THE NEWSLETTER OF THE EARTH SANGHA

# THE ACORN

JAN - JUNE 2024

# WHAT WE DID DURING THE FIRST HALF OF THE YEAR

We spent the first half of the year in a frenzy of propagation, clearing invasives, and planting. And, it wasn't without a few surprises! In March, new spigots were installed at Grove Point Park that allow potable water, which is great news. Unfortunately, a blockage in the line dropped the water pressure at the Wild Plant Nursery so significantly that we had to resort to hand watering the entire nursery for several weeks. Thankfully, Park Authority staff were able to find the blockage and we're back to almost our usual water pressure! In January, Chris, Maddie, & Michaelanne visited our Tree Bank colleagues in the Dominican Republic. The trip was a resounding success! But the journey home had them flying through a snowstorm and getting stranded in North Carolina.

Let's not dwell on the challenges of the year! In this issue of The Acorn, we offer an overview of our DC-area work, and an update from our projects abroad in Hispaniola and Panama.

## Tree Bank Hispaniola:

Pictured in the header image, a new parcela (parcel of land) for our Tree Bank Hispaniola program is planted with native trees near the Dominican Republic / Haiti border. The trees were propagated from local wild stands and are planted into eroding areas, like this one, on the farms of our partner farmers. This slope belongs to Marcelino Alvarez, and the planting was a wise move on his part. That's several acres of loose mud just waiting for the next heavy rain. Chris, Maddie, and Michaelanne visited this site in January along with other restoration sites and our Tree Bank Hispaniola Nursery. Not to worry! Our trees root quickly, and will help hold that slope in place. The planting will also buffer adjoining forest; you can see a little of that in the upper right corner of the above photo...

For more on the Tree Bank, see pages 4 and 5.

## Future Meadow:

In the left photo, Maddie Bright, our Executive Director, with our trusty crew of volunteers and staff, break ground on a future meadow in the **Laurel Hill Apple Orchard Recreation Area**. Ecologists from the Fairfax County Park Authority had already brush-hogged the site to remove invasive trees, shrubs, and vines and are now working to restore the site to native meadow and successional old field habitat.

Our die-hard volunteers installed over 400 redcedar (*Juniperus virginiana*), winged sumac (*Rhus copallinum*), smooth sumac (*Rhus glabra*), and staghorn sumac (*Rhus typhina*) in a single day. This was the first planting for this degraded site and it should be a big help in reviving it. The trees that we put in are tough "pioneer species" that should help the site develop into high-quality habitat, especially when combined with the invasive species control from FCPA.

While Elklick and Poplar Ford Parks (see pages 2 & 3) are focused on establishing large swathes of open meadow, this planting will offer more edge habitat and a greater ecotone transition from forest fragments to meadow. Both sorts of habitat are important and cater to different species, both of plants and of wildlife. Sumacs and redcedar are important cover and forage for various songbirds including Prairie Warbler, for example. Managing towards scrubby woody growth is just as important as restoring oaks and hickories and reestablishing larger prairie spaces and we're excited to be a support for such a wide range of habitat restoration!

## Habitat Refuge in McLean:

In McLean, Virginia, volunteers set up a deer exclosure at the **Marie Butler Leven Preserve** this April. This planting is part of our "Habitat Refuge" program that uses applied nucleation techniques. Instead of planting a lot of plants loosely across a site, we target specific areas and plant these pockets densely and diversely. To protect them from deer, we surround each pocket with a fence. Over time, these pockets establish and spread their seed to the surrounding area. Research even shows that these pockets encourage visitation by wildlife carrying outside native seeds, further driving succession and restoration success across the site.

What are the advantages of planting in this manner? First, the costs are much lower. Compared to caging trees/shrubs individually we save about 80% on fencing costs. Second, we protect more plants. On most restoration plantings, herbaceous plants never receive deer protection at all. Third, we can better tailor the plantings to micro-habitats on site because we're focused on specific pockets of habitat rather than a wide swath of land. Finally, the long-term results are durable. This resiliency comes from a few factors: the deer protection, the density and diversity, and the inherent differences in age classes between the planted pockets and the rest of the site. Among the herbaceous species included at this planting are *Aquilegia canadensis, Phlox divaricata,* and *Thalictrum thalictroides.* Among the woodies: oaks, hickories, and viburnums. We've also done these plantings at Dewey's Creek, Mason District Park, and we have assisted FCPA volunteers at Deerlick Park, Justice Park, and the McLean Trees Foundation at Lewinsville and Churchill Road Parks to develop their own Habitat Refuges.

