



UNDER GLASS AND IN PRODUCTION

In the *Acorn* from exactly a year ago, we ran a photo of a group of student volunteers from the Stone Ridge School of the Sacred Heart, at work in the National Park Service greenhouse on Daingerfield Island, in Alexandria, Virginia. The NPS generously allowed us to use that facility for two winters, to get an early start on our growing season. It was a great experience — we learned a lot about greenhouse propagation — and the plants that we grew there helped fuel a number of early spring restoration projects.

Now, we're pleased to be applying our propagation skills in a larger greenhouse, in Chantilly, Virginia. This time, our benefactor is the Fairfax County Park Authority. You may already have seen this greenhouse in photos and videos that we've been posting on Facebook. It's an impressive space! It's a steel-and-glass structure with a double-pitched roof; it shares a wall with a Park Authority equipment maintenance facility. It's plumbed with four sprinkler rows connected to a fancy new programmable irrigation controller; it's gas heated, equipped with something called a "swamp cooler," and was already stocked with materials for building growing benches. It covers 2,800 square feet, about four times the floor space of the NPS structure. Our use of the greenhouse is, well, perennial. (It's governed by an agreement with the Park Authority that incorporates the greenhouse operation into our Wild Plant Nursery, also on Park Authority property.) We started work in the greenhouse in December.

We're using every square inch of that space. We managed to sow over 16,000 pots and plugs out there, and many of them were growing well by early April. All this extra early-spring capacity will allow us to supply many more local restoration projects and schoolyard plantings. Among the projects that will benefit: a new meadow planting at the Fairfax County Government Center, an established meadow project at Americana Park in the County's Annandale section, our own work at

the Marie Butler Leven Preserve (see page 5 inside), and a growing list of meadow and schoolyard projects throughout northern Virginia.

We're not just focused on volume; there's plenty of diversity as well. As at the NPS facility, we're growing only herbaceous species in the greenhouse, both graminoids (grasses and grass-like species) and forbs (broad-leaved herbs), and we're concentrating on just a few common plant-community types. For common meadow sites, we're growing a selection of goldenrods, broomsedge, little bluestem, and a variety of milkweeds. For forest-edge habitats, we're producing shade-tolerant native grasses such as wildrye, white cutgrass, and bromegrass. For wetter sites, we have an array of different sedges, rushes, and forbs like cardinal flower.

Now that the weather has finally warmed up, we've started moving greenhouse plants onto various fields sites and out to our Wild Plant Nursery, where — shameless plug incoming — you can buy them! Your purchase will help support local ecological restoration projects.

We have many people to thank for making our first large-scale winter growing season such a success. We're deeply grateful to all of our friends and colleagues at the Park Authority, who worked with us so generously and patiently for over a year to launch the greenhouse project. We also owe many thanks to our greenhouse volunteers, especially Mike and Sheila Bishop. Our volunteers spent hours setting up benches, filling pots, fiddling with irrigation equipment, and just generally making things work. Our thanks to you all for creating this unique addition to our local "conservation infrastructure."

— Matt Bright, Conservation Coordinator

Photo: In March, various native meadow and forest-edge species get an early start at our greenhouse operation in the Fairfax County Park Authority's Flatlick Maintenance Facility in Chantilly, Virginia.

TREE BANK UPDATE

Our Tree Bank's Forest Credit program has just about wrapped up another cycle of lending. Forest Credit makes low-cost credit available to Tree Bank farmers, in exchange for conservation easements on their forests. (The Tree Bank works along a section of the Dominican Republic / Haiti border, on the Dominican side, to conserve forest and boost the incomes of small-holder farmers. For more information, go to earthsangha.org and click on Our Work: Tree Bank.)

The loans, made in April 2015, ranged in size from the equivalent of US \$178 to \$978; the median was \$467. By the end of March, 32 had been paid in full; another three had been paid in part, and one was still completely outstanding. Given the situation in which we're operating, that's not bad! (The situation in brief: over the past two years, all of the coffee groves in our region died from a fungal epidemic and a bad drought last spring ruined the summer harvest.) We're working to improve lending and repayment in the new loan cycle, which started in April.

Work continues on the Tree Bank Nursery. We're expanding the shaded container yard to boost capacity by about 50 percent. The current set-up can produce about 20,000 tree seedlings in a year, but we could use a lot more than that. We hope to finish the container-yard project this spring.

We're also expanding the nursery's native-tree inventory, since we need, not just more native trees, but more native-tree species. This is a complicated, long-term process; seed-collection is a novel activity in our region, and native trees are not greatly valued, except for the one remaining species that is still producing marketable timber. We have established a "seed bonus" — a small cash payment to Tree Bank

farmers who bring in useful quantities of seed. And we're improving our tree-species propagation list, by drawing on various published sources as well as local advice.

