



HOISTING A SHOVEL FOR OUR SCHOOLS

Northern Virginia schoolyards should enroll more native plants—that’s the premise of our new schoolyard planting strategy. The Sangha has been doing schoolyard plantings for years, but on an ad hoc basis. We think that we could make a bigger difference if we took a more systematic approach.

Why do such plantings at all? Partly because we want to displace turf, the default groundcover in school landscaping. Turf is not green! Mowing turf contributes to smog and global warming. Inadequate shade on school buildings—a consequence of too much turf—demands more air conditioning, which further contributes to global warming. And because turf holds very little water, run-off from turf is degrading streams. Poor landscaping is also erasing our natural heritage: in the Washington, DC, region, we live amidst one of the most amazing and diverse floras in the eastern US, but you would never know that from most schoolyards. That’s a big educational gap.

Schoolyard plantings can help fix these problems. They also create opportunities to learn about native plants and the native animals that depend on them. Direct observation of nature sometimes means more to students than what they read in a textbook. “This is particularly true for students with learning disabilities or for students who just are learning English,” says Elizabeth Burke, an environmental educator and Sangha Board Member. “Kids who didn’t quite grasp the concepts in the classroom suddenly have their ‘Aha’ moment watching the interplay of insects in a meadow.”

Native plantings can also help the plants themselves: if local, wild stock is used, the garden can create micro-populations that, for some species, may help ensure survival in our highly disrupted landscape.

We want to help schools restore their connection to local forests and meadows by putting our Wild Plant Nursery at their service. Our

nursery produces over 220 species of native trees, shrubs, vines, and herbaceous plants, all from locally-collected, wild seed.

We will try to work with any school, but we plan to focus on “Title I” schools. Those are schools that receive federal grants under Title I of the Elementary and Secondary Education Act of 1965. Title I schools have a high percentage of students from low-income families (usually at least 40 percent). Unlike wealthier schools, Title I schools are unlikely to have school gardening projects, or the resources to create them. And, yes, even in northern Virginia, there are many such schools. There are 38 Title I schools in Fairfax County alone.

In addition to putting our help where it’s most needed, focusing on Title I schools offers another strategic advantage: in northern Virginia, Title I schools have a disproportionately high number of students from first-generation immigrant families. As our immigrant population continues to grow, it is increasingly important to recruit these people into conservation. And reaching out to them through the schools may be one of the best ways to do that.

As for financing this effort, we plan to use our signature approach of acting first and figuring out how to pay for it later. (Hey, it’s worked out great so far!) Actually, we’re not quite that cavalier. Lisa Bright, our Executive Director, puts it this way: “When schools have a budget for these projects, we hope that some support will come our way if they’re using our plants. But when they don’t have a budget, we’ll find a way to donate, especially if they’re Title I.” Either way, we hope that local schools will accept our invitation to become a little more wild.

Photo: In June, we worked with students and parents at Beech Tree Elementary School, a Title I school in Falls Church, Virginia, to plant this slope with native meadow plants grown from local wild seed.

TREE BANK HISPANIOLA



OUR FIRST “PARCELA AGRO-ECOLÓGICA”

So far so good: our first “agro-ecological parcel” is boosting the income of one of the Tree Bank’s poorest farm families; it’s also opening up more land for forest restoration.

This first parcel, shown in the photo above, is a pilot project. It’s a sophisticated farming system that includes a wide variety of annual and perennial crops. It’s “live terraced” with strips of certain dense-rooting crops to control erosion and retain water. And it uses cow-manure composting. The result, we hope, will be a form of agriculture that maintains soil instead of degrading it.

This is a new project for our Tree Bank program, which works with impoverished farmers on the Dominican side of the Dominican Republic – Haiti border. The Tree Bank’s mission is to improve farm incomes and restore native forest. A full program description is available on our website, at earthsangha.org.

The parcel was installed on the farm of Quiterio Aquino. Quiterio’s land was so infertile that it had become a sad, standing joke among his neighbors. But the photo above, taken in August, shows the parcel just after he had harvested a record peanut crop. (Hence the exposed soil. Those areas have been resown with beans.)

The parcel was designed by Gaspar Pérez Aquino, the Tree Bank’s Project Director. It was installed early this spring. It covers about an acre—and putting it in was a lot of work. Quiterio’s soil was so bad that even the weeds were doing poorly. So we spent about \$1,500 to bring in four truckloads of composted cow manure, rent oxen to double-plow the hardpan and mix in the manure, put up fencing, and buy a heifer (a baby cow) so that Quiterio’s family could have a little milk, as well as a source of their own manure for composting.

