The Newsletter of the Earth Sangha

THE ACORN

April 2014

NOT THE BANANAS, BUT PRETTY MUCH EVERYTHING ELSE

By DC standards, last winter was unusually harsh, and early spring wasn't much better. At our Wild Plant Nursery, March ended with several inches of airborne slush. A novelty for local meteorology: somehow the stuff was slush before it hit the ground.

Fortunately for us, we had this wonderful greenhouse. Well, it's not actually *our* greenhouse. It's part of the National Park Service facility on Daingerfield Island —which, incidentally, is not actually an island. It's kind of an understated peninsula; it extends into the Potomac just south of National Airport.

In December, Barry Stahl, NPS Horticulturist and Nursery Manager, invited Lisa into the greenhouse, to start some seedlings over winter. Lisa is the Sangha's Executive Director; she runs our DC-area nursery. Last year, whenever he had time, Barry had been helping out at our nursery, showing volunteers how to manage seedlings, so he knew that our entire facility was open-air, apart from a tiny hobby greenhouse chez Bright. He also knew that Lisa was under pressure to boost production of the roughly 300 native plant species that we are propagating — all from wild-collected seed and spores.

Never diffident in the face of opportunity, Lisa nearly carpeted the greenhouse growing benches and floor with pots, creating a degree of biodiversity in there that would rival the healthiest local meadow or wetland. And indeed, it seemed that almost everything in there had been come from local meadows and wetlands, except for Barry's elm seedlings — and his tropical fruits.

We are very grateful to Barry for all the help! Thousands of vigorous little seedlings now owe their existence to him, and many of them will likely end up on NPS properties in DC and northern Virginia.

FOREST CREDIT KEEPS ON GROWING

This spring, our Tree Bank Hispaniola program extended its Forest Credit program to cover another 12 small-holder farms. The Tree Bank works along a section of the Dominican Republic / Haiti border to improve small-holder incomes and to restore native forest. Forest Credit extends low-cost credit to farmers, in exchange for conservation easements over surviving forests on their lands. The program is the region's only low-cost credit program, and its only conservation easement system.

Forest Credit is now lending the equivalent of $19,750 to 40 farms and protecting about 150 acres of forest. The Tree Bank as a whole has thus far protected or is restoring about 227 acres of forest. We started the Tree Bank in 2006 and it has grown every year. For an overview of all Tree Bank programs, see inside.

A remarkable feature of our credit system is how careful the participants have been with their borrowing. We began lending in 2011 and thus far have had only four late loans (all caused by harvest failure after drought), and no outright delinquencies. Good credit appears to be a kind of community effect: everyone seems to understand the importance of protecting the credit resource.

Tree Bank Diagram inside! Frame it for display above the sofa. Laminate it for use as a place mat. Tape it over the TV. Contact us for additional decorator ideas.

Photo: In February, our winter intern Emma Lanning prepared pots for sowing at the NPS Daingerfield Island greenhouse.

IN GRATITUDE TO OUR MAJOR DONORS FOR 2013

Over $5,000
The Shared Earth Foundation ($20,000)
An anonymous donor ($20,000)
The Community Foundation for the National Capital Region ($13,806)
The National Fish and Wildlife Foundation ($12,860)
Cynthia Irmer & Bruce Engelbert ($9,500)
The Prince Charitable Trusts ($7,500)
Washington Gas ($6,050)
Patricia & Larry Molumby ($6,000)

$1,000 - $5,000
Arlington Village
Bank of America Foundation
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Robert & Nora Jordan
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Trevor Self & Jennifer Childress
Joshua Wenz
An anonymous donor
An anonymous foundation

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Carol & Albert Hunt
Daniel & Teresa Murrin
The Neel Foundation
Marc Eric Ottersbach & Cornelia Bammesberger
Suzanne Pollard & Michael Britt-Crane In memory of Walker Pollard
John Ruml
Lynn Scholz
Kathryn & Peter Scudera
William & Deborah Swietlik
Krissy & Tommy Ventre & their wedding guests
Gail & Bob Weigl

$250 - $499
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Donna Chandler
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Curtis Runyan & Jennifer Balch
Amanda Sauer & Sadao Milberg
Sally & Gerald Sieracki
Mary Sylvia
Elaine & James Tholen
Two anonymous donors

We Thank Our 2013 Government Partners

Whether as grant-makers or contract managers, our government partners are crucial allies in conservation. We are grateful for the funding that these jurisdictions and agencies provided for our work last year.

