

FOREST OWNER

A Publication of the New York Forest Owners Association

January/February 1989

THE NEW YORK



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THE NEW YORK FOREST OWNER

Published for the New York Forest Owners Association by
Karen Kellicutt, Editor

Materials submitted for publication should be addressed to: Editor, N. Y. Forest Owner, RD #1, Box 103, Lisle, New York 13797. Articles, artwork and photos are invited and are normally returned after use. The deadline for submission is 30 days prior to publication in January.

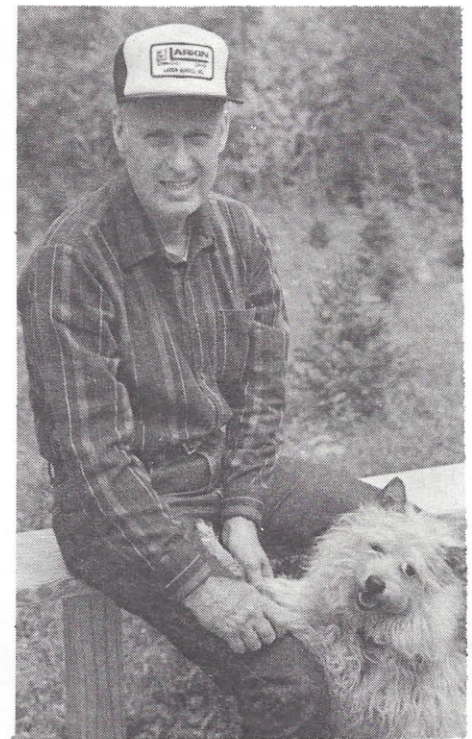
Please address all membership and change of address requests to Executive Secretary, P.O. Box 123, Boonville, N.Y. 13309.

President's Message

As we write this, we are getting ready for Christmas. It's more fun than usual this year as the white spruce we planted as 6" to 1' seedlings eight years ago are now a little over seven feet tall and a few of them are shaped pleasingly enough to be Christmas trees. Our kids and their spouses both have older homes with high ceilings so my trees will not do for them. Maybe in a few years. And I am still the token male in the ladies' handbell choir at our church. We have a few concerts this season and we greatly enjoy it. I ring the big bongers which are hard for the ladies to lift and not possible for them to ring with one hand. So, we hope that, by the time you see this, you will have had a lovely and peaceful Christmas and New Year's.

What's ahead in the New Year for NYFOA? We would like to sell some advertising in this magazine and help defray the cost. We have discussed how to go about it at Board meetings but without any clear idea of how to proceed. Karen can't do it; we know that. Howard Ward talked to Alan Knight, our former editor, and he is unable to do it just now. I talked with Bob Williams, the retired editor of *Pennsylvania Farmer* and three other farm publications. We had some ideas. Our circulation is too small to have a salesman, even part time. We might be taken on by a service which places ads and we will look into this with our local paper. Any of you are invited to do the same.

Bob also suggested we approach companies who sell their products state-wide such as the chain saw distributors or Agway. We used to have an ad from Agway. And hey,



J. Morgan Heussler

Dick Fox, what about the chain saw people? Bob thought we could sell our back cover, inside back cover and inside front cover for \$400 per issue. And, if any of you members know a prospect for an ad, please let us know. We'll keep working on this.

1989 should see another chapter for sure and one or two more if things work out. Mary McCarty has a full calendar of woodwalks scheduled and they will be worth your time. Al Horn has the Spring meeting pretty well in place and the Fall one will happen too. We need better attendance at Board meetings but if you can't come, at least notify Ruth Thoden please.

Snow Shoeing — Both Work & Play

By DEAN FROST

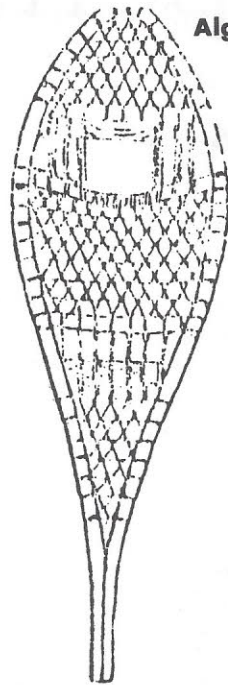
By the time Christmas tree sales are finished here, the snow is getting deep in the woodlands of Frosty Mountain. The snow may melt off in the open areas of our tree farm, but not so in the woods, where it keeps building all winter to a depth of two to three feet or more.

This is the best time of year for timber cruising, for the leaves are off in the hard woods, making it easy to see and leave tracks in the snow, showing the areas already checked.

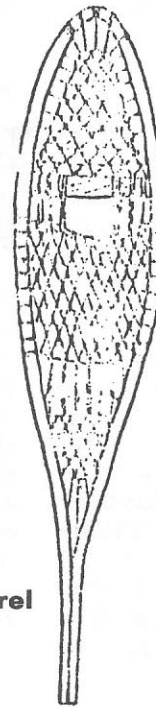
But how is it done with all that snow?

Well it is time for pack boots, warm clothing, pack basket and snow shoes. For now we will look at snow shoes and leave the pack boots and pack basket for another time. Walking on snowshoes is as easy as walking on bare ground. No training period and no practice are needed. This is one advantage that snowshoes have over cross-country skis. The beginner, the first time on snowshoes will be doing fine after the first dozen paces. About the only thing a novice snowshoer should keep in mind, is to remember to pick up his foot and move it over the edge of the stationary snowshoe, and place it down ahead of the other snowshoe. Snowshoeing does not require any sort of cumbersome gait with the feet far apart as in cross country skiing.

