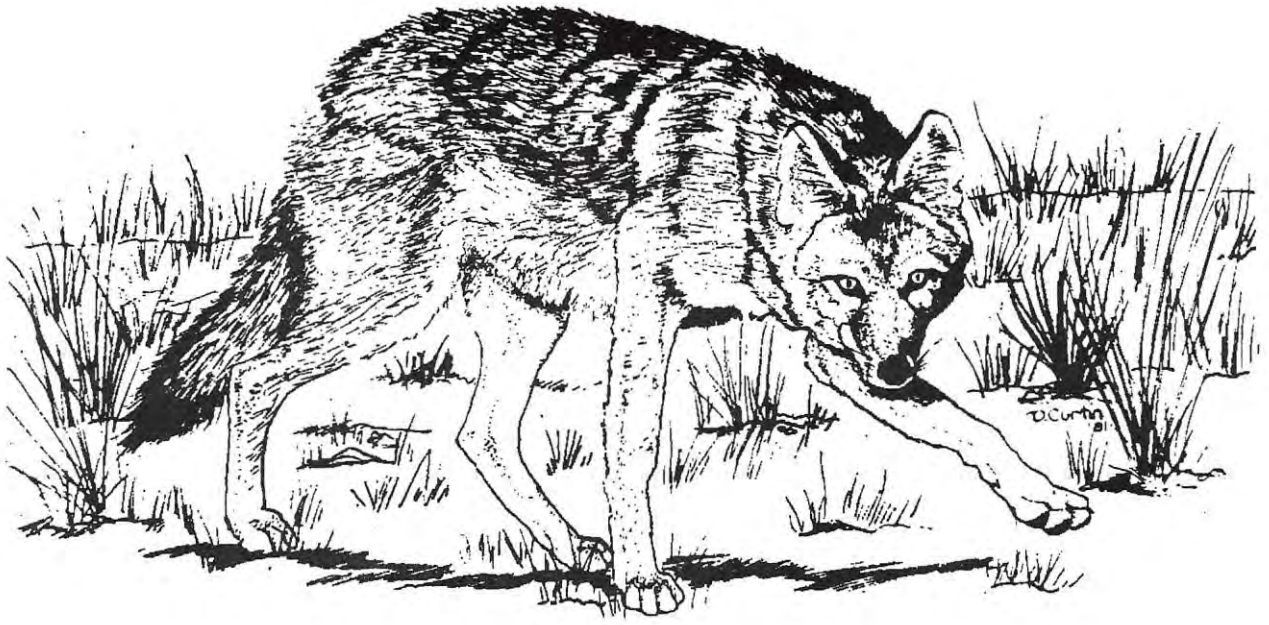
The New York
FOREST OWNER

A publication of the New York Forest Owners Association

May/June 1998



The Eastern Coyote

Ponds

Volume 36 Number 3

COVER:

The Eastern Coyote sketch is by ***Donna Curtin*** *(see page 8) courtesy Cornell Cooperative Extension, Department of Natural Resources.*

FOREST OWNER

A publication of the New York Forest Owners Association
Editorial Committee: Betty Densmore, Chair, Alan Knight, Mary McCarty, Jim Minor, Bob Sand, and Eileen Schaefer.

Materials submitted for publication should be addressed to: ***R.J. Fox****, Editor, R.D. 3, Box 88, Moravia, New York 13118. Articles, artwork and photos are invited and are normally returned after use.* ***The deadline for submission for July/Aug is June 1.***

Please address all membership fees and change of address requests to P.O. Box 180, Fairport, N.Y. 14450. Cost of individual membership/subscription is $20.

GRAY TREE FROG

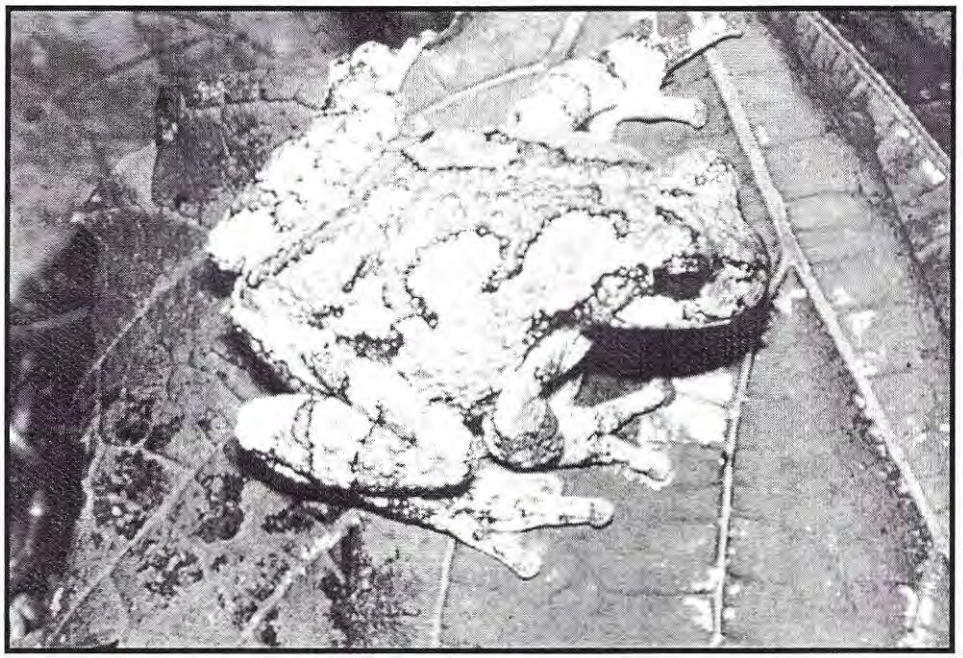


Photo courtesy of Glenn Johnson

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President's Message

By Jill Cornell

When someone asks me to tell them about NYFOA, I tell them that we are a volunteer organization and that I see us as a bridge between environmentalists on one side and economic developers on the other.

I believe we are environmentally conscientious and at the same time we support the wood industry. We need to sell our timber to the industry periodically to help pay property taxes, etc., and we want our harvests to be done with best management practices so our woods are improved by the cutting and improved for timber production, wildlife habitat and recreation.

From seedlings to finished furniture and paper, the branches of the forest family interact and are mutually dependent. We all need each other. Buyers need sellers, and sellers need buyers. Different species of wildlife need differing types of habitat.

Recreational needs vary over the seasons and over time. The forests are dynamic and constantly changing, usually slowly, but occasionally fast and furious as they did this winter with the ice storm. Agencies shift focus, and personnel change. Markets change. Conditions and demands change. Environmental awareness and focus change.

President Jill Cornell

With so many factors and so many variables within these factors, it is imperative that all the branches of the forest family communicate their perspectives, concerns and needs to each other. We won't agree on every issue (what family members ever do?), but there is common ground. We need to build on that ground to work together for mutually beneficial legislation and policies, and to foster communication exchanges of the issues and areas where there is disagreement, even if we can only agree to disagree.

The NYFOA bridge creates opportunities for that communication flow. Our magazine, woodswalks, programs and workshops offer chances for meaningful dialoques. Our partnership events with Department of Environmental Conservation, Cornell Cooperative Extension, Natural Resource Conservation Service, Farm Service Agency, County Soil and Water Conservation Districts, environmental groups, private consulting foresters, industry and Tree Farm Program all provide fertile ground for information exchanges.

A wonderful example of a partnership was the two Woodland Workshops organized by Peter Smallidge of CCE in the Buffalo and Capital Districts. Speakers represented many agencies, industry and environmental groups, and NYFOA.

The Family Forest Fair on October 3rd and 4th at the Washington County Fairgrounds in Greenwich will be another opportunity for all of the forest family to work together to produce the fair, and for all of us to share in the information exchange.

Let's keep the bridge open!

THESE WALLS

By Dorothy S. Darling

These walls tower tall and strong;
Ingrained in their thick silence,
They sequester with mute secrecy
The lingering cadence of memory.

In quiet nightfall she sits alone,
Embracing the familiarity of this place,
Filling it with all the words she can find,
Evolving from heart and from mind.

These walls make creaking sounds,
Embodying a ghostly sort of eloquence,
Flowing from inner urge into a verse,
Words prompted into an oral sphere;
Sadly perhaps no one to give ear,
None to praise, none to fault.

But years now move with a softer tread
Though time refuses to be wasted
As some loving Being comes to soothe
And quell harsh winds with quietude.

New FOREST OWNER Policy

After careful consideration by the Editorial Committee, followed by three month's deliberation by NYFOA's Board of Directors, the Board, January 31, 1998 approved a trial period of one year commencing with the Jan/Feb 1998 issue for a new policy for the NY FOREST OWNER.

The NY FOREST OWNER invites woodland owners and others to submit articles to **Betty Densmore, Chairperson, Editorial Committee; 8228 S. Canada Hill; Machias, NY 14101**, for publication. Writer's Guidelines will be mailed to anyone requesting them and who includes a self-addressed, stamped envelope. The guidelines contain a **modest payment schedule for articles, poems and photographs**.

We are especially grateful to professional foresters and members of the forestry community, including academics, who are encouraged to continue to donate articles to the NY FOREST OWNER as part of their mission to educate forest owners and to promote good forest stewardship.

NYFOA TOUR of PACIFIC NORTHWEST

A ten-day visit to forest owners and woodlots of Oregon and Washington is being planned for August 16 through 26.

Planned with the assistance of forest owner associations in those states, the tour will combine woods walks in member forests, visits to local sawmills processing plants, and ample free time for historical and cultural sites, shopping, and on-your-own walks.

For further information, contact Alan Knight at PO Box 325, White Plains, NY 10603 or via e-mail at alan50000@aol.com.

BUILDING A POND—*An Art as Much as a Science*

By Mary Binder

This is the second part of a three part series on ponds. ***Part I*** *reviewed finding the best location to build a pond (NYFO 36:2.)* ***Part II*** *will give ideas on pond design and construction.* ***Part III*** *will give information on pond maintenance, safety, and fish stocking.*

Part II - Design and Construction

Building a pond can be a large investment and finding a good site is half the battle. Now that a site has been choosen, proper design and construction become critical factors in saving money and in providing long term enjoyment.

Watershed Calculations

It is not necessary to find out how much water will drain into a dug pond because they usually rely on groundwater or springs to maintain their water level. A pond with a dam, however, usually relies on surface water or runoff to keep it full. Watershed (or drainage) calculations will show you how many acres you need of surface runoff to drain into your pond to keep it full.

Plant cover, soil type (infiltration), and surface storage must be taken into consideration while doing these calculations. Rainfall intensity, amount and duration will also give differing amounts of runoff. Once you have determined the number of acres and the average depth of your pond, you can calculate the number of acre-feet. One acre-foot equals the number of surface acres of the pond times average pond depth. For example, a half acre pond times a five foot average depth, will yield 2.5 acre-feet. In the Helderberg Mountains of Albany County two to two and a half acres of drainage area is needed for one acre-foot. This information is taken from a chart found in engineering books. For the above pond to maintain an adequate water level, it would take 5 to 7.25 acres of watershed. I am giving this as an example, because New York has many areas with more or less intense rainfall amounts. The same pond located in certain parts of central New York would need twice the amount of watershed, assuming all other land characteristics were the same. Calculations must be done by someone who has access to watershed estimate charts and the knowledge to use them.

Once you have determined the amount of watershed required, you should walk the pond watershed to make sure all the water does indeed drain toward your pond. An old diversion or drainage ditch directing water across the slope and out of your watershed could seriously effect the amount of water that makes it to your pond. Something as simple as an old log road could act as such a diversion.

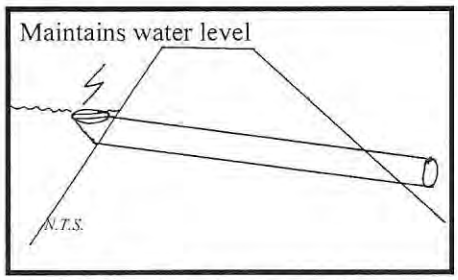


Fig. 1: Hooded inlet pipe spillway with trash rack.

