximizes limited space. Hummingbirds will often visit trumpet honeysuckle and native clematis.

their chicks' nutritional needs, even in years that are hard on caterpillars. As ecologists say, diversity creates stability: A diverse caterpillar community stabilizes food availability, so that no matter what the weather, there will be enough food for chickadees to reproduce.

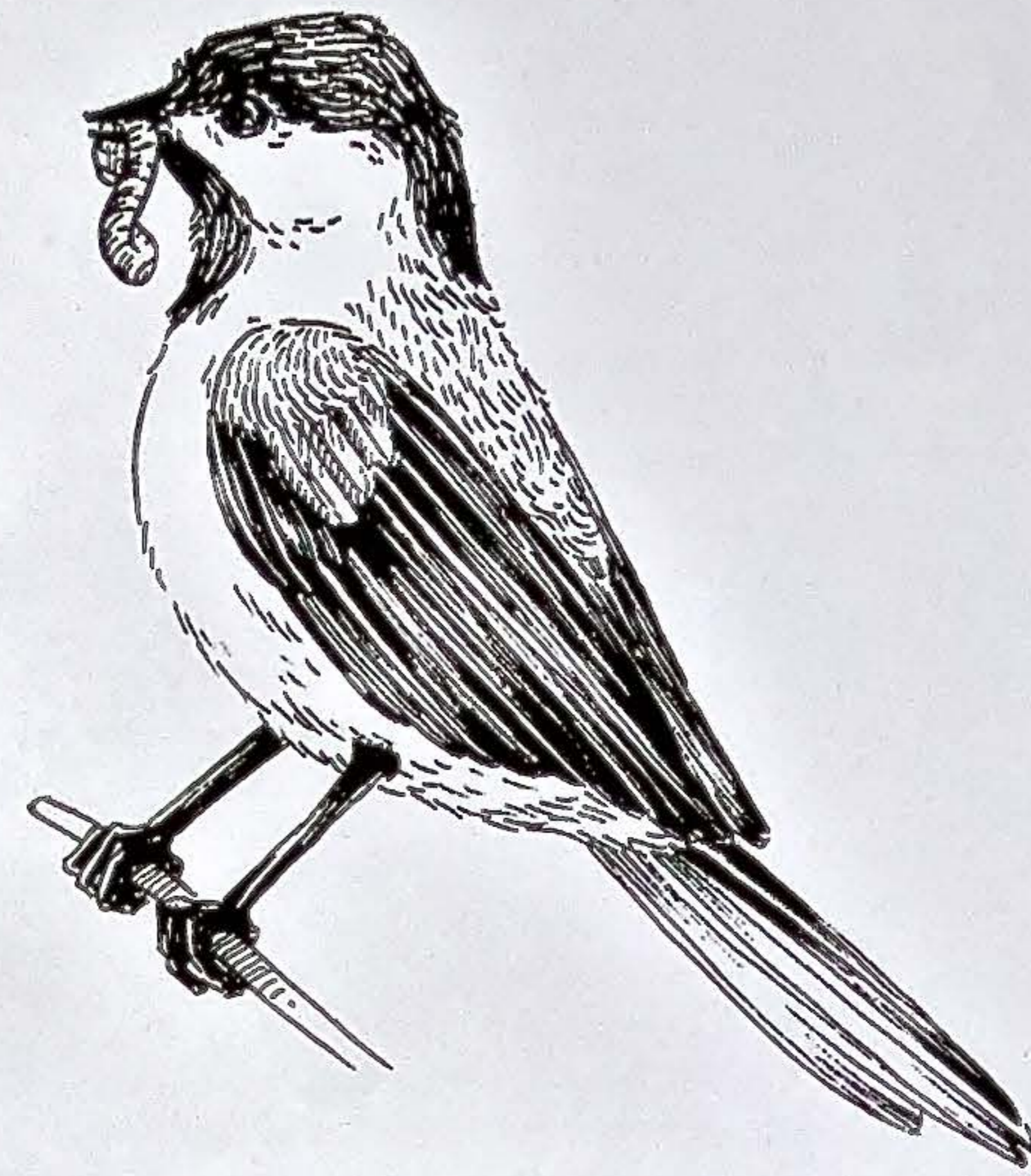
So how can we gardeners meet the needs of breeding chickadees—and titmice, cardinals, bluebirds, hummingbirds, wood thrushes, indigo buntings—in fact, the needs of 96 percent of all terrestrial birds in North America that feed their young insects? It's easy: We just need to design with the plants that are really good at producing the insects that birds need to make more birds. And just as birds need insects, insects need the right plants.

Research over decades has shown that plants discourage insects from eating their leaves by loading those leaves with nasty-tasting chemicals. This approach generally works well and prevents most insects from eating most plants. Fortunately for the many thousands of animals higher in the food chain that get their protein by eating insects, insect herbivores have been able to adapt to the chemical defenses of many plants.

Most can achieve this, however, only after interacting with them for thousands of years. Adaptation is slow and very restricted: No insect species has been able to neutralize the chemical defenses of all local plants, and 90 percent have only succeeded in circumventing the defenses of one or a few plant lineages. That is, most insect herbivores are "host plant specialists" that depend entirely on the plants to which they have adapted. If those particular plant species are removed from the landscape, the insects that depend on them also disappear, because those are the only plants they can eat.

Nothing illustrates better the impact of removing the plants that insects depend on than the relationship between milkweed and the monarch butterfly. Like most insect herbivores, monarchs have a restricted diet: With minor exceptions, they can only develop on *Asclepias* milkweeds. Milkweed has never been a favored plant in landscapes, and over the past decade we have all but eliminated them and other flowering plants from the edges of corn and soybean fields across the U.S. And in the past two decades, we've seen the number of migrating monarchs drop by some 90 percent.

Why don't these beautiful butterflies adapt to some other plant? Because host plant adaptation typically proceeds at a glacial pace;



Carolina chickadees in Doug Tallamy's garden need 6,000 to 9,000 caterpillars to raise a clutch of nestlings. Include plants that drive the food web to bring birds to your garden.

the loss of milkweeds has been far faster than monarchs could acquire the traits required to eat a different plant. If we want monarchs in our future, our only recourse is to put milkweeds back into our landscapes, and if we do not tolerate them on the edge of agricultural lands, then we need to find ways to incorporate them tastefully into our gardens. Efforts to save what may be the most iconic insect in the world will also benefit thousands of other butterfly and moth species, as well as many of the 4,000 species of native bees that rely on a diverse community of plants to supply their age-old needs. And it can all happen in our gardens.

It's easy to think that sharing our neighborhoods with monarchs, chickadees, and other delightful creatures is a simple matter of installing native plants. And that is partially true. After all, our local insects have not had nearly enough time to adapt to the chemical defenses of the ornamental plants from Asia, Europe, and South America that now dominate our gardens. A plant's native origins, however, are not enough. Because all native plants do not benefit insects equally, we must discover which indigenous plant species are

the very best at supporting the insects that drive local food webs. And in most places, caterpillars are better drivers than other insects. Fortunately, a new web tool being launched by the National Wildlife Federation in May makes this easy. Simply entering your zip code will produce a ranked list of the plants in your county that produce the most caterpillars and thus support the most wildlife.

Not to worry—planting species that encourage insects will not leave your garden an ugly collection of defoliated plants. Rather, it will attract the natural enemies of those insects: praying mantis, assassin bugs, tiny parasitic wasps, damsel bugs, jumping spiders—and those breeding chickadees will eat so many insects you'll think you don't have any in your garden at all.

Can you create formal garden designs using a solid foundation of productive native plants? Of course! Formality is primarily a function of the design, not the plant species in that design. Can landscape beds with layers of plants from the ground to the canopy be controlled for weeds? Indeed they can, and once they're established, weeding demands are reduced because there are fewer open niches for weeds to invade.

Moreover, such plantings are necessary to create the private, cozy spaces we enjoy so much in our gardens. Do heavily planted landscapes provide places for "bad men to hide," as a fearful gardener once asked me? On the contrary: A plethora of research (from Frances Kuo as well as Kathy Wolff, for example) has shown that neighborhoods with more trees and plants have less crime than those with lower vegetation.

The notion of sharing our gardens and all of the places we live, work, and play—with nature is new. We have built our spaces believing that humans and nature are like oil and water. In fact, we humans are part of the natural interactions around us, we depend on them, and we will not survive without them. We must assume a new role within nature, one in which we nurture rather than destroy the plants and animals that sustain us.

It is an exciting and an ever-so-important time for gardeners, because we will play a decisive role in defining what this compromise will look like and how successful it will be.

Use natives that are best at supporting insects and driving local food webs.

ECOLOGICAL ALL-STARS

WHAT TO PLANT TO HELP BIRDS, BEES, AND BUTTERFLIES FLOURISH IN YOUR GARDEN.

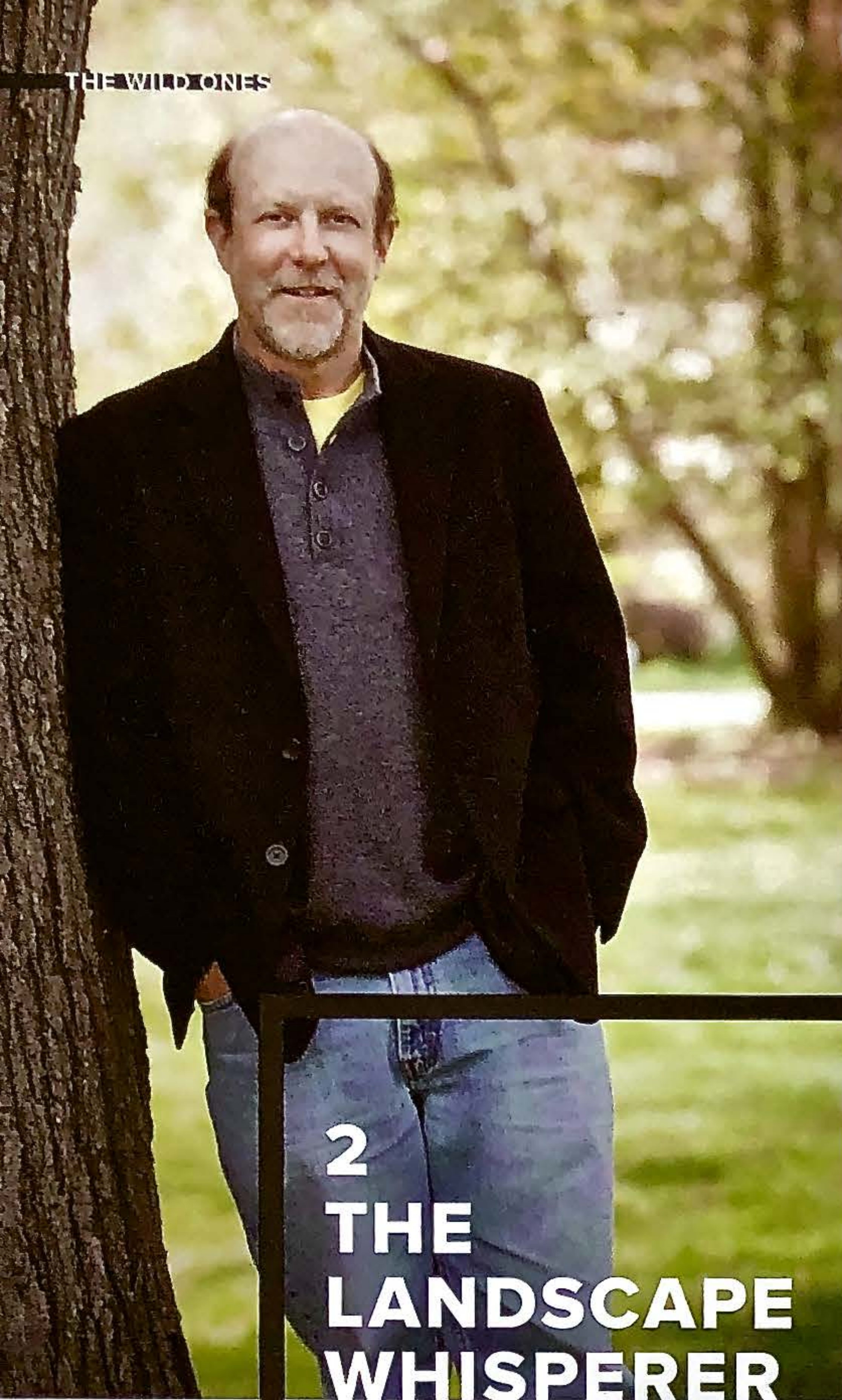
For Baby Birds Most birds need thousands of caterpillars to raise their young; oaks, native cherries, willows, and poplars produce the most caterpillars in most areas of the U.S. Chicks that leave the nest need berries to maintain their blood sugar levels. Blueberries, elderberries, and serviceberries fit the bill nicely.

