

News from the Forest

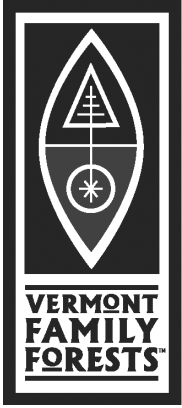
August, 2003

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Game of Logging instructor, John Adler, teaches safe and efficient chainsaw handling to participants in last fall's GOL Level I course. This fall, VFF will offer all four GOL training levels. See workshop listings inside for details.



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Fall Workshop Series

This fall, we're offering eight great workshops—teaching everything from chainsaw safety to the hows and whys of conducting a biological inventory. Learn something new this autumn, and join us on one of our outings. We encourage you to enroll early to those workshops with limited enrollment, as courses often fill quickly.

Introduction to Natural Community Mapping

Date: Wednesday, September 17, 2003

Time: 9:00 AM -noon

Cost: \$35, includes refreshments and map

Location: Granstrom family forest, New Haven

Limit: 20 participants

Back by Popular Demand! Natural community mapping is a relatively new management tool that helps landowners manage their forests in a way that maintains the integrity of natural systems. Ecologist Eric Sorenson of the Vermont Non-Game and Natural Heritage Program led two very popular mapping workshops for VFF in the spring, and he will once again introduce participants to the process of natural community mapping. Participants will receive hands-on experience in identifying site indicator plant species, conducting soil tests, and using the natural communities handbook, *Wetland, Woodland, Wildland*, to verify and fine-tune preliminary field maps. Call VFF (453-7728) to register.

Tree Identification Workshop

Date: Thursday, September 25, 2003

Time: 5:30-7:30PM

Cost: \$5

Location: The Waterworks Property, Bristol

Join VFF Director of Forestry Laura French for a walk through the Waterworks Property in Bristol to learn how to identify trees and shrubs by their leaves, fruits, bark, and habitat. Bring along your favorite tree and shrub identification guide and a magnifying lens, if you have them. Please call VFF (453-7728) if you plan to attend.

Conducting a Biological Inventory in your Family Forest:

Case Study of Lincoln's Colby Hill Town Forest

Date: Saturday, September 27, 2003

Time: 9AM-noon

Cost: free (Project supported by the Colby Hill Fund, Vermont Community Foundation)

Location: Colby Hill Town Forest, Lincoln

Using Lincoln's Colby Hill Town Forest as a case study, ecologist Marc Lapin, herpetologist Jim Andrews, and mammologist Jan Decher will show participants how biodiversity can be assessed by conducting a Rapid Ecological Assessment. Learn how private landowners can conduct similar inventories of their own lands, how such surveys inform forest management, and what the implications are for the broader landscape. This exciting workshop will be invaluable for municipal managers and private forest landowners alike. Please call VFF (453-7728) if you're interested in attending.

Game of Logging, Levels I-IV

Upcoming Workshops (continued)

Dates: Level I, September 13; Level II, September 27, Level III, October 11, Level IV, October 25.

Time: 8:00AM-4:00PM

Cost: \$125/level (cost includes _ gallon of GreenBar Bar and Chain Oil)

Location: Levels I & II, Johnson family forest, Lincoln; Levels III & IV, The Waterworks Property, Bristol.

Limit: 10 participants/level **Advanced registration and payment required**—contact VFF for registration form.

The Game of Logging training program combines Scandinavian logging techniques with the latest systems for working safely around trees. The Game of Logging program is broken into four levels, and participants must complete levels in succession. Level 1 provides an overview of chain saw safety and covers basic tree felling. Level 2 covers basic saw maintenance and chain sharpening techniques and provides more opportunities for tree felling. Levels 3 and 4 present techniques for felling difficult trees, including trees with side and back lean, and cover limbing and bucking techniques and systems for planning work. **We can't overstate the value of these training courses.** We've had participants who have worked in the woods for 30 years prior to taking GOL Level I say that the course changed the way they work in the woods.