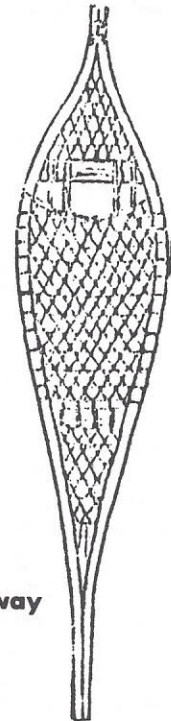
In breaking trails over new soft snow, the snowshoer should keep the tips of his snowshoes free of snow. The toe should ride high. The way to do this is to take shorter steps. Snowshoes with long tails and up-turned tips have a built-in advantage over the others, sooner or later every snowshoer falls. Generally this happens on slopes or when a snowshoe catches on small stubs, fallen saplings or other debris on the forest floor that are buried beneath a blanket of snow. Just make sure your snowshoes are on a horizontal plane and kneel on them to stand up. Small trees can sometimes be useful to pull yourself up with. In extreme cases, you may have to unbuckle your harnesses and move your snowshoes under you to form a solid platform.



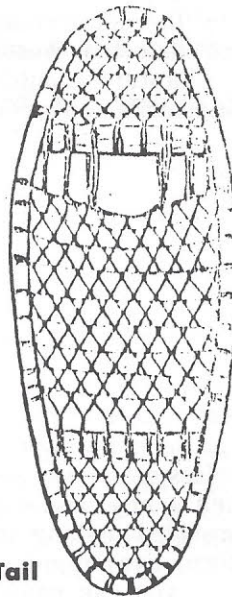
Algonquin



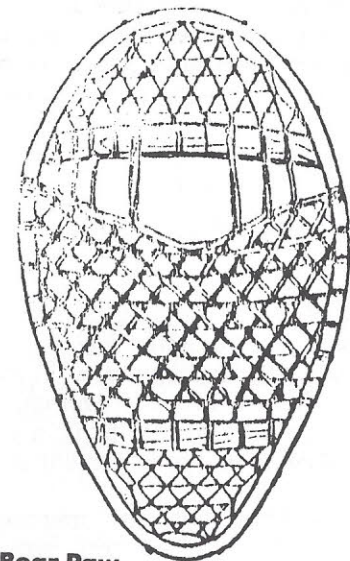
Pickerel



Ojibway



Beaver Tail



Bear Paw

Making turns on snowshoes is much easier than on skis. You simply move one foot in the direction you want to turn and swing the other in front of it. The tips of the snowshoes move the greatest distance, while the tails just pivot. To make a sharp turn, one snowshoe is turned 180 degrees, and when it is solidly on the snow, the other is brought around beside it.

There are essentially five basic styles or shapes of snowshoes. They have many variations and their

names depend on where they are used.

The Algonquin — This is the most versatile and useful type of snowshoe and also the most popular. It is sometimes called the Maine or Michigan model. The shape is a classical teardrop with a fairly long tail and up-turned toe. It is ideal for some open forests, but can also be used effectively in heavy brush. It is a good trail snowshoe.

Continued on Page 10

Chapter Reports:

Western Fingerlakes

43 Attend Chapter Meeting

By JOHN MARCHANT

The Western Finger Lakes Chapter held its first general meeting on November 16, at the Monroe County Extension Offices. Forty-three people were present to hear a very exciting and inspiring talk by Dr. John Kelley of the Department of Natural Resources, Cornell University. John started his talk by reminding us of the importance of private forest lands as well as the personal and social value of maintaining them in an increasingly efficient manner. The main topic of the evening was "The American Chestnut Foundation" for which John is the New York State coordinator. He showed us many photographic examples of what a truly outstanding species the Chestnut used to be and reviewed the history of its very rapid decline. Quite a few of us were surprised to hear that these trees were once called the "Redwoods

of the East" because of their magnificent stature and dominance.

The exciting part of John's presentation came from the optimism he shared concerning the possible recovery of the species. Through the Foundation's efforts, new cross breeding programs have started to show some promising results, and the new techniques of gene splicing emanating from the field of microbiology are starting to generate increasing enthusiasm.

John brought with him many fine examples of Chestnut leaves, nuts and hulls which led to a lot of informal discussion over coffee and cookies for the remainder of the evening.

All in all it was a great kick-off for a new local chapter and the enthusiasm shown by the membership at large indicated that the Western Finger Lakes Chapter should make a valuable contribution to NYFOA.

Cayuga Chapter

By BERNICE KAHLER

Bill Millier's band saw mill on Riley Road in Moravia was the location of the last Cayuga Chapter meeting on November 12th. Approximately thirty people watched Bruce Richards, a sawyer from a local mill explain the rules and complexities of grading and scaling logs.

After a brief business meeting, Bruce described defects, etc. which determine the grade and amount of usable lumber in a timber log.

Bruce then invited members to attempt to scale eight logs which Bill Millier had provided. Following this, Bruce scaled the eight logs. Then Bill sawed three logs which Bruce measured to show exactly how many board feet each contained.

The presentation was interesting and professional, the weather was crisp and sunny, and refreshments were provided making the meeting both informative and enjoyable. If you missed it, you can catch the video which Barb Clark recorded.

1989 Woodswalk Schedule

Committee: Ruth Johnson, Mary McCarty, Earl Pfarner, Alec Proskine

MAY 13 —

Second Saturday — Arnot Forest — Gary Goff, Leader
Alec Proskine in charge of details, 9370 Congress Road, Trumansburg NY 14886

JUNE 10 —

Woods of Karen Anderson, Machias. Afternoon in nearby Arboretum. Bruce Robinson Forester. Karen's phone No. 716-353-8800. Address P.O. Box 306 Machias 14101.

JULY 29 —

Woods of John Marchant and George Appleton — Wheeler and Avoca area.

John Marchant, 936 Little Pond Way, Webster, NY 14580.
George R. Appleton, 32 Peer St., Honeoye Falls, NY 14472

OCTOBER 14 —

Catskill Forest Association, details to be announced. Contact person -

Lou Tirrito (914) 586-3054.

Letters

Thierstr. 9
D 4400 Muenster
West Germany
April 28, 88

The Editor

NYFOA

P.O. Box 123

Boonville, NY 13309

I have long enjoyed your publication and appreciated the advice from "Ask a Forester."