For Migrating Birds Migrating birds fuel their long flight with berries high in fat. Plants such as arrowwood viburnum, wax myrtle, red cedar, spicebush, and native dogwoods produce excellent high-fat berries in the fall.

For Winter Birds Birds that spend colder months in our gardens (finches, juncos, doves, sparrows) need a steady supply of seeds. Native grasses, black-eyed Susan, evening primrose, goldenrod, and sycamore trees meet this need.

For Pollinators To best support pollinators, plant for native bee specialists; the generalist bees will follow. Plants like goldenrod, native willows, asters, blueberries, and sunflowers support the most specialist pollinators.

For Monarchs Monarch butterflies have declined drastically in recent years because we have removed their larval host plant, milkweed, from our landscapes. Plant any of the native milkweeds in your garden to encourage monarch production. Fall-blooming asters provide nectar for migrating adult monarchs in autumn.



2 THE LANDSCAPE WHISPERER

larry weaner
Glenside, PA

"I'm not strictly a restoration ecologist, and I'm not a pure garden designer—I walk the line in between," says Larry Weaner, who has been creating, restoring, and managing native landscapes for more than 30 years. His eye for aesthetics and willingness to dig into the ecology of a site result in gorgeous landscapes that serve their local ecosystems. This May, with his book *Garden Revolution*, cowritten with Thomas Christopher, he shares his years of experience so that readers can begin designing their own environmentally beneficial gardens.

GD: When did you realize *Garden Revolution* needed to be written?

WEANER: I first had the idea for the book about 15 years ago, but it kept getting lost in the shuffle of being too busy. If I had written it then, it would have been a completely different book. So many years have passed from the time I started it to the time Thomas Christopher and I finished it; that gave us the ability to provide practical examples to help readers understand the processes of change and how compositions evolve.

In layman's terms, what do you mean when you say compositions evolve?

Landscapes develop and change over time. And I don't just mean that plants get bigger. There's a life cycle to plants. If natural progression is allowed to take place, a group of plants that are present in a young landscape may not be there when the landscape is 10 years old—some plants spread faster than others; weather patterns affect what grows; soil disturbances such as mowing change which seeds have the chance to sprout.

If the compositions evolve on their own, where does a landscape ecologist come in?

A landscape ecologist directs change, as opposed to putting a static composition in. As I explain in my book, you can create a set of parameters beyond which you won't let the garden stray, but there's not a specific blueprint for where the garden will end up. The landscape makes many of the decisions, but this doesn't mean you just let your garden go—you're still a gardener. I guide a landscape toward reaching its natural potential by understanding what should grow there and planting that. As time goes on, I make edits by removing invasives and adding desirable plants that would not occur on their own, giving natives room to grow.

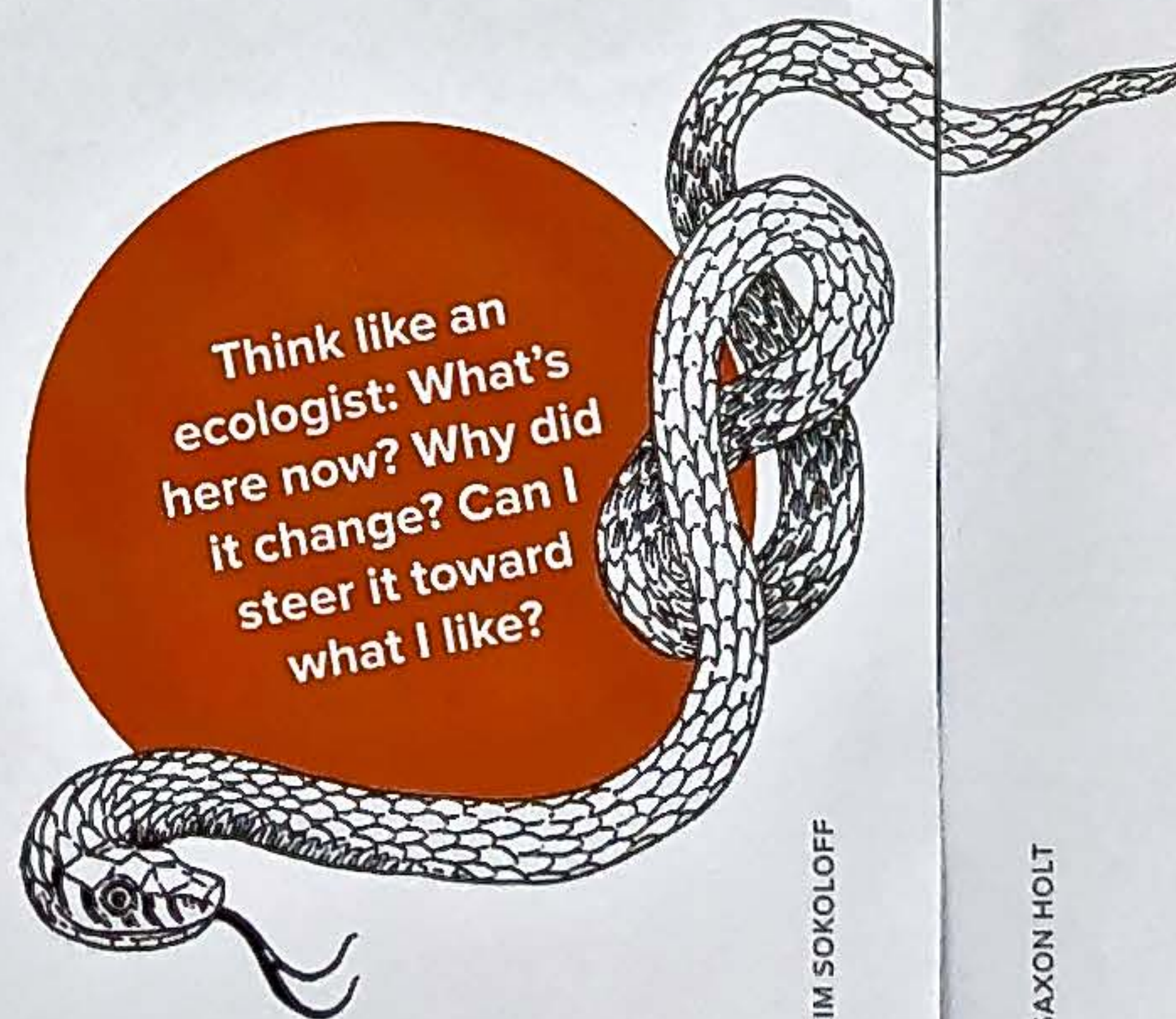
How do your clients respond to the changing landscape?

First of all, every single landscape I work on isn't about directing change. If I'm doing a small garden bed at the front of someone's house, I may create a static composition of native plants because that's what the client wants, or the space available may be too small to allow things to evolve. Sometimes at one scale something looks beautiful, but in a small area it looks unkempt.

But if a client is game for directing change—and they usually are—we've talked about it extensively during the planning phase. Even though they understand going in that the landscape is going to change over time, the reality of it is pretty dramatic. They find the experience surprising and stimulating. They find themselves wondering: What's going to happen next?

Do you know what's going to happen next in the landscape?

I'm confident it's going to be good, but no, I don't know exactly what's going to happen. We plant a landscape and nature expresses itself within the plan. Some plants come in faster, establish quickly and dominate early, then drop off. Others aren't evident at first, but take over later, replacing the dropouts. The process continues at a slower rate until a state of relative ecologic stability settles things down.



Think like an ecologist: What's here now? Why did it change? Can I steer it toward what I like?

KIM SOKOLOFF

In your book you talk about your love of exploration—from investigating railroad right-of-ways behind your childhood home to trekking through the Ecuadorian jungle in your 20s. What places do you explore nowadays?

I wish I had more time to tromp around in the woods and just look at plants. Because we don't plant a site then leave and never come back, I do have the advantage of seeing the same gardens over and over again. I see how landscapes we've worked on develop and evolve; it helps me evolve. It's an exponential learning process when you see a place changing over time.

How do you learn from a landscape you're visiting for the first time?

The most important thing is to not just look at a landscape but to think: What was here before? What's here now? Why did it change? What do I like about it? How can I steer it toward what I like? Think like an ecologist.

Does thinking like an ecologist mean you can only use native plants?

It's important that all landscapes have a significant native component, but no, it doesn't have to be exclusively native. If a client has an interest in plants that are nonnative, I'll use them as long as they're not invasive.

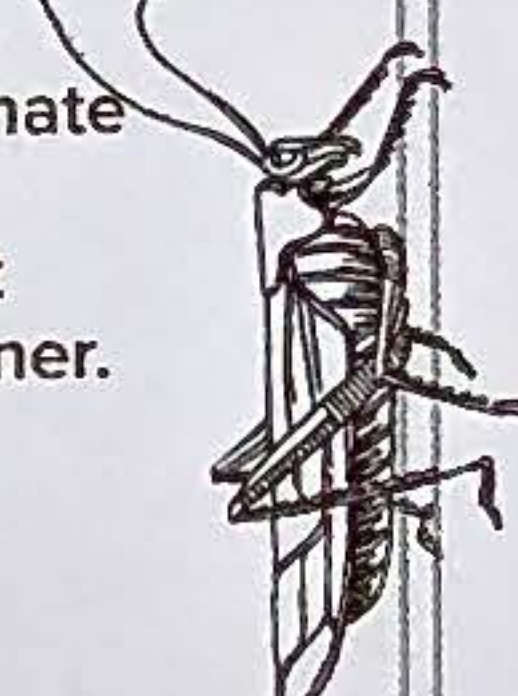
Can you share one underused or underappreciated way a person can create a more ecological garden?

Of meadows, woodlands, and shrublands, shrublands are the most neglected and the most underplanted, yet they're highly important for habitat and aesthetics. Wildlife looks for protection and food in shrubland, so incorporating drifts of shrubs that serve a purpose in design will meet their needs and yours.

SAXON HOLT



Above: Larry Weaner designed this Connecticut wildflower meadow, replacing what used to be a lawn. It includes bee balm, coneflower, little bluestem, and narrowleaf mountainmint. These long-lived plants, typical of prairies, dominate the meadow. See more images of this garden at gardendesign.com/weaner.



Any advice for someone who wants to become a landscape ecologist but finds the prospect daunting?