## Reestablishing Rare Meadow Species:

Pictured on the right, the FCPA's **Poplar Ford Park** is now the site of several rare-plant introductions. Our role was to propagate from remaining local stands, and we help plant as well, while FCPA ecologists identified the best sites for reestablishment. Among the rare species at Poplar Ford: the globally-rare Torrey's mountainmint (*Pycnanthemum torreyi*) and state-rare stiff goldenrod (*Solidago rigida*). In additon to planting, we used our time to pick the brains of local experts. Here Conservation Intern Genny (blue hat) is discussing how our *Solidago rigida* is reseeding on site with FCPA ecologists Darko (center, orange vest), and Owen (right, orange vest).

## Sangha Stewards & Interns at the Greenhouse:

One of our 2024 Full-Season Conservation Interns, Kayla Hubbell, showed us some of her charges in the spring at the greenhouse that the FCPA owns and allows us to use. Long-time Sangha Stewards, Daly and Georgina Chin help manage the bulk of greenhouse production. Among the species in their care: the state-rare Virginia mallow (*Ripariosida hermaphrodita*). We now have several hundred of this tidal-wetland forb ready to go to the Kingman Island restoration efforts in Washington, DC.

Tending to the greenhouse is just the start of our Conservation Interns' duties, who work either as full-season or summer employees. Eventually these plants are transported to the nursery, where they are divided and prepared for sale or restoration sites! Our full-season interns experience all phases of operation from start to finish, giving them a solid foundation for the field. Another one of our 2024 Full-Season Conservation Interns, Ewurafua, has already successfully been employed as the Nursery Lead Coordinator at the Wylde Center in Georgia!

## More Rare Meadow Species: Elklick Woodlands Natural Area Preserve

Pictured above is part of the largest meadow on Fairfax County Park Authority property, located at **Elklick Woodlands Natural Area Preserve.** As at Poplar Ford, we have been planting rare meadow species here, too, as part of a broader meadow restoration effort. This year at Elklick and Poplar Ford, we have thus far installed 250 state-rare stiff goldenrod (*Solidago rigida*) and 50 globally-rare Torrey's mountainmint (*Pycnanthemum torreyi*). Reestablishment work at Elklick has been ongoing for 5 years – a testament to the difficulty of working with some rare species!

## Outreach and Education:

Every year, we endeavor to stay up-to-date with our own knowledge and share what we know with others, too. Here's a brief look at some of what we were up to regarding outreach and education:

- Executive Director Maddie spoke at the Lewis Ginter Botanical Garden Winter Symposium on "Recreating and Reconnecting Habitat with Native Plants."
- Earth Sangha staff and interns visited Woodend Sanctuary to discuss restoration techniques and deer exclosures with Bradley Simpson at Nature Forward.
- Conservation Coordinator Michaelanne and Development Coordinator Katie attended the National Native Seed Virtual Conference put on by the Native Seed Network.
- Michaelanne attended the Wildflower Symposium hosted by the Nature Foundation at Wintergreen.
- Maddie gave a virtual presentation sponsored by Loudoun Wildlife Conservancy and the Loudoun County Public Library.
- In addition to continuing to teach the Botany class for the Arlington Regional Master Naturalist chapter, Maddie also began teaching Botany for the Fairfax Master Naturalist chapter. A big thank-you to all our great Master Naturalist trainees and volunteers!
- Maddie gave a talk to the Northern Virginia Bird Alliance Sanctuary Program for the NVBA, sharing how Earth Sangha staff approach assessing sites and replanting with an eye towards maximizing biodiversity in small spaces.
- Maddie and Michaelanne hosted the Northern Virginia Community College Botany students at two events at the Wild Plant Nursery and at the Marie Butler Leven Preserve.
- Maddie spoke as part of a panel discussion at a screening of "The Last Bumblebee" hosted by Climate Action NOW at Cinema Arts Theatre in Fairfax
- Maddie gave a virtual presentation to the Howard County Master Gardeners on native plant communities.
- Maddie and Kayla spoke to Arlington County Park Corps student interns about plant communities and the importance of environmental and conservation careers.
- We continued to host students from Stone Ridge School of the Sacred Heart on a regular basis across our restoration sites and at our nursery. A big thank-you to all the students, faculty, and staff who joined us this past academic year!

# TREE BANK: OUR PANAMANIAN WORK BEGINS

We have teamed up with a village of the indigenous Naso people of western Panama to try to reduce poaching in their homeland, which consists of dense tracts of old growth rainforest extending over hundreds of square miles, near the border with Costa Rica. The poachers are killing a wide range of animals, and the decline of animal populations will inevitably compromise many plant populations as well. Here's why: the plants need the animals for pollination and seed dispersal, among other things. And animals need the plants for habitat creation and food.

We believe that our best bet for warding off the poachers is continual monitoring. The poachers know that their activities are illegal and they don't want to be exposed. That's one of the reasons that we're building this "casa de vigilancia," or "watch-tower house".