I would very much appreciate a series on the subject timber stand improvement. The subject is often referred to but little has been written about it in the *Forest Owner*. Section 480a of the tax law requires landowners to "thin" a stand. I would like to see this idea of "thinning" discussed in the *Forest Owner*. One could approach it from the do it yourself side and from the assumption that the land owner would get outside help. In the latter case one would like to know how much it would cost, and who does it. Here alone, I am sure you would have enough material to keep the *Forest Owner* interesting for the next couple of years.

I am enclosing my membership dues for the next two years.

There is one other suggestion that I have for inclusion in the *Forest Owner*. I would very much like to know what goes on in detail at the NYFOA meetings. Would it not be possible to write up summaries of the talks given there? I live in Germany and cannot attend the meetings.

Sincerely,
James N. Martin

Mr. Martin,

Thank you for the kind words. We will have an article on timber stand improvement in a future issues. Also, look for a report on the November board of directors meeting in this month's magazine.

Sincerely,
K.K.

Continued on Page 11

Report from Nov. Director's Meeting

Reported by Ruth Thoden

Please submit chapter reports by Feb. 1 for the March/April issue. Send to: Karen Kellicutt, RD 1, Box 103, Lisle, N. Y. 13797.

MINUTES — NEW YORK FOREST OWNERS ASSOCIATION — Board of Directors, November 12, 1988 — 10:30 A.M., Room 213, Marshall Hall, SUNY ES & F, SYR.

ATTENDING: Tom Conklin, Richard Fox, Morgan Heussler, Harold Petrie, Alec Proskine, Bob Sand, Robert Hellmann, Allen Horn, Earl Pfarner, Sanford Vreeland, Donald Gilbert, Howard Ward, John Marchant.

EXCUSED: John Thorington, Donald Colton, Stuart McCarty.

ABSENT: Dean Frost, William Lynch, Wendell Hatfield, Donald Kellicutt.

ADMINISTRATION

— Minutes of October 7, 1988 meeting approved.

— Financial report of November 2, 1988 approved. Letter from treasurer read requesting input from members for 1989 budget.

— Tom Conklin appointed to attend meeting in Syracuse November 16 of new interagency team called by United States Forest Service.

— Correspondence included letter from Commissioner Thomas A. Coughlin, III, Department of Correctional Services regarding our resolution supporting the consideration of using wood fiber at Cayuga Correctional Facility.

— Sand submitted expenses for the fall membership meeting and Heussler commended Sand on program arrangements.

MEMBERSHIP

— Thoden, reporting for Colton, stated letter to delinquent members is ready to be included with copies of magazine when received from Karen Kellicutt. Cost of printing additional copies will be \$100.00.

— Heussler reported he had talked with Charles Mowatt, DEC, Elliottville, who is very interested in starting chapter in the Cattaraugus, Chautauqua Counties area but he wants Colton to contact him for input into how to start chapter.

BY-LAWS COMMITTEE

— Heussler directed each board member to peruse current by-laws and bring to next board meeting any recommendations to be approved by board and go before general membership meeting in April.

PROGRAM COMMITTEE

— Board approved topics of management of woodlands for wildlife and utilization as topics of spring meeting to be held April 29, 1989.

LEGISLATIVE COMMITTEE

— Gilbert reported legislative action:

S.7614 bill creating NYS Forest Resource Industry Council passed legislature; vetoed by Governor — reasoning: wait until task force presents findings.

S.6756 applies the state forest products sales bidding rules which now apply in reforestation areas to state sales from wildlife management areas. Means that all DEC states sales will be administered under one set of rules.

S.7802 480-A program (all bills) died in committee.

A.2804-A S.1944-A authorizing DEC to designate and regulate the habitats of endangered and threatened species died in committee (Senate ENCON). Gilbert reported that investigation of how CFA and NYFOA are incorporated reveals that NYFOA can take stands in legislative matters being incorporated as a trade association (501.C5) while CFA (501.C3) as a charitable organization cannot. Legislative reports published in future by NYFOA must be signed by someone other than Don Gilbert to avoid conflict of interest with his employment status.

EDITORIAL COMMITTEE

ADVERTISING MANAGER: Ward will contact Alan Knight; if Alan not interested, Heussler will contact Bob Williams, retired editor of Pennsylvania Farmer for Advice.

Issues theme for magazine; all board members are to submit ideas to Allen Horn.

Mailing labels: Kellicutt to submit bill to treasurer and hire someone to affix mailing labels to magazines.

LONG-RANGE PLANNING COMMITTEE

Vreeland reported on telephone meeting with members of committee and recommended that the board approve the mission statement adopted in 1983 by the board which would enhance work of committee in developing long-range goals for the association. Board approved the mission statement after adding No. 6 to read as follows: Network with related organizations in promoting common objectives.

WOODSWALKS — NO REPORT.

COMPUTER COMMITTEE

Board requested Marchant to prepare article for publication which will inform members of the software available to them for management of woodlands; i.e. inventory; tax accounting; analysis of forest data.

CHAPTER REPORTS

Cayuga — Fox reported that a log scaling and grading workshop is taking place 11/12/88 in Tioga; newsletters are slated to be published on regular basis.

Tioga — Chapter inactive because Ward has not been able to dedicate necessary time to keep it active.

Western Finger Lakes — Marchant reported first chapter meeting slated for November 16; John Kelly, Cornell Cooperative Extension will be speaker on topic of values of non-industrial private woodland Ownership and American Chestnut Association.

Southern Tier — No report.

AFFILIATE REPORTS

CFA — Gilbert reported on two woodswalks held in September and October; newsletter should come out on 11/14/88; next meeting will be on topic of 480A taxes. Membership drive is underway with 50 new members reported; membership totals 176 at present time.

REPORT OF FISH & WILDLIFE FALL MEETING — NO REPORT

REPORT OF SAF MEETING

Marchant reported on attending four days of SAF meeting in October; attended keynote speeches and all seminars geared to NIPFO. He

Continued on Page 11

Wood In Pipe Organs?