I think the first and simplest step is to get an ecoregion map [go to epa.gov and search "ecoregion map"]. Where are you? Forget about the state you live in—which ecoregion are you in? From there you can determine what habitat within that ecoregion you're in and what plants can naturally occur on your property. Take comfort in the fact that as a homeowner you only need to understand one landscape—your own!

EDITOR'S PICKS

IF YOU'RE THE TYPE WHO ANNOTATES BOOKS AS YOU READ, STOCK UP ON POST-ITS AND HIGHLIGHTERS BEFORE DELVING INTO *GARDEN REVOLUTION* BY LARRY WEANER AND THOMAS CHRISTOPHER (TIMBER PRESS, 2016). IT'S FULL OF CAPTIVATING STORIES, ANALOGIES, AND EXPERTISE. HERE ARE SOME OF OUR FAVORITE QUOTES.

.....
"I honestly believe that having once sampled an ecologically driven approach, gardeners won't want to do anything else."

—————
"By letting the landscape and the native plant and animal community make many of the design decisions, I return spontaneity and a sense of discovery to the garden."

—————
"I learned that a traditional garden is like a beautiful car with no engine. The body is sleek, the interior is plush, and the stereo sounds great, but the owner will always need to push it up the hills with bags of fertilizer, weeding forks, and watering wands."

—————
"Nature has been in the plant arranging business far longer than even the most accomplished garden designer."



Landscape architect Steve Martino is as likely to be working in his own backyard as he is to be designing a client's garden.

Speaking with him, you might think Martino is an entomologist, ecologist, or botanist, and in a way, he is all of the above. A self-taught landscape architect,

he's been designing with desert natives for the past 30 years because, he says, "they're beautiful, attract insects and birds, and don't waste resources."

"What first got me into landscape architecture was being fascinated with the desert and wondering why natives weren't used," Martino says. "I once asked my

former boss why we were using plants that need constant attention and water to stay alive when there were so many beautiful native plants just beyond the fence that survived on rainfall alone." His boss's answer: They're just weeds. "This was in the early '70s, before natives caught on and before people started using the term 'ecofriendly garden,'" Martino says. "I'd take time off to shadow nurseryman Ron Gass, who was collecting seeds to start his desert-adapted plants nursery. I saw how natives tap into the local food chain and become a habitat—they bring their

own entourage. I collected seeds for a particular native, Ron grew it for me, I planted it, and a tarantula hawk landed on it. I thought, "Wow!" I'd only seen a tarantula hawk on a pin in a museum display case, but this one showed up out of nowhere." He's been using native plants in his gardens ever since.

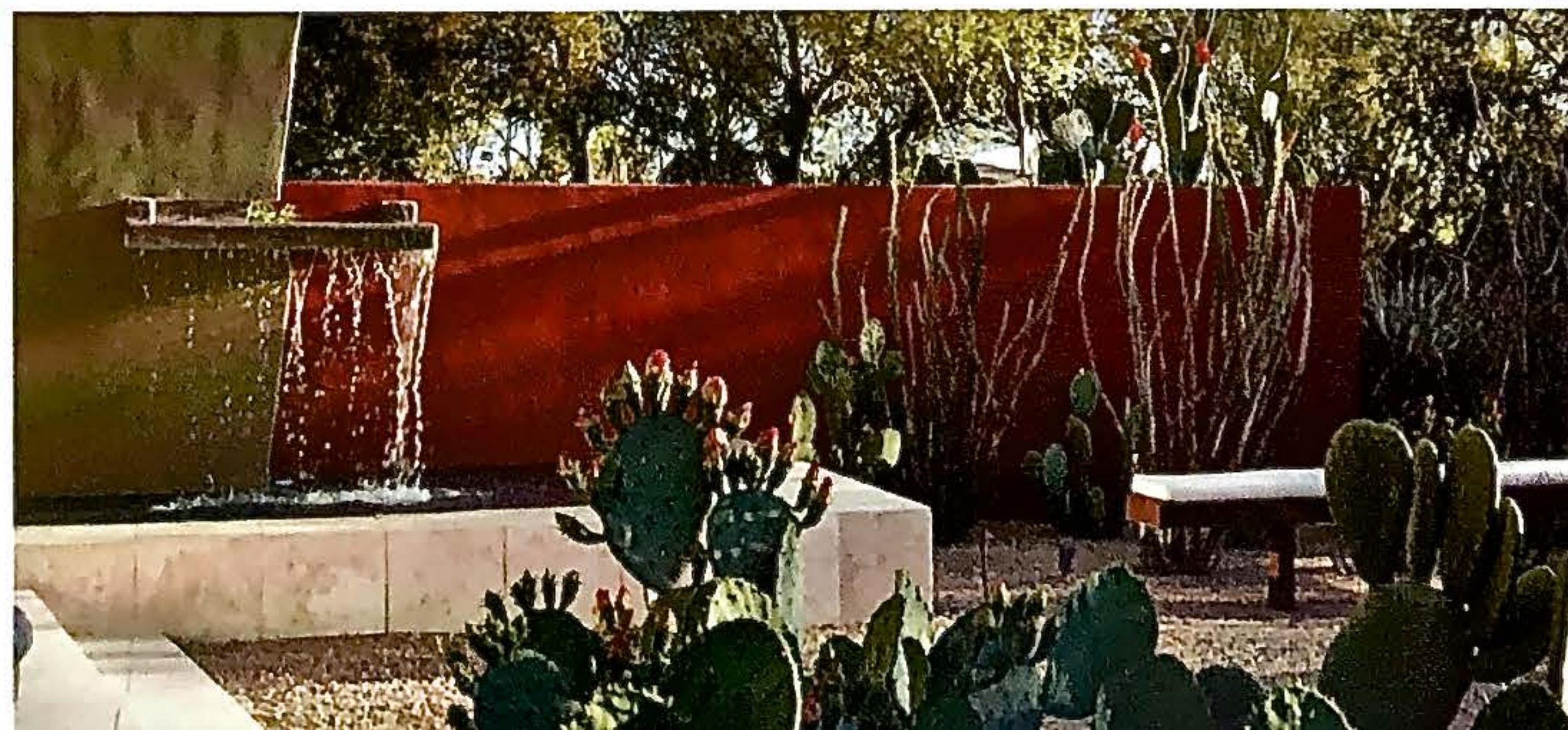
Martino uses colorful walls as backdrops for plants to tie the horticulture and architecture together. "The plants stand out so much better against red, blue, purple, or rust colored walls. It makes the planting look intentional," he says. "Though now people contact me and say, 'I want a red wall.' But it's not about the wall; it's about creating an outdoor space and showcasing the plants."

Today Martino is a staunch advocate for designing gardens to create something beautiful—and wildlife adds substantially to the beauty. He also debunks the myth that you need lots of space to create a natural garden. "Even in a 6-foot-square planter in my backyard I have a thornless prickly pear cactus, with some golden eye plant, and some Mexican honeysuckle," he says, surveying his own landscape. So what's Martino's recommendation for getting started? Kill your lawn. Then invest in a native tree, a good chair, and a colorful wall. "Sitting under the canopy of a native mesquite tree when it's 110 degrees next to a fountain and a few plants that attract butterflies is quite the experience," he says.



Below: This courtyard garden combines many of Steve Martino's signature garden elements: a brightly colored wall that shows off the native plants, a geometric water fountain, and built-in seating to enjoy it all. See more images of this garden at gardendesign.com/martino.

STEVE GUNTHER (2)



3 THE NATIVE PLANT APOSTLE

steve martino
Phoenix, AZ

4

eleanor dietrich
THE LOCAL ACTIVIST
Tallahassee, FL



"I was listening to Doug Tallamy

on the *Science Friday* podcast one day and he said, 'Everybody can do something,' So I started thinking about what I could do," says Eleanor Dietrich. The self-taught gardener started by clearing the invasive English ivy, camphor trees, and nandina behind her own home and replacing them with native plants like bloodroot, columbine, Indian pink, fringed campion, jack-in-the-pulpit. "I try not to plant anything here that wouldn't grow naturally. I'm adding a lot of native flowering shrubs: wild azaleas, hawthorns, viburnums," Dietrich says.

After restoration efforts behind her own home, Dietrich soon moved on to wildflower conservation and rehabilitation along Florida's state and county roads. "I'd heard about conservation-minded citizens who were driving along the coastal highway and saw long stretches of wildflowers in bloom. Monarch butterflies were feeding on them," she says. "But the Department of Transportation (DOT) had a scheduled routine mowing that day so they mowed the flowers."

One of those citizens contacted his state representative, who in turn alerted the secretary of the DOT. Once he was aware of the problem the mowing procedure was changed so they wouldn't destroy wildflowers and butterflies.

After hearing the story, Dietrich decided to get involved with the efforts. She is now working with 16 counties in the northwest Florida panhandle through the Florida Wildflower Foundation (flawildflowers.org) to create mowing

procedures as well as guidelines for managing roadways for wildflowers.

Typically working with local native plant chapters or groups of master gardeners, Dietrich coaches people on how to get their county involved in wildflower preservation. "It takes local effort to get it done. When the local government sees that people in their county want this, they get on board quickly," Dietrich says. Thanks to her efforts advocating, educating, and sometimes cajoling, the Florida Wildflower Foundation now has 29 counties in Florida that have adopted the resolution to restore and conserve wildflowers along roadways.

Dietrich recommends that people start in their own backyard by planting wildflowers or natives. She also says that Floridians can purchase wildflower seed packets for home use or large restoration projects through the Florida Wildflowers Growers Cooperative (floridawildflowers.com). She also likes the map on the Florida Native Plant Society's website (fnps.org), which provides lists of natives to use in each county. "It's my goal to provide people with the resources, advice, and coaching they need to restore the natural plants and wildlife in their local area," Dietrich says.

For Virginia landscape designer C. Colston "Cole" Burrell, one of the biggest challenges is melding tradition with sustainability. "In my area there is a deep sense of regional history; people are married to the Colonial Revival aesthetic, with neatly clipped boxwood hedges, formal parterres, and European-style borders," he explains.

Burrell, who is also an author, lecturer, photographer, and travel guide, compromises with his design clients by mixing natives with more popular ornamentals and substituting common landscape plants such as Japanese cedar with native Eastern red cedar. "I don't

veer too far from what people want, but gently nudge them with smaller changes that they can accept," he says. "It can be as simple as allowing leaves to decompose to enrich the soil rather than raking them up to make things look neat."



5 THE GARDEN DIPLOMAT
c. colston burrell
Free Union, VA

Dutch garden designer Piet Oudolf

has become the best-known face of naturalistic planting, with designs featured at public spaces such as New York's High Line, The Battery, and Chicago's Lurie Garden. Oudolf uses a range of plant species that work for the long long-term and creates stylized visions that blend untamed nature with an artful human hand.

