

CFA News

The Newsletter of the Catskill Forest Association, Inc.
Volume 27, Number 1 - Winter 2009



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The Perfect Storm / Forestry Awareness Day
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Mike's Corner / A Forest Historian



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Subscriptions: *CFA News* is mailed quarterly to members of the Catskill Forest Association. If you are interested in joining CFA, give us a call, visit our office or fill out and mail in the form on the back cover of this publication. Contact information is located above. Please submit address changes to Michele at the address above.

Cover Photo:

Looking west towards Sullivan County and the Pocono Mountains of Pennsylvania from Balsam Lake Mountain Fire Tower on Super Bowl Sunday, February 1st, 2009. Every year a group from Margaretville snow-shoes up to the fire-tower before the Super Bowl. (Photo taken by Ryan Trapani)



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WELCOME NEW MEMBERS!

2008

November

Brennan & Brian Kearney – Margaretville
Christopher J. Conroy – Margaretville
George Mark – Woodridge
John Wilson – Roxbury
John Lyons – Delhi
Tom Russell – Roxbury

December

Mike Fink & Karen Pardini

2009

January

Rosemary & John Jennings - Big Indian
David Goldberg – Westkill
Robert Donohue – Harrison
Robin & Helene – East Meredith

EXECUTIVE DIRECTOR'S MESSAGE

"Hold off on cutting your sawlog and veneer trees!"

I graduated from forestry school in 1975 and have spent most of my career managing over a million acres in Maine, NH, VT, the Adirondacks and the Catskills with the paper industry, an entrepreneur, a power company and a hardwood sawmill. I have been Executive Director of CFA now for 7 years and have been, and still am, involved in many industrial & environmental organizations.....**I have never seen what is before us now.....**

"The Perfect Storm"



Be-

tween new-housing and general construction drop-offs, the US dollar losing value, general decline in strength of the world economy, and people pulling back on spending, sawmills have been slowing their production and even shutting down. The result has been falling prices on sawlogs and veneer, and the loss of work for our highly valued logging industry. Our loggers are accustomed to cutting the higher value products to make their livelihood and have great difficulty making a living on firewood alone – (and we, probably could not afford to pay for the cost of firewood without it being subsidized by the sawlogs.) We Catskillians have not, and still don't have, very many markets for the lower valued products such as pulpwood and biomass (trees that are chipped up to be used for fuel or reconstituted wood products such as paper, cardboard, fiberboard, chipboard, etc.). Low-grade materials can only be economically harvested in large volumes and at constant rates. Our loggers are being caught in the middle with little else to do than squeeze every dollar out of every landowner. They can not be faulted for this. It's what we all would do to keep a roof over our heads and food on the table. (Does anybody know a wealthy logger?)

At the same time, many landowners are feeling the pressure to raise cash to cover losses of income and retirement portfolios. Timber management was probably not a major reason for owning their land. (Perhaps it should have ranked higher, so that the trees would have been worth more by having invested in their management.) These small private landowners have difficulty getting a high price for their timber, may not be aware that they are not getting a good price.....and will harvest regardless of this.

The desire by loggers to harvest sawlog material and landowners to raise cash will place more timber on the market than it can support, thereby depressing prices even further. Who is the winner?...no one....loggers will receive less of a margin for their hard work and investment and landowners will receive less for their timber investment. It will also degrade our forests' future value -- because the best will be cut and the poorer trees left behind. The stands will be harvested with little regard to

their future growth, health and value.

From time to time, there may be opportunities when individual sawmills may increase their prices in order to have a minimal amount of inventory – but, for the most part, people I've spoken with that should be "in the know", believe that prices will be depressed for quite a while. Perhaps as long as five years! What's more, how can a small landowner get a sale prepared in a short amount of time to capitalize on the mills' immediate needs?

This scenario of flooding the market-place, when industry doesn't need it, may be especially true for the timberland investment management organizations that now own a lot of the land previously owned by the forest industry in the Northeast. These so-called TIMOs invest money for institutional clients and individuals seeking to diversify their portfolios. They will be under great pressure to turn their assets into cash, and will be tempted to sell their timber. They are at a better advantage than the average landowner to do so. They have professional management companies with professional foresters working full time for them.

[A side note --- These TIMOs will also consider liquidating their land, and normally plan to do so in 10 to 20 years, anyways. Their responsibility to seek the highest sale price they can triggers sales of smaller and smaller pieces for what is known as "highest and best use" -- a euphemism for development.]

TIMOs will be looking to liquidate as much timber as possible before selling because their prospective client, the small landowner doesn't usually consider timber values in their purchase price.

On the flip-side, a negative situation can create opportunities for those able to center on the positive and resist being short-sited and destructive. There is a fast-growing push to develop energy sources from this renewable resource. There are pellet-mills, cogeneration plants, and wood-ethanol facilities on the drawing board. Just such a pellet-mill is being contemplated for the Catskills. They would provide landowners with a long-awaited method to thin out their forests, making them healthier and more valuable to them for the future – when sawlog and veneer prices escalate – which they will. With the hopes of gaining markets for low-grade trees, we will be able to invest less money in thinning our stands to provide us with more in the future. A win-win situation.