The casa is made according to Naso architectural traditions and is b
blown-down timber. Very little living wood was used in its constructio
guardians can walk the perimeter of a large sacred area called "the jagu
a cave there — and jaguars too! (A large jaguar sometimes watched ou
The entire area for this project amounts to some 160 acres. We think t
off most of the poachers, in part because we were able to recruit some
We hope to work with these people to develop a forest economy that i

We see our work with the Naso as an extension of our Tree Bank
ican / Haitian border. In both cases, we are trying to help poor people
without cutting it down. Along the DR/Haiti border, that would seem
cao; for the Naso it will likely require community-approved ecotourism
in June. The casa is now almost ready but we could use your help with
wildlife cameras, GPS units, and various other gear — and of course w
expenses.

## S

built almost entirely from
n. From here, Naso forest
ar cave." There actually is
r team as they worked.)
hat we will be able to scare
of them to build the casa!
s wildlife-friendly.
work along the Domin-
monetize native forest
to mean coffee and ca-
n. This picture was taken
the next steps. We need
ve need to cover our travel


# Tree Bank: Soil Is Our Best Investment

*From the front page . . .*

The planting will also provide habitat for local wildlife and, in five years or so, the little trees will begin to cast some shade. (Bananas will probably be planted around them to thicken the shade and add an economic incentive to protect the growing native tree seedlings.) At that time, Marcelino will probably start adding coffee and cacao as well. Both are high-value shade-tolerant tree crops. The planting will make money while improving the soil, retaining water, and creating more habitat for local insects, reptiles, birds, and so on. A solid investment!

Probably over 100 farmers in the Tree Bank region are now using some of their land to make this kind of investment. Our Dominican staff guides those investments to help farmers make the most of their plantings, from species selections to coffee or cacao harvest. Above, one of our Co-Directors (and a brother of Marcelino), Cosme Quezada, shows us around the Tree Bank nursery while explaining the virtues of guarana, a fast-growing local member of the bean family. We can see parallels between the restoration efforts of our Tree Bank and our work back home. Our partners here plant native "nurse" trees and shrubs in order to prepare the land for more economically productive plants like coffee and cacao. In January, we visited sites that were planted with Guama (a nitrogen fixer) and Guava (a tasty snack in the field) which grew quickly, helped heal the soil, and now provide shade for the next round of planting. This is similar to our Habitat Refuges where we plant densely so that the layers of plants can support each other. For example, we might plant a slow growing oak that needs shade near a faster-growing black cherry. This helps the trees grow and kick-starts forest succession.

## Green Ash: Conserving a Threatened Species

These green ash (*Fraxinus pennsylvanica*) saplings, pictured here this July, were grown out from our seedlings and will be planted by Fairfax County's Urban Forestry Management Division (UFMD) as part of an invasive pest management effort. Green ash has been decimated throughout much of its native range by the emerald ash borer, an introduced invasive insect pest. We supplied these seedlings to UFMD as part of our effort to support emerald ash borer biocontrol and green ash reestablishment in riparian and swamp forests.

Continuing to grow threatened species helps us to maintain natural plant communities and protect genetic diversity of increasingly fragmented populations.

For more on our partnerships, see page 7.

## Forest Restoration at Mason District Park:

Below, in February, volunteers kicked off this year's work in this socially important park with one of our trademark "Big Days," this one focused on invasives removal. This and subsequent bouts of control, at **Mason District Park,** have greatly reduced the growth of Oriental bittersweet, porcelainberry, English ivy, and Japanese stiltgrass. In addition to the invasives control, this area was being prepared for another Habitat Refuge planting, which is now completed. We donated and installed a variety of native species here, including, as a long term measure, oaks and hickories to maintain the park's mature canopy. For the shrub layer, we planted arrowwood viburnum (*Viburnum dentatum*, an important forest shrub — birds love its berries). For the groundlayer, we planted erect goldenrod (*Solidago erecta*) and true Solomon's seal (*Polygonatum biflorum*).

## Collaborations, Partnerships, and Volunteerism:

We officially launched our Sangha Stewards program this year to great effect! Volunteers applied to the Sangha Stewards program to work more closely with staff on independent and technical work at our nursery, greenhouse, field sites, and office with greater scheduling flexibility. Some of the Stewards' work has been high profile: helping us remove invasives at Mason District Park, helping regularly with detailed tasks at the Wild Plant Nursery, for example, by building more squirrel exclosures. But much of the Stewards' efforts have been behind the scenes, for instance, managing labels. Labels are a key piece of equipment, and we need careful people to print and organize them, and to clean and sort returned labels for reuse. There are lots of behind-the-scenes chores like this, and we're grateful to the Stewards for managing them in this very successful inaugural effort!

We continued to work closely with Fairfax County Park Authority staff on various restoration efforts across the County. Among the FCPA programs that we support: Helping our Lands Heal, Invasives Management Area, and Landscape Legacy. Our work with the Park Authority has taken place at parks across the region including Marie Butler Leven Preserve, Mason District Park, Poplar Ford Park, Elklick Preserve, and Laurel Hill Apple Orchard Recreation Area.

We also began working more closely with the Fairfax County Urban Forestry Management Division. We spent a day working staff-with-staff to pot up native tree and shrub seedlings at the Noman J. Cole Jr. Pollution Control Plant in Lorton last fall. Trees from that may be ready to go into the ground soon!

## Intern Training:

We host monthly training days for our Full-Season and Summer Conservation Interns. Each training day varies, but they can consist of a presentation conducted by Earth Sangha staff or seminars and talks given by other recognized experts. This training day was devoted to practicing plant identification (and some wildlife too!) and learning to recognize native plant communities at Huntley Meadows Park in Alexandria! From left to right, meet our Conservation Coordinator Michaelanne Makuch (in red pants), Full-Season Conservation Intern Genny Polo (gray shirt), and Summer Conservation Intern Liam Carey (with binoculars); and way in the back there, that's Kayla (see page 2).

## Plant Grants:

At left, two jubilant "Plant Grant" recipients pick up stock at our Wild Plant Nursery in April. This spring, we were delighted to support 12 small-scale restoration projects through our Plant Grant program. Recipients at local schools, parks, and other public lands received free local-ecotype, native plants for their projects. Our selection criteria balanced social and environmental needs and we were proud to support several Title 1 schools and an affordable housing project among our Plant Grant recipients. We hope that the next distribution will be even larger!

Separately, this Spring we also donated stock to volunteers working at designated Fairfax County Invasives Management Area sites. The weekend before our Plant Grant day, we donated trees, shrubs, and herbaceous plants to 10 IMA sites across the county. We plan to continue this critical partnership that facilitates long-term stewardship across dozens of County parks.

# Tidal Wetland Restoration:

We are pleased to report that our sweetspire seems to have found an appropriate home. Virginia sweetspire (*Itea virginica*) is a small native shrub common in the horticultural trade but increasingly rare in our wild areas. Its principal habitat is tidal wetland – a type of habitat that is increasingly imperiled in our region. Native stands across the region are at risk of washing away from erosion accelerated by large storms and development upstream; other stands have been swallowed by invasive species.

To protect our local-ecotype *Itea virginica*, we investigated several possible restoration sites for sweetspire and checked historical records as well. We wanted to see other tidal wetland vegetation, like wild rice (*Zizania aquatica*) established on-site already – a sign that reintroduced *Itea* could thrive too. Our conclusion: protected sections of **Little Hunting Creek**, pictured above in March, is one of our best options.

So far, we have installed some 50 local-ecotype sweetspire in this area — all of them grown from seed that we collected. Some local ecotype blue flag iris (*Iris versicolor*), another beautiful and uncommon wetland plant, was included in this planting as well.

The planting is being done in collaboration with the Friends of Little Hunting Creek and Northern Virginia Conservation Trust, and the planting was done by students from Stone Ridge School of the Sacred Heart. We hope to continue to identify other suitable sites, along Little Hunting Creek and elsewhere, to ensure we have local-ecotype populations of this shrub in appropriate habitat across the region.

If you are a park or land manager and you think you have suitable habitat, let us know by emailing our Conservation Coordinator Michaelanne Makuch at mmakuch@earthsangha.org.

EARTH SANGHA
founded 1997
5101 I Backlick Road Annandale, VA 22003
703-333-3022 info@earthsangha.org

The Earth Sangha is a nonprofit 501(c)(3) charity based in the Washington, DC, area. We are devoted to the restoration and conservation of native plant communities.

**Donate:** Donations are tax-deductible. You can mail us a check (made out to "Earth Sangha") or donate on our website at earthsangha.org/donate.

**Volunteer:** We work with volunteers at our Wild Plant Nursery and our field sites in northern Virginia. Sign up to volunteer at earthsangha.org/volunteer.

**Contact Us:** info@earthsangha.org | 5101i Backlick Road, Annandale, VA 22003 | (703) 333-3022 | earthsangha.org.

**The Acorn:** Our newsletter is printed on paper that is 100% post-consumer waste recycled, process chlorine-free, and manufactured entirely with wind-generated electricity. 

**Platinum-rated:** The Earth Sangha has a platinum rating from Candid for commitment to transparency.

**One of the best:** The Earth Sangha is recognized by the Spur Local as "one of the best small charities in the Washington, DC, region."

Platinum Transparency 2023
Candid.

SPUR LOCAL 24 CRITICAL NONPROFIT

GIBSON PRINT