

THE NEWSLETTER OF THE EARTH SANGHA

THE ACORN

NOVEMBER 2019



CONSERVATION NEEDS INFRASTRUCTURE TOO, & WE NEED YOUR HELP TO BUILD IT!

An advance for local conservation, further growth of our partnership with Fairfax County, and the most expensive upgrade ever made to our Wild Plant Nursery — our greenhouse construction project is finally under way. Matt Bright, our Conservation Manager, offers some basics.

Since 2015, we've been using a greenhouse that the Fairfax County Park Authority's Flatlick Maintenance Facility, in Chantilly, has generously made available to us. A few of you may have volunteered there with us; others have probably seen photos in previous editions of the *Acorn* or online. This greenhouse has been an immense boon to our propagation efforts, and has proved essential to our efforts to offer more species as low-cost plugs, to create our Plant Grant program, and to donate more native, local-ecotype stock to local restoration efforts.

But next spring, when we empty the greenhouse, we'll begin moving beyond Flatlick. At more than 20 years of age, the greenhouse may be nearing the end of its useful life. The Park Authority wants to dismantle it and put the space to other uses. Of course, our work continues, and thanks to our Park Authority colleagues, we have an approved plan to create a replacement facility right at our Wild Plant Nursery, in Springfield. The new structure will give us the same year-round propagation capability, while being easier to manage and reducing our carbon emissions.

The facility's first section will shortly arrive at the nursery. It's a modern, polyethylene mini-greenhouse that will use passive-solar heating. As a concept, passive solar is simple: use the sun not just as a light source, but also, in the winter, as a heat source. That's not how most glass greenhouses work — or at least not the ones with single-pane glazing. The glass admits a great deal of light, but retains little heat. During the winter, gas heaters must be used to keep the interior warm enough for growing.

Not so with passive solar greenhouses. These function much like our rapidly warming planet: they take in sunlight and trap much of that heat inside. There are two major components at work here: insulation on the north side, and copious amounts of water (in our case, buckets and rain barrels) to function as "thermal mass." The

water warms slowly during the day, and slowly gives some of that heat back off at night, when temperatures dip. This isn't a novel concept — such greenhouses are in use, for both study and commercial production, much farther north than here. Our hope is that our relatively balmy winters will make this an easier endeavor than, say, the one at University of Manitoba.

Apart from the structure itself, consolidating our propagation at the nursery will make our operation much more efficient. No longer will we have to truck soil, pots, and tools from Springfield to Chantilly in the winter and haul trailer-loads of plants back to Springfield in the spring. As the owner of the truck subject to most of that abuse, I'm particularly excited by this aspect of the change. We'll also have better control of our inventory, better control of winter growing conditions, and better management of the spring transition, when thousands of plants must move from greenhouse to field.

And, of course, less trucking plus solar heating equals substantially less carbon burned. Over all, it's pretty hard to find a down-side to this, except for its cost. That will be considerable by our standards — maybe as high as \$90,000 over a couple of years. So in order to pull this off, we could really use your help! We've already received a huge amount of help from our trusty Park Authority colleagues, most recently through the extension of Franconia Park's water line to the greenhouse site. (Many thanks to Devon, Phil, and crew!)

In addition to financial support, if you're good at construction, you might consider helping me build this thing. If you want to help or want more information, get in touch with us, at info@earthsangha.org or 703-333-3022.

— Matt Bright, Conservation Manager

Photo: In October we worked with Fairfax County Park Authority ecologists to establish new plantings of three locally rare species at Elklick Preserve. Torrey's mountainmint (*Pycnanthemum torreyi*), short toothed mountainmint (*P. muticum*), and stiff goldenrod (*Solidago rigida*) were already growing in or near the park, but in areas vulnerable to disturbance. We collected seed from those plants, germinated it, and returned the grown-out plants to the park. The new greenhouse will help us do more of this focused propagation for conservation.



GOOD WIFI & A KITCHENETTE!

For the first time in the Sangha’s 22-year history, we have an office. It’s in the Annandale section of Fairfax County, Virginia. The address is 5101 Backlick Road, Suite I. If you’re familiar with northern Virginia, I can orient you with one sentence: we’re near the intersection of Backlick and Braddock Roads. To those not familiar with NOVA, let me just point out that the “lick” in Backlick refers to a place where animals lick the earth for salt. Usually licks are near springs that pass through salt-laden sediments on their way to the surface. Now that you know that, our address may seem a little less creepy.