Bottom line -- if you can hold off harvesting your timber... do so! If you can acquire additional forestland...do so! If you own timberland, manage it wisely by improving it. (Call CFA to find out ways you can do this!) Invest your time and money to enhance your investment! Land, and the timber on it, is a very good long-term investment. There is only so much land on this planet and humans will always depend on it -- especially with an increasing population and its increasing demands. In times gone by, timber has shown less volatility and has proven to be a good hedge against inflation. It has a strong historical risk-adjusted return and is a demonstrated hedge against inflation.

If you are thinking about doing ANYTHING with your forestland – call CFA, first! No cost, if you are a member.....and well worth the time!

Naturally, *Jim Waters*

FORESTRY AWARENESS DAY

April 27th, 2009

*Legislative Office Building (LOB) of the Empire State Plaza
Albany, NY*

Who attends Forestry Awareness Day???

Landowners concerned about property taxes, foresters concerned about forest health, loggers concerned about local regulations and emerging biofuel markets, sawmill managers concerned about energy costs and remaining competitive, forest industry workers concerned about keeping their jobs in rural areas of upstate, students concerned about climate change and how managed forests are part of the solutions, environmentalists concerned about forests being broken up into housing tracts, government agencies concerned about water quality and invasive pests and plants, educators concerned that legislators and the general public are not getting the facts on how healthy forests benefit all New Yorkers.

The day starts out with an issue briefing on the healthy forests agenda to prepare you for legislative visits. Participants sign up for pre-arranged visits with representatives in groups of five. There will be box lunches available.

Registration is free for all of CFA's members, but it is still necessary to register. This can be done by calling Michele at CFA's office (845) 586-3054. Registration must be done by April 20, 2009.

We can carpool. Due to heightened security, please bring photo identification with you. Also, do not bring anything that would not be allowed on an airplane.

(SEE "The Healthy Forests Agenda for 2009" on this page and page 5. They were developed by The Council of Forest Resource Organizations, which CFA is a member of.)



COUNCIL OF FOREST RESOURCE ORGANIZATIONS

*Landowners, Forest Products Industry, and Professional Foresters
Working Together to Improve New York's Forest Resources*

AFFILIATED ORGANIZATIONS

Adirondack Landowners Association • Catskill Forest Association • Catskill Landowners Association • Empire State Forest Products Association • NY Forest Owners Association • NY Society of American Foresters • NYS Farm Bureau • NYS Maple Producers Association • NYS Timber Producers • NYS Tree Farm • Tug Hill Resources Investment for Tomorrow (THRIFT)

The Healthy Forests Agenda 2009 (adopted Jan. 20, 2009)

A four-point program to maintain the size, health and productivity of New York's forests.

New York's 18.5 million acres of forest land are in crisis, their future imperiled by economic and ecological threats. Traditional markets are changing; subdivision and development threaten wildlife, watersheds, clean air, recreational values and economic productivity; invasive pests endanger valuable species. These difficulties threaten our forests' ability to respond to modern needs for new energy sources and relief from the effects of climate change. They also are damaging the economic sustainability and health of many rural communities. Therefore, the Council of Forest Resource Organizations urges the following prompt executive and legislation actions:

Destructive invasive species threaten to destroy NYS' forests. Expand State efforts to combat invasive species by allocating more resources for research on, and assistance to, private forest lands. Healthy private forest lands contribute more than \$40 million annually to the State's economy and provide important public benefits such as clean water, soil stability, and wildlife habitats.

- The NYS Invasive Species Advisory Committee, the NYS Invasive Species Council, and the 10 PRISMs should recognize the importance of invasive forest insects, plants and diseases in

prioritizing inventory and eradication efforts statewide; and continue to assure active involvement of forestry interests.

- Fully fund DEC's new Office of Invasive Species and its efforts to craft an integrated map that pinpoints invasives in and near New York, create an information clearinghouse for invasives and work with the federal government, and plan and implement a more effective emergency response system.
- Accelerate Asian Long-Horned Beetle survey and eradication efforts in quarantine areas of New York City and Long Island; containment of this pest is vital to the survival of the many industries, ranging from maple syrup to furniture, that depend on New York's vast and valuable maple woodlands.
- Reinforce efforts to contain the spread of known invasives, such as the Emerald Ash Borer, which threatens another of the state's most valuable and famous hardwood species.
- Request that federal agency partners increase monitoring and inspections for invasives at New York's ports and borders.

Ease the economic strain of increasing, burdensome taxes on forest owners. Such taxes encourage early harvests and subdivision, thus preventing sustainable management of forest resources and often disrupting wildlife and important non-timber plant species.

- Create a new refundable income tax credit to offset property taxes on forest ownership.
- Eliminate the so-called "Tree Tax" which is applied by local assessors under the guidance of the State Office of Real Property Tax Services.

- Expand the reimbursement to towns for revenues “lost” through RPTL 480A.
- Preserve the practice that was established in 1886 of maintaining comparability of tax payments on Forest Preserve Lands with those on private land.