By HOWARD O. WARD
Photos by Bruce H. Ward

We've all thrilled to the glorious music of a pipe organ. How many of us know anything about its construction other than it has pipes which create sound when air is blown across an opening in the pipe (somewhat like a referee's whistle)? When is a pipe not a pipe? What is a wind box? What is "Tracker Action"?

When you watch an organist play, you see fingers pushing keys similar to those of a piano. Do you notice that the organist's feet are also pushing pedals (keys) at the same time? Probably not. I've heard an organist play a whole piece with his feet only. What notes do the feet play? Those in the bass clef. Are they metal pipes like those of the treble clef but larger? Usually not. **They are of wood!**

How can there be wood pipes? They're not pipes in the usual sense, but open or closed ended wooden boxes standing vertical on the wind box. They have slotted openings like the metal pipes. Some of them are huge. A sixteen foot tall pipe approximately ten inches square made of $\frac{3}{4}$ " boards is common. A thirty-two foot tall pipe creates such a low frequency sound that you can actually feel it as well as hear it. It creates a sympathetic vibration in the seats and structure of the building. At one time I belonged to a church in Connecticut which had a beautiful organ. As a choir member, I sat on a fixed bench (built in) in the choir loft. Whenever the organist played that lowest note, I could feel the vibrations in my seat. I could literally feel the music in my rear end.

Let me take you through an organ and show you all the wood. This particular organ was purchased second hand and installed in the Methodist Church here in Candor in 1902. It was originally built in Buffalo by Garrett House in 1861. It is one of six built there believed to be still in existence in this country. My Mother was the church organist from 1907 to 1962, a total of 55 years, so it was natural that I became familiar with it.

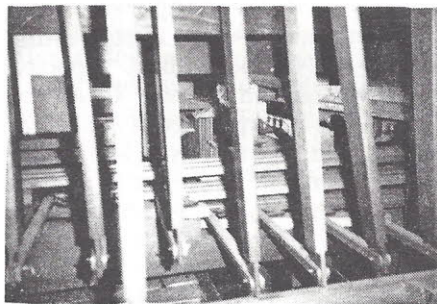
As a matter of fact, for a few years, I supplied the power that fed air through the pipes by operating a hand pump that pushed air into the bellows. The hand pump was replaced by an

electric motor powered blower sometime in the 1940s. In 1984 the organ was completely dismantled, disassembled and then rebuilt to its original integrity by organ builder Gregory Hand of Owego, N.Y.

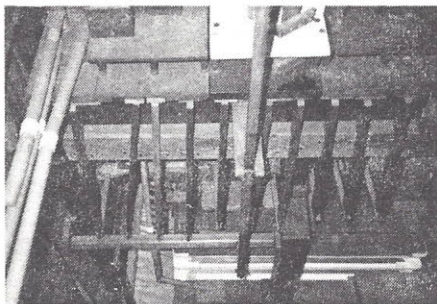
Here we go. The front of the organ show at the right is of oak and was built by the Moller Organ Company of Hagerstown, Md. Some of the pipes seen in the photograph are active pipes but a majority are only for display.

Can you see the foot pedals at the bottom of the picture under the organist's bench? These are the "keys" that play the lowest notes. The pedals are all of hard wood.

The round buttons to the right and left of the keyboard are called "stops". When one of these is pulled out, it opens a valve allowing air to go to a different "wind box" which supplies air to a different set of pipes, either having a different tone or a different range. When you pull out a stop (you've probably heard the phrase "pull out all the stops" which means "give it everything you've got") the following happens. Through a wooden and metal linkage of rods and levers you pull on the horizontal rods near the bottom of this picture.

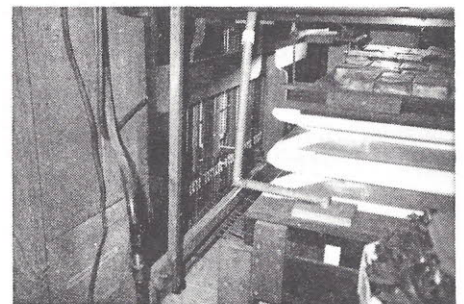


That in turn moves the vertical levers which are hinged on pins near the top. (See bright horizontal pins on the heavy wood frame in the next picture.) This pulls open a valve (at



the top of the lever) to a respective windbox. The valves are of wood, also.

The white lines near the bottom of the picture are soft leather strips joining the folds of the bellows. These are shown more clearly in the next picture. The folds of the bellows are wood boards. Note the paper wrapped bricks on the top of the bellows. These provide the weight that gives constant air pressure in the bellows at all times regardless of air usage, as long as air is being pumped in at the same time, or until the bellows is empty.



This organ has what is called a "tracker action". That means that the keyboard keys are mechanically linked to the valves of each pipe on the various windboxes. This mechanical linkage is a series of levers and spruce strips or reeds, approximately $\frac{3}{8}$ " wide and less than $\frac{1}{16}$ " thick which pull open the spring loaded valves. They are in tension whenever a key is depressed.

Continued on Page 10

Ask a Forester

Send Questions to: Wes Suhr, R.R. #1, Box 59B Oswegatchie, N.Y. 13670

By WES SUHR

FRESHWATER WETLANDS ACT POLICY

"It is declared to be the public policy of the state to preserve, protect and conserve freshwater wetlands and the benefits derived therefrom, to prevent the despoliation and destruction of freshwater wetlands, and to regulate the use and development of such wetlands to secure the natural benefits of freshwater wetlands, consistent with the general welfare and beneficial economic, social and agricultural development of the state."