Our office is a condominium in an “office park.” The park consists of nine low-rise brick buildings surrounded by asphalt parking lots and strips of turf planted mostly with pin oaks, many of them dying, alas. There are about 80 offices in here — accountants, lawyers, dentists, chiropractors, assorted therapists, and some community service organizations. The parking lots have formidable speed bumps. There are foundation plantings of daylily, rose, and cherry laurel. This is no campus for Apple, but it’s clean, in good repair, and seems to be well managed. It’s standard NOVA.

You might ask why, after 22 years, did we rent an office? The short answer is that the Sangha just got too big and complicated to be run out of our basement — the basement of Lisa’s and my house. We took the home-office approach as far as we reasonably could, and then maybe a little farther. But eventually, scaling issues emerged. There was not enough room for staff, not enough storage, no meeting space, and no space for special projects, like seed cleaning, or organizing mailings. To continue growing, the Sangha needed more habitat.

We moved in at the beginning of August, and I can report that corporate life is now much more tranquil. We have separate rooms, so people aren’t trooping in or out to make phone calls. There’s a conference room that can be rearranged for seeds, mailings, or lunch. We have a store room, which greatly ups the odds of finding the right T-shirt or newsletter. We even have a little seed-storage room, with refrigeration space. This will make it easier to keep track of the hundreds of seed accessions that Lisa and Matt are harvesting.

Our lease is for five years, which is plenty of time to get even bigger. But I’m hoping that, at least for the next few years, further growth will be outdoors, rather than in!

— Chris Bright, President

MEET OUR 2019 INTERNS

If you’ve been out to our Wild Plant Nursery this year, whether it was at our exceptionally soggy spring sale, our droughty late summer, or our time-starved fall (seriously, is it just me?) you might have noticed a few extra helping hands. Those people make up our first class of seasonal interns. They worked (and are working) primarily with me, so I have the distinct if somewhat belated honor of introducing them all to you.

Ruth Ann Castillo and Katie Danner are our current fall interns:

Ruth Ann is an Arlington Regional Master Naturalist and has been transforming her yard into a wildlife habitat, removing invasive alien plants and replacing them with natives. Before that, she was an attorney for the Food and Drug Administration.

Katie is a current ARMN student, and will be joining Meadowlark Botanical Gardens as an intern. She came to us from Fairfax County Public Schools, where she taught early childhood education.

During the summer we were joined by Annie Castillo, Sophie Depret-Guillaume, Selwyn Heminway, and Manny Precht:

Annie, now a freshman at Oberlin College in Ohio, studied invasive species in high school, and is an accomplished poet. She was selected as a National Student Poet in 2017.

Sophie, now at University of Virginia, helped restore portions of schoolyard at Woodson High School, her alma mater. She also interned at the Sierra Club and served as a Climate Reality Leader — a program led by Al Gore. She is one of the youngest people to have graduated from that program.

Selwyn, currently at William and Mary, worked at the Chincoteague Bay Field Station, teaching visitors about marine ecosystems. She also

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Photo: In October, Katherine Isaacson, the Sangha’s Development Manager, takes in the suburban fall scenery from the front door of our new office. The window on the left is to Katherine’s office; that on the right is to the conference room.



TREE BANK: SANDY DELIVERS THE SEED

This year's top Tree Bank priority is to produce more native trees at the Tree Bank Nursery. We need to be growing more species, and we need larger seedling volumes for each of the species in our system.

A little context, in case none of this sounds familiar: our Tree Bank Hispaniola program works along a section of the Dominican Republic / Haiti border to conserve native forest in ways that improve small-holder farm incomes. We work on the Dominican side of the border, because that's where the remaining forests are, but our work is designed to help both Dominicans and Haitians.

Most of the Tree Bank's land is forest in easement. About 320 acres are protected in this way. We also have about 110 acres on its way to forest, and we want to restore more. But first, we have to improve our supply of native, local-ecotype tree seedlings. Even many of our current sites are too sparsely planted.