We're developing a cocoa crop. During this past year, much of the nursery's production was given over to coffee, so that we could replant our Rising Forests® Coffee groves with disease-resistant trees. We're still at it, but we're also producing and planting cocoa trees. Like coffee, cocoa can be grown under native forest canopy and, like coffee, it's a high value crop. We think that cocoa has major potential in our project area. It will help diversify farm revenue and allow farmers to profit from planting native forest canopy in areas that might not be suitable for coffee.

We're ready to launch our Bosques Rentables ("Profitable Forests") plantings. These plantings will combine several Tree Bank efforts — coffee, cocoa, and native-tree production — to try to make them work on a landscape scale. The idea is to replant barren, unproductive cropland and pasture with native forest canopy, then, a few years later, put in understories of coffee and cocoa. The results will increase both wildlife habitat and farm revenues. This year, we're planning five pilot plantings, each about three-quarters of an acre. The sites have been chosen but the plantings have not yet been scheduled.

Photo: Winter didn't halt our DC-area work! In February, volunteers cleaned bags and bags of wild-collected seed at the Long Branch Nature Center, in Arlington, Virginia. Stuffed native fauna kept tabs on the progress from the room's upper shelves. The seed is being sown at our Wild Plant Nursery and greenhouse.



IN GRATITUDE TO OUR MAJOR DONORS FOR 2015



\$5,000 & above

The Shared Earth Foundation (\$20,000)
An anonymous donor (\$20,000)
The International Foundation (\$15,000)
Two anonymous donors (\$14,081)
The Community Foundation for the National
Capital Region (\$13,447)
The Community Foundation for Northern
Virginia / Stockwell-Frase Fund (\$10,000)
Cynthia Irmer & Bruce Engelbert (\$10,000)
The Luck Companies Foundation (\$10,000)

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Gail & Bob Weigl
Two anonymous donors

Our 2015 Government Partners

Our government partners are crucial allies in conservation. We are grateful for the funding that these agencies provided for our work last year.

Fairfax County, Virginia: \$16,150 for work in Fairfax County parks and schoolyards.

The Virginia Chesapeake Bay Restoration Fund: \$8,000 for riparian meadow restoration in Northern Virginia.

Year-End / New Year Match

Our Tree Bank / DC-Area match amounted to \$8,889. We are deeply grateful to the two anonymous donors who provided it.

Photo: In November, volunteers planted wetland species, grown at our Wild Plant Nursery, in the "vernal pool" area at the Marie Butler Leven Preserve in McLean, Virginia.

We thank everyone who has given to the Sangha, in whatever form. We owe a special debt of gratitude to these people and organizations, who made major donations to our work last year. The Sangha has drawn great strength from their generosity and vision. May the spirit of their gifts continue to live within our work and practice.



\$250 - \$499

The Ayr Hill Garden Club
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Photo: The morning mist rises from the mountains at our Tree Bank field station in the Dominican Republic, near the border with Haiti.

\$100 - \$249, continued

Karen Kenneally & Peter Raymond
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Two anonymous donors



SOMETIMES WHAT MATTERS MOST IS WHAT YOU DON'T SEE

We have major progress to report on our work at the Marie Butler Leven Preserve, in the McLean section of Fairfax County, Virginia. Most of the invasive alien understory in the Preserve's 17-acre forest has now been downed.

The lead author of this progress is our inimitable, die-hard volunteer Jim Clark, who has been haunting the Preserve, brush saw in hand, for the past year or so. Acres of multiflora rose, Amur honeysuckle, and other invasive shrubs have yielded to him. Of course we're also very grateful to the 300 or so other volunteers who came out to the Preserve last year for various invasive-control events, or who adopted their own particular infestations.

The photo above, taken in February, reveals some of the results. This stand of tulip-trees has no invasive groundlayer and little invasive understory. That's why it's so brown. In Virginia's deciduous forests, brown — not green — is what you should mostly see in winter.

Of course the struggle continues. Most of those shrubs will resprout, but cutting the resprouts will be much easier than the initial work. There are also pocket infestations here and there, and we still have many acres of invasive groundlayer to deal with. Overhead, we're still working to control the invasive canopy — unfortunately, there are invasive alien trees in the Preserve as well.

But we have reached a point where we can restock more of the forest with native shrubs and tree saplings, to help keep the invasives out, and stabilize the forest over the long term. If you live in the DC area, we hope you'll join us at the Preserve this year. Check the field schedule page of our website for event dates and times. (Click on Take Action: Volunteer.) See you out there!

Photo: A patch of more or less invasives-free forest in February, at the Marie Butler Leven Preserve, in Fairfax County, Virginia.