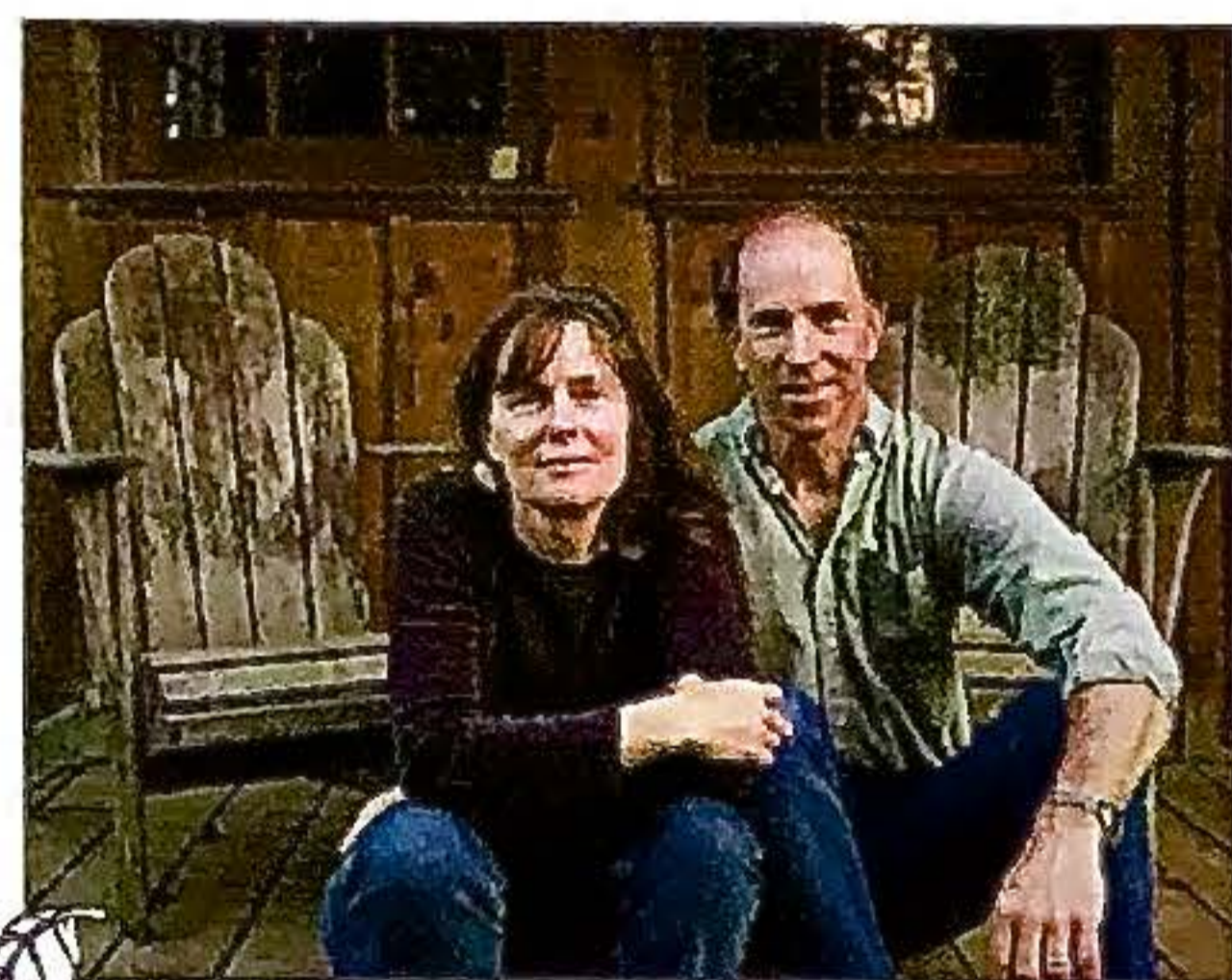
Oudolf chooses plants that come from woodland, woodland edge, meadows, or grasslands. He uses plants that create year-round interest. His spring plantings are inspired by the patterns and forms made by emerging spring foliage, wild bulbs, and other spring ephemerals.

6 THE ARTIST
piet oudolf
Hummelo, Netherlands

7 THE LANDSCAPE ETHICIST

rick darke
Landenberg, PA

Livable Landscapes, *The American Woodland Garden*, and (with Doug Tallamy) *The Living Landscape*. Darke, who refers to his work as “landscape ethics,” consults on the ethical constructs, design, and management of public and private landscapes. Here, he muses on the relationships between living and nonliving things.



Above: Rick Darke and his wife Melinda Zoehrer. Their garden in Landenberg, PA, has served as their living laboratory since 1992.

Right: The Darke-Zoehrer garden is 1.5 acres of locally native and adapted plants. It's a habitat garden for birds, insects, reptiles, and the owners. See more images of the garden at gardendesign.com/darke.

For the past 40 years, Pennsylvania-based ecologist and horticulturist Rick Darke has been studying and photographing North American plants in diverse habitats. His in-depth observations of wild places led him to author books and articles that have become widely referenced in the gardening community, such as *The Encyclopedia of Grasses for*

I grew up with Nature. I have a lot of affection for it. It's the word itself that I struggle with. We need to get away from our reliance on the word Nature and thinking of it as an entity that is disconnected from us. The idea of a separation between Nature and humankind absolves us of our responsibility. Rather, we need to be aware that everything we do has an impact—we are integral parts in a complex web of interdependent relationships.

Let go of the notion that there's an “us” and a “them”—and embrace the notion that we're all in this together—all living and nonliving things. And that puts us in a place where we must make decisions about how we behave. Do we behave in ways that are respectful of resources? Do we garden with low impact? Do we get creative and find ways to nurture and sustain relationships between all the living and nonliving things?

By thinking this way, we can design gardens that are wonderful parts of the overall ecology. Gardens that are joyful, alive, seasonal, regional, well designed.

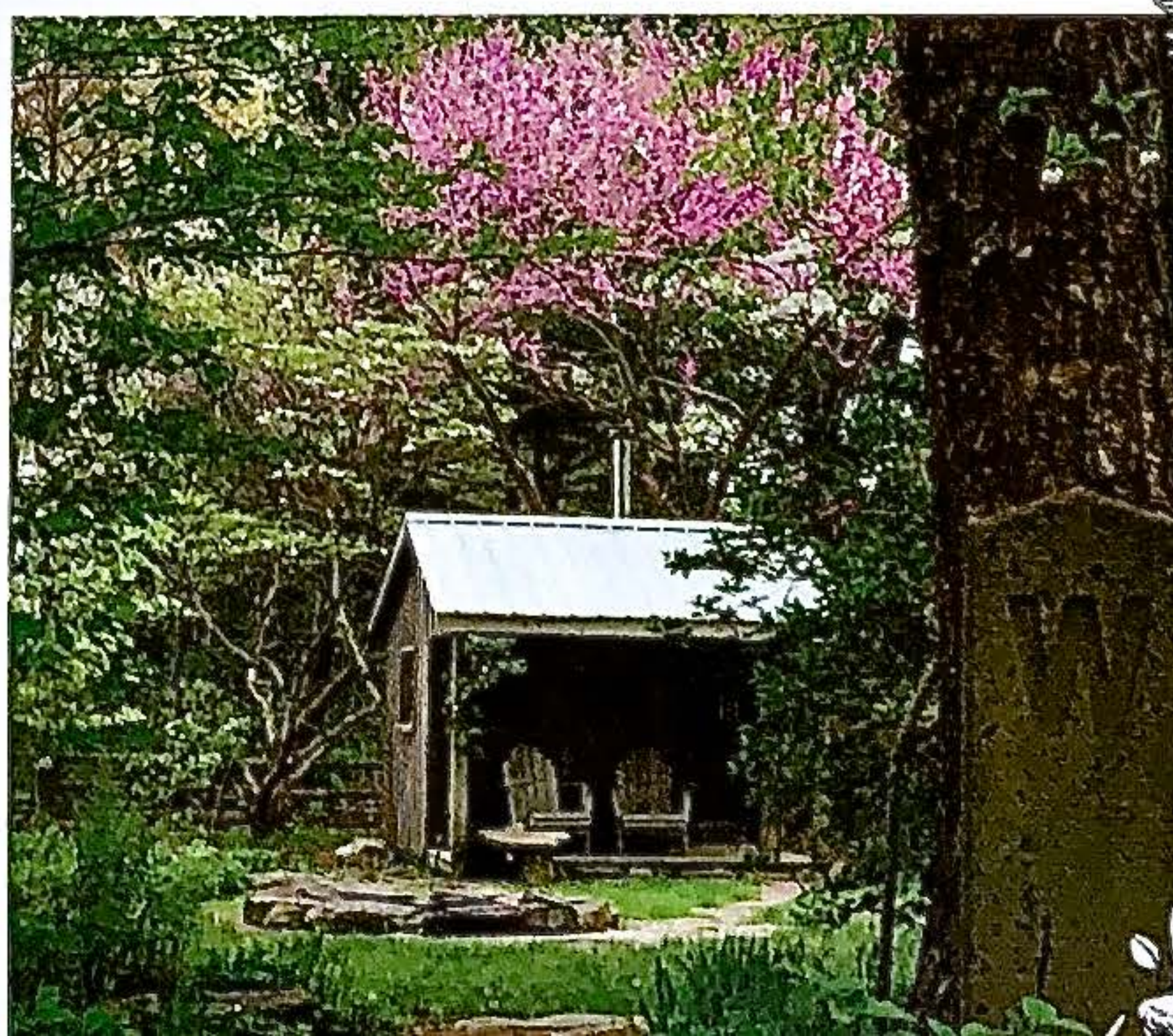
So how do we do that? First we need to learn to see opportunities to make better decisions about our gardens. As we age our brains begin to filter out the familiar. It's more efficient that way: Imagine trying to get simple tasks done if you were excited by something after seeing it for the 20th time—it would be impossible. So naturally, we become blind to the familiar parts of our garden. The only problem is, new,

often important, things are happening all the time—they're just subtle.

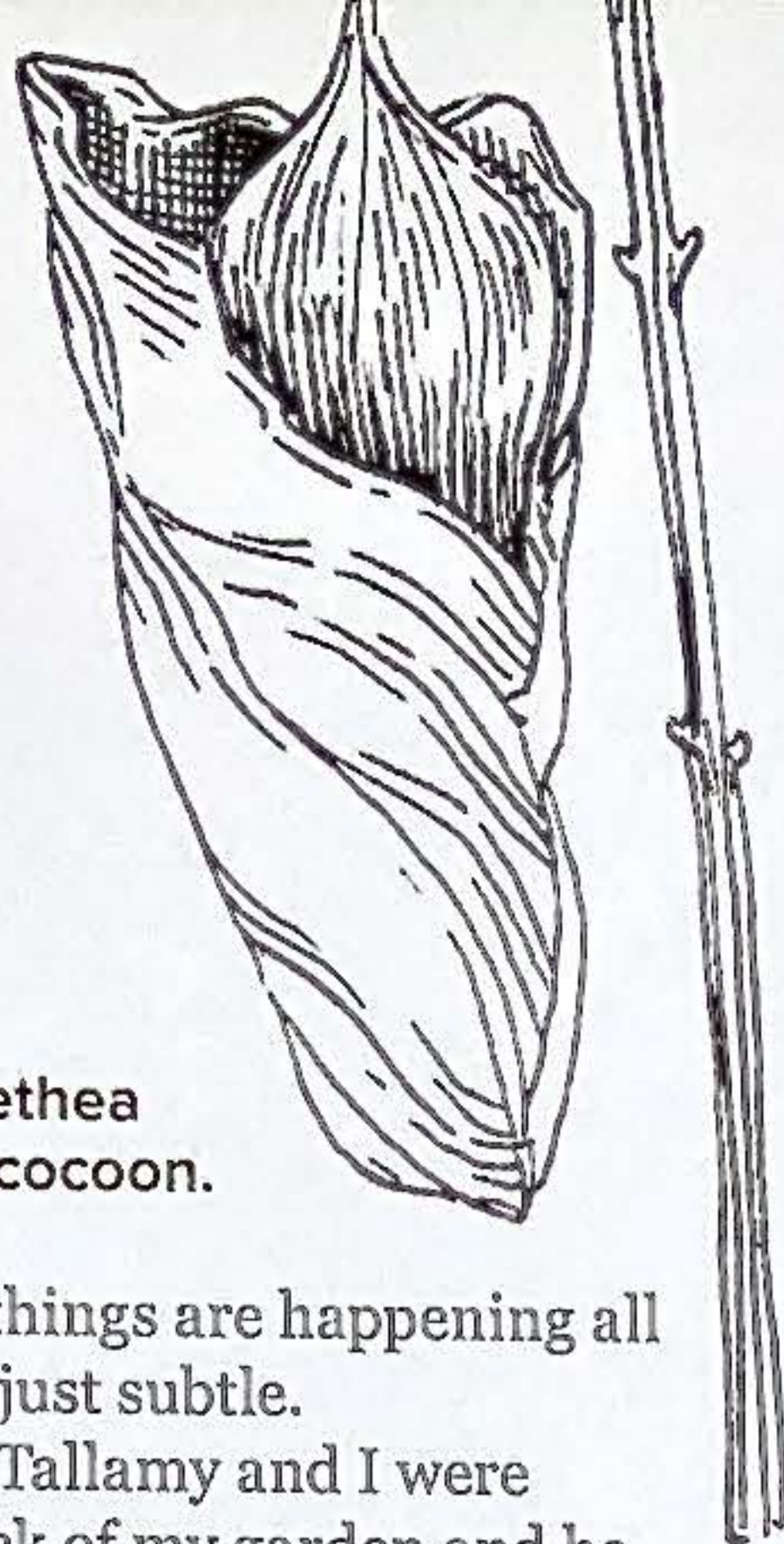
One day Doug Tallamy and I were walking in the back of my garden and he pointed out a promethea moth cocoon. I never would've seen that myself. My eye just wasn't trained to look for things like that, I was focused on flowers and fruit and structure. If someone had asked me if there were any promethea moths in my garden, before that moment, I would have said, “I don't know—I haven't seen one.”