Traditional and new markets for forest products can provide greater employment and revenues than are currently realized. Increase the economic contributions of New York’s forest resource through focused state actions. Encourage good management of forest lands and grow their role in the state’s economy by actively encouraging the exploitation of new markets, particularly wood energy and biofuels, and encouraging investment in the necessary infrastructure.

- The Department of Agriculture and Markets, NYS DEC, and Empire State Development should work cooperatively to support forest products manufacturers through promotion, market development and technical assistance.
- Expand the scope of study in NYSERDA’s recent RFP for a Renewable Fuels Roadmap and Sustainable biomass Feedstock Study that seeks to address critical issues related to energy alternatives in New York. Currently, the RFP seeks to study only biomass-based liquid fuels (“biofuels”) as a potential alternative energy technology utilizing forest derived biomass. There are other proven biomass-based energy alternatives (e.g. -heat, co-generation, power production) with much greater potential to be implemented in the coming decade.
- NYSERDA and the PSC should work to expand the Renewable Portfolio Standard to include “biomass” as an eligible Tier II Customer Sited fuel.
- Limit proposed restrictions on existing or new outdoor wood boilers that provide affordable heat and hot water for rural families.
- The Attorney General and DEC must vigorously enforce laws governing timber theft. Educational programs need to be continued and expanded.
- Provide public incentives - such as expedite review of permitable activities for participants - that recognize landowner and industry investments in forest certification programs such as the Tree Farm System, the Forest Stewardship Council (FSC) and the Sustainable Forestry Initiative (SFI).
- DOT should not impose routing restrictions on log trucks.

Sequestration of atmospheric carbon has been identified as a part of the solution to global climate change. Well-managed forests are effective in removing greenhouse gases from the atmosphere and sequestering them for many years. Reward good forest management and encourage forest owners to combat the effects of climate change.

- The Governor and DEC’s Office of Climate Change need to accept and advocate for the inclusion of forestry and forest management as an offset strategy in the Regional Greenhouse Gas Initiative and to advocate for the establishment of a national cap-and-trade system to limit and/or offset the production of greenhouse gases.
- Income from the sale of carbon credits from managed forest lands should be exempt from state and local taxes. As there is no current revenue from carbon trading, there will be no net effect on state revenues and the State will encourage viable solutions to climate change.

WE NEED PEOPLE THAT ARE IN DOWNSTATE LEGISLATIVE DISTRICTS TO COME WITH US ON VISITS. IF YOU VOTE DOWNSTATE, PLEASE CALL CFA WITH THE LEGISLATOR’S NAMES ASAP, SO THAT WE CAN SET UP APPOINTMENTS WITH THEM! WE NEED YOU TO COME ALSO. THIS IS A GREAT OPPORTUNITY AND IS ALWAYS A LOT OF FUN.



Who says bobcats need large, contiguous forest? This one was shot from a tree-stand in the Town of Maybrook near Newburgh by Matthew Corrado in Jan. of 2009.



Ryan with Matthew’s 25 pound cat.

Calendar of Events For 2009



(February 9th, 6:30pm-8:00pm): Indoor Maple Sugaring Workshop -- If you like the taste of maple syrup and have a few trees nearby you can learn how to make it yourself at the Livingston Manor Free Public Library, 92 Main St., Livingston Manor. To pre-register and for more information call CFA @ (845) 586-3054.



(February 18th, 6:30pm-8:00pm): Indoor Maple Sugaring Workshop -- If you like the taste of maple syrup and have a few trees nearby you can learn how to make it yourself at the Phoenicia library, 48 Main St., Phoenicia. To pre-register and for more information call CFA @ (845) 586-3054.



(February 21st, 9am-12pm): Indoor Maple Sugaring Workshop -- If you like the taste of maple syrup and have a few trees nearby you can learn how to make it yourself at the Phoenicia library, 48 Main St., Phoenicia. To pre-register and for more information call CFA @ (845) 586-3054. (\$5 CFA members, \$10 non-members)



(February 22nd, 2:00pm-4:00pm): Indoor Maple Sugaring Workshop -- If you like the taste of maple syrup and have a few trees nearby you can learn how to make it yourself at the Jefferson Public Library, 19 Center St., Jeffersonville. To pre-register for more information call CFA @ (845) 586-3054.



(February 24th, 5:00pm-7:00pm): Indoor Maple Sugaring Workshop -- If you like the taste of maple syrup and have a few trees nearby you can learn how to make it yourself at the Callicoon Library, 11 Lower Main St., Callicoon. To pre-register and for more information call CFA @ (845) 586-3054.



(March 14th/15th & March 21st/22nd, 10:00am – 2:00pm): Backyard Maple Sugaring Demonstration -- Come and see how the entire process is done while we boil at Ryan Trapani's home on Hall Road - go about 1 mile west on County Route 3, just past the Marquette Post Office and take a right onto Hall Rd. Ryan's home is the second house on the right. Backyard sugaring is for small-scale sugar-makers. FREE



(April 15th, TBA): Tree Planting Workshop -- Come and learn *hands-on* how to properly plant a tree at the Ellenville Public Library & Museum, 40 Center St., Ellenville. To pre-register or for more information call CFA @ (845) 586-3054.



