

The New York

FOREST OWNER

A publication of the New York Forest Owners Association

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FORGOTTEN GIANT

**THE NEW YORK
FOREST OWNER**

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COVER:

One of the largest white pines remaining in the Cranberry Lake area of the Adirondacks in 1915. Note man standing at base of tree.

Photo courtesy of the Moon Library Archives, SUNY College of Envir. Science and Forestry, Syracuse.

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Forgotten Giant



75 year-old white pine planted and thinned on cutover and burned area at Wanakena in the Adirondacks.
Photo by N.A. Richards
(See page 4)

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PRESIDENT'S MESSAGE

The last edition of our magazine promoted the Tree Farm System/NYFOA partnership; that is, to convince members of the Tree Farm System that it makes sense to join NYFOA. The initial response was encouraging; however, applications for membership have tapered off leaving us far short of our goal. Therefore, it is important that each chapter and affiliate, through their various meetings and events, continue to demonstrate and discuss with members of the Tree Farm System the advantages of belonging to both organizations. The one-on-one contact has always been, the best method of getting NYFOA's message across to prospective members. As you can see from the insert photo, my wife and I are members of both organizations. Every member of NYFOA should consider the advantages of increased membership and strive to support the Association's ongoing goal by personally recruiting as many new members as possible. If every one of our current members were to recruit just one additional member during the current year, our membership would double to 3,200. There is strength in numbers, so let's work hard to increase our membership.

On Saturday, January 22, thanks to Bill Miner, NYFOA was able to get a meeting room located in the Hotel Syracuse without cost. The Board meeting convened at 10:00 in the morning and concluded at 4:30 in the afternoon with a short break for the Board members to enjoy lunch and a piece of John Marchant's birthday cake. I must applaud those that attended because the weather was extremely poor. There were times during the meeting when I thought I would be spending the night in Syracuse. Several Board members from the northern part of the State were unable to attend because of the terrible snow conditions. However, this day long meeting, which included a two hour session for



President Don Wagner's partner Betty Wagner with signs of the partnership.

committee activities, was productive and should be considered for future January meetings. A decision to schedule meetings and events two years in advance was acted upon by the Board. Debbie Gill, NYFOA's Administrative Secretary, has been asked to take this challenge on.

The 32nd Annual Spring Meeting has been scheduled for Saturday, April 30, with a theme of "Wood Lot Ownership for Fun and Pleasure". The agenda and reservation form are included in this publication as an insert. If you have attended these Spring Meetings in the past, you know how interesting and informative they are. If you have never attended, I strongly urge that you consider it this year. The program content is great, the speakers are fantastic, and your fellow NYFOA members are helpful and friendly. This year various foresters will take turns being available during the day to answer questions

referred to them. This segment in the agenda has been highlighted as "Ask A Forester".

I am involved with the second harvest of my wood lot located in Hamilton County. If you remember my first President's Message, you will recall how nervous I was about last year's harvest. I am not as nervous this year; but I am just as excited. I am keeping my fingers crossed that the already large amount of snow accumulated in the Adirondacks does not increase significantly so as to hamper the logger. The major concern is that the harvest is completed before the ground thaws.

A few weeks ago I was contacted by the Utica newspaper, The Observer Dispatch, to do an article regarding reforestation of New York State land, post agricultural activities. It was a genuine pleasure to do this article. I expected about a two inch column on the last page. You can imagine my surprise when I looked at the newspaper and found the article, along with a large picture of me standing next to some of my reforested trees, on the front page. This publicity resulted in several people inquiring about membership to our fine Association, and I believe this one article will result in several new members. Let's push for publicity; it does bear fruit.

This President's Message is dedicated to the memory of my mother, who passed away on February 1, 1994.

MEMORABLE QUOTES

.....most of the cost-sharing practices (FIP, SIP and ACP) would be completed by private landowners without governmental incentive, if the governmental support were redirected toward helping landowners install vehicular access Facilitating access is the best way to get landowners into their woodlots. Once there, all kinds of management and satisfaction follow. - Charlie Mowatt, NYFO J/F 94.

FORGOTTEN GIANT

By Norman Richards

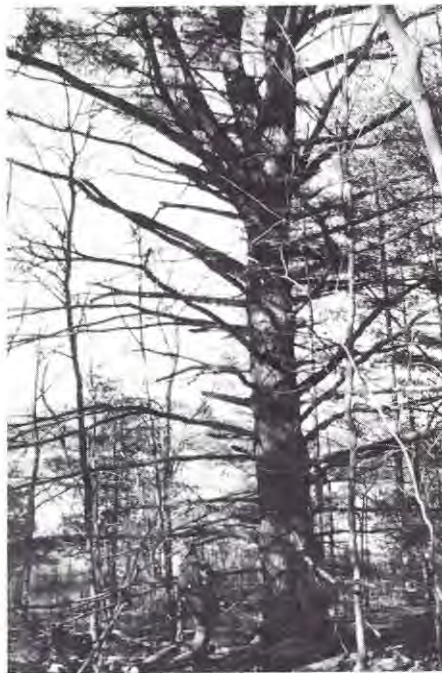
They were the loftiest trees in the primeval forests of eastern North America, surpassing any the first European explorers of the region had known at home. These great trees, called white pine for their white-filmed (glaucous) needles and given the scientific name of *Pinus strobus* by the Swedish botanist Linnaeus, were the choice timber for nearly two centuries of European exploitation. Providing taller, one-piece ship masts than previously available, the species had a significant early role especially in the rise of the British navy as a world power. Also, its light wood made it easier to raft large pine logs down our rivers to trade centers, saw them into lumber with less energy required, and mill the wood for many uses in both the growing colonies and wood-scarce Europe.

White pine continued to be our most important timber species in the first several decades after US independence, until this substantial primeval resource was depleted; and other, less statuesque species had to be used in its place before western timber became available. Apparently the maximum height of our native white pine was about 250 feet. The best documented maximum in New York was an already rare giant cut in the early 1800's in Meredith, Delaware County, that measured 247 feet—over 100 feet taller than any tree standing in the state today.

In slightly earlier history, our white pine was treasured for less exploitive values. Iroquois legend has a white pine as the "great tree of peace" under which meetings were held leading to a democratic union of the "people of the longhouse". The five-needle fascicles of white pine symbolized the five original tribes in the Iroquois Confederation. Probably many people since then who have had the pleasure of sitting on the soft-needle blanket under the light-specked shade of a large white pine have sensed the aptness of that "tree-of-peace" designation.

NATURAL HISTORY

Technically, our species must be called "eastern white pine" to distinguish it from other white pines around the northern hemisphere; especially from "western white pine" with which it evidently had a common heritage in fairly recent geologic time.



Old-field "wolf tree" at Pineholm.

But that must have been a period of different climate when more moist conditions bridged the northern prairie region that now separates the two genetic lines. These are still related closely enough to freely hybridize when brought together; so a future climate may re-unite the two lines if people allow them to survive. Our native species in the east now has a natural range from Newfoundland to western Ontario southward in a triangle down the Appalachians to Georgia. This range is fairly continuous; so there are gradations of genetic characteristics, more than separate ecotypes of the species over the range. However, there is a white pine population in the mountains of Guatemala and southern Mexico, considered a variety of our eastern white pine; this suggests a much wider range in a previous climatic and geologic time.

In New York, our white pine was reported to be dominant throughout the state before its substantial depletion by the late 1800's. This dominance requires some explanation in light of our current ecologic understanding. Soil conditions of New York predominantly favor hardwoods as the "climax" forest species; while white pine is a "gap species" which requires significant forest disturbance to allow it to compete

successfully with hardwoods. It is likely that the dominance of white pine was somewhat exaggerated because of its economic status; but nevertheless, it was apparently more prominent than its ecologic characteristics would suggest. Fire might have been indirectly helpful to white pine in some areas by reducing site quality for competing hardwoods. But this pine is not a very fire resistant species; and its winged seeds usually do not travel very far in colonizing devastated sites.

Probably windstorms were the major natural factor which provided the openings for patches of white pine to be dispersed around much of our landscape. The species is quite wind-firm, although its branches break easily in storms. On relatively poor sandy soils where most hardwoods grow less vigorously, windfall openings probably were enough to maintain substantial white pine. But on better sites where hardwoods can regrow rapidly in storm openings, white pine success has been more scattered. The species is now quite unevenly distributed around New York, and has declining prominence in our regrown forests.

Quite possibly, a factor in past prominence of white pine in our landscape was changing climate. While the 1500's apparently averaged fairly warm and dry—probably a time of greater natural forest clearing by wildfire; the period from the 1600's to mid-1800's is documented as the latest "little ice age". Its cooler average temperatures may have reduced our native hardwood growth to the benefit of white pine, while warmer temperatures since then may be less beneficial now that wildfire is largely controlled.

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A good tree (pruned after thinning) is admired by Karen Richards.

