THE NEWSLETTER OF THE EARTH SANGHA

# THE ACORN

OCTOBER 2022

## CONSERVATION GARDENING

### It could really help if enough of us did it.

Why bother remodeling your home garden just for the benefit of a few bugs and birds? This kind of thing might seem trivial, but actually it is of profound significance for the global biodiversity crisis — a crisis that is driven in large measure by our collective failure to live in ways that are compatible with conservation.

Study after study after study suggest that we may already have lost an outright majority in the number of flying insect species worldwide. Without intervention, 40% of insect species may go extinct, which will certainly have reverberations for other flora and fauna. Birds, the vast majority of whom depend on insects as a food source for at least part of their lifecycle, have declined in the US by 30% in the last 50 years. Our plant communities, facing increasing rates of local extirpations driven by invasive flora and fauna, are increasingly homogeneous and less diverse. Amidst all this, over the

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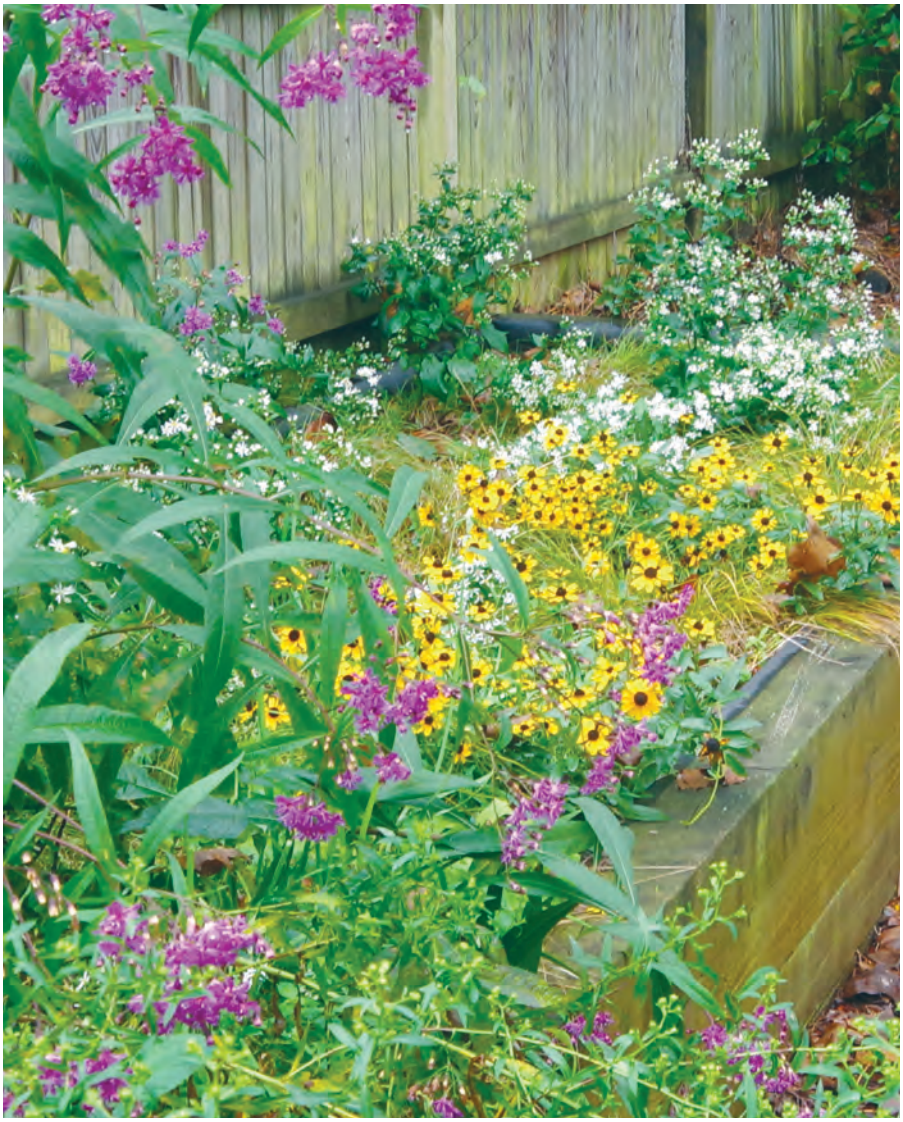
**Photos:** Above, in September, Lisa, our seed expert, began a renewal of her front native-plant garden in Fairfax, Virginia. Eventually, the garden will host dozens of locally-native plant species, some of them in widespread decline. At right and also in September, Katherine, our Development Manager, checked in on the monarch caterpillars dining on common milkweed (*Asclepias syriaca*) at our Wild Plant Nursery in Fairfax, Virginia. It's amazing how much they eat! The adults are more genteel diners. See inside.