Such is the declaration of public policy of the Environmental Conservation Law, Article 24, Freshwater Wetlands, enacted in 1975. Most of us recognize the many benefits of freshwater wetlands, the primary ones being: breeding, nesting and feeding grounds for many forms of wildlife; recharge zones for groundwater supplies; flood/storm or runoff control; water quality control or sediment traps; and recreational, educational and research areas. Once these benefits are recognized, you would probably agree that the use or disturbance of freshwater wetlands should be regulated to some degree, "... consistent with the general welfare and beneficial economic, social and agricultural development of the state."

CONFLICT

The classification of wetlands and the administration-regulation of the Act have caused controversy between some landowners and the Department of Environmental Conservation (or the Adirondack Park Agency, within the Park). It is difficult to administer an Act which intends to control management on highly variable sites and mixed ownerships found in New York, regardless of how well the Act is devised and written. These are some of the common questions that forest landowners with wetlands have asked me illustrating the conflict that does exist:

1. How do they define a "wetland"? They have classified an area as such on my land, but it is rarely wet.

2. My wetland has been classified as "Class 3". What does this mean and why are wetlands rated different?

3. I have owned my woodlands since the early '50's and after a DEC forester cruised it, he mentioned there is a classified 15-acre wetland in the middle. Why was I not informed of this, at the time it was being evaluated?

4. The DEC says there is a deciduous swamp, Class 3, on my woodlot. It is the best access to a knoll of valuable hardwood timber, but the regulations state a road with gravel fill may not be allowed across it. It will be much more costly to take the longer upland route if the permit does not grant this access. Is there any way the landowner can be compensated for this loss?

DEFINITION

As defined in Article 24, "Freshwater wetlands means lands and waters of the state as shown on the freshwater wetlands map which contain any or all of the following (emphasis mine):

a. lands and submerged lands commonly called marshes, swamps, sloughs, bogs, and flats supporting aquatic and semi-aquatic vegetation of the following types:

— wetland trees, which depend upon seasonal or permanent flooding ... including red maple, willows, black spruce, swamp white oak, red ash ('more commonly known as green ash today'), black ash, silver maple, American elm, and larch; — wetland shrubs

— ('several other true aquatic types are listed') ...

b. lands and submerged lands containing remnants of any vegetation that is not aquatic or semi-aquatic that has died because of wet conditions over a sufficiently long period, ... provided further that such conditions can be expected to persist indefinitely, barring human intervention ('this could include beaver submerged lands!');

c. lands and waters substantially enclosed by aquatic or semi-aquatic vegetation, in a or b above, necessary

to protect and preserve the aquatic and semi-aquatic vegetation ..."

In a further subdivision (Part 664), adjacent areas are given the same protection or regulation, regardless of cover- or land-type. This takes the effective boundary of a delineated "wetland" another 100 feet horizontally outward into adjacent areas. The wetland area must be at least 12.4 acres unless it has "... unusual local importance ...". Within the Adirondack Park, wetland delineations may encompass areas even less than 2 acres.

Sorry to bore you with all these details, but they are important and necessary to answer the questions of landowners. If you read the definition carefully, you will recognize that even an upland site, and certainly a lowland area that is only occasionally wet in the spring, could be classified as a 'wetland'. The problem with the definition is that despite its detail, it is inadequate to define/describe wetlands on the basis of vegetative types alone. Soil and hydrologic descriptors should be added for the precision that is necessary when legislation is attempting to regulate land use on these sites. For example, a true wetland — as a swamp or marsh — has a water table above, at or within a foot of the soil surface, and at or above the surface for a considerable part of the year. The organic matter and moisture content of the soil is very high, the gray-mottling very prominent and aeration very low. Several other indicators could be added to confirm that water, for some period of time, is a common characteristic of the site.

I have seen many well-drained upland sites in the Adirondacks that would fit the present definition of 'wetland', as upland benches (flats) that are flooded in the spring from snowmelt. And we have seen over half of the legislated list of 'semi-aquatic' trees in well-drained uplands, for example, red maple, willow, green ash, silver maple and American elm. These trees will grow vigorously on moist, yet well-drained, upland soils.

Continued on Page 8

Ask Forester —

Continued from Page 7

In answer to the first question, perhaps you have a classified wetland that is not a 'true wetland' at all — the site would have to be examined by a qualified team of experts for a sound evaluation. An added problem with the existing map is that the classifying/mapping team has done much of the delineation from an airplane, and all areas have not been ground checked. In addition, you might ask, what time of year did they make the aerial survey? In the spring or during an unusually wet season?

CLASSIFICATION

To begin answering the second question, we must refer to Part 664, "Freshwater Wetlands Maps and Classification" (and I will abbreviate it). Wetlands are classified or rated differently because they vary in importance or with the benefits they may provide for the Public. Therefore, each one should be managed for the natural benefits it provides. A (Class (or value rating) I wetland has any one or combination of the following characteristics: 1. A kettlehole bog; 2. Habitat of endangered or threatened animal or plant; 3. Supports an animal species in unusual numbers or diversity for that region of the State; 4. Provides significant flood control to a developed area; 5. Is close to a body of water that is a public water supply; 6. Contains four or more of Class II characteristics. Class II Wetlands have any one or combination of: 1. Emergent marsh . . .; 2. Two or more wetland structural groups; 3. Near a tidal wetland or open water or perennial stream; 4. Contains an animal or plant species vulnerable in the State; 5. Has significant archaeological, paleontologic or geologic features; 6. Could provide flood control to a lightly developed or planned development area; 7. Connected to a potential water source or aquifer; 8. Within a developed area.

Class III Wetlands may be more important to forestry operations because they may contain deciduous timber; they are classed as III if any of the following features are present: 1. Deciduous swamp or shrub swamp; 2. Total alkalinity of at least 50 ppm; 3. Adjacent to fertile upland; 4. Visible from scenic travel zones; 5. On publicly owned land open to the

New Study of Zone, Acid Rain

A large-scale biochemical analysis of trees in eastern forests to discover the effects of acid rain and ozone will be conducted over the next year by scientists at the Boyce Thompson Institute for Plant Research.