Through much of its natural range, the occurrence of significant stands of white pine on relatively good soils often has been attributed to natural reseeding of abandoned Indian fields. The success of white pine as an "old-field pioneer" was widely demonstrated in its prominent natural reforestation of abandoned colonist fields, especially in New England and adjacent areas of Canada and northeastern New York. Unfortunately, the endemic white pine weevil also thrived in the old-field stands, causing much more damage to the form of trees than they had in previous forests. Of the various pests of white pine, including blister rust, none have been as devastating to the quality of trees as the weevil. Consequently, when forest planting on old fields became an important conservation practice in eastern North America early in this century, damage by the white pine weevil was recognized as a major disadvantage to planting white pine. Otherwise, this would have been the logical primary species for planting on old farmland over most of its natural range. None of the other conifers that have been planted in this range instead are much of a match for good white pine.

MANAGING WHITE PINE

There are various measures one can take to grow white pine in spite of the weevil; but each adds to the cost of devel-

oping a good stand. The insect generally is a serious problem only while the pine are between about 5 and 20 feet tall, usually a period of 5 to 7 years. Tree leaders can be treated with an insecticide in the spring when weevils are about to lay their eggs. But, either the timing must be right or a more hazardously persistent insecticide must be used for effective control; so this has not been practiced very widely. The easiest approach is to plant white pine a little denser, 1400 to 1700 trees per acre rather than 1200 trees or less for other species. The faster crowding of the stand makes a less favorable environment for the weevil, and also helps damaged trees recover reasonably straight stem growth. Alternatively, fewer trees may be planted, and more time spent pruning the stems of the best trees to correct minor weevil damage. Also, choice of planting sites can affect weeviling. Although white pine tends to grow best on well-drained soils, weeviling also tends to be severe there. The pine grows fairly well on poorer-drained soils—except clay; but weeviling tends to be less. This may be due to a poorer environment for weevils to overwinter in the ground litter.

Only about 200 good trees per acre are needed for a full stand by the time the trees are 12 inches diameter, about minimum sawlog size; therefore, most of the planted trees must be removed before then to provide room for the best trees to grow. Usually, weeviling is worst on the larger, dominant trees and less on partially shaded, intermediate-level trees. The poor-quality "wolf-trees"—to quote my mentor, Professor Heiberg—must be removed early enough for the better quality, but weaker, trees to respond to their release. Also, the quality of clear white pine wood is high enough to warrant pruning the best trees to at least 16 feet height after thinning. For timber values, it is practical to prune no more than about 100 trees per acre; because only this many can be grown well to 16 inches diameter at which the pruning will start to pay off in significant clear wood.

In areas where white pine is naturally present in mixed stands, it may be better to try to regenerate it in harvest openings in these stands rather than grow it in plantations. The key to good quality white pine in these gaps is rapid height growth from about 5 to 50 years. During this period, the species can grow over 3 feet a year; faster



Young pines competing with hardwoods in a harvest opening.

than most other northern conifers. White pine can grow in partial shade, and weeviling tends to be reduced there. But many native hardwoods can grow at least as fast on reasonably good sites. The tough hardwood branches cause serious abrasion of soft white pine needles and branchlets; so the pines must be kept free of intruding hardwoods through their height-growth years. White pine tends to maintain height growth in a strong central stem longer than most of our hardwoods. But after 60 to 80 years, the pine crowns flatten with slowed growth, so the pines must be towering over their hardwood neighbors by then, if they are to persist to old age.

WHITE PINE AT PINEHOLM

Old-field white pine is quite prominent in the northwestern Catskills; one of the

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features attracting me to the area 39 years ago when I was looking for land to start a tree farm. I named our place "Pineholm" to honor my favorite conifer. Some old pasture areas already had yielded a crop of large short pine logs harvested from wolf trees, leaving younger pines mixed with hardwoods. Scattered pines with hardwoods had also seeded into more recently abandoned fields. Most of our tree planting on the farm was for Christmas trees. But some of our planting for reforestation included filling white pine in some areas of scattered natural pine seeding. We also planted some white pine windbreaks about eight rows wide on open hill-top fields, inspired by the beautiful field edgings of white pine on a farm near Cooperstown.

The weevil damage was discouraging in our plantings; so I ignored these for several years and turned attention to trying to improve natural pine development in old-field woods of mixed pine and hardwoods. I girdled and poisoned the poorest wolf-pines, and released better pole-size pines from intruding hardwoods to counter the natural successional process of the hardwoods replacing the pines. More recently, taking a second look at our areas of planted white pines, I found that enough trees had at least 12 to 18 feet of lower stem with only minor weevil damage to warrant thinning to release the most promising stems. I have also pruned many of the better stems 12 feet or higher in order to grow at least one log with clear outer wood free of the loose black knots that result from persisting dead branches. As others have suggested, I think it is reasonable to grow white pines with one good log and whatever lower-quality timber we can get from the rest of the tree.

Last year we realized a long-delayed plan to harvest a few of our white pines to be custom-sawn for finishing the interior of our Pineholm cabin. I selected seven



Home-grown pine lumber and author.

trees 16 to 18 inches diameter with reasonably good logs but declining vigor, and sent only the better logs for sawing. We got back 2200 board feet of one-inch lumber 6 to 12 inches wide, planed on one side after air-drying; consequently they are a little thicker than skimpy commercial lumber. What a joy to have such a store of home-grown white pine, beautiful to work with as well as to look at. The one disadvantage is that this relatively fast-grown wood is quite soft, and must be handled carefully until the surface can be hardened with a polyurethane finish. An advantage is that its growth has been quite uniform; the boards dry fairly straight. This differs from red pine which also has nice looking wood, but tends to have sharp changes in growth rates that cause warping of boards. A Norway spruce was also sawn up for us, yield-

ing serviceable lumber, but uninteresting and rather scruffy in comparison with the white pine.

THE FUTURE?

Decline in pine harvest from the western US due to both depletion of the supply and preservation of more old-growth reserves, is contributing to increasing the cost of good pine millwork and finish lumber throughout the country. Log prices for our regrown white pine timber have increased little over several decades in competition with western pine; but this should improve in the future. The problem, however, is that we really haven't regrown enough good white pine timber to offer a substantial contribution to national markets. Looking to the timber resources for our grandchildren and beyond, it should be worthwhile for us to pay a little more attention now to white pine, consciously working to increase its supply in the future. In personal terms, this has been one of the most satisfying conservation activities I am engaged in on our tree farm. Not only can we anticipate a greater yield of good pine timber in the future, but I also hope that some of our pines may grow to significant stature in remembrance of the giants of the past.

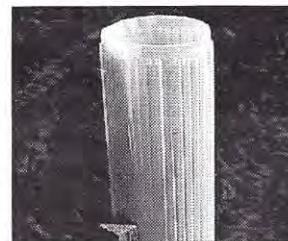
Dr. Richards is a professor of forestry at the SUNY College of Environmental Science and Forestry (ESF) in Syracuse, and a Director of NYFOA. Photos by the author.

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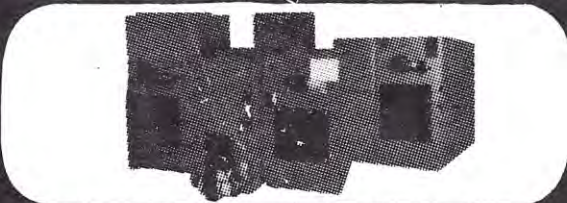


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The American Chestnut and Test Tubes

By C.A. Maynard

INTRODUCTION

Two articles in the September/October issue of the *Forest Owner*, the first by Herbert Darling and the second by Elizabeth Densmore, discussed the importance of the American chestnut (*Castanea dentata*), the disastrous introduction of the chestnut blight fungus, and the role that the American Chestnut Foundation is playing to save this once-magnificent species from extinction. I would like to discuss our chestnut research at the College of Environmental Science and Forestry. The project, partially funded by grants from the New York Chapter of the American Chestnut Foundation, is a joint effort between Dr. William Powell in the Faculty of Environmental and Forest Biology and myself in the Faculty of Forestry and a team of dedicated graduate students. We are attempting to use genetic engineering to design an entirely new gene for blight resistance. There are two parts to the project. The first part is to identify a naturally-produced compound capable of stopping the growth of the blight-causing fungus. The second part is to develop a method of delivering the gene that codes for that compound into individual cells of chestnut and regrowing those cells into a whole tree. Within each of these two areas of research, there are dozens of steps, any one of which may take weeks to months to accomplish. It will be a long project.

PART I

The first step in identifying a potential resistance gene is to examine ways in which other organisms combat fungal attacks. One defense mechanism to combat fungi directly is with enzymes designed to break down their cell walls. Many plant species, including chestnut, use this defense mechanism. Unfortunately, the blight fungus evades the chestnut's defense enzymes by producing enough acid in the immediate area of a developing canker to inactivate the enzymes.

Another defense mechanism is for an organism to release very short strands of specialized defense proteins just long enough to span the cell membranes of attacking fungi. Dozens of these small proteins clump together, forming small

holes in the membrane. Essential minerals leak out and the fungus dies.

Although not as direct an attack as an enzyme that simply rips apart the fungal cell wall, these tiny proteins can be just as effective. A number of different organisms including some moths, frogs, bees, pigs, and probably many others, produce mini proteins with these properties; but to our knowledge, American chestnut does not--yet.

Dr. Powell and his graduate students are testing several of these small proteins and plan to test more to see which are most effective against the blight pathogen. The ideal mini protein would be one that is deadly to the fungus at a very low concentration, but causes the plant no harm even at a much higher concentration. In addition, it should be completely non-toxic to humans or wildlife who will someday eat the chestnuts. After identifying a mini protein that comes closest to this ideal, the next phase of the project will be to build a gene to make these mini proteins inside the plant cell.