Accessing the Family Forest

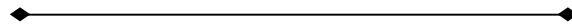
Date: Saturday, November 1, 2003

Time: 9:00AM-noon

Cost: \$20, includes refreshments

Location: The Waterworks property, Bristol.

Good access is an essential element of ecologically sustainable timber management and recreation. Good access protects soils and water and can be beautiful as well. Join Addison County Forester and VFF Founder David Brynn to learn how to improve existing access roads in your family forest and how to design and construct new access that maintains water quality. Participants will learn how to lay out a good access road, including installation of water bars, broad based dips, and culverts, and will be introduced to a variety of tools that will come in handy.



A Closer Look at VFF's Forest Management Checklist

At the heart of VFF's vision of ecological forest management is its Forest Management Checklist. If landowners adhere to these 36 management practices, they will protect water quality, conserve or enhance site productivity, and maintain or improve native biological diversity on their forest lands. In this and subsequent newsletters, we will highlight one of the 36 practices, explaining what it's about and how you can achieve it. For a complete listing of the 36 practices, visit our website, www.familyforests.org, under "Publications," or give us a call (453-7728) and we'll mail you a copy.

Practice #1: Avoid spring harvests and/or rutting that extends beyond the A soil horizon.

To begin with, let's define the "A soil horizon." Soil characteristics vary with depth, and soil scientists refer to these differences as "horizons." Soil horizons appear as bands or layers in the soil. The top layer is called the organic, or O, horizon. The layer beneath that is called the topsoil, or A horizon. Beneath that is the sub-soil, or B horizon, and so on.

Why avoid spring harvests? In the spring, forest soils are likely saturated right to the surface. When saturated, soils are very prone to compaction and rutting. Compaction and rutting can severely reduce a forest soil's infiltration capacity—its ability to absorb water. If water is not absorbed into the soil, it becomes overland flow. If there is sufficient volume and velocity in overland flow, soil erodes, depleting nutrients from the forest and sedimenting nearby streams.

Spring harvests result in excessive damage to tree roots. Many critical feeder roots are very close to the soil surface. In the

spring, when bark is easily stripped off, trees are also very susceptible to damage from logging wounds. All things being equal, a spring wound can cause a lot more damage than the same wound later in the growing season or, better yet, when trees are dormant. Logs get much dirtier in the spring as well, a condition that is especially problematic for portable sawmill operators.

Ruts can last for years and serve as conduits that suck water out of the forest much more rapidly. This rapid loss of water not only deprives the trees of the forest of water, it results in streams that flashflood, reaching higher peak discharge rapidly and causing streambank erosion downstream.

Healthy forests have little or no overland flow except in natural streambeds. Avoiding spring harvests and rutting can go along way towards keeping water where it belongs—in the soil rather than on top of it. Except in some specific instances which relate to forest regeneration establishment, the best time to log is under frozen winter conditions.

Colby Hill Ecological Project

VFF staff are excited to be working with the Colby Hill Ecological Project in Lincoln, Vermont. At the core of this project is a team of scientists that annually inventories and monitors the biological diversity—plants, amphibians, reptiles, birds, mammals, invertebrates, lepidoptera (butterflies) and odonates (dragonflies)—of 680 acres of private land in Lincoln and Bristol. Now entering its sixth field season, CHEP is accumulating information that can help ecologists:

- *Understand the natural biological and ecosystem diversity of a landscape.*
- *Assess the occurrence and conservation of rare species, and learn about species new to Vermont.*
- *Understand the effects of human management on forest composition and productivity.*
- *Determine biomass production.*
- *Understand natural disturbance patterns and the effect of human forest fragmentation on these regimes.*

“The linkages in the web of species and ecosystem interactions are more complex than we know. For this simple reason, it is important that we treat with care all parts of the landscape...”

-CHEP manager,
Marc Lapin

According to CHEP’s founder and advisor, Lester Anderson, this inventoried land, to be preserved as “forever wild” through conservation easements, “will be the control site against which the biodiversity, biological integrity, and water quality of other properties can be measured to set goals for achieving conservation objectives that maintain and enhance the forest ecosystem.”