Besides peanuts and beans, the parcel includes, among other things: corn, pigeon peas, squash, various tropical rootcrops, and herbs. Oranges and plantains will likely be added next year.

Despite a spring drought, the parcel is working well, and Gaspar expects even higher yields next year as the system stabilizes. It should easily feed Quiterio’s family and leave plenty of vegetables to sell.

The parcel was Gaspar’s idea and is a response to a common problem in our project area. Some farmers are so poor that they cannot readily benefit from our Forest Credit program, which is the Tree Bank’s most powerful tool. Forest Credit makes small loans to the farms in exchange for forest conservation easements. But even though nearly all the local farms contain land suitable for easements, the really hard-scrabble farms have so little viable economic activity that they cannot use credit effectively.

The agro-ecological parcel is a way of jump-starting such farms. Obviously, the parcel is too expensive to finance through credit—Quiterio’s peanuts are never going to net \$1,500—so we financed it as a one-time grant. Now, with fertility restored to part of the property and reasonable prospects of keeping it that way, the farm can begin functioning again. At the same time, the established forest on Quiterio’s farm can be protected, and additional forest can be planted.

Forest protection won’t cost Quiterio a thing in terms of production, since his forest areas are definitely not “farmable.” (But they are very valuable ecologically: Quiterio’s old-growth forest patch is home to at least one locally endangered bird species, the loggerhead kingbird.) In the new system, Quiterio’s forest is a major economic asset. His forest easement allows him to borrow from us for further improvements. And his trees provide crucial farm services: water retention, habitat for crop pollinators, and soil renewal. Additional forest restoration will draw more and more of those services into his parcel.

Quiterio calls his parcel “the future.” We hope to make good on that vision, by funding parcels for other very poor farmers. You can help fill their future with peanuts and trees: donate to the Tree Bank!

Our special thanks to the Shared Earth Foundation for supporting the Tree Bank.



THE ALMACÉN IS COMPLETE

Thanks to our generous donors, the Tree Bank now has a coffee warehouse! Or “almacén” as our Dominican colleagues would say. The almacén, shown above, was finished in August. It will provide critical support to conservation in our project area, which is part of the largest forest biome remaining within the Caribbean Global Biodiversity Hotspot. (In plain English: it will help us save some very valuable and very threatened forest.) The almacén will also be a huge help in developing our Rising Forests Coffee brand.

Rising Forests Coffee is grown entirely under native forest canopy, and entirely by Tree Bank farmers. We pay the farmers a better-than-Fair-Trade price for their best beans—an arrangement that puts much-needed cash in their pockets, and that protects forest by giving farmers a way to make money from it without cutting it down.

The building is about half coffee warehouse and half community meeting space. We need that meeting space because our farm membership is growing and our activities are, inevitably, becoming more complex. Tree Bank farmers now usually meet twice a month.

As for the coffee, the almacén is an entirely new capacity for our community. For the first time, our partner farmers will be able to deposit their coffee in a central depot, with confidence that it will be secure from both pests and thieves. And early custody of the harvest will allow us to improve drying procedures—an important measure for developing the coffee’s flavor potential. The storage area covers about 1,000 square feet, and of course we’ll add shelves.

The almacén lies along the road to Los Cerezos, where the Tree Bank is based. The lettering on the side is a kind of advertising. It says, on the left: “Los Cerezos Forest Producers Association” (our Dominican partner organization), and below that: “work supported by Earth Sangha of the US and the support of the members” (that is, the Association’s members). On the right, the “Humanitarian Farming Association” is another local partner that has our permission to meet in the building. That’s Gaspar Pérez Aquino, the Tree Bank’s Project Director, leaning against the side of the building.

The coffee harvest begins in September, and the almacén will begin to fill in October. In the meantime, you can make conservation part of your morning by trying a bag of Rising Forests! Order at earthsangha.org/coffee.html.

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 2012, 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.”



Photos: At left, Quiterio’s new polyculture plot yielded a record peanut harvest in August and has just been resown with beans. Above and also in August, Gaspar Pérez Aquino, Tree Bank Project Director, at our new coffee warehouse and community center. Both photos were taken near the Dominican Republic–Haiti border, in the Dominican community of Los Cerezos, where the Tree Bank is based.

CONFESSIONS OF A GREEN REAPER

Ecological restoration is partly about acting and partly about asking questions. Here are two questions that have been buzzing around my head this year, as I work on our meadow projects: Do ancient techniques of land management have anything to offer modern conservation? And should restoration try to change—not just the landscape, but the way we experience it?