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

Virginia Chesapeake Bay Restoration Fund: $5,000 for local-ecotype seed-collection of native riparian plants.

US Bureau of Land Management: $11,748 for meadow restoration and storm drainage plantings.

US Fish & Wildlife Service: $13,583 for meadow restoration at the Occoquan Bay National Wildlife Refuge.

"One Sangha, Two Nurseries" Campaign

The match for our "One Sangha, Two Nurseries" year-end campaign amounted to $10,945, making it by far the most successful match that we have ever received. We are deeply grateful to the two anonymous donors who provided it.

Photo: September at our meadow restoration site at the Occoquan Bay National Wildlife Refuge in Prince William County, 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.

$100 - $249

Brooke Alexander & Robert Brown
Gwen & Ralph Bates
Jocelyn Brittin
Stanley Burgiel & Jeneen Piccuirro
Harry & Nicole Campbell
Jonathan & Alice Cannon
Margaret Chatham
Georgina & Daly Chin
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In memory of Dr. Maria Sepa
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Virginia Native Bees
Jim Waggener
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Ana Walker & Terence Schmitt
Russ & Sunny Watts
Rebecca White
Mark Willcher
Michael Wilpers
James & Lois Witkop
In memory of Rick Tinker's son
Two anonymous donors

Photo: A "candela" burns into a mango grove on one of our Tree Bank Hispaniola farms, along the Dominican Republic / Haiti border. "Candela" is the local term for a fire that a farmer sets to clear land for planting. Such burns are a regular feature of farm life in late winter and early spring. There are virtually no "natural" fires in the Tree Bank project region.

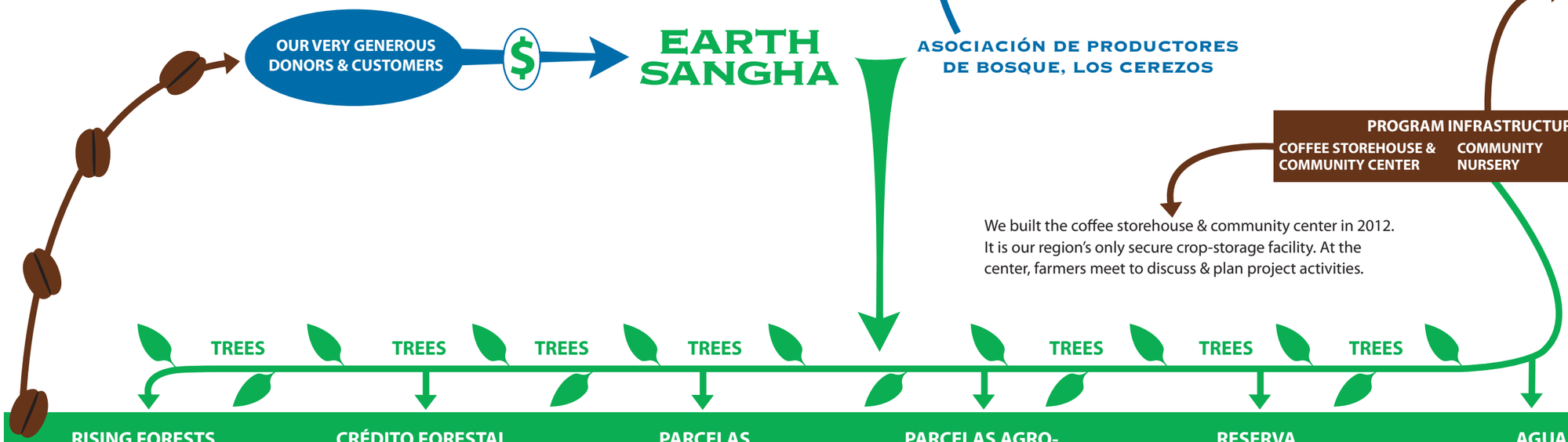
We believe these lists to be accurate and complete but would greatly appreciate any corrections.

THE EARTH SANGHA'S TREE BANK HISPANIOLA: HOW IT WORKS

The Tree Bank works along part of the Dominican Republic / Haiti border, to help poor, small-holder farmers improve their farms, & to conserve & restore native forest on portions of their land. We work on the Dominican side of the border, where there are still valuable forest fragments, despite advancing deforestation. There are many Haitian as well as Dominican residents in our region. The region's forests are part of a *Biodiversity Hotspot*: they contain a high level of biodiversity & are under a high level of threat. We founded the Tree Bank in 2006.