The anatomy of healthy land

When you visit your doctor, you trust that he or she bases both diagnosis and subsequent treatment of your symptoms on a broad foundation of medical knowledge that has accumulated over millenia of investigation of the human body, constantly informed by the latest, most rigorous research studies. Because no matter how well intentioned your doctors might be, if they don’t understand the inner workings of your body, which conditions are “healthy and normal” and which are signs of disease, and how your body will likely respond to treatment, they may do you more harm than good in their tinkering.

Yet when we humans make management decisions for the lands we steward, we often do so with limited knowledge of the complexity of the land’s natural communities. How are we to make critical resource management and conservation decisions if we do not yet know what species occur, what their relative abundance and distribution are, and what sort of population fluctuations they may experience?

Over 50 years ago, Aldo Leopold wrote, “The most important characteristic of an organism is that capacity for internal self-renewal known as health...A science of land health needs, first of all, a base datum of normality, a picture of how healthy land maintains itself as an organism.” The Colby Hill Ecological Project was launched in 1998 to create that base datum for this region of Vermont.

Nothing out of the Ordinary

There’s nothing about the Colby Hill land that is particularly unique or different from other forests on the western slopes of the Green Mountains—which is what makes its conservation so important. The baseline data scientists accumulate here will be applicable to a broad landscape. Says CHEP manager, Marc Lapin, “Conserved lands, and especially large chunks of conserved natural lands, are generally located at higher elevations or are centered upon features that are unique, such as the cliffs and talus of Bristol Cliffs and Deer Leap. The ‘regular’ part of the landscape, particularly in lower elevation zones, is often overlooked and is therefore under-represented in conservation networks.”

Rapid Ecological Assessment

Anderson and Lapin hope that, as neighboring landowners learn about the biological inventory process, they will be interested in conducting such inventories on their own lands. But assembling a team of scientists to conduct a full-blown inventory can be expensive. Thus scientists use what's known as a Rapid Ecological Assessment (REA), which allows landowners to gain a basic understanding of the species and natural communities on their land.

Such an assessment also includes a landscape analysis of the local area, including wildlife corridors, appropriate breeding habitats, and physical diversity (including geology, soils, and topography). This helps landowners understand how different land uses of a parcel are augmented by or in conflict with land uses of adjacent and nearby parcels.

An REA report can also include a preliminary ecosystem map, a tool that enables landowners to more fully appreciate the diversity and complexity of their land, as well as base management units on ecological boundaries.

A Case in Point: Lincoln's Colby Hill Town Forest

To test the Rapid Ecological Assessment process and provide a service to the town of Lincoln, CHEP manager, Marc Lapin, is coordinating an REA on Lincoln's Colby Hill Town Forest, which is near CHEP's conserved inventory lands. Three scientists—Lapin (botany and ecology), herpetologist Jim Andrews (reptiles and amphibians), and mammologist Jan Decher (small mammals)—will survey the 175 acres this summer.

To hear from them firsthand about how they conducted the inventory and what they learned, and to find out how to conduct a similar inventory of your land, you can attend their Biological Inventory workshop in September (see full description below).

Marc conducted an ecosystems survey of the town forest in 2000, and his findings are compiled in a report that you can obtain in digital form or hard copy through VFF. Call or email us for a copy.

Lincoln's Colby Hill Town Forest Ecological Highlights:

- One rare to uncommon plant species, loose sedge (*Carex laxiculmis*), lives here.
- One the west slope of Bald Hill, moist, loamy soils support red oaks, one measuring 33" in diameter.
- The land contains headwater streams of both Baldwin Creek and Isham Brook.
- On top of Bald Hill, there are two, big limestone erratics perched on outcrops of local schist bedrock. Glaciers carried these boulders to Bald Hill from limestone cliffs to the north. On them are three fern species (fragile fern, lady fern, and marginal wood fern) found only in nutrient-rich soils.
- The land hosts 4 distinct natural communities: Northern hardwood, Mesic red oak-northern hardwood, Red maple-black ash swamp, and Sugar maple-white ash northern hardwood forest.
- Abundant bear sign indicates that bear frequently travel through and feed in area.