(April 21st, 7:00pm – 9:00pm): Introduction to Crop Tree Management -- Learn how to enhance the health and benefits your trees and forest provide by practicing *Crop Tree Management* at the Callicoon Library, 11 Lower Main St., Callicoon. To pre-register or for more information call CFA @ (845) 586-3054.



(April 22nd, 7:00pm – 9:00pm): Introduction to Crop Tree Management -- Learn how to enhance the health and benefits your trees and forest provide by practicing *Crop Tree Management* at the Jefferson Public Library, 19 Center St., Jeffersonville. To pre-register or for more information call CFA @ (845) 586-3054.



(April 23rd, 7:00pm – 9:00pm): Introduction to Crop Tree Management -- Learn how to enhance the health and benefits your trees and forest provide by practicing *Crop Tree Management* at the Narrowsburg Library, 198 Bridge St., Narrowsburg. To pre-register or for more information call CFA @ (845) 586-3054.



(May 2nd, 10:00am – 12:00pm): Tree Planting Workshop -- Come and learn *hands-on* how to properly plant a tree in the Village of Margaretville. (Exact location TBA) To pre-register or for more information call CFA @ (845) 586-3054. \$15 CFA members' \$20 non-members.



(May 13th, TBA): Firewood Management Workshop -- Learn the basics about firewood! We will cover choosing the right trees to cut, harvesting techniques, species ratings, transportation, processing, and heating techniques at the Ellenville public Library & Museum, 40 Center St., Ellenville. Outdoor wood furnace & fireplace distributors will also be available for information and advice. To pre-register or for more information call CFA @ (845) 586-3054.



(May 16th, 9:00am – 3:00pm): Chainsaw Safety Workshop -- The chainsaw can be a valuable tool in managing a forest. However, safety precautions and efficiency must first be understood in the Margaretville area. (Exact location TBA) Learn basic safety skills. Pre-registration is required and for more information call CFA @ (845) 586-3054. \$75 CFA members \$100 non-members. Class limit 10, bring your lunch, chainsaw & gear.



(June 13th/14th, 10:00am – 5:00pm): Meredith Dairy Festival -- CFA will be attending the Festival celebrating the area's dairy heritage located in the Town of Meredith. CFA will be serving forest education, advice and information to the public and giving tree identification walks nearby each day. Learn some of the names of our trees and how to identify them. For more information call CFA @ (845) 586-3054.



(July 11th, 9:00am – 12:00pm): Wildlife Management Workshop -- Whether you do something or nothing to your forest, wildlife will be affected. What wildlife can you manage for or against on your forested property? Walk a CFA member's property for one example of wildlife management. (Location TBA) To pre-register or for more information call CFA @ (845) 586-3054. \$5 CFA members \$10 non-members.



(July 12th, 10:00am – 12:00pm): Introduction to Woodlot Management -- There are many options for owners who have forested property. Learn the basics of managing your woodlot at the Phonocia Library, 48 Main St., Phonocia. To pre-register or for more information call CFA @ (845) 586-3054.



(July 18th, 10:00am – 5:00pm): Deposit Lumberjack Festival -- CFA will be attending the Festival celebrating the area's logging heritage located in the Village of Deposit. CFA will set up adjacent to the Woodsman's competition and be serving forest education, advice and information to the public. For more information call CFA @ (845) 586-3054.



(July 25th, 9:00am – 3:00pm): Chainsaw Safety Workshop -- The chainsaw can be a valuable tool in managing a forest. However, safety precautions and efficiency must first be understood in the Napanoch area. (Exact location TBA) Learn basic safety skills. Registration is a must and for more information call CFA @ (845) 586-3054. \$75 CFA members \$100 non-members, class limit 10, bring your own chainsaw & gear.



(August 8th, 9:00am – 12:00pm): Logging Job Tour -- Thinking about cutting some trees on your property? Come and see a forest whose trees are being harvested while in progress. Roads planning, tree marking, cutting and removal are just some of the important topics we will cover. Exact location TBA, but it will be on the DEP's property. To pre-register or for more information call CFA @ (845) 586-3054. \$5 CFA members \$10 non-members.



(August 14th – 16th, 9:00am – 7:00pm): Grahamsville Fair -- CFA will be attending the Festival celebrating Sullivan County's agricultural heritage located in the Town of Neversink. CFA will be serving forest education, advice and information to the public. For more information call CFA @ (845) 586-3054.



(August 22nd, 9:00am – 4:00pm): Huckleberry Festival -- CFA will be attending the Festival celebrating the area's blueberry & huckleberry heritage located in the Village of Ellenville. CFA will be serving forest education, advice and information to the public. For more information call CFA @ (845) 586-3054.



(August 25th, 7:00pm – 9:00pm): Wildlife Management Workshop -- Whether you do something or nothing to your forest, wildlife will be affected. What wildlife can you manage for or against on your forested property? Callicoon Library at 11 Lower Main St., Callicoon. To pre-register or for more information call CFA @ (845) 586-3054.