# Horses not Zebras

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decade from 2010 to 2020, governments have failed to meet even one of the 20 targets for biodiversity conservation set by the UN.

To address biodiversity and habitat loss in one's own property, the prescription is surprisingly simple: remove negative stressors from the landscape and cover as much of the area as you can with native plants, most of them common.

On the first point, effective interventions include ceasing to use insecticides (even those advocated as "bee friendly" kill moths, sawflies, and other ecologically significant native insects), reducing light pollution, reducing the area and frequency of mowing, keeping leaf litter on site, and removing invasive species. Without these simple, no-or-low-cost changes in management, native plants and the fauna that depend on them cannot thrive.

When it comes to replanting, we should think horses not zebras. In sunny areas, common forbs like goldenrods (*Solidago* spp., *Euthamia graminifolia*), sunflowers (*Helianthus* spp.), various other asters (*Symphyotrichum* spp., *Rudbeckia* spp,), mountain-mints (*Pycnanthemum* spp.) and bonesets (*Eupatorium* spp.) along with various native warm-season grasses (e.g., *Schizachyrium scoparium, Andropogon virginicus, Sorghastrum nutans, Tridens flavus*) — these species form the basis for many of the dry to mesic meadows in our region. Though the plants are common, they support many specialist insects. Research by Jarrod Fowler and Sam Droege found that along the eastern US, goldenrods alone supported 39 pollen-specialist bees, with native sunflowers, asters, and rudbeckia following closely behind.

Where we have specific conservation targets in mind, we can be sure to include specific host plants, for example: *Zizia aurea* to support black swallowtails, or *Chelone glabra* for the endangered Baltimore checkerspot butterfly — and of course *Asclepias* spp. for the monarch.

While the constituents shift as we move into forested habitats, the general maxim of common plants first stays the same. Oaks (*Quercus* spp.) and hickories (*Carya* spp.) are some of the best choices across a wide range of wet to dry forests. These too are ecologically significant; Doug Tallamy notes that oaks host more butterfly and moth caterpillars than any other genus of tree. Along forest edges, black cherry (*Prunus serotina*) is another great option both for supporting insects and birds. Species like pawpaw (*Asimina triloba*), persimmon (*Diospyros americana*), and even chokeberry (*Aronia* spp.) could fit into food-forest or other forage-friendly landscapes for people and animals. More ambitious foragers may even find a use for all those extra mast-year acorns!