Conducting a Biological Inventory in your Family Forest: Case Study of the Lincoln Town Forest

Date: Saturday, Sept 27

Time: 9AM-noon

Cost: free, due to the generous support of the Colby Hill Fund

Location: Colby Hill Town Forest, Lincoln

Using Lincoln's Colby Hill Forest as a case study, ecologist Marc Lapin, herpetologist Jim Andrews, and mammologist Jan Decher will show participants how biodiversity can be assessed by conducting a Rapid Ecological Assessment. Learn how private landowners can conduct similar inventories of their own lands, how such surveys inform forest management, and what the implications are for the broader landscape. This exciting workshop will be invaluable for municipal managers and private forest landowners alike. Please call VFF (453-7728) if you're interested in attending.

Ecological Forestry Tools of the Trade

VFF stocks several products that we believe are important to the practice of ecological forestry and which you'll be hard pressed to find elsewhere.

GreenBar Bar and Chain Oil

At VFF, we firmly believe that clean, clear, highly-oxygenated water is the forest's premier product. Only healthy forests produce high-quality water. One key way you help your forests produce high-quality water is by designing, constructing, and maintaining access trails properly, avoiding steep slopes and unstable soils, and by retaining undisturbed buffers between streams and trails.

Another way to help assure high-quality water is by using plant-based, rather than petroleum-based, bar and chain oil when you work in the woods. When you use your chainsaw in the woods, bar oil residue remains in the forest. One gallon of petroleum-based oil can contaminate 1 million gallons of ground water. VFF sells, at cost, canola-based GreenBar Chain-Saw Bar Oil. Independent

laboratory tests show that when GreenBar is mixed with water at a concentration as high as 1:1000, the water still passes drinking water standards.

Canola oil-based Green Bar Chain Saw-Bar Oil is made from US farm products. It is biodegradable and user safe (unlike petroleum oils, which OSHA requires to carry cancer warning labels). It is more slippery than petroleum oil, contains rust and oxidation suppression additives, and operates at a lower temperature than petroleum-based oil, extending bar and chain life.

Long-time chainsaw users who have switched to GreenBar have raved about its performance. According to logger Bill Torrey, the oil's only drawback is that his dog, a constant companion during his logging jobs, likes the way it tastes

But isn't that oil pricey?

There's no question that the canola-based oil, even sold at cost, is more expensive than petroleum-based oil. But considering that most landowners use no more than a gallon or two of bar oil each year, the cost differences work out to **\$5-\$10 per year.**

We hope you'll agree that it's a small price for protecting water quality and chainsaw user health.

_-gallon, \$6; 1-gallon, \$10; 5-gallon, \$40.

Lumber Inventory Closeout

We still have some certified lumber at great prices. Are you looking for select and better oak, cherry, yellow birch or ash for an upcoming project? Or select red maple and white birch at a ridiculously low price? [perfect for hardwood trim that will be painted]. This is left over 5/4 stock from an earlier project, stored in our shed in Bristol. Contact Netaka [netaka@familyforests.org or 453-7728] for pricing or other information.

Get it while it lasts!

During the past year, chainsaw users bought 75 gallons of canola-based bar oil from VFF, protecting 75 million gallons of groundwater.

Organic Maple Tree Fertilizer is Here!

In our last newsletter, we discussed maple tree decline and the benefits of applying a custom-blended fertilizer to boost sugar maple health. Based on the enthusiastic feedback we received, we've ordered and received the fertilizer, blended for us by North Country Organics, in Bradford, Vermont.

The fertilizer—a mix of phosphate rock, dolomite, calcium limestone flour, and sulfate of potash—costs \$19.00 per 50/lb bag (you'll need 2 to 4 lbs. of fertilizer per inch of tree diameter). Don't worry if you didn't place an advance order—we ordered plenty extra.

Certification Update

It's official! The Forest Stewardship Council has accepted VFF's application to the Small and Low-Intensity Managed Forests (SLIMF) Certification Program. We expect to be formally enrolled in the program by October. Certification through this program should decrease our annual certification fees substantially. We will keep you posted as specifics of the program unfold.