To produce more trees, we need more seed. For years, we have been appealing to (and paying) our partner farmers for help on this front. (There are now some 70 families in the program.) But this approach has not yielded a stable seed supply. Collecting wild tree seed is not something that farmers in our region traditionally do, and it's often difficult to sell people on new practices.

So this year, we tried something different and much simpler: we hired someone specifically to harvest seed. In April, Sandy Pérez Recio became the eighth member of our Dominican staff — and our

nursery accessions are already expanding on the strength of his work. His most important achievement thus far has been to collect thousands of Hispaniolan pine seeds. *Pinus occidentalis* is critically important in many of the island's habitats and dominant in much of Hispaniola's mountainous interior. Unfortunately, it's also endangered. That's Hispaniolan pine in the photo above. Germination of the pine seed has been poor — we have only a few hundred seedlings — but even so, this is a big step for us.

Over the course of the next year, dozens of our field sites will benefit from Sandy's work. Over the course of the next decade, many of the resulting trees will begin to produce seed of their own.

— Chris Bright, President

Photos: At right, a truckload of *biodiversidad* was prepared for delivery from the Tree Bank nursery to one of our field sites in September. There were about 10 native-tree species in this shipment. At top, last December, Matt (left) and Katherine explored a Hispaniolan pine ridge in the municipality of Los Cerezos, where the Tree Bank is based. This pine is a crucial component of many of the island's plant communities, especially at higher elevations. But despite its current abundance, it's in trouble. Among the threats: a nasty alien root-pathogen for which there is no practical control, heavy logging (now mostly in moratorium), and habitat loss. We're trying to help by restocking habitat with local-ecotype pine seedlings.



MATT HEARTS INTERNS

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volunteered extensively with Falls Church's Neighborhood Tree Program.

Last, but not least, **Manny** is currently a senior at Annandale High School. In addition to volunteering with us, he is active in the AHS Green Atoms recycling program, he helps edit the school newspaper, and he tutors other students on their writing.

During the spring, Ashlina Chin and Joe Sullivan served as our inaugural group:

Ashlina has a Masters in Plant Pathology from The Ohio State University and worked extensively on plant genetics as an undergraduate at Virginia Tech.

Joe has a Masters in Tropical Forest Ecology from Imperial College in London and has worked on various field-ecology projects across the US.

As this year's final planting season comes to a close, we can see that this has been yet another year of growth for the Sangha's DC-area work. We donated more plants than ever before to local restoration projects. We partnered with local ecologists to propagate and plant locally-rare species. (See the picture on the front page.) We expanded our restoration efforts, yet again, at the Marie Butler Leven Preserve. And we're closing in on another sales record at our DC-area nursery. Along with our many dedicated volunteers, our interns have played essential roles in these achievements.

In terms of both propagation and planting, we have benefited greatly from these reliable and seriously over-qualified people. At the nursery, I'm grateful to them every time I look at our healthy oak tubelings and our surprisingly-full-for-fall inventory. At the Preserve, I see their work every time I'm out on the forested slope near Kirby Road, on the north end of the park — a slope now largely cleared of invasive shrubs and replanted with native ones.

It's a great pleasure to have worked with such diligent, passionate, and accomplished colleagues. And on this point, I'm sure I can speak for everyone at the Sangha: many thanks to all our interns, current and former! We hope that their experiences with us will benefit their future efforts.

Finally, I'm pleased to announce that we have already begun accepting applications for spring and summer 2020 interns. If you'd like to join us, please email a cover letter and resume to me at mbright@earthsangha.org. A little fine print: our interns are paid at \$15 per hour. Maximum number of hours per week is usually 20. There are no benefits but you can have a T-shirt. Maybe even two! The program is aimed primarily, though not exclusively, at high school seniors and university undergraduates.

— *Matt Bright, Conservation Manager*

Photo: Katie Danner, one of our fall interns, plants a staghorn sumac (*Rhus typhina*) along the forest edge at the Marie Butler Leven Preserve, in the McLean section of Fairfax County. The sumac will persist on-site, we hope! Our interns will not, but wherever they go, we hope that their experiences with us will stimulate lots of healthy growth.



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 | \[earthsangha.org\]\(http://earthsangha.org\)](mailto:info@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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One of the best: The Earth Sangha is recognized by the Catalogue for Philanthropy as "one of the best small charities in the Washington, DC, region."