Runoff Estimates

Runoff estimates are done to assure the correct size of the pond outlet or opening. You must be sure there is an opening large enough to allow water to escape from your pond. Too large an opening (or outlet) will cost you too much money; too small and the dam could "blow out".

The procedure to size the outlet takes into consideration plant cover, soil type, watershed size, and rainfall intensity and duration. Many charts, maps and calculations are used. More information can be obtained from an engineer, the Natural Resource Conservation Service, or from a more detailed book on pond building.

The two major mistakes made in pond building are incorrectly calculating the drainage area and incorrectly sizing the outlet. Again, these calculations should only be done by someone with the knowledge to do it correctly.

Pond Design

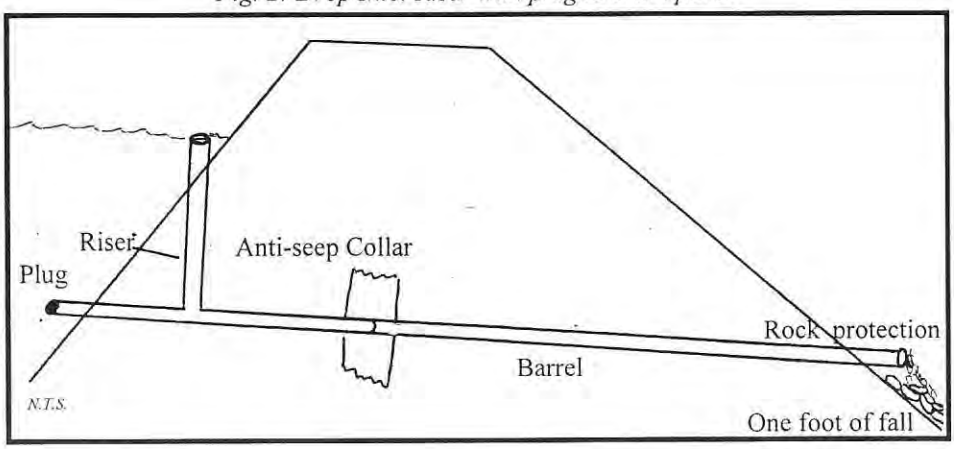
Pond designs should include pond depth, side slopes, profile of centerline of the dam (including all elevations), core trench dimensions, and the spillway design and locations. (See *Fig. 4*). Specific and itemized quantities of building materials should be listed. Special notes should be placed on the blueprints for any additional items you may want installed in your pond. These blueprints may become part of the contract with the excavator which may enable you to enforce the contract.

There are some general guidelines to follow when designing a pond. Most ponds are round, but a more irregular shape will look more natural. A pond should be at least 6 feet deep for warm water ponds and 8 feet or more for trout (cold) ponds. The steepness or shallowness of the pond slopes should be constructed according to your desires. For a general recreation pond, a one foot rise to two foot run (slope) on the inside banks of the pond, is sufficient. This discourages pond weeds from becoming established. If you are designing a wildlife pond, then you would want more gradual slopes, possibly even four to one. This will encourage weeds and provide habitat. The outside bank of the dam should be no steeper than three to one side slopes, so you can safely mow it.

Principle and Emergency Spillways

All ponds, whether they are dug or dammed, should have two different outlets or spillways. The principle spillway main

Fig. 2: Drop Inlet Riser with plug to drain pond.



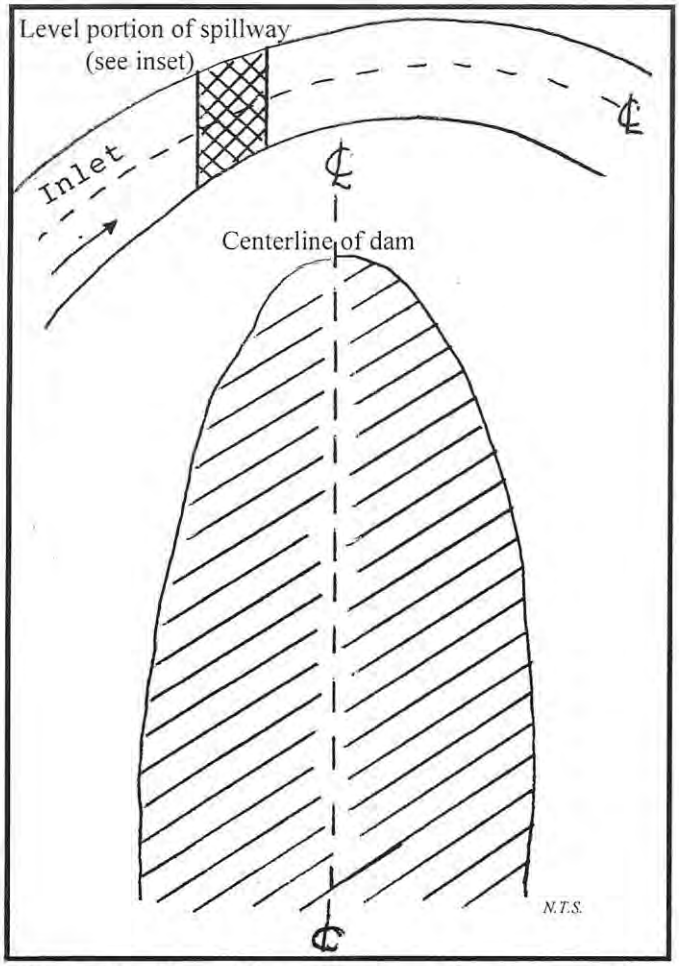
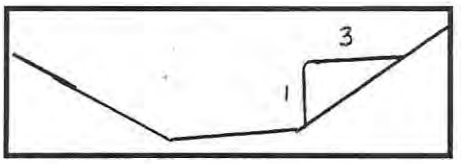


Fig. 3: Plan View of Natural Spillway. Placed at end of dam, on native, undisturbed ground; may have sod or rock lining.



Inset: Cross Section of Level Portion. This slows the water and forces runoff to spread out in the channel. Rock- or sod-lined.

tains the water level of the pond and has water flowing thought it most of the time. The emergency spillway has water running through it only during large storm events or spring melt. The emergency spillway allows extra flow to escape the pond instead of washing the principle spillway out. Many ponds have been dug without an emergency spillway. Their owners are only tempting fate, since eventually a large storm will come along and destroy the dam.

There are many different types of principle spillways. (See *Figs. 1,2,& 3*). Some have a simple pipe laid in the bottom of the dam, some have a riser pipe attached to the pipe laid in the bottom, and some have no pipe at all. I would like to caution about the latter. Allowing the water to run over the dam may save money because you don't have to buy pipe, but over time they tend to erode due to lack of maintenance. An outlet running over the dam would have to be reinforced with rock rip rap and monitored after every storm to be sure it is holding up. Engineering calculations should be done to correctly size the rock to be placed in the spillway. Another disadvantage is that you cannot easily drain the pond for maintenance.

Most plastic or metal pipes have anti-seepage collars installed to prevent the water from working its way along the pipe and out the other end of the dam. *Fig. 2* shows an example of an anti-seep collar.

Most pipe spillways have a steel screen or trash rack, with large openings at the inlet to keep logs and debris from clogging the pipe. These must be inspected to clear away leaves to keep it open.

Emergency spillways should be placed at the end of the dam where it meets the native or undisturbed ground. The location will be determined using a survey level because it must be at the lowest point where water will flow out of the pond. Rock should be placed to create a drainageway and protect the soil when water is running in it. The water should also be directed away from the bottom of the dam so it does not erode the base.

An extra foot of fill is designed into every dam, "just in case". This is known as freeboard and will give added protection to the dam. Freeboard may be higher for longer dams.

Core Trench

Some dams need a core trench or cutoff trench to assure against excessive seepage. *Fig. 4* shows such a trench. Once the pond is excavated and before the dam is built, the core trench is dug. The trench is dug along the centerline of the dam deep enough to extend beyond any pervious layers. The trench must be dug into each end of the dam abutments and also extend beyond any pervious layers. The trench is then backfilled with clayey soil in layers of six to eight inches. Each layer is then compacted. You should watch the excavator to make sure the trench is being installed. Once the dam is built, there is no way to tell if the trench was put in correctly or at all.

Construction

Once you have chosen a contractor, checked their references, and insurance, you can begin construction when the weather is good. Unwanted vegetation and trees should be removed. You should select trees to give the pond a natural edge and provide wildlife habitat. You should remove most deciduous trees directly near the water edge where their leaves may fall directly into the pond. Any organic matter that falls into the pond will decay and use up valuable oxygen in the process. Any fish in the pond may become stressed or die due to oxygen depletion.

Large boulders and tree stumps should be removed. Watch the excavator to be sure the stumps are not buried. Wood will decay in a few years and voids in the dam would be created. Valuable topsoil should be scraped from the pond area and stockpiled for use later. Plan ahead and decide where you want to place any extra spoils. This is a good opportunity to fill in any problem areas on your land. You may also want to create mounds for landscaping and to serve as wind breaks near the pond edge.

The contractor should survey and stake the pond water level. The centerline of the dam should also be staked and the depth of cut will be written on the stakes. Spillways will also be located. Digging of the pond basin will be done next. If the springs are strong or if there is a lot of runoff, the pond will have to be dewatered to allow the dozer to continue working. A ditch can be dug to keep water flowing or submersible pumps can be installed to keep the water from collecting. Stockpile any clay type soils to be used in the core trench or dam. All unwanted soil, rock, and shale can be removed until proper depth is achieved. Proper depth will be checked by taking survey shots.

The remaining clay type soils can then be spread around the pond basin and compacted to seal it. It is best to compact the clay soil when it is at the appropriate mois-

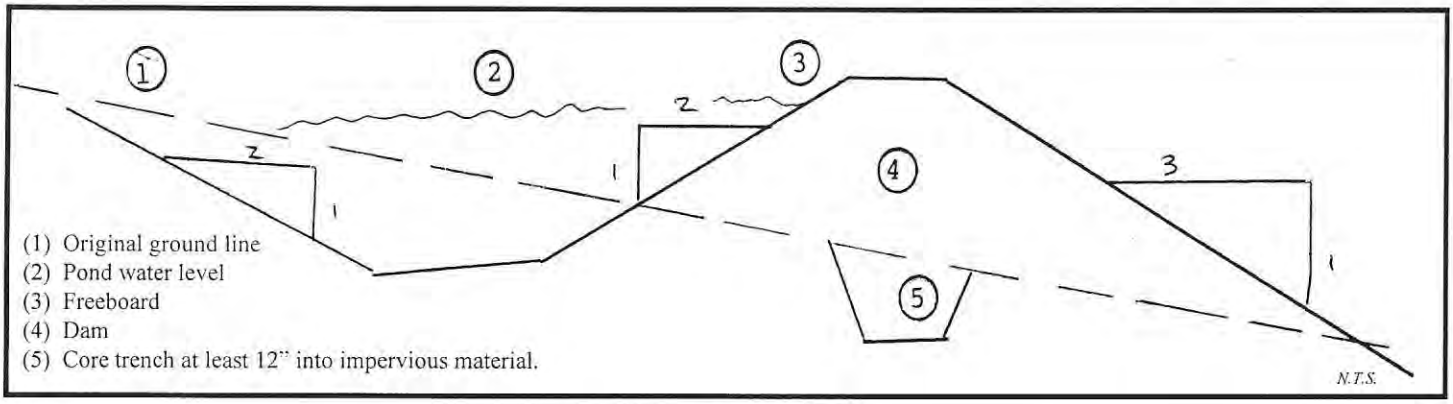


Fig. 4: Typical Pond Profile.

ture content. If you can ball the soil up in your hand and not have it crumble, it is the correct content. Too moist or too dry a soil will not compact well enough to form a seal. Laboratory tests can also be conducted to check the moisture content.

The core trench can then be built, with attention given to compacting it in six or eight inch layers or lifts. Again, the moisture content must be correct. The spillway can then be installed.

Spillway Construction

If a pipe spillway is used, it should be placed on a stable foundation. Some pipes are placed on a concrete slab. Good backfill should be placed around the entire pipe before placing the fill for the dam. This will lessen the chance for cracks and openings caused by uneven settling.

