



THE 500-YEAR FOREST FOUNDATION *Newsletter*

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With your donation you pay for the care of our forests that store one ton of carbon per acre annually.

New Member of the Board of Directors



We are delighted to have McChesney “Ches” Goodall III as our newest board member. Ches is the co-founder of Virginia Forestry and Wildlife Group. He has managed private forestlands in Vir-

ginia for more than twenty years guided by an ecologically based land ethic to provide multiple forest and non-forest benefits. In addition to his extensive background in timberland management, appraisals and sales, Ches has been coordinator of the

Albemarle County Acquisition of Conservation Easements program since 2000. These overlapping and complementary interests give him a broad view of managing land to meet numerous and disparate objectives. He received his Bachelor’s degree in plant ecology from Duke University in 1979 and his Masters degree in forest management from the Nicholas School of the Environment at Duke in 1984. The greatest influences on his profession and world view come from his father, a dedicated scientist and conservationist, and his family farm in Highland County Virginia, which he has explored since childhood. He lives in Richmond with his wife and three children.

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Upland Cove Forest Initiative

There are mountain sites that might be better left as forests not logged. The Upland Cove Forest Initiative addresses these areas. According to Ches Goodall, “There are many places in our mountains where densely wooded slopes are problematic for timber harvesting. These places cannot be commercially logged without building a large and costly road that scars the land and degrades the site forever. These difficult places way up on the mountain should be set aside as a preserve.” For more detail see Steve Nash’s article “Timber Investment for the Very, Very Long Term” in this newsletter (page 2) beginning with the second paragraph.

Why not a 500-Year Forest? Forest owners, this is a wonderful way for adding value to your forest land and a great contribution to our environmental world. So that’s why we are beginning the Upland Cove Forest Initiative. Send an email to oldgrowth500@yahoo.com to tell us of your interest and we will have an experienced forester come and see you and your property to talk about how this can benefit you and your forest.

This article by Steve Nash appeared recently in Appalachian Woodlands & Sportsmen's Review, a newsletter published by Charles Finley of Verbatim Press.

Timber Investments for the Very, Very Long Term

by Stephen Paul Nash

BOB GILVARY WORKED FOR 13 years as a civil engineer on a 256,000-acre tree farm in the Amazon rainforest of Brazil, a project that included a pulp mill, a paper mill, and a hydro power plant. But he banked his salary back in the States, and somewhere in his mind was the idea of managing his own tree farm. "I've always liked it, and still love it. I'm — I don't know — I guess I'm a fanatic about it," he said recently. "Even when I was a kid, I wanted to be a logger." When he returned to the U.S., he bought 2,550 acres of Virginia timberland along Chestnut Ridge in Giles and Bland counties. He began logging it very selectively — about four trees an acre — and initiated a stand improvement program. But a funny thing happened on the way to the sawmill: Gilvary ran into Ted Harris, founder and CEO of the 500-Year Forest Foundation. By the time their conversation ended a year or so later, about ten percent of Gilvary's land had been set aside forever — a protected forest that will never be logged or developed. (It is also a Virginia Natural Area Preserve.) What's the return on an investment that takes your timber off the market forever? What possible incentives could there be for an owner to decide, or for a manager to recommend, signing a "never log it" commitment? "Well, first of all, when I discovered that it was old growth timber, I just wanted to preserve it," Gilvary said. "There's almost none of that left. The rest of my land was logged in the 1950s, but they still used horses back then, and these slopes were just too rough, too steep. So I went to the Nature Conservancy, and they referred me to the 500-Year Forest Foundation." The Foundation added another sweetener, arranging a handsome payout from a Virginia conservation tax credit program. The Foundation's name derives from the idea

that after four or five centuries of protection, Southeastern forest ecosystems will recover some or all of the attributes of an old-growth forest.