Meadows encourage this kind of reflection because they are so complex. The Sangha started working in meadows back in 2010, and we have made great progress on one front: propagation of native meadow plants. At our Wild Plant Nursery, meadow species occupy an ever greater part of our inventory, and like our other plants, our meadow accessions are all grown from local, wild-collected seed.

But the meadows themselves are hard places to work in. The biggest problems are usually invasive alien plants, which now dominate many fields in the mid-Atlantic region. The invasives are displacing native plants and animals, and meadow invasives are very difficult to control.

Since there is no simple solution to the invasives problem, we are trying several different approaches. For example, in one 17-acre field, we are using herbicide to devegetate the field completely, section by section; as the work progresses, we will revegetate with natives. This is a standard procedure, and it's probably the best bet for many infested fields. But there are many other places where the scorched-earth option is impractical. Sometimes the permitting is too cumbersome, or sometimes there are valuable natives intermingled with the invasives, and it would be a shame to destroy that remnant meadow life. What then?

Several years of struggle in such places led me ask those two questions above—and to answer them with a qualified yes. My answer is qualified because I think we really do need the herbicide, and other techniques as well. But it's yes because restoration is a long-term process and we need to think long-term, beyond the immediate technical objectives.

Hence my interest in the scythe, the implement behind “mowing” in its original sense. As a meadow management tool, the scythe has some obvious virtues. Unlike heavy mechanized mowing, it won't compact the soil and it's zero-emissions. Unlike herbicide, it's completely nontoxic. It's also cheap (excluding labor), and since it's just a hand tool, it's pretty much permit-free.

From time to time during this growing season, I have been taking a scythe out to our 12-acre restoration patch in the Occoquan Bay National Wildlife Refuge, near the Potomac River. Our patch is badly infested with all sorts of invasives, and I wanted to see whether I could begin changing the vegetation out there by hand. Here's what I've learned so far:

First of all, using a scythe is exercise—a lot of exercise. This has given me renewed respect for our ancestors—and not just a theoretical deference. I think that this kind of

exertion might have some real social value, although my own labor to date has been solitary. I also find that the exertion places me in the landscape. My legs feel the gullies and the grade; my arms feel the changes in the vegetation—especially the changes in density. And our O'Bay patch is so dense that sometimes I feel like I'm carving rather than cutting.

I have also learned that hand mowing can be “smart mowing.” From a tractor, a field becomes a mass of undifferentiated green, all to be reduced to a certain height. But with a scythe, I'm down amidst the plants; I can see what's what, and I can vary the results with each stroke. At O'Bay, I cut around stands of white beardtongue, sensitive fern, and common reed. Early in the season, I cut high, to miss the young clumps of goldenrod and shrubby St. Johnswort. Later on I cut around them too. But I swing the blade as low as possible when I encounter Chinese lespedeza and other especially noxious invasives. Over time, this kind of nuance may help shape the flora.

The scythe teaches patience. Perhaps it's honest in a way that modern techniques are not. For example, it's easy to be deceived by herbicide into thinking that your weed problems are solved once the initial devegetation has occurred. But of course the weeds are still out there, around the site, ready to move back in; they're usually underneath it as well, in the form of soil seedbanks, which can be very difficult to kill. So no matter how you start, long-term maintenance is essential. With the scythe, long-term maintenance is pretty much what you get from the start.

And the scythe works—at least to some extent. If I mow at the right times I can interrupt seed-set of some weeds; if I mow frequently enough, I can reduce the vigor of perennial weeds that spread mostly by suckering from their roots. Combined with lighter mowing of appropriate natives, such a regimen can help push a field towards native meadow.

Finally, there is cultural depth in this practice. In Europe, people have been using scythes like mine since the 12th century. Take off the little handles, and the design goes back another millennium. Of course, these earlier mowers were mostly harvesting grain or cutting hay. But they were also mowing to maintain meadow and grassland for their livestock. And today, there are many European projects that have repurposed that activity for conservation.

At O'Bay, I'm working about 2.5 acres with my scythe. Given the density of the vegetation, that's a lot for one person. But even a team of “Green Reapers” could not banish the invasives on their own—which is why we're using other techniques out there as well. Even so, I have come to value this simple, ancient tool. And it shouldn't be surprising that after 18 centuries of use, the scythe might have something to teach us about our relationship with the meadows.

—Chris Bright



Photo: In July, the author and his scythe at the Occoquan Bay National Wildlife Refuge in Prince William County, Virginia.