PART II

The second part of the project involves actually transferring the gene into cells of a chestnut and regenerating those cells back into a whole tree. Since the mini proteins are still under development, we are working with other engineered genes to develop the gene-transfer and plant-regeneration techniques. In this way both parts of the project can move forward simultaneously.

The gene transfer process will actually be carried out by a bacterium called *Agrobacterium tumefaciens*, a natural genetic engineer. Wild-type *Agrobacterium* lives in the soil and invades small wounds near the root collar of many plant species, including chestnut. When *Agrobacterium* invades a wound, it attaches itself to plant cells, pokes a microscopic hole into the cell, and injects small pieces of DNA. The DNA travels to the nucleus and is incorporated into the chromosomes of the plant. Wild-type *Agrobacterium* injects genes that cause the plant's cells to divide rapidly, producing a warty gall, called a "crown gall." The bacteria then live and multiply happily inside the gall.

Bacteria are much easier to manipulate

than plant cells. It is a routine procedure to remove the small segments of DNA that *Agrobacterium* injects into the plant, cut out the gall-inducing genes, replace them with "designer genes," and reinsert the segment of DNA back into *Agrobacterium*. These "tamed" laboratory strains can no longer cause gall formation, but they can transfer the desired DNA to plant cells.

The final step is to regenerate whole plants from the transformed cells. At the tip of every growing shoot is a region of a few cells called the **apical meristem**. These cells are unique in that they grow and divide very rapidly and are capable of producing all the aboveground portions of a plant. We are now attempting to cut thin slices through the tips of tiny chestnut shoots and transform them with *Agrobacterium*. We know that we can regenerate new shoots from these shoot tip slices, but we do not know yet if the *Agrobacterium* can successfully transform them. This work is just beginning, and we won't know if it is successful for several months.

What I have outlined above is a research plan and a description of work in progress, not a finished project. We have enough results to be excited about continuing, but we are many years away from having blight-resistant trees. However, the basic philosophy and procedures for genetic engineering of plants outlined above have been used successfully in transferring useful genes to other valuable crop species such as tomato, corn, and potato. Closest to commercial release is the Flavr Savr® tomato. This new variety produces fruit that turns bright red and sweet just like the standard varieties, but the flesh stays firm much longer. Typical "store-bought" tomatoes must be picked green so that the fruit can withstand shipping but Flavr Savrs can be vine ripened and should arrive in the grocery store with much more of their "just-picked" flavor. Thanks to biotechnology, Christmas dinner may include salads topped with sweet juicy tomatoes and American chestnuts roasted once again over the open fire (or perhaps in the microwave).

Charles Maynard is a Forest Geneticist in the Faculty of Forestry SUNY College of Environmental Science and Forestry.

THE FOREST TAX HORIZON- A Particular View

By Michael C. Greason

Would you like a user friendly forest tax law that could help you retain your forest land?

As an outcome of public hearings held this past fall, a report on New York forest tax laws has been prepared by the New York State Department of Environmental Conservation (DEC) and the State Board of Equalization and Assessment. I will summarize the concerns expressed at the hearings and discuss the report's recommendations.

At the hearings there was substantial concern expressed over program consistency between Sections 480 and 480-a of the Real Property Tax Law, administrative problems and inequities inherent in 480, and the desirability of having one forest tax law. This has led to a recommendation to repeal 480. A two year phase-in is proposed during which time any landowner enrolled in 480 would have the opportunity to commit to the new version of 480-a or return to full value assessment without any severance penalty. Any parcel under 480 could participate in the new 480-a regardless of size; therefore even 15-acre parcels enrolled in 480 could become certified.

Also at the hearings there was strong support for State reimbursement to protect localities from the tax shift presently caused as people enroll in the forest tax law. There was recognition that forests provide benefits to society as a whole; and yet the burden of the exemption falls solely on the communities where the enrollments occur. Filtered air and water, viewsheds, and wildlife are examples of the social benefits of forest land; but even the direct economic benefits of well managed forests have broader impacts. Landowners often sell timber to loggers from another town who, in turn, may sell to several mills. The mills then sell raw wood to secondary manufacturers across the state and the finished products are even farther reaching. Thus the forest industry is a major element in New York's economy. Consequently, the report recommends a State reimbursement program; however, it kicks in with a one percent tax shift trigger and regional caps on forest land assessment to protect both the localities and the State treasury. The trigger is activated when the amount of land subscribing to the exemption equals or exceeds one percent of the

assessed value within the taxing jurisdiction. The cap on assessment prevents localities from raising forest land assessments unrealistically high in order to gain inappropriate reimbursement.

It is proposed that the level of benefit for commitment remain at 80 percent but an additional incentive might be offered (perhaps up to 10 percent additional) for meaningful free public access as set forth in the landowner's approved management plan. And there would no longer be an alternative means of calculating the exemption, so the process of determining the exemption is made easier.

At the hearings, many people called for less governmental oversight and micromanagement. Several asked for a broadening of management options utilizing the concept of forest stewardship. The report responds by recommending a forest stewardship approach that parallels the new federal Forest Stewardship Initiative and companion Stewardship Incentives Program (SIP). The work schedule would be relaxed so landowners could work at their own pace and direct management goals meeting the criteria for SIP. At the time of any harvest, a forest management prescription would be submitted to DEC for approval and certification of a stumpage value for payment of the 6 percent stumpage tax as presently collected. This approach recognizes that the forest is most subject to damage at the time of harvest; and approval of harvest plans presents an opportunity for assuring the societal benefit sought for under the forest tax law.

With a forest tax law that is no longer solely timber production driven, the report recommends including land that may not be forest, but fits within the forest stewardship concept. Therefore the report suggests including rock outcrops, swamps, ponds, non-agricultural openings, protection forest (forest too steep or fragile to harvest wood products from), Christmas tree plantations, maple sugar bushes and similar areas not included in the present version of 480-a.

Much of the program administration is recommended to remain the same. There would continue to be an initial filing with the Department, the assessor, and the county clerk and annual filing with the assessor and DEC. This process ensures that there is continued contact with the participant so

revocations are more apt to be avoided. The present 10-year rolling commitment to maintain the forest continues with the same penalty rates applying. Amendments, revocations and voluntary withdrawals would continue under present process. Stumpage taxes and fines would be collected by the State to offset the State reimbursement; but revocation penalties would continue to go to the county because the one percent trigger for reimbursement does not totally reimburse the locality for the tax shift. A new fine process could be established to allow for greater latitude for handling minor violations of the commitment. Not all violations would trigger a revocation.

The additional incentive for public access would be tied to the forest stewardship plan, thereby allowing the owner the appropriate control over the property. Therefore, it is recommended the incentive be on a sliding scale dependent on the degree of public access that is permitted.

Concern over "pockmarking" of open space caused by leases including structural development of second home sites and camps led to a recommendation that some control over this sort of activity be included. Yet there also is a concern in protecting an individual's right to build a home for retirement or a child. Discussion over density, allowing a single structural compound, or some other means of controlling removal of portions of committed tracts yielded a recommendation that structural development on a committed tract be in accordance with an approved plan.

These are the primary issues being addressed as a result of the hearing process and report. I believe this is a user friendly forest tax law. It retains teeth to ensure the land remains in forest use. It protects the forest at time of harvest to assure the cut is conducted according to accepted silvicultural and best management practices. But the landowner would no longer be held to a specified work schedule nor forced to perform noncommercial forest improvement. The owner would select management goals and be encouraged to actively manage the resource.

Mike Greason is a NYS DEC Associate Forester. Revisions to the forest tax laws were proposed in the Governor's Message and are part of Legislation S6486/A9186.

THE FOREST TAX HORIZON - A General View

By Henry S. Kernan

In earlier and simpler times, property assessments were broad-based and state-wide. Their purpose was to raise revenue, not to influence the behavior of taxpayers or to distort markets. The property tax has since evolved toward local levies upon real property alone, with exchange or market value the measure, rather than current use or income-producing potential, as previously.

The results are widely perceived as inappropriate to the special problems of forest land ownership. Hence the many programs of preferential tax treatment. Many of these programs go back to earlier concepts of current use and income potential. They have done so partly in response to present-day concerns over conversion of forest land to other uses, break-up of ownerships into smaller units, and the low yield of forest products compared to the yields better management could bring about.

The contention herein is that a better way exists to assess forest land, and that manipulating the real property tax with exemptions, penalties and the like is a poor way to promote forestry.

Without much regard to locality, ownership, size and condition, all trees and forests:

- withdraw carbon dioxide from the atmosphere;
- add oxygen to the atmosphere;
- intercept precipitation;
- pump moisture out of the soil;
- cast shade;
- create conditions favorable to human amenity;
- provide food and shelter for wildlife;
- enrich and aerate the soil;
- store carbon in wood fiber.

a better way exists to assess forest land

Those are the functions which primarily shape the public's perception of forests. To the affluent, sentimental inhabitants of cities and suburbs, timber is secondary or even excluded as an object of forest stewardship. Witness the spotted owl on the west coast and New York's 2.7

million acres of forest preserve on the east coast. Under public pressure, federal forests are becoming less and less reliable as sources of timber. Millions of forest owners indicate their preferences by paying more in property taxes than they receive in stumpage.