Ted Harris is eager to talk with forest owners about arranging 500-Year Forest agreements for tracts of maturing timber that are a hundred acres or more. It's an idea that Richmond forestry consultant McChesney "Ches" Goodall thinks any owner or manager should consider. He directs the conservation easement program for Albemarle County, has managed timberlands for more than a hundred different property owners over the past three decades, and also owns and manages his family's 1,600 acres in Highland County. "Generating income can be one objective for any owner," he said, "but there are plenty of others: maintaining a beautiful view shed, for example. It's a real chance to see the dynamic processes. How lightning strikes or windthrows might just take out a tree here and there and create an opening where you get new trees coming in. Unthinned forest tends to be shadier, a place where a lot of herbaceous plants just thrive. It just has that soothing, peaceful feel of nature being in charge instead of us." Goodall manages a thousand-acre tract that includes lots of big oaks and tulip poplars. Some high-elevation hollows there have beautiful timber. "But to get to it you would have to build a hell of a road, and totally destroy the beauty of the site. So I told the landowner, 'Hey, I know you want to manage your timberland, and that's great. But it makes the most sense to take some of these more difficult places way up on the mountain and just set them aside as a preserve. Put a hiking trail in there so you can take your kids up there.'"

Ches adds more financial incentives to the list. "If you want to sell that property, the idea that you've somehow devalued it



Bob Gilvary and a monstrous Northern Red Oak



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with a Foundation conservation easement is really mistaken, in many circumstances. What you’ve created is something so unique that you’re going to draw a certain buyer that is looking exactly for that. We all know from economics that scarcity adds value. People with the big money will be really interested in finding a piece of property like that — their island in a sea of cut-over timberland.”

The economics of logging are not always as clear-cut as they seem, Ches said, especially when the expense of access roads is considered. “Clearly, if timber is on steeper ground you’re going have to punch a wider road into the mountain, maybe cutting

across a side slope, digging into the upper bank. Not only is it going to be a terrible eyesore, but it will expose a lot more soil and be unstable, and a maintenance issue. “Does the gain you get out of that timber from building this expensive road really make sense? I don’t think everyone really does that analysis.” The Foundation helps orchestrate tax incentives with the state, collaborates with landowners to develop management plans for their property, and documents the ecology with formal botanical surveys. A suite of rare species, for example, turned up on Gilvary’s Chestnut Ridge preserve.

Finally, the Foundation provides crucial support and planning in the battle against invasive species such as *ailanthus*, *paulonia*, Japanese stilt-grass, garlic mustard, mile-a-minute weed and dozens of other unin-

vited aliens that disrupt forest ecosystems. “As the centuries pass, these forests will become what we think of as ‘old growth,’” says Harris. “By some estimates, less than one percent of our original ancient forests remain, in national parks and wilderness areas. Private owners can help restore our inventory of old growth and provide wildlife habitat for rare species, as well as research opportunities. Those aging trees pull in carbon, too, and that helps as we fight global warming.”

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Stephen Nash is the author of Blue Ridge 2020: An Owner’s Manual, University of North Carolina Press. He is a member of the 500-Year Forest Foundation’s board of directors.



An armful of Garlic Mustard

Effects of Less Biodiversity

According to the Fall Issue of the American Forests, “Recent studies show that forests are being threatened by biodiversity loss and that a significant loss of species in an ecosystem can have the same level of impact as climate change. Researchers from nine institutions across the U.S., Canada, and Sweden are studying how loss of biodiversity affects the growth and health of an entire ecosystem and how to slow it down. The studies revealed that when 41 to 60 percent of the species in an ecosystem are pushed to extinction, the effects are just as damaging as acid rain and nutrient pollution.”

In our eastern forests one of the worst of our invasive plants is garlic mustard. Where

it is native in Europe, parts of Africa, and Asia it has as enemies 69 species of insects and 7 species of fungi that keep it in check. Unfortunately when the pioneers brought this five-foot-tall horseradish plant to the U.S. for culinary or medicinal purposes, the enemies were left at home.

Consider the gravity of this threat in light of the research studies quoted above. Garlic mustard produces toxins that deer don’t like. These toxins negatively affect the mycorrhizal fungi with resulting decline in tree root growth. It is a prolific seed producer whose seeds can germinate up to five years. It literally takes over the forest floor crowding out all the native plants greatly reducing the biodiversity.