(August 26th, 7:00pm – 9:00pm): Wildlife Management Workshop -- Whether you do something or nothing to your forest, wildlife will be affected. What wildlife can you manage for or against on your forested property? Jeffersonville Public Library at 19 Center St., Jeffersonville. To pre-register or for more information call CFA @ (845) 586-3054.



(August 27th, 7:00pm – 9:00pm): Wildlife Management Workshop -- Whether you do something or nothing to your forest, wildlife will be affected. What wildlife can you manage for or against on your forested property? Narrowsburg Library at 198 Bridge St., Narrowsburg. To pre-register or for more information call CFA @ (845) 586-3054.



(September 20th, TBA): Apple Tree Pruning & Cider-Making -- Properly pruned fruit trees grow vigorously, efficiently allocating the sun's energy to making delicious and abundant fruit. Ellenville public Library & Museum at 40 Center St., Ellenville. The first half will cover pruning while the other will teach how to make your own cider. To pre-register or for more information call CFA @ (845) 586-3054.



Catskill Forest & Farm Festival (Some time late Sept. or early Oct.) The 1st Annual celebration of our region's forests located at the pavilion behind the new Freshtown Market, in the village of Margaretville, Delaware County. The purpose of the event is to foster an appreciation for the many benefits our **Working Forests and Farms** provide for our local **communities and society**. This year, we will showcase maple syrup as one local forest-based product. Stay tuned for more information!



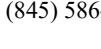
(October 20th, 7:00pm – 9:00pm): Apple Tree Pruning & Cider-Making -- Properly pruned fruit trees grow vigorously, efficiently allocating the sun's energy to making delicious and abundant fruit. The first half will cover pruning while the other will teach how to make your own cider. Callicoon Library at 11 Lower Main St., Callicoon. To pre-register or for more information call CFA @ (845) 586-3054.



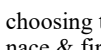
(October 21st, 7:00pm – 9:00pm): Apple Tree Pruning & Cider-Making -- Properly pruned fruit trees grow vigorously, efficiently allocating the sun's energy to making delicious and abundant fruit. The first half will cover pruning while the other will teach how to make your own cider. Jeffersonville public Library at 19 Center St., Jeffersonville. To pre-register or for more information call CFA @ (845) 586-3054.



(October 3rd, 9:30am – 3:00pm): Catskill Forest Association's Annual Meeting -- Hear from your peers as well as experts on how land is being effected and managed in the Catskills. Andes Hotel.



(October 22nd, 7:00pm – 9:00pm): Apple Tree Pruning & Cider-Making -- Properly pruned fruit trees grow vigorously, efficiently allocating the sun's energy to making delicious and abundant fruit. The first half will cover pruning while the other will teach how to make your own cider. Narrowsburg Library at 198 Bridge St., Narrowsburg. To pre-register or for more information call CFA @ (845) 586-3054.



(October 24th, 9:00am – 12:00pm): Firewood Management Workshop -- Learn the basics about firewood! We will cover choosing the right trees to cut, harvesting techniques, species ratings, transportation, processing, and heating techniques. Outdoor furnace & fireplace distributors will also be available for information and advice. To be held at CFA's office at 43469 State Hwy 28, Arkville.

To pre-register or for more information call CFA @ (845) 586-3054. \$5 CFA members \$10 non-members.



(November 7th 9:00am – 3:00pm): Chainsaw Safety Workshop -- The chainsaw can be a valuable tool in managing a forest. However, safety precautions and efficiency must first be understood. Learn basic safety skills. (Location TBA) Pre-registration is a must for more information call CFA @ (845) 586-3054. \$75 CFA members \$100 non-members, class limit 10, bring your lunch, chainsaw &



Check out our website at www.catskillforest.org for a current listing of the 2009 Events!



Article 4: Managing Stand Structure & Species Composition in a Sugarbush

This is part of a series of articles that will be dedicated to informing and educating local Sugarmakers of the Catskills. Local Sugarmakers consist of both commercial and backyard producers. Topics that will be included in this series include Factors that Affect Sap Flow, Healthy and Productive Tapping Techniques, Stand Structure, Species Composition of Maple Stands, Stand Tending, and other tricks of the trade. Stay tuned!

At the end of May last year I planted a few vegetables once I felt comfortable that the frosty nights would no longer be around to kill any of the succulent young parts. After several dry periods and plenty of watering and weeding (by others) I now have plenty of tomatoes and some potatoes, peppers, zucchini, brussels sprout, basil and dill. Soon the first frost will be here and the plants will begin to die. Late next spring I'll have to sow anew.

Early next spring it will be time to harvest another crop: maple sap! Unlike the aforementioned annual plants, the sap will be obtained from giant, woody perennials or sugar maple trees. I have been admiring these trees all summer, fall and winter long. Every time I drive or walk by the sugarbush and see the leaves exposing their green faces to the shining sun, sugar through photosynthesis is being made for the spring. Those tapped maple trees, even hundreds of years old or less must be harvested at some point so that new ones can grow and maple sugaring can continue. Japanese beetles may eat vegetable plants in the garden but that's okay. They have the luxury of starting over each year. In a sugarbush this is not the case. The same maple trees year after year are at the mercy of **wind, ice rime, insects & disease**, sunlight competition from neighboring trees, soil compaction from equipment and more. Eventually some of these trees will decline in health and succumb to these stressors. By managing stand structure and species composition, maple producers can consequently enhance sap production and sustain a harvest of sap year after year.