The Tree Bank is a partnership between the Earth Sangha & this local farmers' association, which we incorporated in 2010. (The name means "Association of Forest Producers, Los Cerezos." Los Cerezos is the settlement where the association & the Tree Bank are based.) About 40 farms now belong to the association.

The nursery was established in 2006. It produces 25,000 trees per year & is the region's only community-operated ecological restoration nursery. We produce fruit trees for local orchards (citrus, avocado, coffee, etc.), some non-invasive exotic timber species, & native forest species. The natives are grown from locally-collected wild seed for the restoration projects described below. All trees are available for free to local farmers.



We built the coffee storehouse & community center in 2012. It is our region's only secure crop-storage facility. At the center, farmers meet to discuss & plan project activities.

We bought a used pickup in 2010. Before that we had to rent trucks to move things around. Sometimes no trucks were available & we had to use donkeys. Our own pickup makes life much easier—for both farmers & donkeys.

Contact the Earth Sangha at:
10123 Commonwealth Blvd, Fairfax, VA 22032
703.764.4830 | info@earthsangha.org | earthsangha.org

This diagram is current as of April 2014.

	RISING FORESTS COFFEE	CRÉDITO FORESTAL	PARCELAS SEMBRADAS	PARCELAS AGRO-ECOLÓGICAS	RESERVA	AGUA	INFORMATION HARVEST
	The Tree Bank's own coffee brand. Rising Forests Coffee is grown under native forest canopy, in small groves, without artificial fertilizer or pesticides. We have plans for Rising Forests Cocoa too! Started in 2011.	Provides low-cost farm credit in exchange for conservation easements over surviving on-farm forest fragments. A very efficient use of capital, since the loan money remains within the system. Started in 2011.	Direct payments for native forest plantings on low-yielding farmland. Started in 2007.	Soil amendment, live-terracing, & polyculture cropping for the poorest farms. Designed to "jump start" productivity on plots of about 1 acre. Started in 2012.	The region's first community-owned nature reserve. Includes 44.3 acres & is managed solely for conservation & scientific study. Established in 2013.	Water management to help stabilize streams & improve the local water supply. Started in 2012.	Data collection for program development. As much data as possible will be purchased directly from farmers trained in relevant field techniques. Will start this year.
BENEFITS FOR THE PEOPLE	Provides the region's only direct access to the US coffee market. No-middle-man model pays farmers far better than any other local coffee program (about twice the usual Fair Trade rate). A dedicated retail brand will help stabilize farm profits over the long term. Serves about 15 farms so far.	The region's only low-cost farm credit program. Allows farmers to buy seed, fertilizer, & other supplies. Also allows for "capital" purchases, such as livestock. Loans are repaid after harvest. Serves 40 farms so far.	Creates a return for land no longer fertile enough for crops. Payments increase as the trees grow. (We no longer accept farms into this program. Instead we are enrolling farms into Crédito Forestal because that is a more efficient use of our funding.) Serves 10 farms.	Helps our poorest farmers achieve a sustainable yield on an area large enough to feed a family, with some of the harvest left over to sell. With a little cash flowing in, farmers can borrow through Crédito Forestal to make additional improvements. Serves 2 farms so far.	Protects the headwaters of the local watershed, safeguarding streams that supply the village & many local farms. As with other large forest blocks, the reserve helps maintain healthy populations of the insect pollinators needed by most local crops. Serves many farms.	A large sand filter provides parasite-free drinking water to students & staff of the local elementary school. Maintenance of the small reservoir on the edge of our reserve helps keep water flowing to the village. Serves many farms.	Will provide interested farmers with additional income. Data collection will be less profitable than a good harvest, but it will also be less risky.
BENEFITS FOR THE FOREST	Because it pays so well, Rising Forests Coffee creates a powerful incentive for forest conservation & restoration. Protects about 20 acres of forest so far.	Preserves on-farm forest by giving it a role in the farm economy. Creates an incentive to conserve established forest, instead of exploiting it or clearing it for crops. Protects about 150 acres of forest so far.	Encourages replanting of forest. Through regular tree surveys of all program plots, we are improving our forest planting techniques. About 13 acres of forest replanted.	Degraded cropland elsewhere on a farm can be restored to forest. Some plots will be experimental inter-plantings of native trees & crops. Such plantings will help connect forest fragments to each other. More continuity will improve wildlife habitat.	Protects about 24 acres of established forest. Nearly all of the remaining acreage will be restored to forest. Community ownership reduces vulnerability to encroaching slash-&-burn, a major problem in government-owned reserves.	Local interest in improving water resources will help create opportunities to restore riparian (stream-side) forest. More riparian forest will help stabilize streams & connect forest fragments to each other.	More information on local forests will help us improve our conservation & restoration work. Data collection will make farmers more effective advocates for the forests.

