

Garden Conservancy News

PRESERVING, SHARING, AND CELEBRATING AMERICA'S GARDENS

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Open Days 2021: New Connections, New Themes, Renewed Energy

Connecting gardening, people, and ecological stewardship

In many ways, the question of why we garden—and why we value visiting gardens—is philosophical. Gardening has always been an activity that draws people together through the sharing of seeds saved from previous years with our neighbors, the sharing of divisions of our favorite plants with friends, and, importantly, the sharing of advice and lessons learned with those who are new to gardening.

We garden because it knits us into the fabric of like-minded plant lovers. We garden because we know that spending time outdoors and cultivating a garden that reflects our values and horticultural interests is a

deeply fulfilling activity with benefits to our physical and mental health and well-being.

We garden because our parents and our grandparents gardened. We garden because we wish to transfer our own knowledge to a new generation of explorers, plant lovers, and risk takers. We garden because it connects us to our collective history and to people from around the world who have shared the same interests and passions but expressed them in their own unique ways. We garden because we know that it increases our quality of life in ways we can't even explain—we simply can't imagine a life that doesn't involve our lovingly tended plots of earth or our pots on a windowsill.

Now, more than ever before, we also garden because we recognize that we have a responsibility to be stewards—partners with the planet to try to leave the world in better shape than it was in when we entered it. Gardeners, through what we do

on our own properties, have the potential to help save the world. At the Garden Conservancy, we believe that we have entered a new golden age of gardening—an age in which the societal and ecological roles of gardens reflect our changing priorities, cultural values, and knowledge.

We are proud to announce that we are an organizational ally of Two Thirds for the Birds—a new initiative aimed at reducing the use of toxic chemicals in the home landscape and encouraging the use of native



continued on page 4

We're delighted to announce that Open Days will return in late May!

Special provisions, including pre-registration and other precautions, will make in-person garden visits possible again while ensuring the safety of all, both hosts and visitors.

Read more about the 2021 Open Days schedule and logistics for visiting, starting on page 7.

Below: Entry gate to the garden of John and Pepe Maynard in Groton, MA. Pepe and Page Dickey co-founded the Open Days program in 1995; both will open their new gardens to the public as part of 2021 Open Days. Photo courtesy of John Maynard





Douglas W. Tallamy, entomologist, author, and naturalist

Rob Cardillo

plants, for the benefit of the birds who breed in our gardens.

Douglas W. Tallamy, a renowned University of Delaware entomologist, is also a supporter of the Two Thirds for the Birds initiative. An expert in the way in which native plants form the basis of productive food webs, Doug is a leader in the movement to encourage more responsible stewardship of our home landscapes. Garden Conservancy Director of Public Programs and Education Patrick MacRae spoke with Doug virtually about the connections between native plants, bird populations, and our gardens. Here are some highlights from that conversation:

Patrick F. MacRae: Doug, in addition to being a well-known author and environmentalist, you study insects. How are insect populations, bird populations, and gardens related to each other?

Doug Tallamy: Everything on the planet starts with plants because we are made up of energy from the sun, but it is plants that allow us to be the energy from the sun.

Plants capture that energy, turn it into food, and then we either eat those plants directly, or we eat something that ate those plants. And that is true for [almost] everything on the planet. The plants you put in your garden are capturing energy from the sun and they're either passing it on to other living things or they're not—they can't pass on [the sun's energy] unless living things eat those plants. Most vertebrates don't eat plants. They eat something else that ate plants, and, typically, that is insects—mostly caterpillars. Caterpillars transfer more energy from plants to other organisms than any other type of plant eater.

What does that have to do with birds? Well, 96% of our terrestrial birds rear their young not on seeds, not berries, but on insects. If you don't have insects, you don't have 96% of

the birds. What are those insects? Most of the insects turn out to be caterpillars, which dominate nestling diets.

If you create a landscape that doesn't produce the caterpillars that run the food webs, you have a dead landscape. That's the connection between plants and birds. And of course, which plants you put in that landscape is critically important because most plants don't make a lot of caterpillars. That's true even with native plants.

Just 14% [of our native plants] make 90% of the caterpillar food. So 96% of the birds rely on 14% of our native plants. If we build a landscape out of the other 86% of native plants, or out of a whole bunch of non-native plants that supply almost no caterpillars, we don't have enough food for the birds.

Lots of other animals eat insects, too. And they depend on that transfer of energy from plants, just like birds.

PFM: What trends have scientists observed in bird populations and what are the causes?