Backfill and dam material should be free of rocks greater than six inches, sod, trees, or roots. Do not use frozen soil or place backfill on a frozen foundation.

The emergency spillway should then be constructed on native, undisturbed land wherever the surveyed grade shows the lowest point. Rocks large enough to handle anticipated flows should be laid by hand to stabilize the slope.

The pond inlet also should be stabilized with sod or rock if necessary.

Beach Construction

If you want to install a beach for recreation purposes, plan a proper place for it. You may want it oriented towards the sun, but yet have a shade tree nearby. It should also be placed near the access road or path and away from the inlet or outlet. The slope should be graded to a four to one slope for safety. This slope should extend out ten to twenty feet and then drop off at a two to one slope.

The excavator should dig up about six inches of soil to allow the filling with beach sand to remain at the same elevation as the rest of the pond. A filter fabric, that is porous to allow water and oxygen exchange, can be placed over the excavation. This is relatively inexpensive and will stop the mixing of expensive beach sand with the existing pond soil.

Masonry sand can be purchased and delivered to the site. Do not use another, less expensive type of soil because it can cause the pond to become turbid. When ordering, the company will want to know how many cubic yards you need. Simply multiply the length of your proposed beach times the width times the depth (usually 1/2 foot) to get the cubic feet. Then divide your answer by 27 to convert to cubic yards.

Final Grade and Seeding

Once all the rough grading has been completed, the contractor can provide the final grade. A construction survey check should be conducted to make sure everything is at the correct grade.

A seed bed should be prepared by discing or harrowing. Contact your local grain store or the Soil Conservation District for some ideas on appropriate seed mixtures. Some sort of legume and perennial grass in the mix would be useful. A soil sample should be taken to a local nursery or Cooperative Extension for fertilization recommendations. Once seeded and fertilized, the area should be mulched with straw or hay to keep the seed and fertilizer from washing into the pond. Again, any additional organic material that finds its way into your pond will be a source for pond weeds and algae to develop.

Some companies can hydroseed your pond shore with a machine that pumps a slurry of seed, fertilizer and tackifier. The tackifier acts as a sticky substance that holds the whole mixture into place until germination. Some are even dyed green to make it look better. If you are seeding during the summer months, you must irrigate in order to provide germination. Livestock should be fenced out of the pond area to protect the shore from overgrazing and erosion. Gravity feed watering troughs can be installed to bring water from the pond to the cattle.

Small trees and shrubs planted around your pond will provide a food source and cover for birds and wildlife, as well as provide a natural look to your pond. Contact the Soil and Water District, NYS Department of Environmental Conservation and Cooperative Extension for some ideas.

Once all the hard work is done, sit back and enjoy your pond. Spring peepers and turtles will find their way to your pond in a matter of days. Pond vegetation will grow and dragonflies and water striders will delight your senses. It will not be maintenance free, but if constructed correctly, your work will be minimal. Enjoy. ▲

Additional References:

Ponds - Planning, Design, Construction, SCS Agricultural Handbook Number 590, June 1982. Out of print.

"Build Your Own Pond", by John Weiss, Country Journal, June 1993.

Book of Pond Information, Compiled by Dutchess County Soil and Water Conservation District, $ 3.00, P.O. Box 37, Millbrook, New York 12545.

Earth Ponds, the Country Pond Maker's Guide to Building, Maintenance and Restoration, by Tim Matson, 1991.

"Beach-building on a Lake or Pond", by Tim Matson, Country Journal, July/August, 1995.

Mary, who lives in Westerlo, with her husband and two boys, is Vice-Chair of NYFOA's Capital District Chapter. She is a graduate of SUNY ESF with experience with the Forest Service, Bureau of Indian Affairs, and Conservation Districts.

Beaver, Love Them Or Leave Them—*Part Two*

By John S. Braubitz

This is the second part of a two part article (see NYFO 36:2, 6 Mar/APR 1998 for Part One)

In 1959, I moved To Central New York. That's when I caught the "beaver fever." The beaver up here were not as scarce as they were in Lycoming, PA; there were enough beaver up here to spark my earlier infatuations into a full blown addiction. Once people knew I was interested in beaver, they kept calling me up telling me where they or someone else spotted a beaver, and I would be off to chase the elusive rascals. This was exciting, but if you really wanted to observe beaver in the early 60's,the Adirondacks were the place to go. I spent the next twenty summers looking for new beaver dams and walking through abandoned Beaver Meadows. We ran all over the North Country. Some of my favorite sites were up near Paul Smiths College, Cranberry Lake and Old Forge. On these trips I discussed my interest about beaver with many of the local residents, and to my surprise many of them did not love these wonderful animals. As a matter of fact, they hated them and often took extreme measures to destroy their lodges during the winter months to eliminate them any way they could legally, or illegally. They believed the beaver destroyed the fishing and caused the water to warm up and increased the eutrophication process. This was particularly true in the Cranberry Lake area. This was hard for me to believe, and I could not see how anybody in their right mind could despise these wonderful creatures.

In the late seventies and early eighties, the beaver population for some reason started to explode in Central New York. There was no reason why anybody had to visit the Adirondacks to observe beaver. You could see them any day you wanted to and some days when you didn't.The beaver were here to stay. I live near a tributary to Owasco Lake called Dutch Hollow. The population on this stream in 1982 seemed to explode.There were fifteen dams from the lake to Cream Hollow road. Migrating trout were having a difficult time getting over two or three of the largest dams. The local fishermen started to sound like those Cranberry Lake fishermen who did not love beaver. The largest beaver dams started to disappear mysteriously in the dark of night. In 1982 this was not legal. The beaver vs. fisherman drama continued with the beaver winning almost every encounter. I imagine some migrating trout made it successfully to their breeding sites on some of these dark nights, but the very next day the dams would reappear. The beaver never seemed to tire. I guess that's where the saying "busy as a beaver" comes from. Finally, about five years ago the D.E.C.trapped all the beaver to allow a free Spring migration of trout. I'm not so sure even they love them as much any more. As this conflict was going on, a camp owned by one of my friends was flooded by a beaver dam. The camp had six inches of water right up to the first step in front of the camp. The beaver also destroyed a beautiful shade tree at the Emerson Park boat launch in Auburn. Bear Swamp's beaver population is increasing to a point that some people think it may alter the habitat in a negative way. I could go on. The point I'm trying to make is, "not as many people love them as much."

John Braubitz

Eutrophication of a Beaver Dam in the Cranberry Lake Area

If that's not enough, a protozoan disease, *Giardia lambia,* appears to be transported by beaver, and you can get a severe diarrhea now called "Beaver Fever."

The question many of us are asking ourselves is, "are we still infatuated with beaver?"

For me the answer is yes, but I have a hard time loving them when their population is exploding and over-running their habitat.

New York State is not the only state where the beaver are going through an unimpeded growth. There are many examples of other states and one of these is Utah. Their Division of Wildlife documented several case studies. One of the best examples is a study done on Red Butler Canyon[1].

The beaver were all trapped in the last part of the last century. In 1928, the Utah Division of Wildlife reintroduced beaver. The population took off and then finally exploded. In 1981, it was recommended that all beaver be eliminated from the Canyon because their feces contaminated the water with the parasite *Giardia lambia.* In 1982, Fort Douglas, a community that got water from Red Canyon, applied for a permit and received it from the Division of Wildlife to remove the beaver from Red Canyon. All the beaver were harvested.

Studies were done before and after the harvesting. After the first large flood it was determined the canyon lost 0.62 acres of cattails (*Typha latifolia*) and many other genera such as Eleocharis, Scirpus, Juncus, Poa and Equisetum. Because of this loss of plants and habitat, the U.S. Forest Service–Salt Lake District, requested the Utah Division of Wildlife Resources to reintroduce the beaver in the summer of 1991.

In my opinion, the Red Butler Canyon study may become as well known in beaver management as the Kiabab Study was for deer management. I know some of you might question the accuracy of the Kiabab study, but the predator vs. prey relationships are still sound. In my opinion this study shows that beaver are an important part of most stream and river ecosystems, but they need some environmental resistance. This does not mean complete destruction. Balance is the answer. We must have legal access and a new group of young trappers to meet the challenge. We may not all love the beaver any more, but let's not LEAVE THEM!

[1]If you would like more information on the Red Butler Canyon Study, the website address is: http://ecophys.bio...r/riparian-beavers ▲

John Braubitz is a Professor in the Science Department of Cayuga County Community College. Web Page: http://www.cayuga-cc.edu/braubitz/

New York's Own "Barking Dog"–The Eastern Coyote

By Robert F. Gotie

In late January at about eight o'clock in the evening my wife, standing at the kitchen window, called to me excitedly. "Bob there's a pack of wolves outside the house howling and carrying on." "They sound just like a bunch of crying babies and this eerie sound so close to the house has me unnerved." Since I was busily occupied in the basement, my immediate response was to nonchalantly call out to her that they were not wolves but merely eastern coyotes. And, rather then being at the door ready to pounce on any of us or our children, they were probably on Morgan Hill just across the Labrador creek valley, a short distance away. I also interjected that they pose no real problem to us and that she should enjoy the serenade while it lasts. An hour later my teenage son yelled out, "they're still at it"; thinking the whole affair was neat, after all he had to go as far as Cranberry Lake a few years ago, with his dad of all people, to hear this same cacophony. Had my wife not been married to a wildlife biologist, I'm almost positive the local DEC office would have received a frantic call next day requesting that they do something before the kids were maimed or eaten by these evil beasts.

The scene I've painted here, and I fully admit that I have taken some editorial license, is playing itself out more and more these days in central and western New York. The reason for it is quite clear. As the landscape in New York, especially south of the Adirondacks and west of the Catskills mountains have become more forested over the last half century, it has become more inhabitable for creatures like coyotes. Likewise, people have been abandoning the cities for the peace and security of the countryside at the same time. Unfortunately, animals with large canine teeth, long pointy noses, a semblance of group dynamics and a habit of eating animals smaller then they or of the variety we humans prefer, have never been valued highly by most humans. Thus, the stage has been set for a classic melodrama.

To make matters worse myths and legends abound about this canine and its bigger cousin the gray wolf; so much so that many people accept these myths as fact. I can recall in the late 1960's one particular myth taken as fact by some members of the sporting community in the Mohawk Valley. According to the author of the "Seven Year Predator Control Plan," brush wolves (which he estimated in the thousands) were attacking children and decimating New York's deer herd. At the time, I was a recent college graduate who had just been keenly honed to accept the facts not the fiction about our wildlife, including those critters considered vermin. This eagerness to find the facts rather than make value judgements led me a decade later to begin a modest study of this interesting and often maligned member of the canine family here in central New York.

After more than 20 years of study with a dozen of those years personally examining the remains of 181 coyotes taken by trappers and hunters in 13 counties of central New York, I present here some factual information about New York's own wild canid. I hope it will help dispel some of the mythology surrounding this secretive creature.

The eastern race of coyote is commonly called the coydog or brush wolf. Its scientific name is Canis latrans, var. It was first identified in New York during the 1920's. It now occupies all of New York and is listed as a game species with open and closed hunting and trapping seasons. Research conducted in the Northeast during the 1970's and 80's strongly suggests that its arrival here is the result of eastward movement of the sub species Canis latrans thamnos from the upper mid west. Probable hybridization with wolves and dogs has subsequently resulted in a larger variety than that found in the western U.S. Other biologists speculate that the eastern coyote was always here and that the species held on in small numbers throughout the Adirondack wilderness as New York settlement expanded in the 1800's. Its return to prominence coincided with the decline of agriculture and the regrowth of these open lands to forests in the mid 1900's.

Although our coyote is larger than the western subspecies, it is much smaller than most people believe. Scaled weights from coyotes collected here in central New York average between 32 and 40 lbs. Juvenile coyotes weigh less than adults and females weigh less than males by about 16%. The largest coyote I weighed was an adult male that tipped the scale at 53 lbs. Weight is deceiving with this species because it has long fur and a large bottle brush tail. The coat color of eastern coyotes is also highly variable. I have seen coyotes jet black in color and as red as its little cousin, Renard, the red fox. Typically, though, their coat color is a grizzled gray brown with black markings down the center of their back.