Since crops of sugar maples are not plowed under and re-planted as easily each year, it is important that diversity in stand structure be maintained. Diversity in stand structure will more readily lead to a steady or sustainable supply of maple trees to tap for future seasons. Stand structure in a sugarbush relates to the species composition and size (age, diameter and height distribution) structure of trees. Stand structure is the result of: (1) Shade tolerance of tree species; (2) History of disturbance and management; and (3) Ecological conditions.

1. Shade tolerance of tree species

Tree species vary considerably in their tolerance for shade. All trees prefer to grow in sunlight, but some can tolerate shady conditions better than others. American beech and sugar maple for example are extremely shade-tolerant and can be found growing in the understory of larger trees. On the other hand, aspen and paper birch need plenty of sunlight in order to germinate and cannot tolerate competition for sunlight very well. White ash and basswood are shade-intermediate and can tolerate partial shade. (Refer to **Table 1** -- "Shade Tolerances of Selected Tree Species").

Table 1 Shade Tolerances of Selected Tree Species

| HARD-WOODS | Tolerant * | Intermedi-ate | Intolerant * |
|--|------------|---------------|--------------|
| Sugar maple | X | | |
| Red maple | X | | |
| Yellow birch | | X | |
| White birch | | | X |
| Basswood | | X | |
| Aspen | | | X |
| Mountain maple | X | | |
| Striped maple | X | | |
| SOFTWOODS | | | |
| Fir | X | | |
| White spruce | | X | |
| Cedar | X | | |
| Hay-scented fern | X | | |
| New York fern | X | | |
| * Tolerant: can regenerate and grow in shade | | | |
| * Intolerant: cannot regenerate and grow in a lot of shade | | | |

2. Diversity in Species Composition

Many sugarbushes over time become monocultures of sugar maple and red maple tree species. Since pure stands of sugar maple allow very little sunlight into the understory and regeneration is sparse. Only shade-tolerant species such as sugar maple, American beech, striped maple, hay-scented and New York fern can grow in this light-limited condition. However, maple is highly preferred by deer over beech, fern, and striped maple. Consequently, beech, fern and striped maple are often found invading the entire understory while the overstory of maple continues to age and move closer to the end of its rotation. This leads to an unsustainable condition where sap yields will continue to decline over time.

In addition, monocultures of sugar maple provide an abundant food source for insects and disease to forage upon and spread easily. According to the *Centre Acer* in Quebec, pure stands of maple degrade the soil through acidification from the addition of branches, twigs and leaves to the forest litter over time. Companion species in a sugarbush can help mitigate this problem. At least 10-20% of the stand should consist of companion species of yellow birch, white ash, black birch, or basswood. Fallen trees and other coarse woody debris (CWD) should be left on the forest floor

whenever they do not obstruct access to tubing lines or buckets. CWD provides nutrients to the soil and enhances growth of fungus such as mycorrhizae. Mycorrhizae help roots uptake nutrients. CWD also provide natural shelters or obstacles for herbivores which protect germinating seedlings as well as cover for many species of wildlife. Dead standing trees called snags provide habitat for birds such as woodpeckers. These birds in turn reduce insect populations that may infect a stand as well as provide future den sites for small critters. At least 3 snags should be left per acre. The larger the diameter at breast height (dbh – measured 4 & ½ ft. above the ground) the snag is, the greater will be its potential as a future den site for wildlife. Snags without bark are essentially useless for most wildlife since they provide little protection from the elements or quarters for insects than snags with bark intact.

Some species are incompatible in sugarbushes. American beech can be invasive in sugarbushes because of its low desirability by deer as mentioned above. American beech also suffers from a disease called beech bark disease and readily sends out root suckers when it begins to die. Its leaves are also slow to decompose and hinder sugar maple germination. Where possible, beech should be cut, girdled or weeded out by use of herbicide (*Oust* or *Glycophosate*: Please contact CFA or your forester for more information if you plan on using herbicides). As mentioned earlier, fern (hay-scented & New York) are not browsed by deer and can take over the understory and outcompete maple seedlings. After overstory removal, fern must be killed by either herbicide, or patience....and luck for regeneration to establish. Balsam fir, eastern hemlock and red spruce should also be discouraged since they too degrade the soil through acidification over time. However, they can be used as windbreaks at the edge of the sugarbush to help shelter the stand from cold winds.