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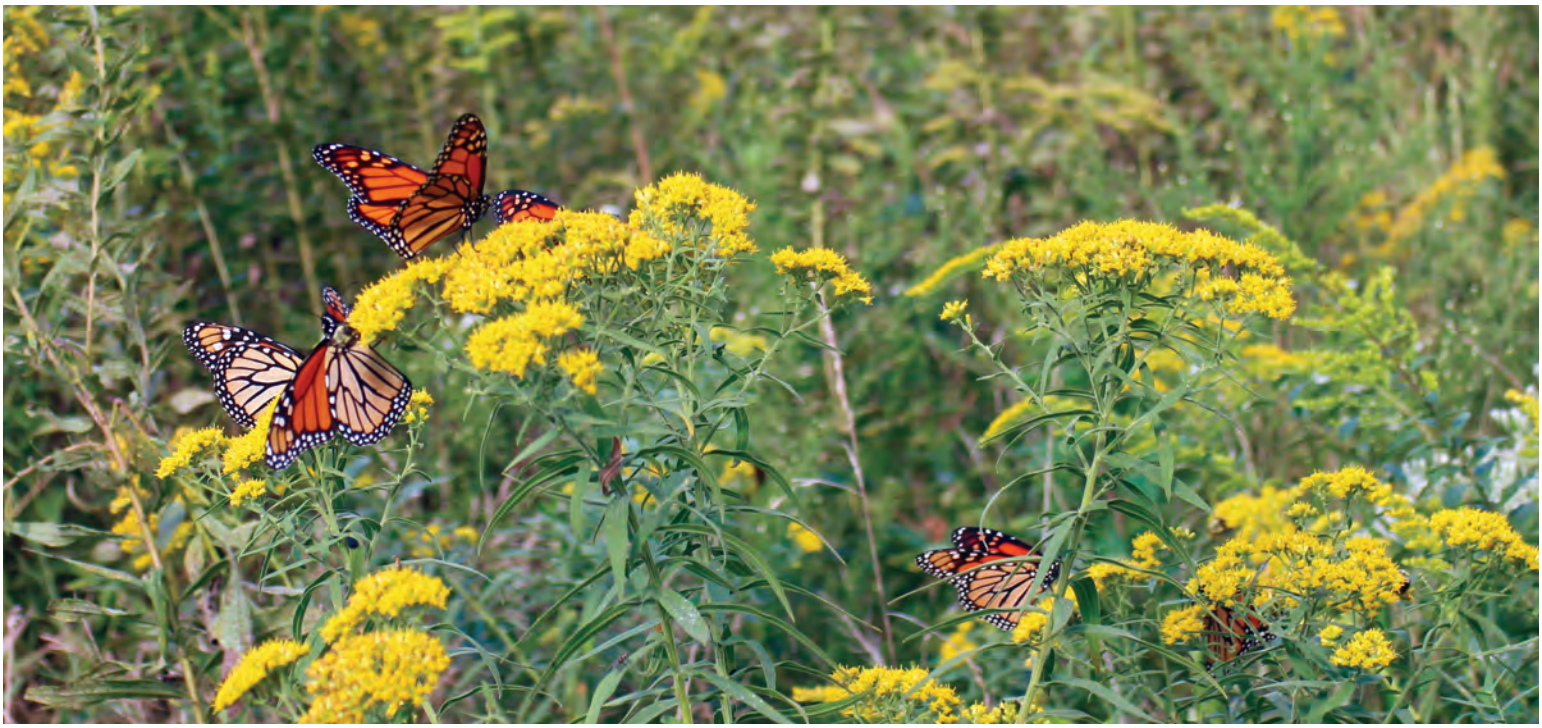

**Photos:** Opposite above, a side bed in September at Lisa's and Chris's house in Fairfax County, Virginia. Even small spaces can be a big help in maintaining native insect populations. Lots of variety is key. Framing small gardens in wood or stone can help keep people from treading where they shouldn't. Opposite below, also in September, Matt gave a presentation on native trees at our Wild Plant Nursery, in observance of National Public Lands Day. This side, above, monarch butterflies sip nectar of various goldenrods (*Solidago* spp.) in a meadow in the Lorton section of Fairfax County. This photo was taken in September 2014. People sometimes get the idea that monarchs live solely on milkweeds (*Asclepias* spp.). Not so! The caterpillars eat milkweed leaves, but adult monarchs, like people, do better with a varied menu. Below, Lisa's native-plant garden behind the house is weedy but spectacular. It's like a giant terrarium, home to myriad little creatures.

# Santo's Future Coffee Grove

Meet Santo Fernández, who recently joined our Tree Bank Hispaniola program. ("Santo" is his nickname.) In the photo below, he's planting a batch of native Hispaniolan trees, grown at the Tree Bank nursery, into this little de-vegetated pasture, which he plans to convert into a shade-coffee grove. (Our Tree Bank program works along a section of the Dominican Republic / Haiti border to restore native forest and improve small-holder incomes. We plant a lot of coffee groves.)

Santo's plot is about two-thirds of an acre. It was covered in a dense, weedy scrub — too dense to allow nearby trees to colonize the area. That's a common scenario in our region. The first step in restoring such an area is to chop out all of that scrub. The native trees are Step 2. They will provide the shade that our type of coffee prefers — as well as essential habitat and food for local wildlife.

But of course, the weeds would come right back and kill the little trees, without additional bouts of chopping once or twice a year. In about five years, most of the trees will have reached 8 feet or more and little pools of shade will weaken the weeds. The coffee can then be planted in. We grow that at the Tree Bank nursery as well. The coffee will arrive as seedlings about 6 inches high, so adjacent weeds will still have to be chopped back occasionally. It will take another five years before the largest coffee trees begin to bear, so Santo is at least a decade away from his first harvest, and that's assuming that things go well. You could say that the coffee is kind of a bet, but given the state of his soil, Santo has chosen well. Fertilizer costs preclude annual cropping on a site this poor, but coffee makes sense.

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Filling in structural gaps in your landscape can have huge benefits by unlocking habitat for new species. Understory trees and shrubs (e.g., *Carpinus caroliniana, Corylus americana, Cornus florida, Euonymus americanus,* and *Viburnum* spp.) provide nesting spots for songbirds, branches from which phoebes and peewees can hunt for insects, and more options for insect pollinators. Some early-flowering trees and shrubs (e.g., *Lindera benzoin, Acer rubrum*) can help support early-emerging pollinators in forested or forest-edge conditions at a time of the year when most meadows haven't begun to leaf out.

All of these efforts will not only improve the ecological value of your own garden, but if you inspire a few neighbors, or if the garden is near enough to a park or other habitat fragment, you will magnify the ecological benefits of these places by reconnecting them. These reconnections have been shown to reduce the risk of extirpations, provide more wildlife habitat, and genetically connect a plant species' populations to each other, thereby reducing long-term risks like inbreeding depression. Not bad for just one garden!

— *Matt Bright, Conservation Manager*

**Photo:** In July, in our Tree Bank area in the Dominican Republic, Santo Fernández planted this little former pasture in native trees. That's Santo planting away, in mid-frame. In five years or so, when the saplings begin to cast a little shade, he will plant coffee underneath the natives. Five years after that, he may see the beginnings of a harvest.

# EARTH SANGHA

## CONSERVATION IN PRACTICE

The Earth Sangha is a nonprofit 501(c)(3) charity based in the Washington, DC, area and devoted to ecological restoration. We work in the spirit of Buddhist practice, but our members and volunteers come from a wide variety of religious and secular backgrounds.

Want to contact us or make a donation? You can support our work by becoming a member. Membership starts at $35 per year. Donations are tax-deductible. You can mail us a check (made out to "Earth Sangha") or donate on our website. We will send you a receipt and include you in our mailings. (If your name and address are correct on your check, there is no need to send us anything else.) To donate specifically to our DC-Area programs, write "DC- Area" on the check memo line; to donate specifically to the Tree Bank, write "Tree Bank" on the memo line. Contact us at: Earth Sangha, 5101 I Backlick Road, Annandale, VA 22003 | (703) 333-3022 | earthsangha.org. Complete program information is available on our website. Want to volunteer with us? We work with volunteers at our Wild Plant Nursery and our field sites in northern Virginia. For more information see our website or call Matt Bright at (703) 333-3022.

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