I examined the ages of coyotes using a technique called tooth cementum analysis. This method of aging coyotes has been around for years. After softening a large canine tooth, thinly cross slicing and staining the section, you can count under a microscope the rings of cementum that are laid down each year, just like the rings of a growing tree. In my study I found that 56.2% were less than one year old. The oldest male I examined was four years old and the oldest female was 11. This high number of juvenile animals in a population is generally indicative of high death rates. When you look at the human domination of the landscape in central and western New York, it is not hard to imagine why this might be so.

Like people, a coyote embryo grows on the wall of the uterus. After a coyote pup is born, a scar remains at the place where the placenta was attached to the uterus. When a coyote's uterus is carefully examined, you can actually see these scars. One scar means one pup and so on. Although this technique is not perfect, it also has been used for years to determine reasonable rates of reproduction or litter sizes in this species. By this method, I was able to determine that no coyotes in their first year of life had pups. Coyotes breed once each year in January and February with whelping occurring 60-63 days after conception. Since the bulk of the animals I examined were collected before this mating period, no young of the year females would have yet reached sexual maturity. Nearly 63% of female coyotes entering their second year (yearlings) of life or having bred the first time whelped pups. Their average litter size was three pups. Females in their third or more year of life bred successfully 92% of the time and averaged seven pups.

The diet of the coyote is highly variable.

They basically eat what is abundant and easily obtained. At the time of my graduate studies in Texas I met the famous biologist Dr. Clarence Cottom. His description of the eating habits of coyotes will forevermore remain with me. "They open up their mouths and take in the scenery." Rabbits, woodchucks and other small mammals form the bulk of a coyote's diet, but they will also take deer or livestock if easily obtained. Insects, fruit, carrion and vegetables are also taken in season. Cats and small dogs would certainly be considered table fare by coyotes, especially if left unattended to roam about in the back forty or chained to a box like a junk yard dog.

The social organization of this species revolves about a mated pair and their young of the year. A family group or as some people call it a "pack" can range from four to 10 animals. Coyotes give birth in late April and early May. Both sexes provide parental care which normally takes place from May to August. At this time growing puppies require large quantities of food and both parents help by increasing their time hunting. It would be usual to see healthy coyotes in the daytime during June and July because of the need to provide for their young. Neither is it unusual to hear coyotes howling nor bawling in the early evening hours, after all this is when they are most active. Also, its scientific name (given to the world by Thomas Say) means "barking dog."

Group hunting is most typically observed when the family group is hunting larger prey. It is most obvious during the winter months when deer are concentrated in thick winter cover trying to escape the ravages of the "hunger moons." Although deer are taken by coyotes for food, their predatory impact on the deer population in New York is insignificant. On a local level, especially when deer population densities are low, the coyote like its cousin the gray wolf can slow the rate of recovery of a winter ravaged deer population by preying on the malnourished survivors and their fawns.

Important mechanisms for regulating coyote populations are availability of food and territoriality. Adult females, mated pairs and groups defend territories. Our best information about territory size comes from radio tracking studies in the New England States. Biologists there have found that eastern coyote territories are about 6.5 square miles per mated pair in farm land and about 18 square miles in forested terrain. Food availability seems to be the causative agent influencing the size of territories. This is probably why coyote territories are smaller in farm country where a variety of habitats provide a greater number of prey animals as well as increased variety. Using this information and the information I obtained on reproductive rates, ages and the harvest distribution routinely collected each year, reveal that there are about 5-10 coyotes for every 20 square miles of land area in central New York.

In response to concerns expressed to the New York Legislature about coyote presence and depredations in northern New York in the late 1980's, the DEC held a series of public meetings to measure citizen views on a proposal to open a year round hunting season on this species. Such a proposal would have essentially made the coyote an unprotected species. A clear majority (80%) of participants at these meetings and in letters to the DEC did not support this proposal. Neither did these people feel that a change in this species status was justified because of complaints and concerns about the increased presence of coyotes in northern New York.

So how does the DEC, Division of Fish and Wildlife classify this wild canine and what provisions are there for managing it? Before 1972 New York attempted to control coyotes with bounties. After this year bounties were prohibited for all species, except when the New York State Health Department determines that a species represents a human health threat. Prior to 1976 the coyote was an unprotected species. They could be taken at any time by hunting and trapping. As their value grew in the world fur market, trappers and hunters were the first to propose laws to protect them during the pup rearing season. Thus, the first open season for the taking of coyotes, as well as their little cousins the red and gray fox, was established for the 1976-77 season. This simple action in the mid 1970's resulted in the classification of our "barking dog" as a game animal. It also set the stage for managing this species as more than just a pest. In a nutshell the current approach to coyote management is to establish an annual open hunting and trapping season with the goal of removing surplus animals by licensed hunters and trappers. The DEC has done this each year since 1976.

Every coyote legally taken during these seasons and possessed or sold must have a plastic seal attached to it or its pelt. Seals are obtained by first sending in a report card to a DEC office. The report card includes when, where and how the coyote was taken. Report cards are available at the nearest DEC Wildlife Office or one can be found in the annual hunting and trapping guide. These cards serve to keep us informed on where coyotes are taken, how many are taken, when and how they are taken. By using this information we are better able to evaluate whether our harvest-based management strategy is appropriate. During the 1996-97 season New York hunters and trappers reported taking 2,500 coyotes in 607 towns. In the first season (1979-80) of this record keeping system, a total of 2,094 coyotes was reported taken in 369 towns. Since the coyote is still expanding its range in New York, the DEC has not taken any action to halt its spread across the environs of New York

To directly assist landowners who are aggrieved by this species, New York Environmental Law also provides for the taking of coyotes at any time by landowners who are experiencing property damage. Landowners or their designated agents can solve localized problems with coyotes when it's happening without jeopardizing the continued existence of this species elsewhere. New York State does not pay any indemnification for damages caused by wildlife, nor does it provide predator control trapping as a routine service to individuals. If history is a good teacher, then it is to the state's credit that we have learned from the Western experience and not squandered millions of tax dollars and license fees trying to control this very adaptable creature.

To those of you who read this article and whose experience may be somewhat less approving, I have no argument. Just as Stanley P. Young found while writing his classic work, "The Clever Coyote," I also have found a subject worthy of respect. To a big tooth predator with the audacity to have expanded its population size and range in a place where the human population of more than 19 million people is bent toward total homocentricity, I tip my hat. And I hope that Young's final sentiments expressed nearly 50 years ago, will eventually become our collective view of the eastern coyote in New York: "the coyote, when not an economic liability and therefore requiring local control, has its place among North America's fauna." ▲

Bob Gotie is Sr. Wildlife Biologist, NYS DEC, at the Cortland office.

THE RETURN OF THE WOLF

—*Should Wolves Be Reintroduced To The Adirondacks?*

By Lexi Nichols

Introduction

Recently, the thought of reintroducing wolves to the Adirondacks has brought a lot of conflict to people all over New York State. My 7th grade teacher brought this issue up during school this year, and really got me thinking about the argument. Our teacher has introduced us to live wolves, shown us videos, and gave us the chance to study the habitat and the social structure of wolves. Our forester, **Ron Cadieux**, advised me to write to a wildlife biologist with the Department of Environmental Conservation, **Mark Brown**, who is responsible for introducing endangered species back into their historical habitat. Since our tree farm where we spend summers is located near the Adirondacks, I am interested in this issue.

A Wolf's Eating Habits

Wolves *(Canis lupus)* are carnivores, and eat large game. In Yellowstone, where wolves were reintroduced, they have been studied closely, and it has been noted that they chase coyotes *(Canis latrans)* out of their range, except around the edges, where coyotes come and eat the leftovers of a wolf's kill. Since coyotes eat small game, like rodents, the rodent population may increase, which may be good for hawks, owls, eagles, foxes, pine martens, and other rodent-eating mammals. Bear, fox, ravens, and eagles might eat of the leftovers that wolves leave. In Yellowstone, the wolf's diet is elk. In the Adirondacks they would eat white-tail deer and available moose.

Are the Adirondacks Big Enough for the Wolf?

In 1992 over 90 Canadian lynx were reintroduced to the high peaks of the Adirondacks. They require large areas of land, larger than the Adirondack Park, and the lynx has been found as far away as southern Pennsylvania and New Brunswick, mostly as road kills. The wolf pack requires large areas as well, maybe up to 300 square miles. Because there may not be enough land in the Adirondacks, they might spread outward and establish in neighboring farmland. It is sometimes difficult to tell wolves apart from coyotes, especially since they might interbreed. This could be a problem for the farmers.

Would It Cost Too Much to Reintroduce the Wolf?

It is estimated that a wolf reintroduction project would cost about one milllion dollars. Would this be the wisest use of that much money, especially if they may not survive, like the lynx? Or could that money with more success be used to help other endangered species?

Conflicts With Other Animals

Currently, the eastern coyote lives throughout the state. The wolf may have an effect on its population, based on the studies at Yellowstone, as well as the fox and the fisher. The fisher has been recently reestablished. The wolf will effect the deer population, which may have an impact on hunters, who do not want competition. The moose has recently been making its way back to the area, and wolves may cause them to become extinct once again.

Public Attitudes

A large percentage of people who live within the Adirondacks don't like the idea of having wolves in their backyard. They don't even like the coyotes, who are not as aggressive as the wolf. People who live in the towns and communities might feel uncomfortable, or very nervous about having their children play outside, walk to school, have picnics, etc., knowing that wolves might be nearby. They would also know their pets would be at risk.

In December, a man came to my school with two pet wolves, for my grade to interact with. He told us a story about an incident when his wolves were puppies. One of them ran away to a neighbor's house and got in a fight with her over a piece of bread that she was holding. He bit her hand and got away with the bread. We couldn't come to see the wolves with any food, because they might attack us for it. Usually, wolves weigh 60 to 100, or even 160 pounds, which is big enough to cause problems being hit by cars, like deer in some communities where they are overpopulated.

It might be very difficult for scientists to study the wolf in the Adirondacks, because the terrain is rough, and the mountains are full of woods with underbrush, so sightings would not be very easy.

Sketch by Lexi Nichols

Conclusion

I believe that wolves should not be introduced to the Adirondacks at this time, because of the high cost of the project and risk of failure. I love wolves, and I am grateful that I had the experience of looking at a wolf up close, and petting his fur. They are beautiful, intelligent, and mysterious and should never be allowed to go extinct. If they came back from Canada on their own, like the moose, then people could get used to them gradually, and they would be less controversial. ▲

Lexi Nichols, 12, is a 7th grader at Bell Middle School in Chappaqua, Westchester County. She is learning about stewardship practices at the tree farm her family manages in Washington County.

THOSE *OTHER* DEER TICK DISEASES

By Elizabeth Nichols

Most people who work in or around forests are aware of the hazards of contracting lyme disease carried by the tiny deer tick, *ixodes scapularis.* In recent years, this disease has spread throughout different areas of the United States, with the heaviest concentration in Westchester County and some areas of Connecticut. Two other lesser known diseases, both prevalent in southeastern New York, are carried by the same deer tick. It is entirely possible that these diseases may spread as well. (Birds are carriers of the deer tick, and they do travel!) Since the symptoms are different than lyme, it is important to be able to identify them so treatment can begin quickly. If you're not familiar with them, read on!

Human granulocytic Ehrlichiosis (HGE) is caused by a type of bacteria (Rickettsia), and the symptoms may include a high fever, severe headaches, and occasional vomiting. Amoxicillin is useless against this bacteria, but other antibiotics are effective. It is not known how long the tick needs to be attached to transmit the disease, but it is believed that it is only for a short time, as opposed to contracting lyme, when the tick needs to be attached for about 36 hours. (When I had HGE, I had pulled a tick off that had only been attached for a few hours, so I didn't worry about lyme. A day or two later I developed symptoms that were so unpleasant–high fever and terrible head and body aches– that I definitely wanted to go to the doctor. I was put on antibiotics immediately, and had to take several blood tests over the course of a few weeks, to rule out other diseases and see if the antibiotics were working. Thankfully, HGE responds quickly to the right medication, which is a different antibiotic than the ones used to treat lyme!) How common is HGE? In Westchester County and Long Island, it is now about as prevalent as lyme, with 25% of nymphs carrying the disease and 50% of the adults. Co-infection (contracting lyme and HGE) can occur in 10 of nymph bites and 32% of adults.