3. Disturbance & Size Class Diversity

By providing small openings in the overstory mixed with larger openings, forest managers can provide for not only diversity in species composition, but size as well. Smaller openings around larger maple trees used currently for sap production will lead to sweeter flows since photosyn-



thesis is enhanced as written about in *CFA News: Spring '08*. Larger openings will hopefully allow enough sunlight in the understory for regeneration of desirable tree species such as sugar maple to germinate. These will provide the growing stock for a future sugarbush. If regeneration establishes, a new age class or *cohort* will develop. These trees naturally being shorter than the older ones, will add not only age and diameter diversity, but also vertical diversity in canopy strata that many species of wildlife depend upon. These cohorts can be either established in small openings called *group selection cuts* (at least ¼ acre), or in *single tree selection cuts*, where single trees are removed to allow sunlight into the understory. If the sugarbush is unproductive then a larger regenerative cut may need to be prescribed in which the stand is *started over*. In this case, a *shelterwood cut* may be implemented in which most of the overstory is removed except some residuals that will act as the seed source and partial shade for the next crop of sugar maples. However, there are many variables such as seed bank storage, low and high woody interference, herbaceous interference, and deer browse that influence any silvicultural prescription and its implementation.

4. Ecological Factors

The amount of openings may differ from site to site in order to establish a new cohort (age class) since its ecological condition varies. Deer browse may be significantly higher in one area compared to another as a result of food availability in the locale. Areas that are surrounded by large blocks of undisturbed forest, where little sunlight penetrates the understory, will be browsed upon the most after regeneration has germinated from a disturbance in the canopy. Areas that are surrounded by apple orchards,

farms or other sources of food will be browsed upon the least and will experience the greatest amount of success. In areas that are over-browsed, openings may have to be enlarged so that enough regeneration germinates that it overwhelms the appetite of browsing herbivores and that some can establish. Large *shelterwood cuts* work best in these areas. Small partial cuts would most likely always fail to regenerate in most places in the Catskills due to a lack of disturbance and diversity throughout the forested landscape. Otherwise, exclusion fences must be erected to keep out herbivores and/or increased hunting pressure implemented.

Conclusion

The price of purchasing land has been steadily and considerably increasing. Taxes per acre have also risen tremendously. With these added costs, packing up operations and tapping other sugarbushes may be less of an option than in previous times. Therefore, it is more important presently to manage a sugarbush for structural diversity than ever so that a single sugarbush can be tapped for the longest rotation. The challenges are many since sugar maple is also a desirable timber crop as well as a forage species by white-tailed deer. However, there are some management options available. Please give us a call for further information.

Attention Sugarmakers

If you would like to submit an article about something you would like to share that is related to your maple syrup production, please call CFA and let us know. Article topics may vary from fun maple stories, anecdotes and production levels to sugarbush and evaporator management. Also, any producers who would like to advertise their maple products and/or supplies should also call our office. Help us promote a forest product and **preserve** our working forest while promoting you... the producer.



This picture was taken in the northern foothills of the Adirondacks. Someone forgot to gather this bucket! Any guesses as to when? (Photograph taken by Larry Dennis, a forester with LandVest.)



Mike's Corner: Observations by a Forest Historian
(Part 4 of a series by Dr. Michael Kudish)

"Bogs With Lost Hemlocks"

Since 1994, my major focus on reconstruction of the forest history of the Catskills has been on the period following the end of the Ice Age (Before 1994 the major focus had been solely on events over the last 300 or 400 years). The extraction of peat samples from about 90 bogs and fens has yielded plant macrofossils (wood, bark, twigs, roots, leaves, needles, cones, fruits, seeds, etc.) which are set aside and identified with the use of microscopes. The portion of the peat sample that is too decomposed for the plants to be identified, are sent to Beta Analytic, a radiocarbon-dating laboratory in Miami, Florida. Radiocarbon dates have ranged from only several hundred years to about 14,000 years!....with the median age around 4000.

Most of the bogs, to my surprise, have had little or no change in their vegetation over thousands of years. One notable kind of exception is a group of bogs which have lost their hemlock component. Hemlock wood has been found buried near or at the bottom of five upper-elevation bogs to date -- yet today no hemlock can be found within at least a half-mile of the bogs. Two of these bogs on Mill Brook Ridge, in addition to the wood from hemlock, have hemlock cones preserved. The cones are closed when they are first removed from the peat sample because they have been soaked in water for thousands of years, and upon drying, their scales open up.

Outside the Catskills, other researchers on forest history in the northeastern United States, especially in New England, have noted a hemlock "crash" -- a precipitous decline in hemlock fossils, especially pollen, about 5,000 years ago. Since then, hemlock has made a partial, slow comeback, but never attained the abundance of pre-"crash" levels. No one to date has figured out why the "crash" occurred. There are several hypothesized causes ranging from climate change - to disease - to defoliation or a combination of these.

In the Catskills, a limited "crash" did occur be-

cause it occurred in only five bogs. Most of the bogs, older than 5,000 years and which have hemlock today, have had hemlock all along, so that there was no "crash". I'm not even certain that the Catskills' loss was precipitous; it could have been gradual over centuries or even a few millennia.