The degrees to which forest carry out those environmental functions vary much less than their capacities to produce timber. Some are more aesthetically pleasing than others; some grow faster; some are more congenial to wildlife. Nevertheless and broadly speaking, they are uniform in their environmental values, or at least perceived as such by the public.

Those values are the acceptable base for taxing forest land. We need a property tax applying to all private forest lands, without the confusion and erosion of exemptions and preferential tax treatment. All forests have much the same public and private benefits; and to much the same degree. They vary more regarding timber, but timber is not perceived as important. **A uniform rate applied to all forest lands** does away with the endless expenses, complications and inequities of assessments by individual assessors based upon current use, market value, income potential or conformity to a management plan.

An important consideration in setting the rate is the relation between the benefits forest supply to the public and the services the forest receive. Timber production is not a good measure; it varies too much over time and place. The environmental benefits are listed above. The services received are principally protection, research, extension and technical assistance, all state responsibilities. Even with no tax, forests have low monetary yields unless the rotations are very short. They are not good sources for funding general social purposes such as education and welfare. To treat them as such is to bring about the very conversions, fragmentations, and over-cutting so much deplored.

Balancing benefits and services would, I believe, result in a real property tax low enough to encourage investment and long-term management.

The timber industry is a heavy user of roads and bridges. **A compensatory tax is justified, but upon units of timber rather than value.** Hemlock logs wear road and bridges over which they travel as much as

cherry or ash, regardless of value.

A third tax suggested is upon the **conversion of forest land to more intensive uses.** A conversion tax is not a penalty, but is socially neutral. It compensates the public for the additional services required by the new uses.

A uniform rate applied to all forest lands

The foregoing tax proposals are intended to conform to the public's perception of forest values and to compensate for services received. To promote other social goals, means other than the tax system are probably more appropriate.

Henry Kernan, forester and Master Forest Owner, is a frequent contributor to the NY FOREST OWNER and a staunch critic of NYS's Forest Tax Laws.

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CHAPTER/AFFILIATES

SOUTHERN TIER

The January meeting's program was Forest Management & Sensitive Natural Resources. Ray Nolan, a natural resources specialist with DEC, reviewed both the wetlands and stream protection regulations, including how they may impact timber management. He discussed how an individual can determine whether a particular stream is listed as protected by DEC. He also addressed how wetlands may be enhanced to improve wildlife habitat.

The next meeting will be the annual potluck supper on Friday, **March 25, 1993** at the Farm and Home Center on Front Street in Binghamton. This will be a joint meeting with the Broome County Christmas Tree Growers Association. Doors will open at 5:30 P.M. and dinner will begin at 6:00 P.M. Members and guests should bring one or more dishes to pass, together with their table setting. Drinks will be provided. NYFOA president Don Wagner will be present to meet everyone and sample the cooking. He will also briefly update members on the upcoming **April** state meeting in Syracuse and other Association initiatives.

NORTHERN ADIRONDACK WEST

NAC staff met just before Christmas to lay out the next upcoming event and plan the next NAC News. During the meeting it was decided that there would be three scheduled woodwalks and/or meetings per

year scheduled at the same time each Year. There will be a Spring meeting on the **second Saturday of April**; our summer meeting will be in conjunction with the area tree farm meeting planned for the end of July or beginning of August; and a fall woodwalk for the first weekend of October.

The next member meeting will be on **April 9th** and shall be primarily a forest tax workshop. Planned topics shall include accounting and income taxes, Forest Tax Law 480-A, cost sharing opportunities, management planning, and timber contracts. The meeting will be held at Paul Smith's College. Anyone who wishes to attend had better call in advance, as the event will be canceled if we do not anticipate at least 25 to attend the meeting. Contact Bob Howard at (315) 265-7560.

CENTRAL NEW YORK

Ignoring the bitter cold weather, 25 people attended our 480A Tax Law meeting on January 20th at St. Paul's Methodist Church in Syracuse. Bill Burlingame, DEC forester in our region, answered many of our questions and brought us up to date on proposed changes to the 480A tax law. Two very informative (and interesting) presentations of actual 480A experiences were given by Judy and Peter Gianforte. Not only did we learn the basics, but from the Gianfortes' experiences, one can see that there are many issues to be considered. A most enjoyable part of the evening was seeing new faces and talking to people interested in NYFOA. We hope to see these same "new" faces at our first annual Covered Dish Supper on **March 19th** to be held at St. Paul's at 6:30 pm.

April 16th at 10:15 AM Bob and Marge Sykes will host a woodwalk at Fox Ridge Farm in Elbridge (315/673-3691).

CATSKILL FOREST ASSOCIATION

On Saturday, February 5, CFA hosted a seminar on 480a and Forest Stewardship to introduce Tree Farmers to CFA and NYFOA. Thirty-two participants attended the program at the Shandaken Town Hall.

The 480a discussion was led by DEC foresters. Jerry Gotsch of Region 3 and Peter Innes of the Region 4 office in Stamford. The second half of the program featured a slide presentation on the Stewardship Incentives Program (SIP) by DEC forester Tom Backus.

Another CFA success story: A CFA member was approached by a logger who offered him \$5,000 for some trees. We suggested that he hire a forester to plan and mark the sale. The logger raised his offer to \$10,000; but the member followed our suggestion. The forester marked the kind of harvest that the member wanted and put the sale out to bid. In the end the original logger won with a bid of \$26,900; and the forester oversaw the harvest to ensure that the member got what he expected.

April 23 we will have a tree planting workshop (914/586-3054).

SOUTHEASTERN ADIRONDACK

30 people attended a Sunday meeting in Glens Falls despite a record low temperature of -34°F. A new slate of officers will direct the chapter: Chairman, Gregg Mackey; Vice chairman, Mike Valla; Treasurer, Polly Fullerton; Secretary, Jean Beard; and Newsletter Editor, John Hastings.

Joanne Triffs exhibited and discussed 150 slides of wildflowers growing in the Adirondacks. Joanne co-authored a book with Anne McGrath entitled "Wildflowers of the Adirondacks".




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WESTERN FINGER LAKES

WFL would like to thank Donald Pfromer for our January program. He and his wife own a Christmas tree farm outside of Walworth. Members and guests were put to the test with a quiz on tree species. Mr. and Mrs. Pfromer brought twelve different cuttings from trees grown on their property to identify. A potted tree was awarded to the winner of the quiz. No bottled air freshener could match the natural fragrances of the cuttings. There was an added attraction provided by Carol and Phil Fox; they played a video that showed past Tree Farm Award winners.

March 30th we will have a meeting on ponds. Our scheduled speaker is Steve Lewandowski from the Ontario County Soil and Water District. Steve will address pond uses, construction, and maintenance. Contact Dale Schaefer (716) 367-2849 eve.).

THRIFT

Recently elected to the coordinating council were Betty Woods, Harold Petrie, Bernie Davis, and Charlie Sprague. 1994 officers are: President, Harold Petrie; 1st Vice Pres., R. Mark; 2nd Vice Pres., M. Virga; Treasurer, R. Watson; R. Ovia, Public Relations; B. Woods, Secretary & Hilltalk Editor; and R. Mark, Program Chairman.

March 1st, Bob Demeree will discuss



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the pros and cons of RPTL 480A. **March 23** at VVS High School in Sherrill at 7:15 PM, Paul Curtis of Cornell University and Bernie Davis of Region 6 NYS DEC will provide the program.

NIAGARA FRONTIER

On January 30, 1994, nine NYFOA members attended a cross-country ski and lecture at Allegany State Park. The cross-country ski was on your own on the Park's extensive trail system. The conditions were great, and all the skiers enjoyed themselves. The lecture was given by Jim Rich, who gave a slide show demonstration of various pressures on the Park's forests. Jim Rich explained that past oil and gas drilling, together with future proposals, are severely impacting on the Park's forested land. Jim also showed slides and explained the location of tornado activity in the Park and what the Park had done to salvage the timber blown over by the tornado. All who participated felt that the presentation was very informative and that it was a beautiful day to enjoy the cross-country skiing of the Park, and it left them with at least one favorable memory from that fateful day (Super Bowl Sunday).

ALLEGHENY FOOTHILLS

On February 5 the AFC co-hosted, with the Ellicottville Cooperative Extension, and others, a seminar on the FIP and SIP Programs, Safety in Your Woodlot, Tree Diseases, Tree Identification in Winter, and much more. The seminar was attended by about 250 people. The AFC served lunch and helped with parking and registration. We netted about \$500 for our treasury from the lunch. A big Thank You! to all the members of AFC who participated in the programs, helped with lunch, registration and parking. We had not lack of willing volunteers.

After the program, at a quick business meeting, we set our March activity ... a trip to the sugarbush and syrup making operation of Gerry and Mary Perkins of Cuba, New York. We will meet at 10 a.m. on **March 26th** at their farm. For more information call the Perkins' at 716-969-1660 or Betty Densmore at 716-942-6600. Bring a bag lunch and watch for NYFOA signs.