ON THE MAP

If you follow our blog “Life in the Field,” you might already have read about our conservation mapping for the Sangha’s Tree Bank project in the Dominican Republic, and you might even have played around with our interactive map. If you haven’t yet had the chance, be sure to check it out at earthsangha.org. The following is adapted from my blog post on this topic.

The screenshot at right will give you a sense for our Tree Bank conservation activities. The entire map shows 175 acres of land in conservation, with the vast majority of that (about 150 acres) covering existing forest. (The rest is forest plantings.) Each point represents a single plot that is enrolled in one of our land conservation programs. The most numerous, in pale green, are our Credit Reserve plots, where farmers enroll extant forest into a conservation easement in exchange for a line of credit. The blue dots represent Reforestation Plantings, where we directly subsidize the planting and maintenance of degraded areas to return them to forest and to buffer existing natural areas. The large dark green dot is our Tree Bank Reserve, which we purchased for permanent conservation.

The points are roughly at the center of each plot. Because of steep terrain and dense vegetation, it is difficult to get an exact boundary for every plot. The diameter of the dots represents the size of the plots relative to each other, but is not to scale on the map; the actual easement or planting does not include the entire area covered by its dot. The different dot sizes are there to help you visualize the data.

Many of these areas are complex polygons that follow the contours of the forest. In the coming years we hope to add shape data to show you the exact plot dimensions. At present, we don’t even have basic GPS coordinates for every plot, so the screenshot is only a small portion of enrolled areas. Cosme and Manolo, our Tree Bank Co-Directors, have been sending us GPS coordinates, but they have to physically visit every site to get an accurate reading, and some of these sites are remote. Currently, the map shows about three quarters of the Credit Reserves, but fewer than half of the Reforestation Plantings. Rising Forests® Coffee groves have not yet been included.

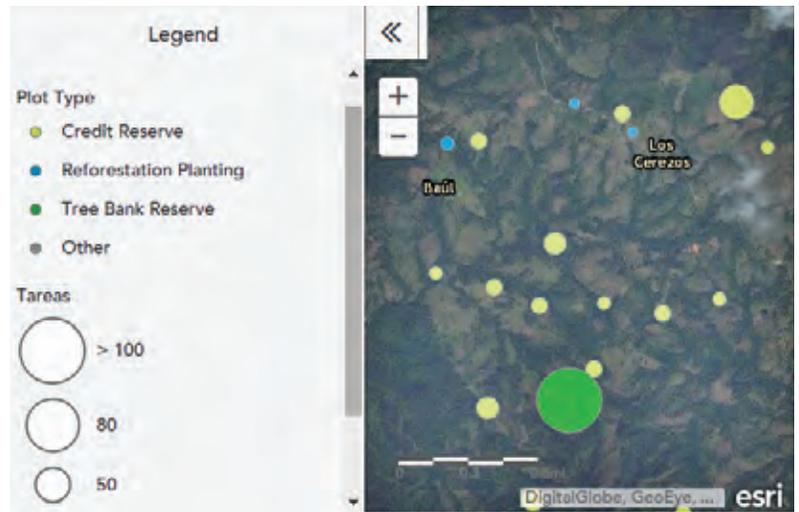
What does the data show? The Reforestation Plantings (blue dots) tend to be near Credit Reserves (pale green). Credit Reserves tend to be ecologically valuable, either high-quality secondary growth or maybe “old growth,” much of it riparian. By creating Reforestation Plantings adjacent to these sensitive areas we buffer them from inadvertent damage and reduce edge effects.

Notice, also, how our 45-acre Tree Bank Reserve links up, through the branching forest patches, with about a dozen Credit Reserves to create a large, nearly contiguous, stretch of land in conservation. This is the beginning of a network of protected areas that the region badly needs.

Mapping is a powerful tool for conservation. We can now see easily where we have conserved contiguous forest, and identify the best candidate areas for further conservation. We’ve also been applying these techniques in the DC area, by mapping out our seed collection sites, to help create a broad inventory of the native plant populations that we propagate. As our mapping capabilities develop, we will continue to share this information with our partners and donors online and through the *Acorn*.

— Matt Bright, Conservation Coordinator

Photo: Above, a screenshot of the Tree Bank ArcGIS database shows some of our protected forests. The border with Haiti is about three miles out of frame to the west (left in the screenshot).



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, 10123 Commonwealth Blvd., Fairfax, VA 22032-2707 | \(703\) 764-4830 | earthsangha.org](http://earthsangha.org). Complete program information is available on our website.

Want to volunteer or meditate with us? We work with volunteers at our Wild Plant Nursery and our field sites in northern Virginia. We meditate in the Del Ray section of Alexandria on Tuesday evenings. For more information see our website or call Lisa Bright at (703) 764-4830.

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