Gypsy Moth Research by Jonathan Walker

IN LATE JULY I BEGAN A brief study at the 500-Year Forest property owned by Rick Helms and Carolyn Phillips in Albemarle County. This experiment, part of a larger investigation into factors influencing the spread of the gypsy moth in North America, explored how habitat type affects the dispersal of adult male gypsy moths. After the end of the mating period in central Virginia I sampled for wild gypsy moths (to make sure there were no adult moths remaining on the property) and set up a grid of pheromone-baited traps. The traps recaptured marked, lab-reared male gypsy moths that I released from the center of the grid, which allows me to

estimate the probability that a moth will fly over a range of distances. Because only adult male gypsy moths are capable of flight, their ability to fly and locate mates is critical to population growth of this species. I'm using the data collected at Helms-Phillips forest in combination with several other experiments to analyze how forest fragmentation affects the gypsy moth invasion.

My data from these experiments show that most dispersal occurs over short distances, less than 200 meters, but that on average adult male gypsy moths fly on the order of 20 meters further in open fields than in forests. More importantly, a separate

experiment shows that gypsy moths strongly resist leaving the forest, suggesting that the configuration of forests in a landscape may influence their spread. The next step for this project is to use data from these experiments to build a realistic simulation model that will assess how the behaviors observed in my field experiments affect population dynamics. My hope is that an improved understanding of how landscape characteristics affect this species can lead to more efficient management against the spread of this pest.

I'd like to thank the 500-Year Forest Foundation and especially Rick Helms and Carolyn Phillips for their support of this project. Though

all of my work is permitted by the USDA and precautions are taken against releasing adult male moths when mates are present, it did take a leap of faith on their part to allow me to work with this invasive pest on a forest with an important conservation mission. Finding spaces for a large-scale experiment such as this one is often challenging, and it was an absolute pleasure to work in such a beautiful forest.

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Jonathan Walter is a graduate student in the Department of Environmental Science at the University of Virginia. He is the first to do research in one of our 500-Year Forests. He is the author of this article.

Derecho

Recently a Derecho, a straight line violent wind storm causing more damage in some places than any hurricane in recent memory, swept through central Virginia. With the fall of this big oak tree the sun light will reach the forest floor encouraging young trees to flourish. This is the reason that old-growth forests are age dynamic. Not only are they populated with old trees but young trees and middle aged trees from previous wind falls and other calamities that cause the structure of maturing forests to be ever changing.



Donors ~ Thank You

What we do is only possible with the support of the people you see on this list.
The following gifts were received from June 1, 2012 to October 31, 2012.

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*in memory of my grandparents
and friends*

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in memory of Anthony Rini, father

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*in memory of my husband,
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Vibrant and dynamic, OLD GROWTH FORESTS are very special sites that speak to our hearts aesthetically and spiritually, and being a key to biodiversity, they support essential living resources by purifying water, creating fresh oxygen, storing carbon, creating deep rich soils, and offer varied ecosystems within itself by providing homes for the many species indigenous to its area.

These forests are becoming increasingly rare.

The 500-Year Forest Foundation, a non-profit organization, works in partnership with private forest owners to produce future old-growth forests.

You can help. For more information or if you'd like to contribute in some way:

call (919) 489-7778 OR email oldgrowth500@yahoo.com



500-YEAR FOREST
FOUNDATION

President's Letter



Ted Harris

It is so encouraging to talk with environmental friends. They like the idea of our focus: working with private land owners to foster the development of old-growth forests. If it is a first time meeting, they ask, "Where are our forests located?" "They're all in Virginia", I say. Then there is the sense of "Why just Virginia?" It's an idea that needs to be spread. That is one of our new efforts. Within several years we hope to say that we are located in several states.

The acquiring of new 500-Year forests has been accelerating. We have doubled our number of forests from three to six in the last three years. We should be on course to continue to add at least one forest per year. We believe our new program of the Upland Cove Forest Initiative will be very helpful in adding new forests. We have identified three potential forests in this category.

Most importantly we will become pro-active in finding a new executive director to work at least half time, gradually assuming full time duties as the Foundation grows.

Jim Murray has retired from our board of directors. He has been faithful, hardworking, and very supportive of our efforts. We will miss his expertise, persistence, and thoughtfulness.

It is you, our friends, who give life to our organization. We are grateful for your support.

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