Since then I've seen several cocoons and done research on promethea moths. Now I take note when I see them. If I see the cocoon of a promethea when pruning a tree, I can decide not to prune that branch this year. It was Doug's comment that broadened my visual scope. Noticing these subtleties influences my actions. And my actions inform the way I garden. Which impacts how my garden changes.

Lift that veil from your eyes. Remove that filter that keeps you from seeing subtle new things in the familiar space that is your garden. Stop assuming that you understand how everything works. If you can do that, you open yourself up to all the wonders that a dynamic garden brings. Your garden will expose new relationships among all the living and nonliving things, including you, that you were blind to before. And the more you understand those relationships, the more you'll understand the impact your actions have.



Promethea moth cocoon.



STEVE LEGATO; RICK DARKE; FACING PAGE: BOB STEFKO

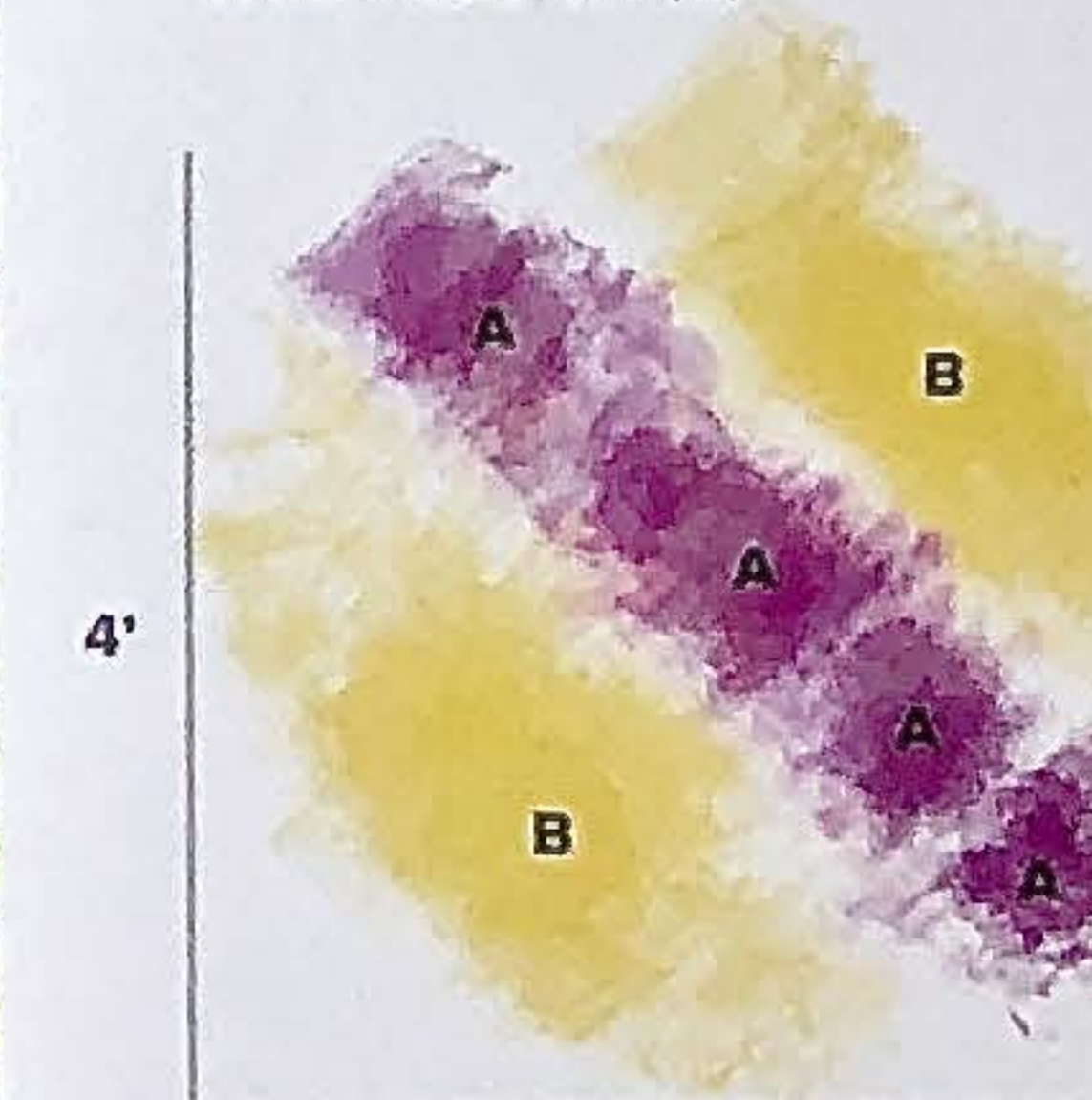
8 THE INTERSPECIES MEDIATOR

roy diblik
Burlington, WI

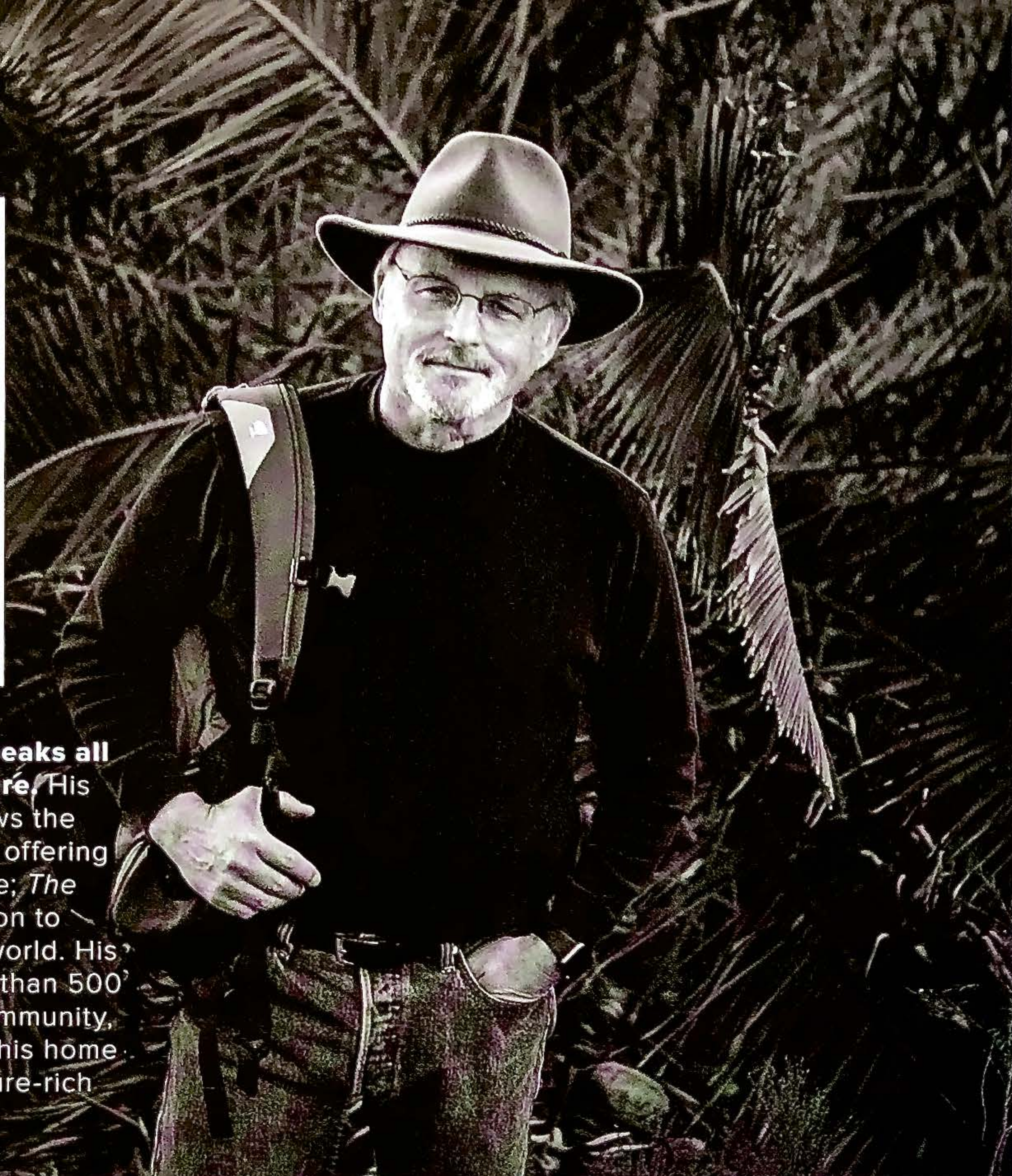
Roy Diblik pioneered the production of native plants in containers before he cofounded Northwind Perennial Farm, a nursery and design business serving private and public gardens. A master of creating exciting and resilient combinations of native and nonnative plants, he's refined a series of modular plant formulas and presents them in his book *The Know Maintenance Perennial Garden*. He spends part of his time training young people for careers in the landscape industry. Diblik and his work were profiled in our Early Spring 2016 issue.

DIBLIK'S PLAN FOR SMALL SPACES
Even in a small space (4 by 4 feet), you can attract wildlife.

- A. LIATRIS SPICATA (4)
- B. RUDBEKIA FULGIDA VAR. FULGIDA (2)



9
THE AUTHOR
richard louv
San Diego, CA



Author and journalist Richard Louv speaks all over the world to get people into nature. His first book, *Last Child in the Woods*, shows the impact of a nature-deficient world while offering practical solutions to get kids into nature; *The Nature Principle* is an urgent call to action to repair our relationship with the natural world. His newest book, *Vitamin N*, presents more than 500 ways to bring nature into your home, community, and life. We took a walk with Louv near his home in San Diego to learn how to create nature-rich environments around our homes.

GD: In *Vitamin N* you discuss the Worldwide Homegrown Park. What's that, and how does it relate to our gardens?

LOUV: It builds on the Homegrown National Park, which is the idea of my friend Doug Tallamy. He suggests that everyday gardeners are the key to reviving urban biodiversity and to helping reverse the biodiversity collapse. I would like to broaden this idea beyond our borders. In *Vitamin N* I suggest the creation of a Worldwide Homegrown Park—joining with people in other countries to change our public and private spaces, even urban places, into havens for native species. We would be creating wildlife corridors throughout our cities and nations. Think of the power both adults and children would feel if they could be part of greening a nation.

What are some of the best ways to bring nature into our gardens and homes?

Create a restorative environment at home. Do an inventory of the often overlooked natural elements that already exist in your home and just outside the door. Persistent nature is everywhere—in your yard, on a roof or balcony, sometimes in the most unexpected places. One excellent way to encourage wildlife is to create a butterfly rest stop by planting seeds of indigenous pollinator plants.

What does it really mean to bring nature into our gardens?

When we talk about wildlife, we're not necessarily talking about coyotes and mountain lions roaming through our backyards—though that does happen occasionally in my region. The basic idea is to increase the number of beneficial

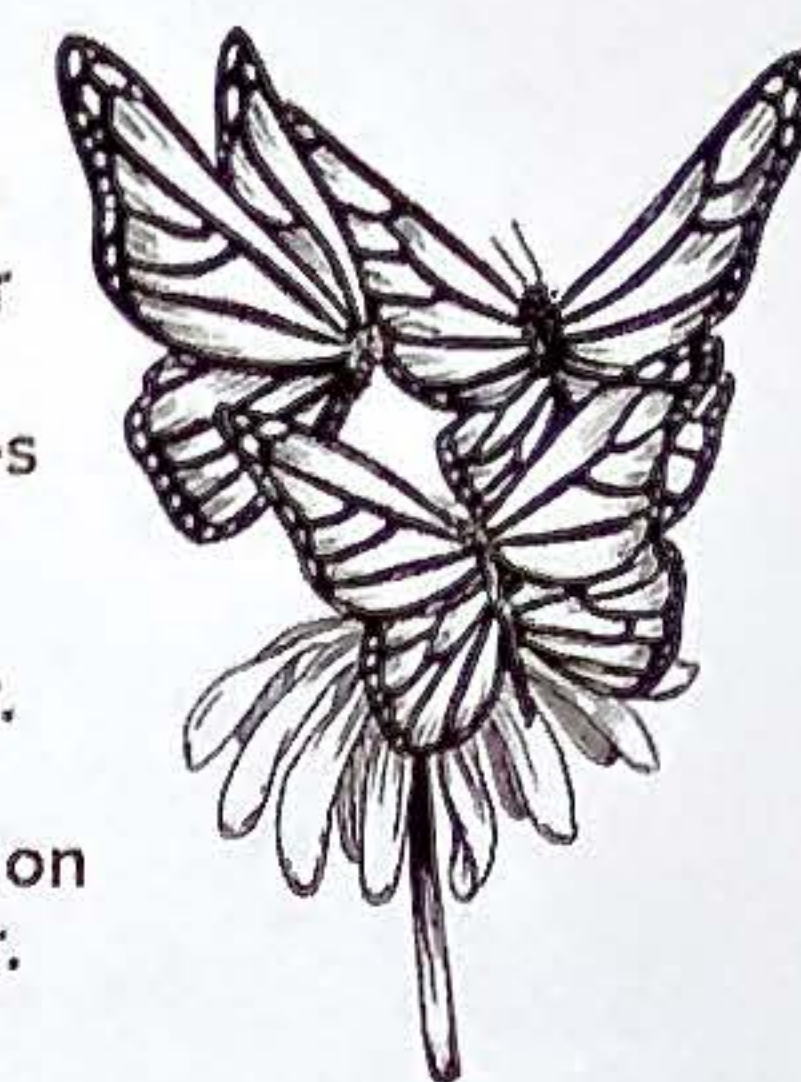
insects whose evolution has been formed by the bioregion. These feed the rest of the food chain, and can sometimes serve as natural pest control agents.

In *Vitamin N* you describe your friend's experience living in a cabin in the woods. What's the lesson in his story?

Reconnecting to nature opens new doors to health, creativity, and the spirit. Back in the 1980s my friend John was starting a new company. On a lark, he bought a cabin in the Tehachapi Mountains north of L.A. For the next 10 years, he and his wife took their boys to the cabin every available weekend. He made most of his big decisions there and credits the cabin investment with helping him succeed both in life and in business. Spending time in nature can be a good investment in the present and the future.

JOSH HENDRES

You can transform a yard, garden, roof or window box into an area that encourages wildlife by making room for one tiny animal: the butterfly. Illustration right: monarch butterflies on an *Echinacea* flower.



What are some ways to learn about nature and bring it back to your home and garden?

It's important to focus on our own homes and gardens, but it's vital to see these places as part of a wider ecosystem. That's why I think it's a good idea to join a group that explores a local bioregion. Organizations like Close to Home and Exploring a Sense of Place have group outings, leadership training, and local courses in bioregions around the U.S. If such a group doesn't exist in your bioregion, help create one.

We can also encourage young people to build community through service organizations. Boy Scouts, Girl Scouts, Camp Fire, and 4-H remain dedicated to connecting young people to nature. Investigate family nature programs sponsored by conservation groups or public park systems.

A 2011 U.S. Fish & Wildlife Service analysis reported that there are 47 million birders in the U.S. Why do you think birding is so popular?

Traditionally a hobby for mature adults, birding may be gaining ground with young people. One reason is that it's so accessible. You can do it in the suburbs, on farms, in inner cities, and even at home. Well-placed and maintained birdhouses and feeders are good, but woody plants that support local insects will bring in more birds. We can create safer places for birds to nest by planting shrubs with berries, thorny trees, and bushes. If you're just starting out, the American Birding Association and the Cornell Lab of Ornithology have information and resources.

What are you excited about right now?

I'm excited about the many campaigns springing up to connect children to nature. I'm excited about the family nature clubs appearing around the country that get kids outdoors. Much of this has been helped along by the Children & Nature Network, a nonprofit that grew out of *Last Child in the Woods*.

"People don't often think of the value of beneficial plants and how they affect us. They provide oxygen, put us in a cheerful mood, increase the value of our homes, mitigate runoff, and so much more—it's critical to get that information out," says Steve Castorani, president of North Creek Nurseries in Landenberg, Pennsylvania. Castorani's role in getting the good word out about plants—and choosing the right plants—has been huge.

Castorani founded North Creek Nurseries with Dale Hendricks (who's since left the company) in 1988 to offer do-no-harm, long-lasting plants that were different from those you could get from other nurseries. "As it turned out," Castorani says, "the vast majority of those plants were natives."

When North Creek first opened, using grasses and perennials was a fairly new concept that was gaining momentum. "Firms like D.C.-based Oehme, van Sweden and Philadelphia-based Andropogon Associates understood ecology and were calling for more natural landscapes," Castorani says. As naturalistic plantings became more popular, so did the demand for the types of plants at North Creek.

Castorani and company set out to promote the ornamental benefits of natives, but they also wanted to make naturalistic planting more affordable and accessible. The solution: landscape plugs. These little bundles of young native perennials and grasses rooted in a cone of soil are ready to be planted directly into larger landscapes. "The idea came from wanting to match plants that work well together into these bundles in an economical way," Castorani says.

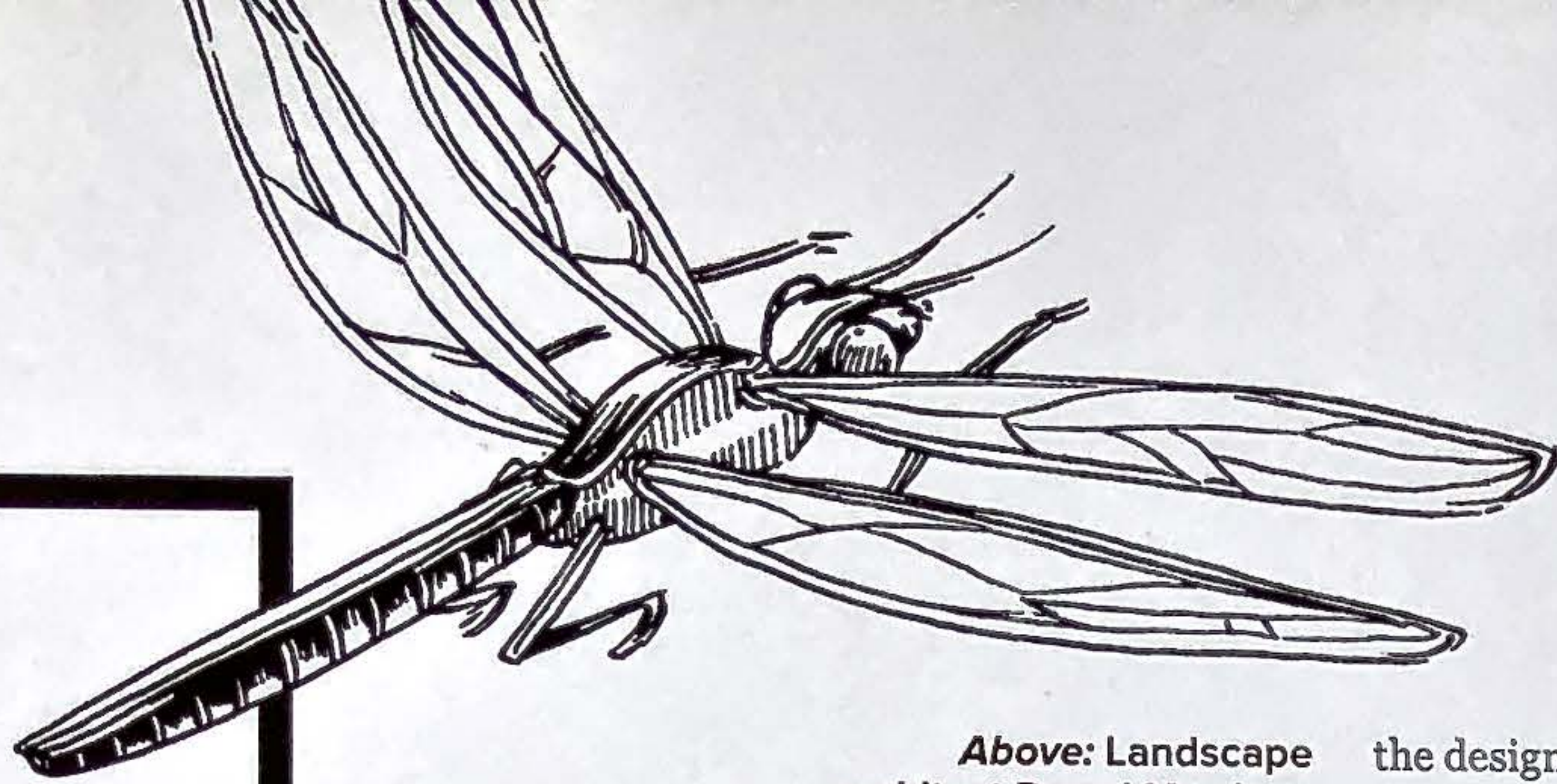
What really helped put natives on the map was the American Beauties brand of native plants (which Castorani started). These plants (abnativeplants.com) are available at garden centers or at gardencrossings.com, making plants that North Creek and other plant nurseries produce and propagate more readily available to designers and home gardeners. American Beauties donates part of the proceeds from the sale of these plants to groups such as the National Wildlife Federation and the Pollinator Partnership.

In addition to selecting, propagating, and promoting good-for-everyone plants, North Creek has an entire department devoted to researching how they can be used in their test gardens. "There's still a lingering perception that native plants are messy," Castorani says. "We've worked hard to help shift that paradigm and share—in a simple way—how they can be used in lush combinations to provide services such as cleaning water, generating food for pollinators, and supporting larval hosts." North Creek's website offers a plethora of plant information, resources, and ideas. And helpful tags on their American Beauties line educate gardeners on the benefits of each plant. "We strive to help people understand which plants encourage wildlife," Castorani says. "We can heal the environment and make a stronger connection between the landscape and human beings."



10
steve castorani
THE AMERICAN PLANT PIONEER
Landenberg, PA

11
THE
EDUCATOR
darrel morrison
Madison, WI



Above: Landscape architect Darrel Morrison recommends getting to know the native flora and ecology. This includes learning about native insect species that depend on local plants to survive. Insects like this dragonfly also bring liveliness and beauty to the garden.

Designer and educator Darrel Morrison has been using native plants to design gardens and restore prairies since 1970. He's taught planting design classes at Columbia University, the University of Georgia, and the University of Wisconsin-Madison. A frequent host of nature tours, Morrison observes plants in their natural ecosystem to translate the plantings into designed landscapes and shows others how to do the same.

Left: When leading field courses, Morrison says, he's always on the lookout for vegetation patterns. Native birch trees, with their patterned bark, are a great reminder to always be on the lookout for ways to add geometric shapes, patterning, and rhythm to your garden.



GD: What is a natural garden?

MORRISON: I have four principles I work from when designing natural gardens: One, the gardens should be ecologically sound—they should not use limited resources unnecessarily. Water and energy inputs should be preserved. There should not be any invasive species that will diminish natural diversity. There should be plantings that attract other forms of life (butterflies, bees, birds).

Two, a garden should be experientially rich. It should be filled with color, texture, and, my favorite, movement. This is why I'm a big fan of native grasses—they are constantly moving in the breeze. The garden should be spatially intriguing, too, with mystery and places to explore.

Three, gardens should tell us where we are. They should reflect the native plants, stone, and woods of the region.

Four, gardens should change over time. This means they change over the seasons but also, and perhaps more importantly, over the long term. The migration of certain species through the garden and the maturing of plants should be part of

the design. I like to say that paintings are two dimensional, sculpture is three dimensional and landscapes are four dimensional, with time being the fourth dimension.

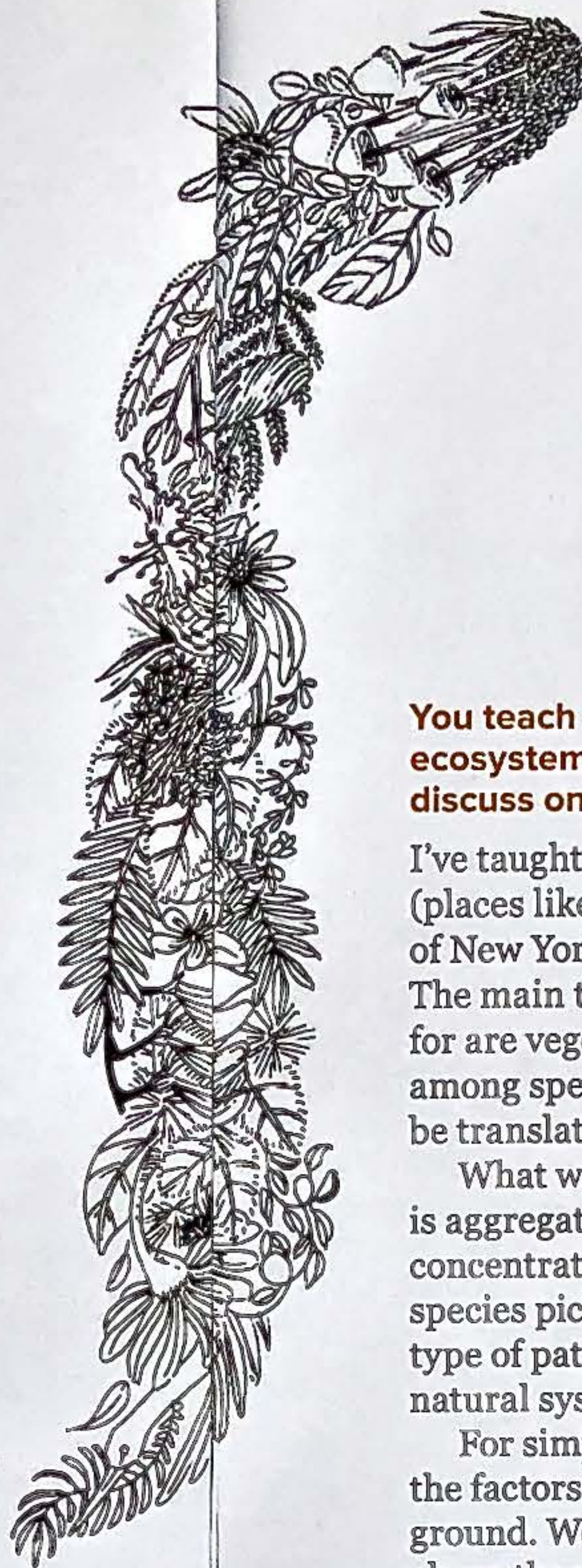
What got you excited about natives and using them in your work?

In the '60s I was fresh out of college working for a public agency as well as a private practice. We were just using the same species over and over again—*Vinca minor*, crepe myrtles, English ivy. I thought there had to be a better way. I ran across the book *American Plants for American Gardens* by Edith A. Roberts and Elsa Rehmann. The book details plant communities of the Northeast and how to adapt them to residential gardens. It struck me that I needed to know more about this.

I soon decided to attend the University of Wisconsin-Madison to get my master's degree in landscape architecture. The first class I had was Plant Ecology. It set my life in a new direction. At the time, the scientists at the university were working on the first prairie restorations in the world. It was amazing to see meadows created by scientists. I started learning all I could about natives and dove deep into learning about plant communities.

How can gardeners transform their backyards into more naturalistic spaces?

It's possible to move incrementally into the development of a more ecologically sound and natural garden. It's a process, and gardeners can take it one step at a time or jump into the level they feel comfortable with. I like to begin with substitution. You can start by replacing traditionally used exotics with natives: pawpaw instead of crepe myrtle, *Viburnum acerifolium* instead of *Euonymus alatus*, *Liatris spicata* instead of *Lythrum salicaria*, *Sorghastrum nutans* instead of *Miscanthus sinensis*, *Pachysandra procumbens* instead of *Pachysandra terminalis*, *Hamamelis virginiana* instead of *Weigela* spp.



You teach field courses on native ecosystems. What do you look for and discuss on the hikes?

I've taught a lot of field courses in forests (places like the Black Rock Forest north of New York City), prairies, and wetlands. The main things we're on the lookout for are vegetation patterns, interactions among species, and how what we find can be translated into a garden's design.

What we see is that often one species is aggregated in some way in drifts. It's concentrated, disperses, and then another species picks up. Understanding this type of patterning is essential to adapting natural systems into a landscape design.

For simplicity on the tours we look at the factors that affect the plants above ground. We can see how much sky is open above the plants to understand how much sun an area gets. It's also possible to look for indicator species. For example, if we see a prickly pear cactus, we know there are soils that drain well. This information can be used to know where and how to place plants in a residential design.

Who has influenced your work?

Stephen and Rachel Kaplan, environmental psychologists who taught at the University of Michigan. Their work outlines four characteristics of natural ecosystems that make them interesting to people: mystery, complexity (the number of species and how they look aesthetically), coherence (how a space is organized and results from pattern), and legibility (the way to move through the landscape is visible). This can all be translated into the design of a garden. For example, using a riverlike form to create a path invites you to follow it, so it's legible. You don't see the end of the path in the distance, so there's mystery. The distribution of plants along the path gives it coherence. And the ground plantings can have a diverse mix of plants, perhaps in a limited selection of colors, to provide complexity.



You've worked all over the country. How do you learn about local ecosystems and develop a cohesive design?

I always start by getting to know the native flora and ecology. You should take a hike, preferably with a local botanist or taxonomist who can show you the way. There are local plant and garden clubs that have these types of tours. Read the local literature. Each area usually has a go-to book about how to use regional

natives in landscapes. In Wisconsin, I used the book *The Vegetation of Wisconsin: An Ordination of Plant Communities* by John T. Curtis, which has wonderful lists of flora by plant community.

When I was teaching a class at the University of Georgia and showing projects I'd designed in Texas, New York, Wisconsin, and other areas, a student asked, "How can you know enough about each area to do these designs?" I replied, "I work with people who know a lot more than I do." To which the student said, "Then why do they hire you?" I said, "I'm the one who knows how the pieces fit together." My point is that you don't have to know everything. You have to know where to look, whom to ask, and how the pieces can fit together.





12 THE PLANT PROVIDER

neil diboll
Westfield, WI

Neil Diboll took over Prairie Nursery (prairienursery.com) in 1982 and began leading efforts to make native prairie plants available to gardeners and designers nationwide. Ever since, he's been working to change people's relationship with their gardens and the planet by espousing the concept that a personal landscape is a joint venture with nature—the garden is a home for birds, bees, butterflies, wasps, snakes, small mammals, and all forms of life.

With that in mind, Prairie Nursery has worked to make prairie planting more accessible by creating Pre-Planned Gardens—sets of plants that have been strategically designed to meet a specific purpose. (They even design them for different soil types, light conditions, and ecological function.) Gardeners can buy plants for a 25- to 192-square-foot area for hummingbird gardens, butterfly gardens, children's gardens, rain gardens, bee gardens, and more.

PRE-PLANNED HUMMINGBIRD GARDEN

Plants for a hummingbird habitat garden. For dry sand to loam soils and full sun. (Fits a 67-square-foot area.)

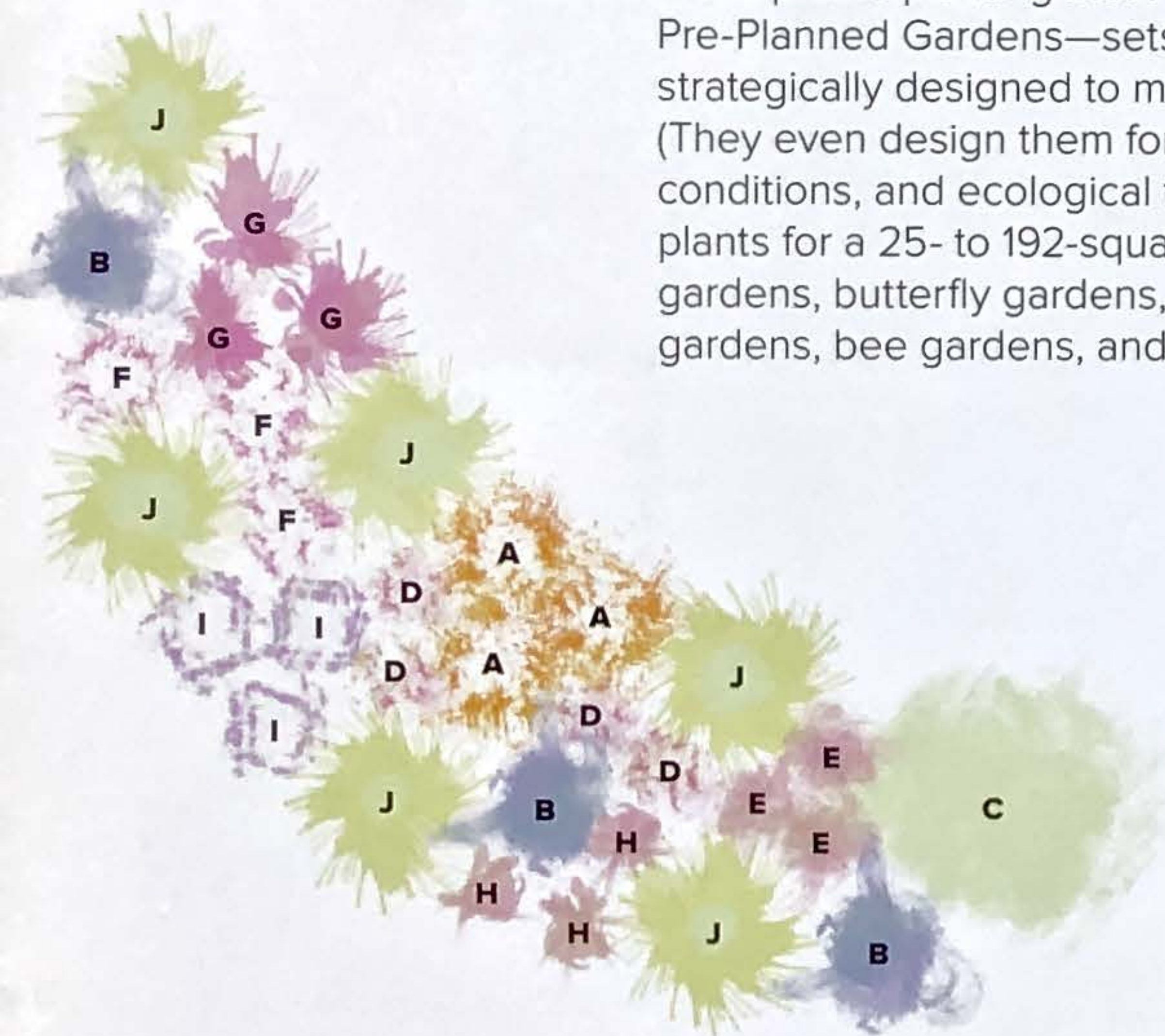
- A. BUTTERFLYWEED (3)
- B. SKY BLUE ASTER (3)
- C. NEW JERSEY TEA (1)
- D. SCALY BLAZINGSTAR (4)
- E. COLUMBINE (3)
- F. BROAD-LEAVED PENSTEMON (3)
- G. DOWNY PHLOX (3)
- H. WILD PETUNIA (3)
- I. HOARY VERVAIN (3)
- J. PRAIRIE DROPSEED (6)



PRE-PLANNED MONARCH GARDEN

Plants for a monarch garden. For dry sand to loam soils and full sun. (Fits a 50-square-foot area.)

- A. BUTTERFLYWEED (4)
- B. SMOOTH ASTER (2)
- C. LANCELEAF COREOPSIS (2)
- D. PALE PURPLE CONEFLOWER (3)
- E. ROUGH BLAZINGSTAR (3)
- F. MEADOW BLAZINGSTAR (3)
- G. PURPLE PRAIRIE CLOVER (2)
- H. SHOWY GOLDENROD (3)
- I. HOARY VERVAIN (1)
- J. PRAIRIE DROPSEED (5)
- K. LITTLE BLUESTEM (4)



13 THE ECOLOGICAL DESIGNER

jonathan alderson
Wayne, PA



"Twenty or so years ago, the state of mind was that providing for wildlife meant planting a bush for butterflies. You'd see butterflies on it and some might think, *I did a great thing!*" says landscape architect Jonathan Alderson. "But not only does butterfly bush not provide good habitat or a food source for butterflies; we now know that it's not just one plant that's going to provide the right habitat and food source for wildlife. It's about how everything works together." Alderson is known for creating sustainable landscapes that provide oases for birds, pollinators, and other wildlife through the use of plants that add value to a space—most famously, the 86-acre meadow garden at Longwood Gardens made up almost entirely of native plants.

Birds, butterflies, and other animals and insects aren't the only happy visitors in Alderson-designed landscapes. Humans, too, are fond of his breathtaking designs. How does he design spaces full of natives and accommodating to wildlife yet still accessible to people? "With great difficulty!" he says. "Unless a meadow has some structure to it, it can be perceived as a field of weeds. But there are strategies. Add massings of shrubs or a copse of trees. Mow a path through a meadow to create a clean edge. Or plant drifts of one particular plant for a tidier look," Alderson says. "You can also add a built element: an arch, bench, or stone wall. These elements give humans a frame of reference. A sense of order seems to make people more comfortable."

Add structure to a meadow by massing shrubs, planting a copse of trees, or mowing a path through a meadow.



While gardening with natives is nothing new, Boston naturalist and ecologist Claudia Thompson feels a compelling sense of urgency. "As development displaces habitat, and the earth becomes increasingly unbalanced with the effects of the loss of biodiversity, we bear greater individual responsibility for stewarding our own backyards."

In 2010 Thompson founded the nonprofit Grow Native Massachusetts (grownativemass.org) to spread her message. "We need to change the paradigm that conservation occurs only in select areas such as wildlife preserves, and realize that our lives are inextricably interwoven with nature," Thompson says. "Conservation and the protection of biodiversity needs to happen on a broader level in order to support the ecosystems that we rely on for our survival."

Grow Native Massachusetts offers resources and educational tools for home gardeners and landscape professionals while encouraging grassroots neighborhood efforts to help homeowners integrate natives into their yards. The organization holds an annual plant sale, and their popular lecture series features experts from throughout the Northeast speaking on topics ranging from native plants to ecological landscaping. "If every homeowner did just a little bit, and if homeowners can understand that stewardship begins at home, we will succeed at sustaining wildlife and ecosystems," Thompson says.

14 THE STEWARD

claudia thompson
Boston, MA

LINDA DAVIDSON / THE WASHINGTON POST / GETTY IMAGES



This garden in Austin, TX, designed by Christy Ten Eyck is filled with natives. Its wild core is balanced by formal courtyards near the home. Here, a courtyard with a formal gravel seating area, outdoor fireplace, and stone fountain. Native possumhaw trees dot the courtyard. See more images of this garden at gardendesign.com/teneyck.

For almost 30 years, landscape architect Christy Ten Eyck of Ten Eyck Landscape Architects has been integrating ecofriendly design elements and native plants into a wide range of public and private projects. Based in Austin, Texas, Ten Eyck was introduced to sustainable practices early in her career when she worked with trailblazers such as Steve Martino and Carol Shuler. “They were leading the charge in bringing environmental sensibility to landscape design that wasn’t there before,” she says.

“Water has always been a precious resource in the desert Southwest, so rainwater reclamation, conservation, and xeric landscaping are integral components of our designs,” Ten Eyck says. “Whether it’s a large public space or a small home garden, the same basic principles apply.”

15 THE CONSERVATIONIST

christy ten eyck
Austin, TX



GD: What can homeowners do in their own yards to get the most out of water resources?

TEN EYCK: Instead of allowing rainwater to run off, we try to slow down the movement of water so it percolates into the ground. Use gravel and permeable pavers for walkways and patios. Collect rainwater in cisterns or barrels, and harvest water condensate from air conditioners. Native plants require little supplemental moisture once established. Choosing the right site and mulching further reduces the need for water and maintenance.

How can a home gardener approach design with native plants in mind?

I try to get my clients to stop thinking in terms of having a lush green landscape year round and to embrace other colors. There’s something beautiful about purples and mauves against tones of beige and brown. Limit your plant palette to big drifts of a few varieties so that the design remains simple and manageable.

Can you recommend some good regional natives?

My favorite vine is *Mascagnia macroptera*, a rambunctious climber with clusters of yellow flowers—attractive to butterflies—and frilly chartreuse seedpods that fade to brown. Trees are important shade creators that help cool the home and landscape. A great small tree for urban lots is *Bauhinia mexicana*, with orchidlike white flowers that bloom from March to November. The flowers are especially attractive to swallowtail butterflies and hummingbirds.



Limit your plant palette to big drifts of a few varieties so that the design remains simple and manageable.

When Sean Hogan had trouble finding regional native plants for his landscape designs, he founded Cistus Nursery, a retail and mail-order specialty nursery near Portland, Oregon. Through regular plant hunting expeditions, Hogan trials and introduces new selections of natives from Baja California to western Canada, as well as cultivars from regions such as the Mediterranean and South Africa, areas with wet winters and dry summers similar to the climate conditions of the Pacific Northwest.

“Think in terms of plant combinations rather than individual species, and layer plants to simulate how they grow in the wild.” Hogan suggests. “Use a groundcover shrub such as *Ceanothus gloriosus* as a mulch and weed suppressant. *Ceanothus*, also known as California lilac, has the added benefit of fixing nitrogen into the soil. Manzanita is one of the finest overall native garden plants for our region, with evergreen foliage, bell-shaped flowers followed by small berries, and mahogany bark. Manzanitas are virtually carefree once established. Many varieties begin flowering in early to late winter, when bees are just starting to emerge and Anna’s hummingbirds are looking for food.”

16 THE PLANT HUNTER
sean hogan
Portland, OR



As Kay McConnell says, “Kids get excited when they find butterflies, praying mantis, and other creatures.” Here, a young girl holds a praying mantis.

Teaching children about environmental stewardship and an appreciation for nature are among Kay McConnell’s greatest personal rewards. A landscape designer, owner of Garden Therapy, LLC, and a member of the Guilford Garden Club (guilfordgc.org), McConnell and her fellow club members are leading the transformation of the grounds at the Friends School of Baltimore, a private Quaker school that fosters community and life skills.

More than 8,000 trees, shrubs, and perennials native to the piedmont and coastal plain of Maryland’s Chesapeake Bay watershed have been planted on the school grounds to improve stormwater management and provide wildlife habitat. The gardens, which include plots for growing edibles, are a living laboratory for lessons in earth science and biology, as well as inspiration for classes in writing and art. “The kids get excited when they find butterflies, praying mantis, and other creatures. They learn about life cycles and become more connected to nature as caretakers of the gardens,” McConnell says. “Those are lessons that will stay with them throughout their lives.”

To engage children at home, McConnell suggests, “Garden together! Listen to your children’s questions, look closely at whatever catches their attention, and enjoy their sense of wonder. Start out with small, simple tasks. Let your kids select plants, especially native species that attract eye-catching insects. Milkweed, for example, is the sole food source for monarch butterfly larvae. Plant *Asclepias tuberosa* in dry areas; *Asclepias incarnata* performs best in moist sites.”

17 THE TEACHER
kay mcconnell
Baltimore, MD

After nearly 30 years as a horticulturist at the Santa Barbara Botanic Garden, Carol Bornstein finds herself working at one of the country’s leading centers for sustainable gardening in urban settings. As director of the Nature Gardens at the Natural History Museum of Los Angeles County (nhm.org), Bornstein is responsible for long-term care and development of the 3.5-acre site, which is used for research and education programs. “The garden is an outdoor classroom that illustrates more responsible ways of gardening in an urban setting,” Bornstein explains.

Visitors to the gardens can take daily nature walks led by museum staff interpreters, stroll the garden independently, or attend seasonal workshops on design, water management, composting, edible gardening, and habitat gardening. The garden is also a well-used resource for landscape architecture and horticulture students, garden clubs, and school groups. While Bornstein has become an expert in California gardens, her advice applies to gardeners anywhere. “Evaluate your site’s soil, drainage, exposure, and microclimates,” says Bornstein, a coauthor of two books, including *California Native Plants for the Garden*. “Visit nearby natural areas that mimic your conditions to see plant combinations in the wild and to discover plants that you like. Pick a color scheme to help unify the landscape, keeping in mind cultural requirements. Choose plants not just for flowers but also for their habitat value and for year-round attributes such as attractive structure, foliage, fruits, and bark.”