In a comprehensive study, researchers will take more than 1,000 leaf samples from the trees for a dozen tests to detect biochemical changes that reflect the state of their health.

For example, almost all pine trees in the mountains around Los Angeles died of exposure to high levels of ozone in the 1960s. Ozone levels in the Los Angeles area are much higher than other cities due to the operation of large numbers of automobiles.

How acid precipitation affects trees remains a mystery, but one theory

holds that it may reduce trees' winter hardiness.

Burning massive amounts of fossil fuels in automobile and truck engines, in power plants and in metal smelters creates the chemical pollutants that form ozone and acidic precipitation. Acid precipitation occurs as rain, snow, sleet, hail, mist and even fog.

Large numbers of forest trees have died over the past few decades or are dying in the eastern United States, eastern Canada, Germany and other European countries.

American and European scientists theorize that the death of those trees may be due to air pollution and other environmental factors, including disease, drought, heat, and adverse changes in climatic patterns and soil conditions.

Continued on Page 9



RED SPRUCES IN DECLINE — Ruth G. Alscher, left, a scientist at the Boyce Thompson Institute for Plant Research, and Suzanne Fellow, a research assistant, examine some of the red spruce saplings that have been exposed to different levels of zone in experiments conducted at the institute's field research site near campus.

public. Class IV Wetlands can be wet meadows or coniferous swamps which lack other features of the above classes., Remember, I have left out some detail for the characteristics in each class. For a complete description, visit your local DEC office and request Part 664 of the

Wetlands Environmental Conservation Law.

This article will be continued in the March/April issue. Regulatory USE, NOTIFICATION procedure and landowner COMPENSATION under the Act will be reviewed to answer questions 3 and 4.

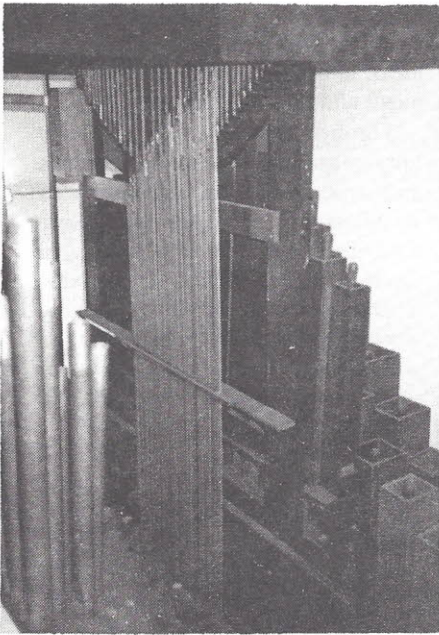
Pipe Organ —

Continued from Page 6

If you'd like to know in more detail how these work, pay me a visit and I'll take you to the organ and show you.

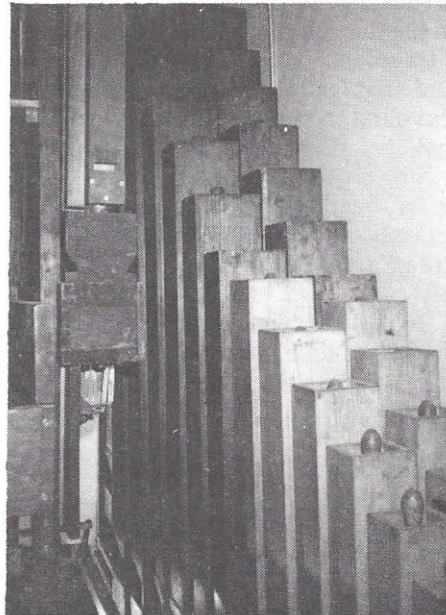
The valves which the reeds and levers operate at the air inlet to each pipe are spring loaded and faced with soft leather so that no air will escape when the valves are closed. Note that there may be several different pipes of the same pitch but different tonal sounds. Some pipes are open and some are closed.

In this next picture, the round metal pipes have closed end caps which can be moved up or down to tune the pipe to the right pitch or vibration frequency. The wooden "pipes" at the right of the picture have wooden plugs with round wooden handles for the same purpose.



I visited the Moller organ factory in Hagerstown, Md. and watched and heard a "voicer" adjust metal organ pipes to get the right "voice" or tonal quality. (The human ear is amazing!)

This organ has 17 different stops which cover different tones as well as different octaves of pitch. For example there are several eight foot long (high) pipes each with different tonal qualities but the same pitch. The large metal ones are in the bank of pipes at the front, shown in the picture with the keyboard. The large wooden pipes are shown in the following two pictures.



The next picture shows the wooden air duct and wooden slide valve which put air into the windbox under the wooden pipes. Part of the key-to-valve linkage may be seen under the windbox.

Continued on Page 11

Acid Rain —

Continued from Page 8

Hardest hit in the eastern United States is red spruce — an important commercial tree used for pulp, paper and lumber. Also endangered is the sugar maple, especially in Vermont, New York and Canada.

In a major effort to solve the mystery, the researchers at the Boyce Thompson Institute and Cornell University are studying a number of the trees' life processes necessary for

growth and development, such as nutrition, photosynthesis, physiology and winter hardiness. The institute is an independent research organization based at Cornell.

The new study, funded by a \$336,000 grant from the U.S. Forest Service, involves collecting at least 50 samples of foliage each month throughout the year of ailing red spruces in the high-elevation areas of Whiteface Mountain in New York's Adirondacks and Clingman's Dome Mountain in North Carolina. For comparison, a similar number of samples also will be collected from healthy trees in low-elevation areas near Howland and Millenocket, both in Maine.

"The study is one of the most comprehensive yet in the attempt to find out what's happening to those trees in terms of physiological functions at both decline and non-decline sites during the entire growing season," Amundson said.

Working with Amundson as co-investigators are three other Boyce Thompson scientists — Ruth G. Alscher, Robert J. Kohut and John A. Laurence — and Jean Chabot-Fincher at Cornell. Cooperating in the sampling work at Whiteface Mountain and Clingman's Dome Mountain are Professor Arthur Johnson at the University of Pennsylvania and Samuel McLaughlin of the Oak Ridge National Laboratory in Tennessee.