DT: A study published in *Science* last year by the folks at the Smithsonian Migratory Bird Research Center analyzed 50 years of data from the Breeding Bird Atlas. We've lost three billion birds in the last 50 years—a third of the North American bird population. The losses are not equal across all bird species; aquatic birds are actually doing a little bit better.

So about three billion terrestrial birds are gone. There are a lot of causes, including predation by cats let outside and collisions with cars and windows. Migration is also very hard on birds because now when they migrate to the tropics, so much of it has been converted to eucalyptus and coffee farms. It's no longer the pristine habitat that used to allow them to overwinter. And the latest information from my lab indicates that we're also landscaping in a way that doesn't allow birds to reproduce as well as they need to.

We asked our Open Days hosts what “nature-friendly” gardening meant to them. A few quotes accompany this article. On our website, we will designate those gardens where the hosts inform us that they engage in responsible environmental stewardship with a special symbol.

“Nature-friendly gardening, for us, is about stewardship and giving back. As we cultivate our nine acres, it is with a rewilding in mind. This includes a focus on intentional informality, native plantings and development, meadows, and woodland spaces. There are so many rewards from this kind of gardening. Plants thrive and create an immeasurable amount of beauty, bounty, and joy for us and the many animals and insects that support the land.”

— Matthew Malin and Andrew Goetz, founders of Malin+Goetz fragrances and natural products and Open Days garden hosts



Shobha Vanchiswar



"The amazing diversity of creatures is very rewarding and adds to the enjoyment of the garden. I love knowing that I have owls and bobcats and fox and barn swallows and monarch butterflies, along with a myriad of others that also inhabit my property. It isn't just for me. How I care for it affects them as well; I am a steward for all."

— Kathryn Herman, landscape architect, Open Days garden host, and Digging Deeper presenter

[Birds] migrate here and find there's not enough food because we're creating landscapes that don't make enough caterpillars. That hasn't been obvious because we haven't processed how many caterpillars it takes to make a bird. To make one clutch of chickadees, for example, takes 6,000 to 9,000 caterpillars, just to get them to where they leave the nest.

And then the parents continue to feed their young caterpillars another 21 days after that. So it really takes tens of thousands of caterpillars to make one bird that weighs only a third of an ounce. And if you want that bird to breed in your garden, in your landscape, or anywhere where there are humans, which is nearly everywhere, you need to have those caterpillars there, because chickadees (and most birds) only forage about 50 meters from the nest.

The birds are not going to fly five miles down the road to the nearest woodlot to get their food. That takes more energy than they get from the caterpillars.

PFM: Open Days is a national community of people who primarily garden on a backyard, homeowner scale. How can gardeners make a difference in our own gardens?

DT: 85% of the U.S. east of the Mississippi is privately owned. If everybody landscaped responsibly on their own private property, we'd be 85% done! That's why the private homeowner, and how he or she treats their landscape, is such an important component of the future of conservation. If we only do conservation in parks and preserves, we will fail.

And that's why we're in the sixth great extinction now. Everybody outside of a park or preserve has had cultural license to do whatever they want on their property, for example, just make [their whole property a] lawn. And that's what has caused the problem. Everybody has a responsibility for good Earth stewardship. The people who are already connected with plants can be leaders in saying the goal now is not just to make pretty landscapes, but to make ecologically productive landscapes.

It's a brand new goal, because for the last two centuries we've only focused on aesthetics.

How pretty can we make it? Now the challenge is "can we make it pretty and productive at the same time?"

PFM: Is being a gardener concerned about aesthetics, or a gardener with a specific botanical or horticultural focus, mutually exclusive to being a good steward of your patch of land? Does one necessarily come at the expense of the other?

DT: I'd like to challenge people to create really classy native landscapes as examples for others.

We've done research in my lab that shows that there is room for compromise in our plant choices. We have found that you can have up to 30% of the woody plant biomass of your landscape non-native as long as it's not invasive—nobody should be tolerating invasives—and still have viable food webs if 70% is productive natives.

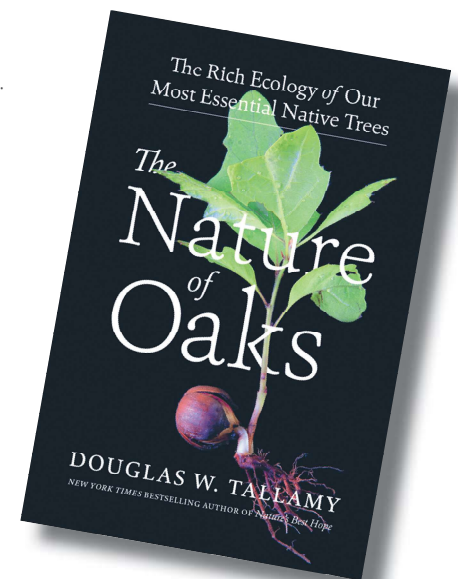
A lot of our gardening, of course, is with perennials and annuals that, at least in terms of the food web contributions, provide much less. Perennials and annuals are very important for pollinators, of course. But there is room for compromise.