Babesiosis is a malaria-like illness caused by a protozoan parasite. Symptoms of this disease usually begin about a week after being bitten, and include a gradual onset of malaise, fatigue and loss of appetite followed by fever, drenching sweats, muscle pain and headaches. Recommended treatment includes a seven-day course of oral quinine plus clindaycin (intravenous or oral) under careful supervision of your physician. Fortunately for most of us, this disease is only being detected along coastal areas at present.

It may be possible to contract several of these diseases from one tick bite. There is also a virus which has been found in 1/2% of deer ticks, called *powassan*, which is like encephalitis.

If you have been bitten by a tick and develop any of these symptom, call your physician IMMEDIATELY. HGE and Babesiosis CAN BE FATAL in rare instances, so early diagnosis and treatment are essential. Lyme disease is easily curable if treated early, but can cause serious complications if undetected. Remember, deer ticks are tiny, and sometimes look like tiny moles on the body. If you live in a tick-infested area, keep a magnifying lens readily available, to see if your mole has teensy-weensy legs. *(Warning: they are UGLY beasts under magnification!)*

This information was provided by the American Lyme Disease Foundation, Inc., an organization dedicated to controlling tick-borne infections through support of research and education. They are currently looking at methods to kill the tick in your environment, detecting other possible diseases carried by the tick, and supporting researchers who are creating vaccines. If you would like to make a contribution, or would like educational material, please send it to ALDF, Inc. Mill Pond Offices, 293 Route 100, Suite 204, Somers, NY 10589. (E-Mail: ALDF@computer.net) ▲

Elizabeth Nichols is the Newsletter Editor of NYFOA's Lower Hudson Chapter.

HOW TO REMOVE A TICK

1. Remove as soon as possible.
2. Use curved forceps or tweezers, pull straight back gently but firmly; do not jerk or twist.
3. Disinfect area of skin and wash with soap and water.
4. If part of tick mouth is left, leave in place until it flops off or is absorbed, or remove like a splinter.
5. Observe bitten area for any rash.

Application or Facsimile Application for Membership in the New York Forest Owners Association.

I/We would like to support good forestry and stewardship of New York's forest lands.

( ) I/We own _____acres of woodland.

( ) I/We do not own woodland but support the Association's objectives.

NAME_____

_____

ADDRESS_____

_____

City Zip

Telephone_____

County of Residence_____

County of Woodlot_____

Referred by_____

Annual Dues

(Please Check One)

INDIVIDUAL	$20
FAMILY (or co-owners)	$25
CONTRIBUTING	$30-$100
SPONSORING	$101and up

MEMBERSHIP INCLUDES:

Six issues of the **NY FOREST OWNER,** woodswalks, chapter meetings, and two statewide meetings for all members.

PLEASE make check payable to: NYFOA and SEND TO:

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P.O. Box 180.
Fairport, New York 14450

LETTERS

Landscaped State Land in Limbo

Hundreds and hundreds of landscaped acres are being mowed and still look the same or worse year after year. The acres to which I refer are the medians between our expressways and thruways.

Why not plant these acres to shrubs (lilacs, forsythia, rhododendron, etc), groundcover (myrtle and all the ivys), and to all the species of trees appropriate to the area?

As the plantings grow, it will reduce the headlight glare between lanes and make driving more pleasurable. Cost of mowing and equipment will be reduced.

The towns and counties the roads run through may help plan the projects and do some of the work. It may take a long time but could be fun and rewarding to us and nature.

—**David Swanson**, Mt. Morris

TREE-HUGGER
By Howard Nelson

I am, and I do.
I'm not ashamed to say so,
When I mentioned it
to my friend Jim,
who speaks quietly
and understands green things
better than anyone I know,
he said he does it too.
In my walks I often
Stop and embrace a tree.
There are certain beeches
along the creek
I especially like.
Their smoothness draws me to them,
and their shade of light gray.
I can fold my hands together,
just barely,
on the other side.
The curves and knobs
of my bones
press the hard arc,
and sometimes I move
my hands slowly
over the bark
as I move them
over a woman's back.
Put your arms
around a tree
and you begin to feel a life
more spacious, and rooted,
slower and cooler–
a life quite different
from your own.

Mummy shows embalming older than once thought

A 4,000-year-old mummy indicates that ancient Egyptians started using embalming techniques about 1,000 years earlier than previously believed.

Ulrich Weser of the University of Tabingen in Germany and his colleagues examined bones of a man unearthed in Giza in Egypt in 1914. The researchers discovered that the bones had been treated with pine resins and sodium-based compounds that preserved the remains and served as an antiseptic. The skeletal remains were heavily impregnated with the preserving goo, suggesting the embalmers "defleshed" the skeleton of Idu II, at least in part, before embalming, according to a report in the Jan. 22 issue of Nature.

Idu II served as secretary general of the Pine Wood Trade Office during Egypt's Old Kingdom period, roughly 2150 B.C. While it may not sound like a glamorous job, it probably provided such executive perks as mummification, the researchers say, and a ready supply of pine and pine byproducts. —**The Washington Post**

THE KILLING FOREST

The National Institute for Occupational Safety & Health reported that 1,492 fatalities were recorded in the logging industry during 1980-89, making fatality in this line of work 23 times more likely than in the average American job.

—**RURAL FUTURES, March 1998**

Paradise II

Standing in a semi-open clearing near
a steep timbered Attica ravine

Exhausted I sit on the brown, dry
cover of last year's leaves

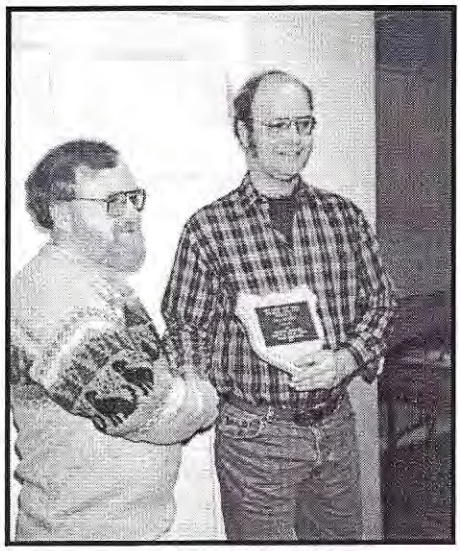
Eying the killed trees which will
provide this year's warmth.

Summer sounds surround me
Maple and ash movement
Mosquito's tiny music
Woods vole rustling toward food
–or companionship

The sun cracks the leafy ceiling
Blinding my view of another
paradise.

—J. Kania, 1978

SOUTHEASTERN ADIRONDACK CHAPTER



Jim Durller, SEA Chapter Chair (l) and Dale Monroe.

The Southeast Adirondack Chapter of the New York Forest Owners Association recently presented their first annual "**Kenny Bandel Outstanding Logger Award**" to **Dale Monroe** of Lake George. The award was given at the Annual Winter Meeting of the SEA Chapter, held at Crandall Library in Glens Falls. The local chapter covers Saratoga, Warren and Washington Counties.

Dale has been in business for over 13 years and is active in numerous logging and community programs. He is an active member of the regional New York Logging Training, Inc. Committee and has supported the program through his assistance to many of the training sessions. Dale completed the Trained Logger Certification in 1996 and continues to take additional educational credits for certification. He also attends many programs/workshops related to the logging industry to enhance his own professionalism. In 1997 Dale received the Conservationist of the Year Award from Woodmen of the World. Dale also is an active volunteer in school and community programs serving as an instructor in the 4-H Adirondack Guide program and advising several of the 4-H environmental trips. Dale, his wife Hildy, and children live on Stone School House Road in Lake George.

The award is named in memory of Ken Bandel, a well-known local logger from Shushan. Ken and his father, Warren, were voted N.Y.S. Outstanding Loggers of the Year in 1984 by the NYS Timber Producers Association.

Forestry *Fast Forward*

By David Beers

As a forester in ***2008***, I need to satisfy the landowners and the mills while I stay competitive with loggers, land speculators, developers, preservationists, and other foresters. I need to sell my services and do the job efficiency.

Word of mouth still provides the majority of business, but supplemental sources give me the edge. I update my web site and send out emails to potential customers. I peruse a realty web site for any recent transactions of wooded acreage in the surrounding three counties. The realty site includes property descriptions, locator maps, and pictures of parcels. This site gives me the names of new woodland owners I could contact. I also search the aerial photos and processed satellite imagery on the web for timber that looks promising. I pay a monthly subscription to a company that interprets satellite imagery and turns the data into timber type maps that they post on a members-only web site,

I just bought a small, waterproof, impact resistant, and inexpensive data recorder to make field work easier, faster, and more accurate, I affectionately call this machine Cruiser. While flagging boundaries, Cruiser keeps me on the correct bearing and maps the boundaries with its GPS receiver. It also has a metal detector to help find iron stakes.

Cruiser automatically overlays a 400'x 400' grid of measurement points onto the parcel map. Using this default grid, Cruiser can direct me to any point I choose. I can change the default in numerous ways. I can make the grid 300'x300'. I can exclude an area from cruising by simply highlighting it. I can specify that points at the end of each line must be more than 100' from the border. I can manipulate measurement points by dragging them to a new location

Before leaving the office, I scanned the topographic quad, soils map, aerial photo, and tax map into Cruiser. Cruiser can overlay any of this spatial data onto the map of measurement points. I overlay the contour lines and an aerial photo and decide to go west. By selecting the next point on the line heading west, Cruiser knows what point to direct me to and points the way with an arrow. Cruiser also shows my distance to the next point. Whenever I cross a stand boundary I select the "Stand" key. Cruiser records that position and automatically recognizes the points within the stand boundary as a separate stand. At any time, I can easily manipulate stand boundaries with the keypad's direction arrows.

At each point, I enter species, diameter, height, and any other pertinent information by voice or typing. Cruiser automatically assigns the data to its measurement location. I also record every trail crossing and stream crossing for later mapping.

With cruising done, I am back at the truck. Cruiser downloads its data into the laptop. I enter a few more items, like site class and then I try out a few cutting scenarios on Stand One. First I take out all the beech and fir, and cut everything over eighteen inches. Then I try taking out all the low value trees. After every scenario, the laptop projects the cut stumpage value, growth in value of residual timber, net present value, rate of return for the next 20 years, and any other data I choose. The laptop also shows the present conditions in graphs, maps, and numbers; conditions like percentage composition by species and diameter.

After selecting a few promising cut scenarios. I am ready to visit the landowner. Working with the laptop, the landowner is able to choose a cut scenario that will best meet her goals, The laptop is invaluable in finding the optimal cut and then illustrating how that cut is optimal. I find the laptop also helps promote sustainable forestry. Many times I have convinced a landowner that a strict diameter limit cut will not meet their goals. Simply calculating a 20 year rate of return is usually all the convincing needed to avoid high-grading.

The landowner chooses a thinning of Stand One that will remove about one fourth of the trees. This cut scenario removes law value trees, to open up the crowns, and increase the growth of the most valuable trees. The scenario removes all financially mature trees (having a diameter greater than 18 inches). The scenario also maintains areas of dense conifer cover as winter shelter for wildlife. I head out the next day with Cruiser, paint gun and tree stick to mark the trees..

This landowner wants higher prices for the wood by applying for a sustainability certification program. To get the higher prices from the mill, the wood from this lot will need identification as certified from the forest to the retail store. Cruiser has a bar code gun that works like a staple gun- At each marked tree I enter the species, diameter, number of logs, and pulp height. Cruiser assigns that data to the bar code and to the tree's location. Towards the end of the day I find areas I neglected to mark by viewing a map of marked trees.

With marking finished, I am back at the track downloading the data into the laptop, Software processes the data and inserts it into a management plan template. The software inserts maps, graphs, numbers, charts, tables, and words. I read over the plan to make needed changes and use my creativity to give the plan uniqueness. The pull-down forestry menu in my word processing program helps. This menu has a forestry glossary, forestry regulations for each state, stocking charts, topographic maps, road maps, soils information, silvics information, and more. Each year's upgrade has great new features.