Besides measuring seasonal changes in overall growth and the rates of photosynthesis at those sites, an array of biochemical products, or metabolites, in the foliage will be measured through laboratory analyses. These products include starches; sugars; tannins; key antioxidants, such as alpha-tocopherol, ascorbic acid and glutathione, that are involved in protecting trees from the harmful effects of ozone; and pigments such as chlorophyll and carotenoids that are essential for photosynthesis.

Also to be measured are seasonal changes in needles, including cell injury and structure, and concentration of some 20 nutrients, including nitrogen, phosphorus, potassium, iron, manganese, magnesium and sulfur.

In addition, the researchers will study the levels of the trees' cold hardiness in the fall by measuring changes in carbohydrate levels in the needles. In particular, a type of a

Continued on Page 12

Snow Shoeing —

Continued from Page 2

The Pickerel — This snowshoe is similar to the Algonquin except it is much longer and narrower and has a much higher up-turned toe. These snowshoes are fairly big and ponderous, but very stable with no tendency to slip sideways. It is a very poor snowshoe for thick forest but excellent for deep soft snow.

The Objibway — This is a fairly long snowshoe, characterized by a pointed toe or tip, because the frame is made of two pieces of wood joined at the toe and tail, it is not a good snowshoe for in the woods due to the pointed toe.

The Bear Paw — This is a rounded snowshoe with a broad - nearly flat toe and no tail. Due to wide design it is not good for trails and hilly areas, but is extra good for thick forests where fast turns, around obstacles are required.

The Beaver Tail — This is an oval-shaped snowshoe with no tail and slightly upturned toe. This snowshoe is frequently called modified bear paw, or the other paw. The best choice for thick, heavily forested or hilly areas.

Snowshoes are made of wood or metal with rawhide or synthetic webbing. All these materials have their advantages and their weak

points. My choice is the wooden frame, made of white ash and rawhide webbing.

However, wooden and rawhide snowshoes require more care. They must be protected from sudden heat and mice, also require a good varnish periodically.

The webbing on modern wooden snowshoes is usually of a synthetic fiber and is generally considered superior to rawhide. They are tougher, do not rot and mice do not eat them. Also, once they are stretched lightly on a frame, they will not slacken if they get wet, as rawhide will.

The most common binding on harness is a combination of a wide toe strap, a strap around the heel and a strap over the insteps. They are many variations of this binding or harness on the market and all work well.

Once you have snowshoes you will find not only they are great for traveling in the woods, they are also just as great for winter hunting, fishing or just a nice walk in the woods on a beautiful winter day. Happy snowshoeing from Frosty Mountain Tree Farm.

* * *

Dean has been snowshoeing since the age of nine. Snowshoeing, he said, offers a new way to tour your woods in the winter.

SNOWSHOE SIZE GUIDE

Weight of the Snowshoer in Pounds	Approximate Snowshoe Size in Inches
<i>Bear Paw</i>	
110 - 130	13 x 32
130 - 160	13 x 34
160 - 180	14 x 34
180 - 200	15 x 34
200 plus	15 x 36
<i>Beaver Tail</i>	
110 - 140	12 x 30
140 - 180	12 x 34
180 plus	12 x 38
<i>Algonquin</i>	
40 - 60	9 x 30
60 - 90	11 x 36
90 - 130	12 x 42
130 - 160	12 x 48
160 - 190	13 x 48
190 - 220	14 x 48
220 plus	14 x 52
<i>Pickerel</i>	
110 - 140	10 x 48
140 - 180	10 x 56
180 plus	12 x 60

IT IS NOT ENOUGH TO OWN A FOREST



The challenge is to nurture it, to fulfill a destiny of beauty, productivity, and family pride . . . while turning enough dollars over to hang on to it. But how?

There are no easy answers, only ideas to ponder by the woodstove. That's what NYFOA is all about: ideas, family pride in forest management, and sharing of dreams.

Through regular issues of *Forest Owner* magazine, frequent seminars and woodwalks in one another's woodlots, and extended tours to extend the fellowship and learning in foreign lands, members of the New York Forest Owners Association are growing as surely as the trees in their woodlots.

Join!

Check your preferred membership option:

- Regular - \$10 Family - \$15
 Contributing - \$16-\$99
 Supporting - over \$100

Send checks payable to:
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 Boonville, NY 13309

Yes, I'd like to join the New York Forest Owners Association and get more out of my woodlands.

Name _____

Address _____

City _____

State/Zip _____

County _____ Phone _____

Letters —

Continued from Page 4

Dear Editor,

**Re: On Splitting Wood —
Dispelling Some Myths -
By Morgan Heussler**

On behalf of other mythologists, I submit: Allowing blocks of wood to freeze will permit an easier separation of fibers because of the stressed alteration of cell and tissue structures; the trick is to be sure the block is sap-full green or 'wet' prior to freezing and the splitting done after thawing. This process of freezing & thawing was most effective when large close-growth-ringed elm and sugar maple blocks were placed on end in the fall and then split in early summer for burning at least six months later.

And as regards the labor of making little ones out of big ones, a former cotton-pickin', steel-driving' acquaintance offered this advice, useful to both young and old: "fur ever' man an' ever' job, dey's a click".

Respectfully yours,

R. Fox
RR 3, Box 88
Moravia, NY 13118

Meeting —

Continued from Page 5

reported emphasis on NIPFO by SAF was predominant throughout meetings with importance on education of NIPFO.

REPORT OF MEETING WITH NWOA

Marchant reported on meeting he and Stuart McCarty had with Keith Argow, Executive, National Woodlands Owner Association. A tour of Marchant's woodland in southern NYS as well as lands of John Crebs, 4000 acres, viewing there a red pine harvest. Gilbert reported his meeting at SAF meeting with Argow. Both Marchant and Gilbert recommend that close networking be established with NWOA. Board approved payment of \$145.00 membership in NWOA.