Legislation

By David J. Colligan

One of our members, Owen Mangan of Buffalo, called my attention to a new law, Section 242 of the Real Property Law. The law requires that sellers of real property provide written notice to a prospective purchaser of a lack of electrical services to the property being sold. The new law also requires notice to a prospective purchaser of any electrical and utility surcharges which are being assessed against the property being sold. Both notices must be provided prior to the contract. Current regulations require that a utility provide 500 feet of single phase electric line along a public road to a new customer at no cost. Any extra costs are at the customer's expense. If the property owner does not pay the full cost at once, the cost is placed into a "surcharge" that is spread in the gas or electric utility bill. The law does not require disclosures as to gas availability but does cover gas surcharges. Gas surcharges expire after 10 years, but electric surcharges can continue in perpetuity.

The penalty for non-disclosure is payment of actual damage; that is, the undisclosed cost that the purchaser pays. This new law should be complied with by anyone selling rural land. Tell your sales agent to add a notice complying with this law to the description of the property they supply to interested parties. Ask your attorney when he reviews the sales contract to add an acknowledgement by the purchaser that this disclosure was made to the purchaser prior to the date of the sale contract.

The Envirothon

At the January 22, 1994 meeting of the NYFOA Board of Directors, the Board voted to support the Envirothon at the regional level by matching Chapter or Affiliate donated funds not to exceed \$25 per donor. The Envirothon is a competitive high school program organized in New York State by the NYS Conservation District Employees Association, Inc.

Think Globally, Act Locally, Together

EXPORTS - a growing force in northeastern woodlots

By Alan Knight

Politicians and trade associations fuss over who'll win and who'll lose because of NAFTA and GATT (the North American Free Trade Agreement and the General Agreement on Tariffs and Trade). Meanwhile, northeastern farmers and land owners are already pocketing more foreign-earned dollars because they've got something the world wants: trees.

Not ordinary trees; some of the best hard maple, ash, cherry, and oak on earth is produced here in what one veteran forester nicknamed "the hardwood capital of the world": central and western New York and northern Pennsylvania.

The Japanese know it. So do the Koreans, Taiwanese, English, Germans, Belgians, French, Italians, and Spaniards.

And they pay well. Indeed, they pay so well that political arguments for creating jobs by keeping logs here for processing into exportable dimension lumber and furniture — at present — make no cents. Foreign buyers commonly outbid domestic buyers.

Jerry Miller, a Portland (Chautauqua County), New York, consulting forester who has turned himself into a log broker and exporter, estimates that 20-25 percent of the region's hardwood production ends up aboard ship in the form of logs, dimension lumber, or value-added products like cabinets and doors.

Miller handles export for Allegheny Highlands Hardwoods, a confederation of ten New York lumber mills too small to

have their own export departments. Thanks to a \$40,000 grant from the New York State Global Export Marketing Service (GEMS), as well as contributions from the participating companies, Miller trots the globe like a Secretary of State, promoting northeastern hardwoods at trade shows and through sales trips tightly scheduled and coordinated by our overseas embassies. On one recent trip to Europe, he met with 22 European companies in 15 days, all pre-arranged through U.S. embassies, and sometimes through the New York State Department of Economic Development office in Germany.

"They even provided a translator," says Miller.

Miller is very high on the degree of assistance the industry has received from both state and federal agencies.

Some of that government support and understanding came through a late-80's "Governor's Task Force on The Forest Industry."

"The politicians found out what we already knew," Miller says. "New York has some of the very finest hardwoods. They figured it was a way to help stimulate the economy and create jobs."

GROWTH INDUSTRY

Dana Fitzpatrick, executive vice president of the Fitzpatrick and Weller Inc., of Ellicottville (Cattaraugus County), New York, says 50 percent of his hundred-year-old company's output is now exported. Ten years ago, only 10 percent went abroad;



Finding export markets for New York hardwoods: Jerry Miller.

twenty years ago, almost none.

The company makes furniture components and hardwood dimension lumber.

Fitzpatrick, who is in the fore of national trade association lobbying efforts, notes several trends that shape today's export markets. No surprise, the environmental movement is at or near the top of the list, he says, but for different reasons in different places. Domestically, spotted-owl fever in the Pacific Northwest has constricted timber supplies and, even though that region produces softwoods, our hardwoods have been able to supplant softwoods for some uses, such as in flake board used in paneling and furniture components.

Paradoxically, the "greens" movement in Germany has restricted production of chipboard there (due to related air pollution in the manufacturing process, Fitzpatrick says) leading to the politically-correct preference for "natural" solid-wood furnishings made of U.S. hardwoods, thank you very much.

Fitzpatrick also thinks he has seen a heightened demand for northeastern hardwoods because of international pressure to save the rainforest. Furniture manufacturers in Japan and Singapore who bought tropical and subtropical hardwoods, increasingly look to U.S. woodlots as the next best source.

Smaller apartments in Europe and elsewhere also affect demand, says Fitzpatrick.

HOW IT HAPPENS

A key to stimulating exports in recent years, and likely to remain so in the future, is the American Hardwood Export Council (AHEC). Dana Fitzpatrick says the Council received about \$3.5 million last year from the Foreign Agricultural Service (FAS) of the U.S. Department of Agriculture for development of export markets. With European markets now considered "mature," the Hardwood Export Council is targeting such lesserdeveloped markets as Singapore and Mexico.

The funds finance foreign travel — "trade missions," as they are called in the trade — for industry groups to attend overseas shows and exhibits, and to make sales calls on prospective buyers.

Many export sales leads are obtained through periodic listings published by AHEC and funded by FAS. It's as though AHEC produces a sort of Pennysaver listing of products and materials needed abroad, as expressed by the companies that need them. Export-minded timber companies then follow-up, typically by fax machine.

Light-colored hardwoods, such as oak, maple, birch, and ash, brighten small living quarters, making them appear larger.

UPS AND DOWNS

While export sales have been a boon to northeastern woodlot owners the past few years, they've slowed recently.

"Fortunately," notes Jerry Miller, "export demand seems to rise when domestic demand drops, and vice versa. Two and half years ago, domestic demand was in the pits, but international demand was strong. The United Kingdom has been a tremendous market, but the past six months couldn't have been any worse [for that market]."

Miller estimates that while Japan's purchases of northeastern hardwoods increased five percent over the past two years, they fell back one percent the past six months. Dana Fitzpatrick cites recession there.

Europe has been in a recession for a year, says Miller, who has been there on several sales trips the past two years, and "Italy has been hit with spending cutbacks from its corruption scandals."

He adds, "Japan's purchasing has decreased tremendously. But Fitzpatrick is confident of a rebound. "They build about a million and a half homes a year."

Kevin King, executive director of the Empire State Forest Products Association, agrees that "things leveled off this September and October."

As overseas demand cooled in the summer of '93, domestic demand roared at a record pace, pushing prices — including prices paid to land owners for logs — to unprecedented heights.

"Fifteen or twenty years ago, maple was the craze in Japan," says Jerry Miller. "They wanted it for bowling alleys. Then the price came down quite dramatically. Then red oak was hot for a few years. More recently, it's been ash, cherry, and hard maple again, tied to the furniture market. The new fad seems to be veneer-finished ready-to-assemble furniture.

Another shift in the export market is in sawlogs -- that is, logs slightly inferior to near-perfect veneer logs. Jerry Miller has found that it is no longer true that only the best logs are exportable. Through work done independent of the Allegheny Highland Hardwoods group (which does not deal in raw logs), Miller has found that

sawlogs are also in demand overseas, and he has made something of a specialty of finding export markets for them.

Good news, indeed, for New York and Pennsylvania farmers.

Language is no obstacle, says Jerry Miller. "English has truly become the language of business. And all transactions are quoted in dollars."

Better yet, says Miller, foreign sales are actually less risky than local sales. Protocols of selling abroad dictate bank guarantees and required letters of credit from overseas buyers.

"The money is wired to our account before the logs are even unloaded."

This article first appeared in THE AMERICAN AGRICULTURIST. Alan Knight, NYFOA Award winner for 1989 currently serves on NYFOA's Editorial Committee.

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THE BARK BEETLES

By Douglas Allen

IMPORTANCE

The bark beetle family Scolytidae (skol-lit-i-dee) is represented in North America by more than 500 species, among them some of our most important forest pests.

Forest owners should be concerned about scolytids; because nationwide, members of this family kill more trees than any other agent. Most especially, it is a handful of species associated with commercially valuable conifers (i.e., "softwoods" or cone-bearing trees) that pose serious economic threats. Pines, spruces and firs, for example, are highly susceptible once they are weakened by drought, defoliation, poor site conditions, physical damage, excessive crowding, or old age.

Many hardwoods also are host to bark beetles, but generally the latter are not as damaging as their conifer-feeding cousins. The European elm bark beetle is an exception, of course. This introduced pest, and the fungus that it carries, is responsible for the demise of one of our premier shade trees.

APPEARANCE

Adults are 1/32 to 3/8 of an inch long (Fig. 1), and hard bodied. Depending on the species, they can be light tan, reddish brown or almost black. Beetles are found on or beneath the host bark.

The immature stage or larva is 1/5 of an inch or so long when fully grown, legless and distinctly segmented with a fleshy, whitish, elongate to slightly curved body (Fig. 2). The tan to brownish head has well developed chewing mouthparts. After the larva completes feeding it transforms into an immobile, nonfeeding stage called a pupa (pew-puh), which is whitish and resembles the adult in size and general appearance. It is during the pupal stage that adult characteristics are formed. Larvae and pupae occur only beneath the bark.

LOCATION OF DAMAGE

Bark beetles are often referred to as innerbark insects, because the damaging life stages feed and burrow immediately beneath the host bark. Heavy infestations girdle the trunk and (or) branches of an infested tree by destroying important food conducting tissues and cells responsible

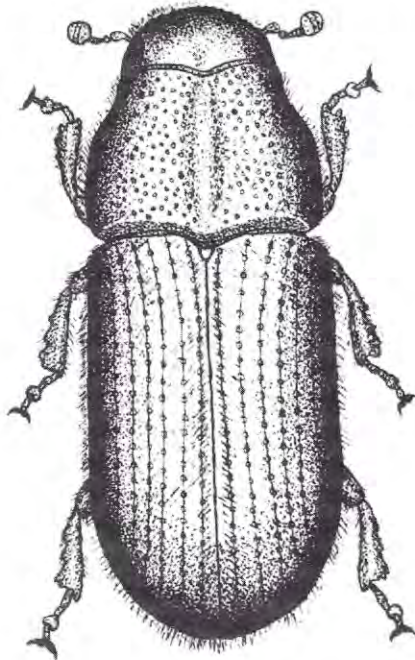


Figure 1. Top view of a bark beetle.

for growth. Innerbark borers do not excavate tunnels into the sapwood or heartwood of the host as do true wood borers. However, the galleries of some scolytids, collectively known as "engraver beetles", are etched on the surface of the sapwood (the area exposed when you peel bark off a log).

ECOLOGICAL ROLE

These insects are considered secondary in an ecological sense, because generally they require a stressed or weakened host. Normally, they are unable to successfully attack a healthy individual, either because it is not chemically attractive to them or beetles are unable to overcome the defensive mechanisms of a vigorous tree. There is an important exception to this behavior.

Populations of some bark beetles, most especially those associated with conifers, may build to very high densities in stressed trees, slash or extensive blow downs. When a large number of adults emerge and seek another host to continue the life cycle, they may mass attack healthy trees and overcome the host's ability to produce abundant resin (pitch), the major line of defense. The first wave of beetles is killed by excessive resin flow as individuals attempt to penetrate the bark of a healthy tree, but siblings that follow can readily establish because the host is now stressed and resin flow is impeded.

Bark beetles play an important beneficial role in forest communities by breaking down dead and dying woody material, one of the initial steps in nutrient recycling. Their presence in standing trees signifies the occurrence of a stress or disturbance that predisposed the host to attack. More often than not, this predisposition is associated with human activity.

HOST FINDING

Scolytids could put a blood hound to shame! The tiny beetles have evolved an incredibly sophisticated ability to detect chemical odors associated with a stressed host and to sense chemicals produced by siblings for the purpose of mate finding and host colonization. This powerful sense of "smell" is due to highly modified sensory cells in their antennae.

SPECIES OF CONCERN IN NEW YORK

In our region, the most important species in this family are the pine engraver, *Ips pini*; eastern larch beetle, *Dendroctonus simplex*; red turpentine beetle, *Dendroctonus valens*; and spruce beetle,

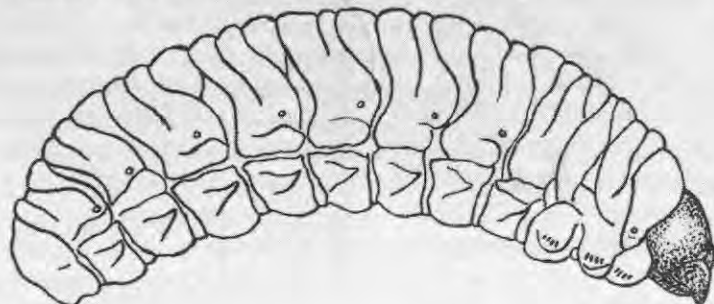


Figure 2. Side view of a bark beetle larva.



Figure 3. Pine bark with two pitch tubes; arrow designates an entrance hole.

Dendroctonus rufipennis. A newcomer that is gaining notoriety as a threat to the Christmas tree business is the introduced pine shoot beetle, *Tomicus piniperda*. Species of *Ips* (pronounced as "hips" without the h) are most often associated with severely stressed standing trees, trees that have been felled recently and freshly cut logs. Members of the genus *Dendroctonus* (Den-drock-toe-nus), literally meaning "killer of trees", generally are found in standing trees. *Tomicus* breeds in newly cut pine logs and stumps. When adults emerge in the spring, they damage Christmas trees by boring into, and killing, the tips of lateral shoots.

DETECTION

The first evidence of bark beetle activity is the appearance of very fine, almost powdery, reddish brown boring "dust". This material is produced as adults burrow through host bark. Borings accumulate in bark crevices or at the base of standing trees immediately below each entrance hole. On downed logs or branches, it collects in small piles on the ground and may also coat areas of bark.

The next sign of activity in a needle-bearing host appears shortly after beetles penetrate the bark of a live tree and, in the process, sever resin canals. The sticky

NY FOREST OWNER

resin, commonly referred to as "pine pitch" or "spruce gum", flows out the entrance hole and eventually accumulates as a hardened mass attached to the bark around the opening (Fig. 3, whitish mass beneath arrow). Species that periodically sweep their egg galleries clean of borings must extend the entrance hole to the outside of this mass (Fig. 3, see arrow). A mass of hardened pitch with a hole in the center is referred to as a "pitch tube". Once the adult is beneath the bark, he or she (depending on the species) excavates a brood gallery (Fig. 4,A) where eventually eggs are deposited.

Shortly after eggs hatch in the brood gallery, larvae begin feeding in the innerbark, on the same plane as the brood gallery but moving away from it (Fig. 4,B). The combined damage that results when many brood and larval galleries coalesce eventually destroys so much innerbark tissue that foliage becomes discolored. Reddish-brown or "fading" foliage and the presence of entrance holes, dust and (or) resin is clear evidence of a bark beetle attack.

WHAT TO DO?

The best hedge against a bark beetle problem in conifer stands is prevention through maintenance of tree and stand vigor:

- i) Plant species on sites to which they are well adapted (consider soil, aspect, elevation, geographic location, etc.);
- ii) Thin stands at appropriate times in their development to avoid excessive competition for growing space;
- iii) When doing stand improvement work or prescribed thinnings, avoid a large buildup of slash that may serve as breeding material;
- iv) During silvicultural operations, take care to minimize physical damage to the residual stand;
- v) Remove trees heavily damaged by severe weather such as ice, lightning or high winds.

If one of your objectives is to manage pine or spruce for sawtimber, trees or freshly cut logs that are infested with bark beetles should be processed and dried as quickly as possible. Bark beetles introduce many different microorganisms into infested material. One group, the blue stain fungi, rapidly discolors wood and this may result in serious grade loss.

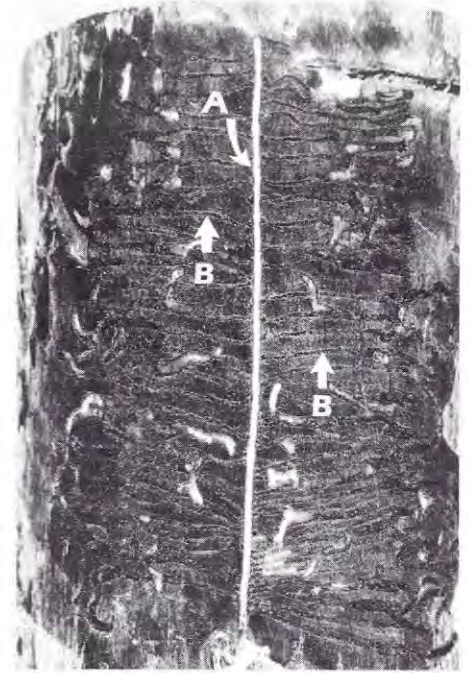


Figure 4. Bark beetle galleries in inner bark; A - brood or egg gallery (white vertical line) made by adult, B - two of several larval galleries perpendicular to the egg gallery.

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THE FOREST AND DEER

By James M. Savage

About 30 people participated in a "woodswalk" on October 9 sponsored by the Northern Adirondack Chapter of the NYFOA. The woodswalk took place on SUNY-ESF's James F. Dubuar Forest in Wanakena, a 2,800 acre forest, home to ESF's Forest Technology Program (a.k.a. the Ranger School). Dick Sage, coordinator of ESF's Adirondack Ecological Center, and Jennifer Hill, a graduate student at ESF, led the walk.

Wayne Allen, who assists with the management of the Dubuar Forest, began the woodswalk with a review of the recent history. Mr. Allen explained that the forest had been cut-over hard by the Rich Lumber Co. between 1900 and 1910. Subsequently, several fires burned through the area, often originating with railroad locomotives. Since 1912, the year the Ranger School opened, extensive areas have been planted to conifers, either by Ranger School students or by the C.C.C. (Civilian Conservation Corps). Today the Dubuar Forest is about 50% conifers.