Back at the office I go on-line to fill out the forms for sustainability certification. I send the state a harvest notification and a copy of the management plan electronically. The landowner receives the management plan attached to an email message only two days after the initial consultation! Lastly, I email adjoining landowners to notify them of the upcoming harvest and ask them to double check my boundary flagging.

I soon get replies that the landowner, the state, and adjoining property owners are satisfied. I put the stumpage out to bid on the internet and email all my favorite loggers. When showing the lot, the loggers question some measurements. To justify my work, I scan the barcode of a few trees to get their data. The loggers agree with my measurements for each tree and are satisfied. I take bids, choose a logger, and supervise the harvest The landowner is pleased, the state is pleased, the mill is pleased, and the consumer in pleased. Most of all, I am pleased to have the whole process condensed to less than a week with more effective results.

In 2024, my pager tells me that this lot is ready for another thinning. I had installed radio collars on a few trees. These collars send me a signal when a certain tension is reached. Technology allows the forest to tell me when crowding occurs and when a thinning would be beneficial. It is time to mark again. ▲

David Beers is a consultant forester residing at Fort Edward, NY.

ASK A FORESTER

By Stephen Davison

FROST CRACKS

Q. I've heard loud, gunlike noises on cold winter nights and later noticed some seams on trees in the woods. Can this be frost cracks? —**R.F.**, Moravia

A. It is possible that both the noises and the seams are from so-called **frost cracks**. These cracks are misnamed because frost isn't the direct cause of the cracks. Both hardwood and coniferous trees develop frost cracks. Frost cracks usually affect dormant trees.

Frost cracks occur during periods of wide temperature swings when there is sudden, severe cold weather. During a cold night following a warm day, the inside wood and water of the tree remains warm and stable with little shrinkage. The outer wood in the tree becomes cold and the water in these outer wood cells moves out of the cells and freezes. These outer cells dry and shrink. This unequal shrinkage between the inner and outer wood cells creates unequal pressure which causes the layers of wood to separate and release the pressure. The sudden pressure release can sometimes sound like a "gunshot." The cracks usually start at the base of the tree and work their way upward. Frost cracks are commonly found on the south and west sides of trees.

It has been further suggested that while all of the above is what happens when frost cracks are created, it is an injury to the young tree which is the biggest contributing factor to the formation of frost cracks when the tree is older. Following the injury, the cambium walls off the decay and prevents it from spreading to new growth by forming tissue that has been described as a **barrier zone**. This zone is structurally weak and differs from normal wood in its anatomical and chemical makeup. When wind or a rapid temperature drop causes a change in internal stresses in the tree, a separation along the barrier zone may occur, resulting in **ring shake**. The ring shake causes separation along the radial plane, and separation outward to the bark of the tree causes the seams and cracks which are called frost cracks.

Canker, decay or wetwood organisms often enter the tree through the crack. A ridge of callus tissue along the length of the crack may develop during a period of several years, where repeated healing and recracking occurs. ▲

CUBIC MEASURE

A question has been raised by Robert Nowack concerning an article in the Jan/Feb 1998 issue of NY Forest Owner (and LETTERS in the Mar/Apr issue) entitled "Forest Service to Convert to Cubic Measure." The article states that in the Lake States, full cords of wood will be converted to cubic measure by applying a conversion factor of **.79.** This would convert a full cord into **.79** cubic feet. Mr. Nowack (in his letter) feels that this conversion is in error. It is. He says that the correct conversion should be .79 times 128 cubic feet or 101 cubic feet. His math is correct but there is an error with the .79 conversion factor.

A **full** or **standard** cord of wood is an imaginary rick of wood measuring 4 feet by 4 feet by 8 feet or 128 cubic feet. Except for some pulpwood, trees are rarely cut into 4 foot lengths. So the formula for cords is: $\frac{W\text{ (ft)} \times H\text{ (ft)} \times L\text{ (ft)}}{128}$

Since a cord contains wood, bark and air, the cord does not tell you how much wood there is in a cord. Various conversions have been used to determine the amount of wood in a cord. These conversions consider straightness, knots, roughness, position on the tree and softwood versus hardwood. The Lake States will use 79 cubic feet as the amount of solid wood in a full or standard cord. The article in question should have read *"Conventional full cords will be converted with a 79 conversion factor. A full cord, in other words, will equal 79 cubic feet."*

But, you may ask, what about face cords?

The cord originated with the practice of stacking 4 foot fuelwood in ricks 4 feet high and 8 feet long and is defined as a unit of wood equal to these measurements. The cord also contains bark and space.

In a **face** or **short** cord, the wood is cut into less than 4 foot lengths. This is usually done for the convenience of everyone involved. Not too many people have stoves that can handle 4 foot long wood. When firewood is sold, the length of the wood in the face cord must be stated.

A short or 16 in.face cord measuring 16" by 4 ft by 8 ft is 0.33 standard cords. The face cord in the above example in the Lake States would contain 26.3 cubic feet of wood. ▲

Steve Davison is a NYSDEC Sr. Forester in the Cortland Office. He has agreed to write the Column, "Ask A Forester".

MY FAVORITE TREE

By Mike Greason

Dick Fox asked me to write about my favorite tree. I would guess most DEC forestry staff, many NYFOA members and quite a few of my woodworking customers would guess right when they would holler out, "Butternut."

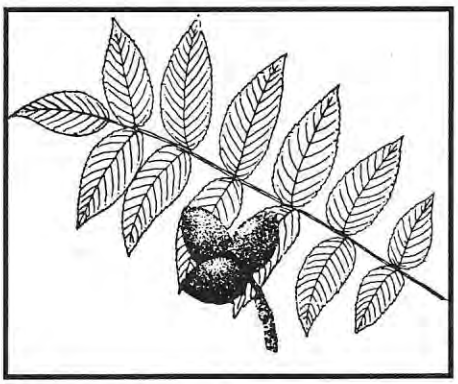
My interest in butternut began, when as a boy, we had a mature butternut by the former old chicken coop which served as our shop and my summer bedroom. I used to gather the nuts, lay them out in the driveway for the husks to rot away so my mother could use those rich nut meats for cooking.

That interest exploded after I started logging. We tried to find the best markets for every log. Early on we discovered we could sell white hearted ash in Brattleboro, Vermont to be used for tennis rackets for $90 per thousand board feet. By shipping those logs along with the rejected brown hearted ones to Sherbrooke, Canada for hockey sticks, we could get $350 per thousand - now that was worth the extra fuel and time to truck. At that time red oak veneer was bringing from $190 to $225 per thousand delivered to northern Vermont or Canada. Grade specifications had a lot to do with which market we would ship to. And some of those specifications seemed tighter in those days than now; for example, white oak veneer had to be at least 22 inches on the tip and could not have one catface or blemish anywhere. Butternut was much more gracious.

We discovered that butternut had some unique marketing advantages. First, none of our competitors were even interested in buying it. It was almost as popular as red maple in those days. However we found that the veneer market on the St Lawrence Seaway would pay us $450 per thousand for any log that even resembled veneer potential. An occasional knot, frost crack or other minor defect was regularly overlooked. The obvious grade logs went to a mill in Massachusetts that had a contract for paneling Friendly Ice Cream Stores. The highly defective logs ended up being sawed at a friend's mill and kept in a barn for my own eventual personal use.

The high profit potential we found in butternut gave us interest in seeking out individual trees. One of the features of the species is that its foliage starts to turn yellow early enough in the fall so that, for example, as we drove our overloaded log truck up Greenfield Mountain, we could gaze over the Pioneer Valley, record individual tree locations on our internal GIS locators (My sense of direction far exceeds my computer skills and I could lock those trees in my memory until I visited with the owner.), and check the trees out for purchase possibilities at a future date. One lot we bought yielded 62 thousand board feet of veneer; that was the week we bought our first St Bernard.

I once tried to pull a U-Haul trailer load of butternut logs up Greenfield Mountain with my Jeep wagon. Upon cresting the hill, the trailer lifted the back end of the Jeep



off the road and got it violently swinging back and forth. Just before pitching over a 100 foot embankment, the Jeep tipped over leaving one embarassed young logger trying to explain the traffic tie-up to a state trooper. At the time it seemed like an easy way to bring the logs to where our loader was; yet it was not a trick I tried again.

Upon becoming a DEC forester, my wife and I bought an old farmhouse needing restoration. I had all this free butternut, air dried several years. What better source could I ask for for building kitchen cabinets, paneling, furniture and all those other needs we suddenly had. We bought a radial arm saw and a new aspect of my life unfolded. I have always found butternut defects fascinating. I'd seek out an open knot, a patch of wormy wood, a feather crotch and highlight them in a door panel or cabinet side. Compliments flowed; I remember one night when one bridge player commented that our kitchen cabinets looked almost as nice as knotty pine.

This personal woodworking, initiated out of need and a supply of butternut, led to entrepreneurial expansion into a custom woodworking business. What started with one radial arm saw has grown into a fully equipped shop with all the toys and a stockpile of over 10,000 board feet of lumber, of which 1,500 is butternut. I've built a half dozen butternut kitchens and hundreds of pieces of butternut furniture. It machines fairly well and the whiskers sand off after the first coat of finish. It has a warmth to the color and grain which I never get tired of. I still seek out the defects preferring them to clear wood. I even prefer butternut's appearance to cherry or walnut.

In 1972, I found a large tree which was, at that time, the largest butternut known in the state. This 34 inch diameter tree was the largest of its kind I had seen. Because a major portion of the top was broken and it was a mile from the road, I offered to buy it for $130, a price that no one at that time would have expected to gain. As one might expect, that was a chain saw cut that was heard around the state. The tree yielded 806 board feet of lumber ranging up to 18 inches wide, some with a fluorescing bright green stain, and it yielded a lot of conversations about cutting a state champion tree.

I redeemed myself however when I found yet another state champion at 57.95 inches in diameter, scoring 253 points, in the Town of Catskill. And imagine my disbelief when a slightly smaller diameter, but taller and more widely spreading champion scored 267 points reduced the Catskill champion to second place. The Catskill second place champion still stands without any sign of butternut canker and it has no need to fear my arriving with my Wood-Mizer bandmill. The owner had contacted me because he wanted to rid his driveway of the tree that dropped a pickup load of nuts. I talked him out of cutting and found a young lady who sold the nuts to the State Tree Seedling Nursery at Saratoga.

Over the past decade or so, butternut canker has decimated the species. Always a small component of the forest, butternut is now becoming a rare find. Hopefully disease resistent trees will survive and retain a niche in our forest. Its sweet nut meats benefit us and wildlife alike. Its wood offers a beauty that enriches our lives. Although not on the same scale as the American chestnut, losing butternut as a component of the northern forest is a loss that I would regret. But, as with chestnut, I keep my eye out for those few that hang on and now I will only consider cutting those trees that are dead or dying. ▲

Mike is NYSDEC Chief of the Bureau of Private Land Service.

WANTED! —A Few Good Neighbors

By Gary R. Goff

Probably everybody would like a few good neighbors, or at least wouldn't mind exchanging some of their current ones! New York's Master Forest Owner/COVERTS Volunteer Program* is based on the genuine neighborly interest of volunteers across the state in assisting neighbors with concerns, issues and opportunities regarding forest ownership. Owning and managing forest land can be quite an undertaking particularly to new owners. Taxes, trespass, sawtimber value, wildlife management, water quality, access and boundaries are concerns all forest owners must contend with sooner or later. NY's Master Forest Owner (MFO) volunteers are peers ready to help based on their experiences and some focused training supplied by Cornell Cooperative Extension and other organizations and agencies.