STRATEGIC PLAN FOR FOREST RESOURCES — PLAN OF ACTION TABLED.

Mission Statement for NYFOA:

The Association is organized to encourage the wise management of private woodland resources in New York State by promoting, protecting,

representing and serving the interests of woodland owners.

General Objectives of NYFOA:

1. To assist owners in making decisions for the best use of their forests.

2. To work to increase profitability of woodlot investment.

3. To influence legislators at all levels of government to strengthen forestry as an industry.

4. To unite forest owners in a common cause of improving their forest resources and forest opportunities.

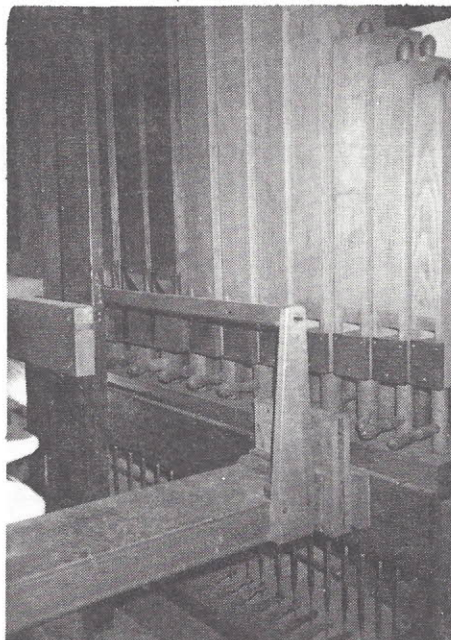
5. To inform the public on the value of a healthy tree growing industry.

6. Network with related organization in promoting common objectives.

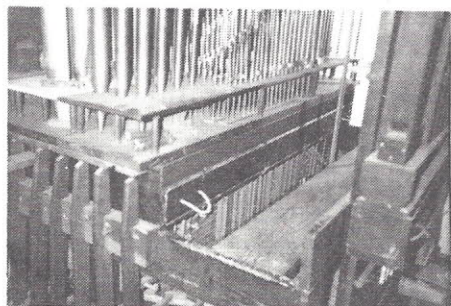
Mission and General Objectives adopted by NYFOA Board on November 12, 1988.

Pipe Organ —

Continued from Page 9



The next picture shows a wind chest containing several windboxes serving the several banks of different size and different tonal quality metal pipes. As



you can see, some of those pipes are little bigger than a child's whistle. The piece of white rope is a handle to let you pull open the horizontal door in the side of the windchest for access to valves and linkages within.

The next picture shows shutters on a large closed box which contains pipes similar to those above. As the shutters are opened or closed by a foot pedal, the sound level is increased or decreased. Again, note the wooden linkage which operates the shutters.



I don't have a picture of it but the tremolo is uniquely achieved by a paddle wheel fan operated by an air motor powered by air from the bellows.

Thanks to my son Bruce, I have more pictures but not the room in this article to show them or explain them. I realize that I have brushed lightly over a, to me, fascinating subject. My main objective is to point out to a group of tree farmers like myself a very unusual and interesting use of wood.

You probably have a lot of "why" questions after reading so far. Let's see if I can answer some.

Why do they use wood strips instead of wire in the linkage between keyboard and pipe valve? Answer - Metal expands and contracts with changes in temperature, wood does not. In the mid 1800s when these organs were built, churches and organ lofts were unheated. In winter the temperature would drop, the wire would shrink and partly open the

Continued on Page 12

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Pipe Organ —

Continued from Page 11

valves. Thus, when you tried to play, you'd get all kinds of whistles and noises.

It should be noted that changes in temperature also cause the metal pipes to expand and contract. This changes the pitch slightly, putting them out of tune. Most of us don't notice this but some do. Again, the human ear is remarkable.

Why do they use wood for the air ducts rather than sheet metal? Answer — Wood tends to dampen unwanted vibrations whereas metal may amplify them causing undesirable noise.

Why do they use wood for the valves rather than metal? Answer - Wood is lighter, won't rust, and has less friction where sliding valves are used.

If you have other questions, I'll try to answer them. If I can't, Greg Hand can.

Howard O. Ward

If you know of a unique use for wood, please send your story to Karen Kellcutt, RD 1 Box 103, Lisle, N.Y. 13797.

Acid Rain —

Continued from Page 9

sugar called raffinose that helps plants develop the ability to withstand cold temperatures in winter will be measured.

Although similar tests have been conducted on samples from trees growing under controlled conditions, this is the first large-scale, year-round sampling effort involving both dying and healthy trees, according to Boyce Thompson scientist Robert G. Amundson, who is coordinating the new research project.

The scientists suspect that acid rain and ozone in the lower atmosphere may be involved in the death of trees, especially red spruces, but they have no hard evidence. Scientists have previously found that ozone reduces photosynthesis in agricultural crops and trees.

Amundson said that ozone — and perhaps acid precipitation as well — may play a part in delaying or reducing the ability of plants to withstand winter cold.

"These measurements have never been made on tree samples taken at the decline and non-decline sites as thoroughly and continuously for a

whole year as they will be in our study," he pointed out.

All of these measurements will be compared with those being made in several studies underway at Boyce Thompson. In these studies, red spruce and sugar maple seedlings and trees are exposed to different levels of ozone and simulated acid rain under controlled conditions.

The results of the new study will provide a basis for further studies of trees in decline using chambers that exclude the ozone and acid precipitation that occur in high-elevation areas.

The researchers hope to continue collecting foliage samples for analysis during 1989 if additional funding is available.

Boyce Thompson scientists have been studying the question of whether ozone, acid precipitation or the two together contribute to forest decline. Since 1985, they have been involved in four separate research projects funded by \$4.4 million in grants from several funding agencies, including the Electric Power Research Institute and the U.S. Forest Service. Amundson's work is an expansion of these studies.