Next, Jennifer Hill highlighted some of the white-tail deer research that is currently conducted on both the Huntington Forest in Newcomb, and the Dubuar Forest in Wanakena. The research is funded in large part by the National Park Service. On many Park Service lands, deer populations are exploding; and the Park Service feels that the increasing numbers of deer are harming plant and animal life and are in conflict with park management goals. As hunting is prohibited in National Parks, the current research centers are seeking alternative ways of reducing the burgeoning deer populations, alternatives that will be socially, politically, and economically acceptable.

As Jennifer explained them, the primary objectives of the research that ESF is conducting are to test the following hypothesis:

1. By removing a family unit of deer a localized population void can be created, and that such a void will persist for at least two years;
2. The translocation of deer as family units will result in higher survival rates than have been observed in the past; and
3. The creation of a localized void in a deer population will permit an adequate

amount and diversity of plants to regenerate and develop in height beyond the reach of deer.

To test the above hypotheses, a family unit of deer which has been marked and monitored closely for several years will be trapped and transferred from the Huntington Wildlife forest in Newcomb to the James Dubuar Forest in Wanakena. Back in Newcomb, researchers will monitor the "void" that has been created, taking special note of how long it persists, and of how plant and animal abundance and diversity change, following its creation. Over in Wanakena, the "newcomers" will be observed to determine how they interact with the resident deer population. (The resident population has already been marked and monitored for a year). In addition, mortality and reasons for mortality among "newcomers" and resident deer will be carefully documented.



Dick Sage (center) describes the impact of deer in a clear-cut. Right of Dick is Jennifer Hill, who is involved with the current research project.

Photo by author.

Following Jennifer's thought-provoking presentation, the group headed for "the bush." The convoy made several interesting stops, each time discussing a bit about deer ecology, deer management, and the details of the deer research project. At one stop, for example, the group learned about

the box traps that are used to live-trap the deer so that they can be measured, weighed, tagged, etc. Jennifer set the trap upon our arrival, but to no avail: we didn't catch any deer. We couldn't even trap one of the prospective NYFOA members who were present! Too bad We could have charged a year's membership fee in exchange for their release!

At another stop, a small clear-cut, Dick Sage discussed the impact that deer have on natural tree regeneration. Deer are drawn to recent clear-cuts where abundant tree regeneration (FOOD!) can be found developing. Because they prefer some species of trees over others; however, deer may affect the species composition of regeneration. Other impacts include delayed height growth of seedlings, stem deformities, and/or reductions in the amount of regeneration. These effects are demonstrated by erecting "deer exclosures" (small, fenced-off areas that are inaccessible to deer but accessible to smaller animals) and observing the differences inside and outside the fence. In the clear-cut visited on the woodswalk, several deer exclosures had been erected a year earlier. Already, comparative differences in the amounts and heights of tree seedlings were apparent!

Where deer densities are very high, regeneration may be prevented all together. This is exactly what is happening in some of our National Parks (and other lands as well) and, thus, why efforts to find alternative methods of reducing deer populations are underway. Even if deer populations can be held down for just a few years, that may be enough time for an adequate amount and diversity of regeneration to become established and to grow out-of-reach of the "hungry herds." Only time will tell!

If you are interested in learning more about the deer research mentioned in this article, contact Dr. William Porter, principal investigator for the project, or Jennifer Hill, graduate research assistant, at SUNY-ESF in Syracuse. Needless to say, NAC's recent woodswalk was interesting and informative and FUN FOR ALL!

Jamie Savage is Asst. Professor in the SUNY/ESF Forest Technology Program of the NYS Ranger School at Wanakena.

ASK A FORESTER

By Mark Kurtis

Question: What is the best way to thin my woodlot? Specified diameter size? Is there one diameter that is best?

Answer: Not surprisingly, this question is familiar. Can a landowner make a quick and easy decision based on little or no data and not end up "stripping" the woods in the course of selling timber?

The best answer is a long one. Almost all of us want a short answer and will make our own if one is not supplied so; I do have a comment that I hope will be taken with the salt with which it is served. Also answers cannot be universal; and there is more opportunity for debate than there is room for, here. It seems to me through observations and discussions that the answer could well be; yes!

The last 100 years of our State's land use and its resources, as well as the markets effecting those resources has been that the increase in value of many timberlands has

out paced the backsliding effects of the past "abuses". However, the science of Forestry can demonstrate on paper the eventual economic ruin of the careless landowner. Or can it? What constitutes abuse of land in America? What will the future demand on our woodlands be? What species will be most valued? What use will be dominant?

If you consider what you have, what you want, and what you will be doing for your future, you can sell timber on a diameter basis and still own profitable timberland. Note that my experience is in an area of New York where virtually every stand is an even - age stand of currently high value species having been "picked through" once or twice. I view the future of each stand as having an unavoidable destiny with a prescription for a regeneration cut. That's not inherently bad but it is a different discussion.

There are optimums for maintaining or manipulating stand structure and composition for maximizing tree growth and

financial yields. You could do a thorough inventory, then compile a stand and stock table (including all stems to 2" dbh, an understory assessment, wildlife corridor and land form mapping, too); and develop a marking guide considering all of the aspects of the ecosystem.... and finally mark the stand for sale holding as close to the guide as is artfully possible.

You could do that. However; I feel that when a stand has been cut to a diameter using good old eyeball judgement of its ability to tolerate such a cut; that, by the time the next 15 to 25 years roll around, the price of stumpage is disproportionately high compared to other commodity price changes; the trees have grown well despite their being the "weaker" suppressed trees of the original stand; and priorities and specifications of the industry have changed.

Mark Kurtis is a graduate forester (SUNY/ESF 1983) and member of NYFOA, Allegheny Foothills Chapter.



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A GREATER MEDICINE

By Jane Sorensen Lord, PhD, OTR, ND

"To the Iroquois many plants were medicine. But, understand that medicine includes all that elevates, soothes or heals the human body and spirit. Medicine includes fresh air, good water, gentle wind, all that makes us feel, be stronger, and endure. In Seneca-Iroquois, the word love is derived from the word medicine.

"Plants are used as part of, and to assist, nature; so healing can take place. Wild plants make the strongest medicine, much stronger than ones grown on herbal farms. The wild plants are stronger because they grow in their natural surroundings which provides them the best medicine.

"When the Indians use wild plants to assist healing, ritual processes are followed from the picking, to the ingestion. The strongest plants are never taken; and for those which are taken, something else is left, like a fallen apple or a handful of new soil, to nourish the remaining plants and to support the earth. The idea is to never take without giving.

"During the careful preparation of the plant, thanks are given again. In traditional medicine all people recognize and respect the living plants and what the plants do. A reciprocal relationship exists between plants and traditional people. Plants, and, indeed, the whole earth are owed respect for healing. Healing is spiritual and reverent as well, not at all like modern medicine where the pill is given power over the person, and"



Wild
Ginger

I had called Mike DeMunn to ask him to suggest healing plants that I could re-introduce to my forest. Because my land had been farmed or grazed, wild medicinal plants had disappeared from the under-story. Mike is a professional forester, of Seneca-Iroquois and French heritage. Dave

Taber of Cornell University introduced me to Mike after he read my second article on herbs. "You might find him interesting," he wrote.

Interesting is an understatement. After a conversation with Mike, I understand differently; and I walk around for days talking to myself and writing down questions to ask him.

I ran down a list of plants that I wanted to plant in the woods. "No, golden seal wouldn't be happy there. It is very hard to grow. Why don't you try wild ginger? It likes to be near water, but not in clay. And it likes to grow under maple, basswood, and ash. It will take several years for the plant to mature and spread. It has beautiful large heart shaped leaves and a brown flower."

Mike suggested that bloodroot would grow in a similar environment. I already found that out because I had successfully transplanted it after observing where the mother patch came up each spring. I knew that the roots, which really do seem to bleed, were used as a red dye. I did not know that the "blood" was put on closed skin eruptions, like warts. I guess that is because I have always sold my warts to my mother for a nickel; and they went away!

"Tell them to plant mullein in large forests clearings." In herbology it is used for colds, sinus, and lung problems. It relaxes the smooth muscle and relieves congestion. In an oil of the flowers it is good for earaches. It likes gravelly, well drained soil.

"Also, plant catnip where it is moist. I've noticed it likes to live around the edges of barns. Catnip tea warms and relaxes and is used along with many other herbs." I successfully grow catnip in a pot hanging from the lowest branch of a pin oak. My ten cats devour it, if it is on the ground!

"The forest plants are as important as its trees. They nourish soil, provide food and cover for small animals. Once you learn to identify them, you often can tell the type of soil and know what else can grow there. A healthy forest is a whole, balanced ecosystem that supports all life. You must understand that all the parts must be there to make it so."

In one conversation I asked Mike if he had a Seneca name. He does. It is Da-Hah-da-nyah, the name of a chief long ago. It



Bloodroot

means he protects all things [in the forest, NY was 95% forest].

Dr. Jane is an occupational therapist and a naturopathic doctor.... Mike DeMunn studied forestry and ecology at the University of Montana. Mike is the adopted son of Gay-ono-say, the Seneca herbalist.

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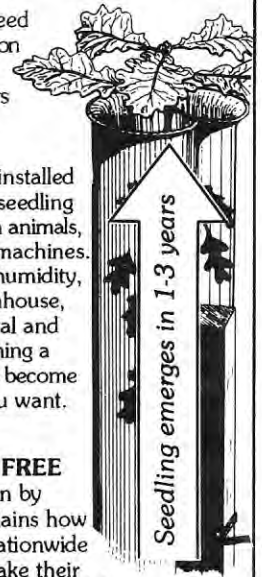
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LETTERS

An Arbor Day Woodswalk

The best attended woodswalk on my Otsego County land was prompted by the publicized offer of free seedlings from the understory of a White Spruce plantation. The seedlings were easily extracted from the duff by troops of boy and girl scouts. The prodigious number of seedlings would have otherwise perished for lack of light.

Henry Kernan, South Worcester

Trees vs. Forests

For "ACT II" ["PLAY ON WORDS", JAN/FEB '94], I agree with the director who said, "we plant trees ... but we manage forests"

It seems like trees and forests are important words to people. Would a solution, then, be to change the motto to: "Growing today's trees for tomorrow's forests"?

Russell Seaman, Rougemont, NC

At the January 22, 1994 Board Meeting, the motion to change NYFOA's logo was defeated; the original motto, "Growing tomorrow's trees today", remains.—Ed.

Bugs Revisited

I am a NYS Tree Farmer and recently became a member of NYFOA. I write a weekly column for the WATERTOWN DAILY TIMES called the Black River Journal. The subtitle, Nature, Nurture and Nostalgia, gives you an idea of its concerns.

I would like to obtain reprints of the topics listed on page 21 of the NY FOREST OWNER (Jan/Feb '94) [Articles by Professor D. Allen; see page 14 this issue for no. 13 in the series which deals with particular insects and general ecological issues.] I plan to use them as references for future columns.

Louis Mihalyi, Glenfield



The American Chestnut

Because I remember the chestnut trees growing on the farm where I was born and I expect to be planted; I applaud your efforts to beat the imported blight that destroyed one of the greatest trees that graced our native forests.

As a youngster, I scraped pailsfull of chestnuts from my Dad's sawmill roof after a hard frost. We had several large chestnut trees growing in a farm lot used for pasture and orchard. When the nuts matured, we had to confine the pigs; they would grab every nut that fell. A small room in our home was used to dry the nuts, at times nigh a foot deep which required stirring to prevent mold.

As I recall my Dad planted buckwheat at chestnut blossom time. He was buried in a chestnut coffin; the grave site for the past 72 years has never required any fill - I suspect the coffin is still intact.

While you may be "jousting with windmills", I honor your efforts to save the American Chestnut tree and hope and pray for your success.

Lfee Signor, Moravia

VALUES

Many a poem has been written about the Beauty of God given trees;
And of their worth to us here on earth,
But what of their destiny?
Now a tree is much like a person;
They live and grow old, but what for?
Some end up a cross on a steeple;
Some a plank in a bar room floor.
Some men are born to be famous;
Some rich, but many are born to be poor.
When we think of what lies in the offing;
Is the body more important
That they put in the box;
Or the tree they destroy for the coffin?

from: *Sentimental Journey*, A collection of poems by Lfee Signor.

Useful Information

Having complained some time ago that the Forest Owner published mostly social hype: meeting proceedings, chapter news, award ceremonies, reminiscences and what I call "obituaries", i.e. departure notices of famous members, it is only fitting that I send congratulations to you and the Editorial Committee now that things have turned so much better. I am particularly grateful for articles by Douglas C. Allen and Norman Richards and Charley Mowatt, to mention only the best. These give readers excellent insight into what is happening in the woods. Now we can behave in a more informed manner in our forest by understanding what trees, insects, soils and climate do. Sure, I could go to the Forestry School library, but I rather pay twice as much for the FOREST OWNER and have good and useful info delivered to me in language and form that I can easily comprehend. Keep up the good work!

Peter Levatich, Brooktondale

The Marketplace

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Mar 23: THRIFT; 7:15 PM, VVS High
School, Sherrill, Paul Curtis & B. Davis

Mar 25: STC; 5:30 PM Binghamton
Extension; Pass-A-Dish Dinner with
Xmas Tree Growers.

Mar 26: AFC; 10 AM; Sugaring;
Perkin's Sugarbush; Cuba; (716) 942-
6600.

Mar 30: WFL; 7:30 PM; Ponds; S.
Lewandowski; Monroe Co. Extension;
(716) 367-2849 eve.

Apr 16: CNY; 10:15 AM; Woodswalk;
Elbridge; (315) 673-3691.

Apr 23: CFA; Tree planting Work-
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Apr 29: ARBOR DAY

**APR 30: NYFOA SPRING MEET-
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NEW YORK FOREST OWNERS ASSOCIATION

32nd ANNUAL MEETING

SATURDAY, APRIL 30, 1994

Marshall Hall Auditorium
SUNY College of ES and Forestry
Syracuse, New York

8:30 a.m. Registration in Auditorium Foyer
Coffee and Donuts in Nifkin Lounge

9:30 a.m. ---- **Welcome and Opening Remarks**
Don Wagner

9:35 a.m. ---- **Business Meeting**
President's Report - Don Wagner
Executive Director's Report - John Marchant
Treasurer's Report - Clara Minerd
Chapter Affairs - Charles Mowatt

PROGRAM: WOODLOT OWNERSHIP FOR FUN AND PLEASURE

10:30 a.m. ---- **Pond Design, Permits and Construction for Woodlot Owners**
Richard J. Mc Climans, P.E., SUNY/Dept. of Forest Engineering at CESF

11:15 a.m. ---- **Woodland Mushrooms - The Good, The Bad and The Ugly**
Dr. George Hudler, Professor, Cornell University

12:00 p.m. ---- **Buffet Luncheon - Nifkin Lounge**
Presentation of Awards

1:30 p.m. ---- **Rabies and Wildlife - What Woodlot Owners Should Know**
Laura Bigler, Cornell University Diagnostic Laboratory

2:15 p.m. ---- **Managing Wild Flowers in Woods and Fields**
Dr. Norman Richards, Professor, SUNY/CESF

3:00 p.m. ---- **Program Evaluation and Summary**

Ask A Forester - An opportunity throughout the entire day to talk 1 on 1 with a Forester

Advanced registration is required by April 14 to confirm luncheon arrangements

----- DETACH ----- COMPLETE ----- MAIL ----- BEFORE ----- APRIL 14, 1994 -----

32nd ANNUAL MEETING RESERVATION FORM

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NEW YORK FOREST OWNERS ASSOCIATION, INC.

Nominations for Directors of the Association BIOGRAPHICAL SKETCHES

TO ELECT: Four (4) Directors for Three (3) Year terms: (1994 - 1997)

JOHN T. HASTINGS is a forester (SUNY/CESF '70) with DEC working out of the Warrensburg office. He is NY's outstanding TREE FARM Inspecting Forester with over 150 approved Tree Farms credited to his efforts. Since 1984 the family has owned a 30 acre Tree Farm in Washington County. John serves the Southeast Adirondack Chapter as Editor of their newsletter. He enjoys being a Civil War history buff. The Hastings reside at: RR 5 Box 338 West Mountain Road, QUEENSBURY, NY 12804 Ph.:(518-798-0248).

CHARLES P. MOWATT is a forester (SUNY/CESF '58), now retired after 32 yrs. of service with DEC. He is a member of the NYSAF. In 1968, he and Marion purchased their 150 acre Cattaraugus County Tree Farm. They are NYFOA members since 1988. Charles is a past Director and Officer and serves as Chairman of the Chapter Relations & Development Committee. He is a member of the Executive Committee. The Mowatts mailing address is: P.O.Box 1182, SAVONA, NY 14879 Phone: (607-583-7006).

NORMAN A RICHARDS is a Professor of Forestry at SUNY/CESF and for 30 years his 190 acre Delaware County property has been a Certified Tree Farm. Norm has served NYFOA for 30+ years in many capacities. As a Director, Officer, Program Chair, Program Speaker, Program Arrangements, Committee chairman or assignments, his support and contributions of both time and talent have been valued. Presently he serves on the Long Range Planning and Awards committees. The Richards reside at: 156 Westminster Ave, SYRACUSE, NY 13210 Phone: (315-472-3696).

ROBERT A. SYKES is retired from General Electric after a 36 year career. He manages his 120 acre Town of Skaneateles Tree Farm primarily for recreation. Bob's interest in Forestry has developed through his long NYFOA membership. His latest acquisition is a sawmill. The Sykes reside at: 4786 Foster Road, ELBRIDGE, NY 13060 Phone: (315-673-3691).

ELIZABETH WAGNER is a homemaker who works part time for a veterinarian clinic involved solely with race horses. She, with her husband Don, are actively managing two Certified Tree Farms. In 1977 they purchased their first (30 acres) and in 1991 the second (190 acres). The larger property has four forest compartments with improvement cuts scheduled each year beginning in 1992. Betty is extremely interested in forestry. She donated to the Central NY Chapter a handmade quilt that was raffled to benefit its treasury at the '93 Fall Meeting. The Wagners live at: RD 1, Box 203C, Graham Road, UTICA, NY 14420 Phone: (315-733-7391).

-----Detach-----Complete-----Mail---BEFORE APRIL 16, 1994-----To-----
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ROBERT A. SYKES _____ ELIZABETH WAGNER _____

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