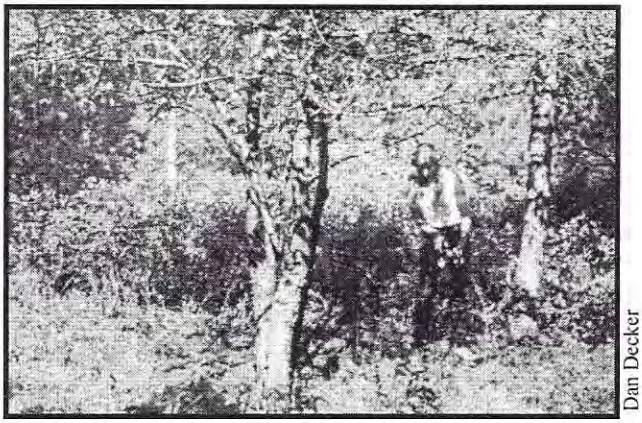
There are currently 145 active, certified volunteers from 43 counties across the state ready to respond to requests from their neighbors for assistance. The simple goal of the program is to provide private forest owners with the information and encouragement necessary to manage their forest holdings wisely. The volunteers are not selling or promoting anything but good forest stewardship based on the owner's objectives! The volunteers generally are available to visit with neighbors via a half-day walk on their land to discuss interests, options and where to get help. The volunteers are not professionals, do not provide technical assistance, nor are there any obligations what-so-ever. Their greatest attributes are that they are unbiased, knowledgeable, experienced, and tied into an informal web of expertise in local communities and across the state. Many belong to the NY Forest Owner Association, are Tree Farmers, belong to their Cornell Cooperative Extension County Association, and have participated in some forestry assistance programs. They are willing to share what they know, tell what has worked for them and point out some possible pitfalls along the way. The most commonly stated reason for joining the MFO program given by new candidates each year is that "they wanted to do something good for the forest resource" as a way of giving something back to their community.

Volunteers also promote good forest stewardship within their communities through work with 4-H clubs, school mentoring programs, writing articles for local newspapers, assisting with forest owner workshops hosted by Cooperative Extension, and serve on the NYS Forest Stewardship Committe, and the many activities sponsored by NYFOA such as woods walks and the Forest Family Fair.

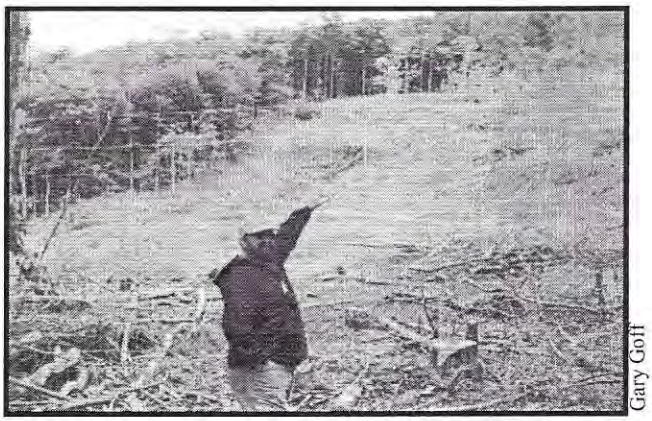
If you are interested in an on-site visit by a MFO volunteer, or just wish to speak with one over the phone, a listing of volunteers is available at all County offices of Cornell Cooperative Extension, Regional offices of NYS Dept. of Environmental Conservation or via the NY Forest Owners Assoc. phone-assist line, 1-800/836-3566. If you are interested in becoming a MFO volunteer and attending the September 1998 training workshop, call Gary Goff, MFO Director at 607/255-2824 or e-mail <<grg3@cornell.edu>>. ▲

**The NY Master Forest Owner/COVERTS Program is jointly funded by The NYS Forest Stewardship Program and The Ruffed Grouse Society, Cornell Cooperative Extension, and the USDA Renewable Resources Extension Program, with cooperation from NYSDEC Div. of Lands and Forests, and the NY Forest Owners Association. The term "COVERTS" (pronounced like cover) meaning good grouse habitat, refers to a similar program funded by The Ruffed Grouse Society, and is symbolic of the importance of habitat to all wildlife.*

Wildlife habitat enhancement projects can be as simple as pruning, fertilizing, and releasing an apple tree from competition to...



Dan Decker



Gary Goff

...as ambitious as creating a 30-acre clearcut to promote favorable sawtimber regeneration and ruffed grouse habitat.

CORNELL COOPERATIVE EXTENSION PUBLICATION TELLS HOW TO ENHANCE WILDLIFE HABITAT

Have you ever wondered what you could do to help local wildlife or why you should?

—An increase in some insect-eating birds around a garden may naturally reduce insect damage to garden produce and make your yard more hospitable. Habitat enhancement can increase both the number and variety of wildlife on your property to allow you close viewing or study of various birds and mammals.

Conversely, have you ever wondered what kind of habitat attracts unwanted wildlife to your land?

—Racoons are attracted to water, squirrels will come a long way to feed on nuts and fruits, and rabbits will nest in unmowed grass.

One of the most popular Cornell Cooperative Extension publications, **Enhancement of Wildlife Habitat on Private Lands**, has been extensively revised. It shows landowners what kind of habitat attracts which animals.

The 42-page publication includes dozens of illustrations and detailed instructions for 10 low- to moderate-cost projects to provide desirable habitats. It also cites nearly 50 references for additional information.

Many of the projects are applicable for an urban park, suburban backyard, or rural area. Most are suitable for adult-supervised youth activities.

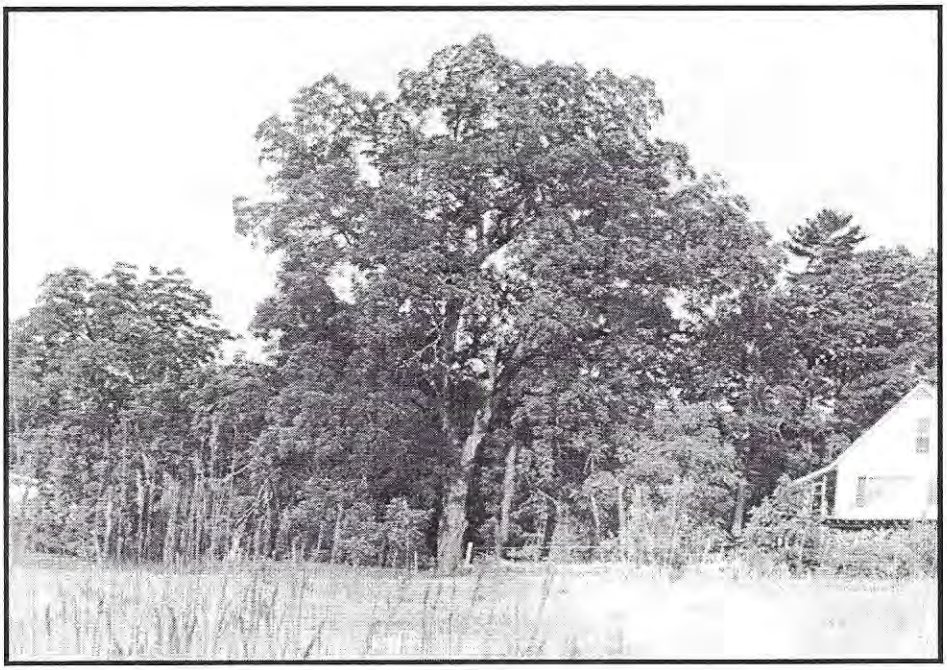
Copies of **Enhancement of Wildlife Habitat on Private Lands** are available from the Cornell University Resource Center, 7 BTP, Ithaca, NY 14850 for $7.50 which includes handling and mailing. New York State residents should add applicable sales tax.

Copies may also be available at Cornell Cooperative Extension County Associations throughout NYS.

PROPAGATION AND USE OF BLACK WALNUTS IN NORTHERN NEW YORK

By Michael Bedoian ©1998

We have been propagating black walnut trees from seed for almost ten years. To date, we have planted about 400 trees, the oldest of which were started from seed planted in 1989 These trees are now about 20 feet tall and growing very quickly. Our seed source is trees which have been growing on our property in the Champlain Valley for many, many years.



To prepare the walnuts for planting, we harvest them as they fall from the trees, husk them and immediately bury them about one foot deep in loamy garden soil. We protect the nuts from squirrels by putting them in an old wire minnow trap prior to burial. The location is flagged and the nuts left until spring. They are dug up in late April or early May and planted individually about two inches deep in a tilled nursery area, far from trees, to discourage foraging by squirrels. The walnuts germinate quickly, sending their reddish feather-like stems toward the sun and their strong taproots into the earth. Our germination rate is about 65 per cent.

The seedlings grow in their nursery for one year, and the following spring are carefully dug up and transplanted to their final locations. We find they transplant well if care is taken not to damage the taproots. We plant the seedlings with a dibble, a heavy steel tool used for planting forest trees. The site of each planted seedling is flagged, so it may be located amid surrounding vegetation in succeeding years.

Black walnut trees are very intolerant of shade and it is necessary to **remove all** vegetation that shades the little trees. We use handsaws and pruning shears for this important task, which must be repeated for several years until the young trees dominate their site. Our oldest transplants are now "on their own", creating a hammock of walnut trees where only weedy scrub species grew before.

We also harvest and sell our black walnuts. If properly prepared after harvest, the nuts are well worth the effort, as their flavor is rich, full and unique in its complexity.

Immediately after they fall from the trees, the nuts are gathered and the soft outer husks removed. We wash the nuts in a steel tank in batches of about a bushel with just enough water to cover them but allow them to rub against one another as they are agitated, to remove pulp adhering to the shells. After being thoroughly rinsed and drained, the nuts are spread on shallow racks in a layer one nut deep and placed in a cool, dry and dark place with some air circulation, to dry. We dry ours across the beams in our hayloft.

The nuts will dry in two to three weeks, depending on air temperature and humidity. When they are dry we pour the nuts into onion sacks and suspend them with wire from our barn rafters, to protect them from squirrels until we are ready to crack them.

The nuts vary in size, flavor and ease of extraction from tree to tree. A section of railroad track as an anvil and a ball peen hammer wielded judiciously are used to remove nut meats. With practice it is possible to extract a pound or more of nut meats per hour - a pleasant task for long winter evenings. To preserve freshness, the nut meats are stored in tightly closed plastic bags, in the freezer. They remain fresh that way for many months.

Black walnuts are excellent in baked goods. Our favorite recipe is a variation of the traditional Swiss Engadiner Nusstorte, using black walnuts instead of the European white walnuts. These "black walnut pies" are very popular with our farmers' market customers who enjoy the flavor that only black walnuts can offer.

We have a half dozen bearing black walnut trees around our old farm house, the largest of which is fully five feet in diameter. It's surely as old as the house, which was built about 1790. We suspect this tree was planted by the first settlers who probably brought black walnuts with them. Walnuts surely were a luxury in those days, as California walnuts had not yet been invented!▲

Michael Bedoian, a new member of NYFOA, manages his Black Walnut plantation in Essex, NY.

TO CUT OR NOT TO CUT
—*Our National Forests?*

By Henry S. Kernan

Several recent sessions of Congress have had before them proposals to terminate timber sales from federal lands. Their supporters are organizations whose members profess to be concerned about the environment. The forested area is about one quarter of the country's timberland and produces some four billion board feet-a-year.

Last October the latest of these bills was introduced as HR 2789, the National Forest Protection and Restoration Act of 1997. The bill has ten sponsors and was referred to four committees: agriculture, resources, education and workforce. In spite of the broad name and referrals, HR 2789 has just one target: the end of commercial logging on federal lands.

Congress will probably take no action toward that end. Nevertheless, its presence in Congress is significant as well as the content of the bill.

The title suggests forests under stress and at risk, in poor condition and in need of protection. Yet a publication of the United Nation's Food and Agriculture Organization dated 1997 states that from 1990 through 1995, American forests gained over seven million acres. The growth to removals is a favorable 33 per cent increase according to a 1991 Forest Service report.

Section 3's Findings give much insight into attitudes behind HR 2789. They add up to the perception of an ecological crisis caused by the felling of trees and the removal of logs. As a result, the first finding states, "a strong majority of the American people think that natural resources should not be made available to produce consumer goods on public lands." The findings go on to cite logging damage to scenery and salmon, to watersheds, recreation, fire control, and taxpayers whose losses are hundreds of millions of dollars annually for a small part of the timber consumption of the United States. Another paragraph points to logging's small part in employment and income.

Clearly the sponsors and backers of HR 2789 believe that the Findings justify closing timber sales on federal lands. They have existed for nearly a century and have created a workforce and communities dependent upon them. The bill therefore proposes several new programs of federal action.