Let's say I own an acre and I dedicate a third of that acre to my conifer collection from around the world. That leaves two thirds of an acre. What am I going to do with this two thirds? Will it be lawn? Or will it be productive natives? That's what I'm talking about.

PFM: Your new book is called *The Nature of Oaks*. Why are oaks crucial?

DT: There are four things that need to happen on all of our terrestrial landscapes. First, we need to support the food webs we were talking about. Local food webs support the animal diversity out there and they run our ecosystems. The number of species in an ecosystem determines how functional it is, how productive it is. And with 7.9 billion people on the planet, we need more ecosystem services than ever before.

So we have to have hyper-productive landscapes. The plants that make them hyper-productive are essential. That's one thing landscapes have to do.



Doug Tallamy will also be a guest speaker in our spring virtual programs on May 6.

His new book, *The Nature of Oaks*, is available for purchase together with registration for the event. For more information and to register, please visit gardenconservancy.org.



Keelya Meadows

"Each of us can make a difference by incorporating small changes in the landscape to become an interconnected part of the solution."

— Julia Cencebaugh Kloth,
archivist, Open Days
garden host, and Digging
Deeper presenter

The other thing they have to do is support pollinators. Pollinators create the plant landscape. If we lose our pollinators, we lose most of the plants. We need a diverse community of pollinators, and I'm not talking just about bumblebees and honeybees. Those are generalists. I'm talking about the 4,000 species of native bees that pollinate; one third of them can only reproduce on the pollen of particular plants.

The third thing that has to happen in our landscapes is watershed management. You have to have enough plants on your land so that all the rain that falls on your land stays on your land; no run-off! That's basic landscape water management, and that requires lots of plant roots.

The fourth thing is to capture carbon. We have too much carbon in the air. Plants take carbon out of the air and, through photosynthesis, they lock it up in their tissues and they pump it into the ground. Soils could hold up to seven times the amount of carbon that's in the atmosphere right now if we had enough plants to put it there. That's why having well-planted landscapes is so important in terms of climate change.

How do oaks rank in those four things? Well, they're number one in terms of supporting food webs. Nationwide, oaks support 900 species of caterpillars. There's no other plant genus that comes close to that. They're excellent at carbon sequestration and they have huge root systems. They're excellent at watershed management.

The only thing that oaks are not superior at is supporting pollinators because they're wind-pollinated. However, there's actually new evidence that a lot of our native bees go to oak catkins and gather the pollen; they just don't transfer it to female oak flowers.

So in terms of the four things that have to happen, oaks are number one or near number one for three of them. That's why they're so important. I want people to understand the

oak in their yard is not just another tree. It's an entire community of living things doing so much to strengthen our ecosystems.

PFM: One of the benefits of visiting gardens through Open Days is having the opportunity to learn from gardeners all across the country—to figure out new ideas, to find out how other people have handled challenges you might be also facing in your own garden, and leave with new creative inspiration.

DT: Talking to somebody who knows how to do it, there's nothing better than that in my view. That's what the old apprenticeships used to be all about in the Middle Ages. That's how knowledge was transferred in the past. It works. We should do more of that today.

PFM: Especially in the current pandemic, we're recognizing the importance of gardening for our mental health and wellness. Can you talk a bit about some of the pure joy of creating habitats that are highly functional?

DT: To me, creating habitats is like going on an African safari and it's really rewarding. I am trying to get people to look for what a plant is doing at the same time they are seeing what it looks like—it's not replacing that joy of seeing a beautiful plant, it's adding to that joy! Your plants can be bird feeders, too, if you choose the right plants. You can actually watch your birds forage for caterpillars in your trees, and bring food to the nest; these are all natural interactions that trigger all those medical benefits you read about—nature lowers your blood pressure, lowers your corticosteroids, lowers your stress levels. All kinds of wonderful things happen when you experience the natural world.

Plants also grow and change throughout the season, and the things that use the plants also change dramatically throughout the season. If you don't tune into that, you're missing a lot as well.

"Wildlife turns the garden into a wonderland. Gold finches and hummingbirds bathe in the fountains. Finches eat the seeds from the tall rudbeckias. Orange and striped dragonflies find resting spots near the water. Salamanders seek moist hiding places."

— Keelya Meadows, artist, Open Days garden host,
and Digging Deeper presenter



Keelya Meadows