NO GUARANTEE

The Sangha has a friend named Matt Craig, who is a kind of vegan hunter-gatherer. During the growing season, Matt tries to get as much of his sustenance as possible from nuts, berries, and other foods that he collects from the wild. Matt is very thin — but he's also very healthy! And because he is so adept at foraging, Lisa sometimes asks him to collect seed for our DC-area propagation program.

One fall several years ago, Matt brought Lisa the following eco-dietary report: in a forest near Virginia's Blue Ridge, he had found a grove of chinkapin (*Castanea pumila*) — or so he thought. Chinkapin is a native shrub or small tree, and a cousin of the fabled American chestnut (*C. dentata*). Matt's harvest consisted of jumbo-sized, spiny nuts with sweet, rich meats.

"Not chinkapin," thought Lisa, who asked to see the grove. Halfway up a remote, rocky slope, Lisa's suspicions were confirmed. Matt had wandered into a group of apparently pure American chestnuts whose stems had survived the chestnut blight long enough to flower and bear fruit. (We say "pure" because chestnut species can interbreed, but the leaves of these trees did not look like a hybrid form.)

The chestnut blight is a pathogenic fungus native to east Asia, where it attacks Asian chestnut species. Since those species have co-evolved with it, the fungus in Asia is more nuisance than plague. The American chestnut has no such adaptive immunity. A contaminated shipment of Asian chestnuts released the blight into eastern North America around 1900. Fifty years later, the American chestnut was largely a memory.

One small and possibly saving grace in this ecological disaster: the fungus doesn't always kill the chestnut's roots. So the roots of many of those lost chestnuts continue to sprout, and the shoots grow for a year or two or maybe even a decade, until the blight finds them again. (The blight is airborne; it has many alternate host trees, so the blight itself can survive the loss of the chestnuts.) It is very, very rare to find a stem that has survived long enough to mature, flower, and bear fruit. But when you do find one, it's just possible that you're looking at a tree with some genetic resistance to the disease.

Matt brought some of those nuts to our Wild Plant Nursery, and they yielded a cache of about 120 sturdy seedlings. Unlike our other accessions, these seedlings are not, local-ecotype, since they weren't derived from the forests of northern Virginia. But that's good in this case, because any local chestnuts would probably be hybridized with the foreign chestnuts planted out in local lawns and parks.

We planted a few of those seedlings in 2012, and by last winter, the rest were ready to go. In November, we included some in a planting at the Marie Butler Leven Preserve, in McLean. And in December, our colleague Rod Simmons, ecologist for the City of Alexandria, took charge of the remaining seedlings and included them in restoration work on three Alexandria sites, all of which are known to have been chestnut habitat — and which still contain an occasional chestnut stump sprout. Rod also distributed some seedlings to similar sites in Arlington and DC.

We do not know whether our chestnut seedlings will survive. There's no guarantee — but the parent plants' good fortune is reason to hope that at least of few seedlings will live long enough to produce nuts of their own. And if that happens, then just maybe a little population of naturally blight-resistant chestnuts may begin to emerge in northern Virginia. We'll see. We've planted, and now we'll watch.

Photo: Look at that technique! Last December, volunteer Joan Gottlieb planted some of our American chestnut seedlings in Alexandria's Dora Kelly Nature Park.

EARTH SANGHA

BUDDHIST VALUES IN ACTION

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.) Contact us at: Earth Sangha, 10123 Commonwealth Blvd., Fairfax, VA 22032-2707 | (703) 764-4830 | 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.

The Acorn: Our newsletter is produced with "print on demand" technology, which consumes far less energy and materials than does conventional printing. This paper is 100% post-consumer waste recycled, process chlorine-free, and manufactured entirely with wind-generated electricity. This issue © copyright 2014, Earth Sangha.

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."

RISING FORESTS COFFEE

From the Tree Bank's farmers
To you:
Rising Forests Coffee.
Revive yourself.
Restore the forests.
earthsangha.org/coffee.html
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