Before 2007, the four bogs I found with lost hemlock are on Mongaup Mountain, Mill Brook Ridge (two bogs), and Balsam Lake Mountain, at elevations ranging from 2,820 to 3,680 feet. On the Mongaup Mountain bog, hemlock disappeared sometime between 4,900 and 4,200 years ago. On Balsam Lake Mountain, it disappeared sometime between 9,500 and 6,300 years ago. In one Mill Brook Ridge bog, hemlock disappeared sometime between 5,800 and 5,400 years ago; in the other, it disappeared sometime between 6,400 and 2,300 years (I have no intermediate radiocarbon dates between these pairs of dates).

In 2007, I found a fifth bog with plentiful hemlock wood in the bottom of the peat, some twenty inches below the surface. The bog is located in Sid's Notch, on a northwest spur of Eagle Mountain at an elevation of 2,720 feet. As of this writing, the radiocarbon date has not yet arrived from the laboratory, but should be available soon.

What caused this loss of hemlock in some parts of the Catskills and not in others? Why was this loss not concentrated within several centuries, as in New England, but rather spread out over several thousands of years? I've begun to work on the answer to this question, studying hemlock health and reproduction in existing, remote high-elevation stands which escaped the human bark peelers of the nineteenth century. Perhaps some of the reasons for the loss, thousands of years ago, are still some of the reasons of the loss today.



American Environmental Photographs Collection, [AEP Image Number, e.g., AEP-MIN73], Department of Special Collections, University of Chicago Library.

CFA Tree Marking Program!

This is a great way to get an area marked that will provide you and others with firewood as well as improve the health of your forest. You are welcome to join us during the marking to learn how to do it yourself. This could save you money down the road as it will sharpen your understanding of forest management and you will be developing your own tree selection skills. Thinning out the forest will make it more resistant to insects and disease, a better water filter, better wildlife habitat and increase the value of the timber.

DETAILS:

1. You must be a CFA member.
2. An "on-site-visit" fee of \$100 plus mileage will be charged for selecting, designating on the ground the area to be marked, and determining the acreage to be included.
3. After reviewing the forest management plan (if there is one) and taking into account the landowner(s)' objectives, a prescription for that stand will be recommended by the representative and the marking guidelines agreed upon by both the representative, the landowner(s)' forester (if there is one) and the landowner.
4. A maximum of 10 acres will be marked for each landowner in any one calendar year.
5. A fee of \$45 per acre will be charged for the marking.
6. \$15 of this \$45 can be claimed as a tax deductible contribution to CFA, a 501-c-3 not-for-profit organization.
7. The trees marked will be the trees that are considered "crop" trees (These are the trees that are the "keepers".) They will be marked by tree-marking paint at or just below eye height, most of the way around the bole of the tree, and on the stump.
8. It will then be up to the landowner to remove or kill all of the trees without paint. In most cases these trees will not be useful for anything but firewood. There may be an occasional saw-log tree, but unless there are a sufficient number of them, it will not be worth-while to have them delivered to a mill. The goal with this program is to improve the forest by removing the "weed trees". In some cases the trees can be left as fertilizer and wildlife habitat.
9. In the case that the landowner does not want to do the work themselves, a list of professionals will be given to them by CFA to contact in order to have the work done.
10. There is a limited amount of this we can get to, so sign up soon! Just fill out the application below and mail it in. We will call to schedule.



**Marked for
Forest Stand Improvement**
**Do not damage or
remove marked trees!**

www.catskillforest.org



A thinning typically removes about 4 to 5 cords per acre. If you had 10 acres marked, that would be about 45 cords of firewood being made available to you! That means that for an on-site fee and somewhere around \$10/cord you would get a rare and valuable educational experience along with the wood marked by a professional forester from CFA.

CFA is holding several special programs in chainsaw safety and use for landowners. (See the Calendar of Events in this issue.)



CFA TREE MARKING

APPLICATION

Name _____

Address of Property _____

Email address _____ Date _____

Phone Number and best time to call, where you can be reached during the weekday _____



PO Box 336
Arkville, NY 12406

MEMBERSHIP APPLICATION

I believe in enhancing the quality of the forest land in the Catskill Region through proper forest management.
To that end, I am interested in joining the Catskill Forest Association and supporting its efforts.

Name _____

Mailing Address _____

Phone #: _____ E-mail: _____

Membership Categories (Select the level & if you'd like, make an additional donation):

| | |
|------------------------------|-------------------------|
| Membership | \$50 + \$ _____ |
| Contributing | \$75 + \$ _____ |
| Business / Supporting | \$100 + \$ _____ |
| Supporting | \$150 + \$ _____ |
| Sustaining | \$250 + \$ _____ |
| Benefactor | \$750 + \$ _____ |

Amount enclosed \$ _____

Do you own land in the Catskill Region? Yes _____ No _____

Property address: _____

Telephone #: _____ County: _____

Total acres: _____ Forested acres: _____ Pond Y / N Stream Y / N River Y / N

Would you like a CFA forester to come to your property and spend 3 hours walking your forest, making suggestions and giving you impartial and confidential advice? (It just costs \$100 plus our mileage to do so.) Y / N
(If so we will call you to schedule an appointment.)

All membership dues and donations are fully tax deductible to the extent allowed by law. A copy of the most recent financial statement filed with the New York Department of State is available upon request.