One is to be a National Heritage Restoration Corps, to "restore areas to their natural condition as existed prior to the occurrence of commercial logging.

Another proposal is for a worker retraining and relocation program to help those dislocated by the termination of commercial logging.

Furthermore, the Environmental Protection Agency would receive up to $3 million to investigate wood-free alternative products for paper and construction. And other grants up to $30 million would develop and produce such alternatives.

The National Forest Restoration and Protection Act sees the exploitation of forests for timber as damaging and wasteful, loggers better out of the woods, and wood products better replaced by other materials.

Predictions are that we will use more wood, not less. Wood is low-cost, available, versatile and more pleasant to live with than plastic, metal and foam rubber. Yet logging must be and must be perceived as being socially and environmentally acceptable. To an extent and at a cost, plantations in Brazil, Chile and New Zealand can send us wood. But choosing them for supplies of wood is hardly a rational way for a country with nearly half-a-billion acres of productive timberland. ▲

Henry Kernan is a consulting forester in World Forestry, a Master Forest Owner Volunteer and a regular contributor to the NY FOREST OWNER.

NOTICE

Henry is offering free to all any amount of 6-10" White Spruce tree seedlings from dawn till dark, May 2, (only) at his farm located 4mi N on County Rd #9 off NY23 in S. Worcester. 607/397-8805

Pine False Webworm—*potential threat to NY's white pine*

By Douglas C. Allen

Growing concern about this defoliator is a result of two current out breaks in North America, one in northern New York and another in eastern Ontario. For several decades following its introduction into the United States from Europe around 1925, this insect was considered little more than an occasional pest of ornamental red, white, Scots, mugho, Austrian, Swiss mountain, and Japanese red pines; or an infrequent problem of red and Scots pine in Christmas tree plantations.

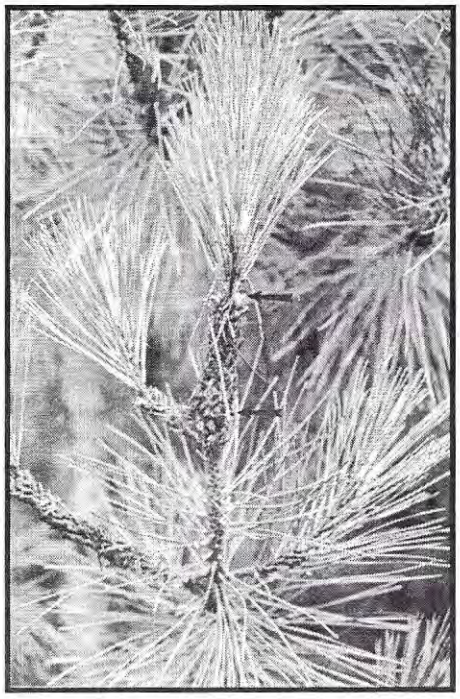


Fig 1. Nest constructed by a colony of pine false webworm (between arrows). Note on this and the two adjacent shoots to the left only old foliage has been consumed.

Since 1981 in eastern St. Lawrence and western Franklin counties of New York and the mid-1990s in Ontario, however, heavy defoliation has occurred to stands of sawtimber size white pine. The New York outbreak first appeared in 1981 on 75 acres of Scots pine near Fort Jackson, approximately 15 miles east of Potsdam. The infestation has persisted at this location for the past 17 years and from here spread to most Scots and white pine stands encompassed within an area of approximately 450,000 acres.

Because little natural mortality occurs in populations of this introduced pest, annual survival in all life stages is very high. Consequently, the infestation is expected to persist at damaging levels and to continue spreading south and east in New York.

An Odd Name! - People who are not familiar with forest insects find the name "pine false webworm" confusing. It feeds on pine and in fact does construct a web or nest within which the caterpillars live (*Fig. 1*). So why refer to it as a "false" webworm? I think the purpose is to distinguish this sawfly, which belongs to a group of insects in the Order Hymenoptera (hy-men-op-ter-ah) (along with the wasps, bees, hornets, etc.), from the true pine webworm which constructs a similar nest but belongs to the moth and butterfly Order Lepidoptera (lep-i-dop-ter-ah).

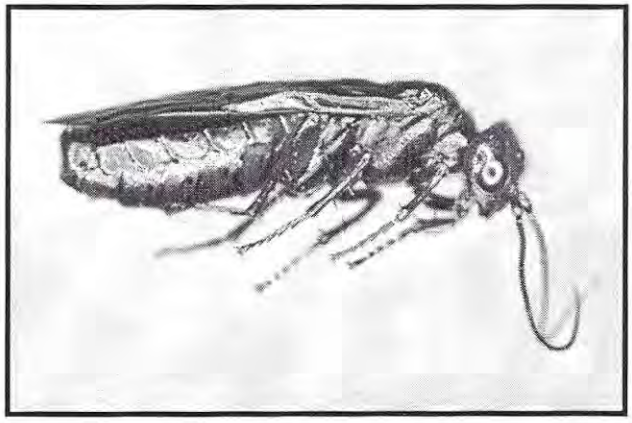


Fig. 2. Female pine false webworm.

Appearance - The two things a forest owner is most likely to spot when the pine false webworm occurs in a pine stand are the large, distinctly colored adults and conspicuous nests made by the gregarious caterpillars.

The wasp-like adults are present for only a short time from May through early June, but they are readily noticed because of their size, appearance and very active behavior. The shiny blue-black females are approximately 7/16 to 1/2 inch long and have a bright orange head (*Fig. 2*). Males also are predominantly blue-black but slightly smaller (3/8 inch or so in length) with a small patch of yellow to yellow-orange on the front of an otherwise black head. Adults are capable of flying but generally remain airborne for only short distances and spend most of their time flitting from branch to

Fig.3. Opened nest. Caterpillar is immersed in a mixture of dried needle fragments, silk strands and dried fecal pellets.

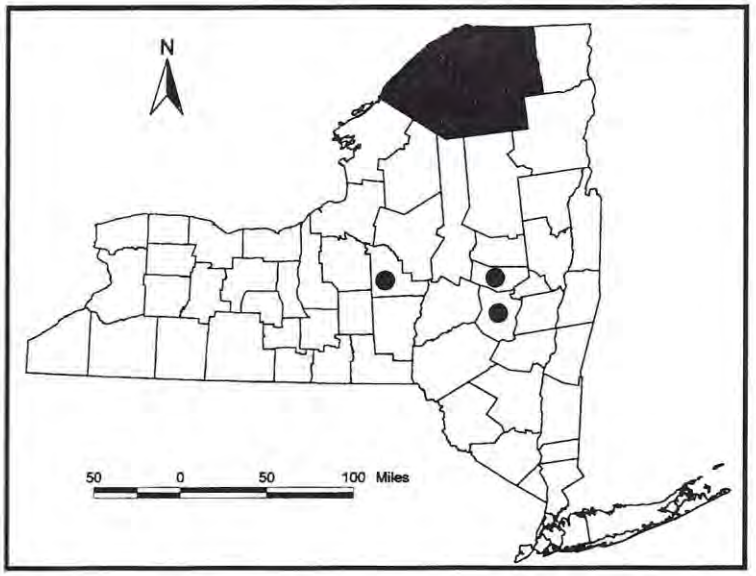


Fig.4. Approximate location of known infestations in New York. The current outbreak occurs in St. Lawrence and Franklin Counties (shaded).

branch or crawling on the ground, tree boles and foliage.

The second piece of evidence that a forest owner is likely to notice are the webs or nests which become especially conspicuous in late June and early July. Shortly after egg hatch, small groups of caterpillars begin constructing elongate nests of silk, dried fecal pellets and bits of dried foliage (*Fig. 3*). Each nest is 4 to 6 inches long when caterpillars are full grown and usually is wrapped around the previous year's twig. Presumably, this structure protects the insects from adverse weather and may discourage many natural enemies.

Damage - pine false webworm prefers old foliage (*Fig. 1*) and only when populations are high and competition for food is intense will it consume needles of the current year. Consequently, even following a year of heavy defoliation trees retain some foliage. Trees that look completely brown in July "green up" as the growing season progresses and current-year foliage has an opportunity to expand. The fact that trees usually retain a significant compliment of current-year foliage largely explains their ability to withstand repeated, heavy defoliation.

Significant growth loss occurs each year of heavy defoliation; that is, when all old foliage is consumed and partial feeding occurs to current-year needles. However, tree mortality usually does not materialize until stands have experienced 5 to 7 successive years of heavy defoliation, at which time trees are weakened enough to encourage invasion by bark beetles.

The Webworm Experience in New York - Webworm damage under forest conditions in New York was unheard of until the 1981 outbreak in eastern St. Lawrence county. In 1984, heavy defoliation appeared on 24 acres of large red pine in Schoharie County. This area and a 20-acre, lightly defoliated buffer zone was clearcut, which eliminated the problem. Additionally, two small (< an acre) areas of Scots pine defoliation were reported during the late 1980s, one in Madison County and another in Montgomery County. Neither of the latter amounted to anything. Clearly, however, this insect is well distributed in eastern New York (*Fig. 4*).

Management - Experimental work has been done in Canada with various insecticides, but no chemical controls have been attempted in New York. Plans are under way to explore the feasibility of developing biolgical control methods, such as introducing parasites or predators known to be important natural controls in Europe. The Canadian Forest Service is screening and evaluating promising agents and, hopefully, in the near future results of this preliminary research will allow us to undertake field trials. Before this can happen, a good deal of laboratory work must be done to assure that we liberate an agent that is very specific to the pine false webworm and is unlikely to disrupt life systems of native insects. In the meantime,we will continue to monitor the outbreak in northern New York, and I encourage any forest owner who detects the insect on their land to contact their local DEC office. ▲

This is the 37th in the series of articles contributed by Dr. Allen, Professor of Entomology at SUNY-ESF. Reprints of this and the complete series are available from NYFOA, phone1-800-836-3566.

BEE WELL

By Jane Sorensen Lord, PhD, OTR, NR

I couldn't wait for "weeping golden bell" to bloom this spring. I've been studying Chinese herbs and was excited to gather and prepare it to use for Spring colds, allergies and earaches. The flowers are extracted in oil, and used like we use mullein for ears.

For ingestion they make a very strong infusion, strain out the flowers, add sugar, boil it down to crystals then store and use it by the teaspoon dry or by diluting it in hot water. I've used honeysuckle and chrysanthemum prepared this way. The sugar is soothing and the mixtures tastes a lot better than tinctures or extracts.

When the forsythia bloomed, I was there! I took a basket and went out to collect the, yes, weeping golden bells. I collected and collected. Then I collected more. It takes lots of little flowers to make a packed cup. So many, that I stopped short, rather than denude the bush.

I took them inside, spread them out on a paper towel, and left them to dry. In a few hours my 3/4 cup of flowers shrunk to a quarter of their size, and still weren't dry. There wasn't enough for an extraction with an oil, or for a sugar mixture. Just a few cups of tea.

I'm going to stay with mullein oil for earaches. It works great. And I'll use coltsfoot flowers for coughs and colds. Coltsfoot flowers about the same time as forsythia, and are bigger, fatter, and much easier to collect!

Also, I didn't want to collect all the forsythia for me (as if I could) because my new honey bees are coming and need them for food.

We decided to put up an electric fence so the deer couldn't eat up all my herbs again. As our plans got bigger—let's put in some fruit and flowering trees—we decided to put in a couple of bee hives because the fence will keep out bears, too.

The more I'd read about bees the more interested I got. Last year I took a bee course at the Sullivan County Beekeeper Society. I didn't proceed because of the bear problem. With a garden already threatened by deer, the last thing I needed was a bear or two.

Then, one of my herb magazines did an article on bees. They discussed the vast benefits to the garden. But more importantly, to me, they stressed the environmental responsibility of keeping bees. In the last five or six years, we've lost almost half our domestic bees. Mostly to bee diseases, but also to pesticides, herbicides and environmental pollution. Why, it was MY responsibility to keep the bee population alive!

The final decision was made on the commuter train to New York City. Waiting at the station one Sunday evening, