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Climate Forward

Climate Forward: Gardens Fit for Earth Day



By [Catrin Einhorn](#)



A garden with native plants in Columbia, Md., is a magnet for bees and other pollinators. Jason Andrew for The New York Times

Nurturing Nature in Your Yard

Gabrielle Stevenson needed advice on how to welcome pollinators and other wildlife to her front yard in Roseville, Calif. She knew that replacing part of her lawn with native plants was the best way to nurture biodiversity there. But she didn't want a mess and didn't know where to begin.

She also didn't have thousands of dollars to hire a professional landscaper. Which plants should she buy? How should she arrange them?

"To be honest, I find it quite daunting," she wrote in an email to us last month.

It can be. But it's worthwhile, according to scientists. Native flowers, grasses, shrubs and trees in cities and towns offer food and habitat for wildlife facing alarming declines, particularly [insects](#) and [birds](#). They also save water, since native species, when they're placed in an appropriate spot, generally don't require watering once established.

It seemed like a good topic on Earth Day Eve. So, for guidance on how people can get started without much time or money, I called Rebecca McMackin, the former director of horticulture at Brooklyn Bridge Park, an urban wildlife haven that attracts rare insects like the two-spotted lady beetle and the golden northern bumblebee. Here's what she had to say.

Start small

It's true that gardens take effort, McMackin said. There's the research, the money, the maintenance. So, she advises cautious newbies to start small.

"Pick a corner of your lawn to replace first, rather than the whole thing," McMackin said.

Pay attention to how sunny or shady, wet or dry it is, because you'll choose your plants accordingly. If it's a small area, you can pull out the grass yourself, with your hands or with the help of a spade or shovel. Instead of discarding the grass, McMackin suggests, simply shake off the soil and place it to the side, roots up, to return to the earth.



Milkweed is on the menu in this garden to satisfy the monarch caterpillar, which can eat nothing else. Jason Andrew for The New York Times

Choose caterpillar food

Insects can't eat just any plants. They've evolved over thousands of years to consume certain kinds. The most famous example in North America is the monarch caterpillar, which can eat only milkweed. Oak trees, the heavy hitters of host plants, feed [about 900 species of U.S. caterpillars](#). But many plants that are widely used in American gardens are food deserts to local caterpillars.

One reason caterpillars are important: [They're food for baby birds](#).

Wherever you are, “the best thing to do is to plant butterfly host plants,” McMackin said. “They are just an absolutely magical thing that people can do that really illustrates the beneficial impact that we can have so quickly.”

To find host plants in the United States, you can plug your ZIP code into the [National Wildlife Federation’s Native Plant Finder](#). Their data is from Doug Tallamy, a professor of entomology at the University of Delaware whose work has helped catalyze a growing native plant movement.

For a tidy look, keep the flowers short

Many native flowers evolved alongside tall grasses that acted as natural scaffolding. When planted alone in a garden, these lanky species can lean over.

“Plants that are taller than two feet can look wild and messy if not sited or arranged properly,” McMackin said. “Keeping plants low will maintain a managed aesthetic.”

In much of the eastern half of the United States, one option is eastern red columbine, host to the columbine duskywing, among other insects. It blooms when ruby-throated hummingbirds are migrating back from Mexico, and the birds are drawn to the red flowers.

“The ruby-throated hummingbird is the pollinator partner for that flower,” McMackin said. “Without that bird, those flowers are not going to reproduce as much. And those birds have come to rely on that flower when they get here.”

(The West has its own [species of red columbines](#), which also nourish hummingbirds.)



A native garden in Wading River, N.Y. “The best thing to do is to plant butterfly host plants,” said Rebecca McMackin, an ecological horticulturalist. Karsten Moran for The New York Times

Don’t forget the woody plants

“We often imagine ornamental gardens filled with nothing but flowers,” McMackin said. “But shrubs are beautiful, highly beneficial for wildlife, and less work than most garden perennials.”

So are trees, which have been called meadows of the sky, offering flowers to pollinators and leaves to caterpillars.

“An enormous fraction of North America’s butterfly and moth caterpillars — many thousands of species — are known to feed on just a couple dozen kinds of woody plants,” said David Wagner, an entomologist at the University of Connecticut who specializes in caterpillars.

Trees also [cool communities](#), stash carbon out of the atmosphere, filter air and suck up storm water.



A Los Angeles yard where the owners have planted more than 150 native species. Alisha Jucevic for The New York Times

Where to get plants and more information

Search the internet for native plant nurseries in your area. People who work there are a good resource for questions, too. Bigger nurseries are starting to carry more native species, but be sure to ask whether they've been treated with pesticides.

Many states have native plant societies that keep track of pop-up sales in your area. Some can also point you to plant lists and sample designs, [like this guide for northern New Jersey](#).

California's group has a great starting place for our Climate Forward questioner, Gabrielle Stevenson: [an online garden planner](#) that includes an "HOA Friendly" option for a native garden with a more manicured look.

Grab a book

You can find lots of books about native plant gardening. Some even highlight the relationships between plants and insects, like these:

- *Pollinators of Native Plants: Attract, Observe and Identify Pollinators and Beneficial Insects With Native Plants*, by Heather Holm
- *A Northern Gardener's Guide to Native Plants and Pollinators*, by Lorraine Johnson, Sheila Colla and Anne Sanderson (Northeast, Upper Midwest and Great Lakes)
- *Gardening for Moths: A Regional Guide*, by Jim McCormac and Chelsea Gottfried (Midwest)
- *Native Host Plants for Texas Butterflies: A Field Guide*, by Jim Weber, Lynne M. Weber and Roland H. Wauer (Texas)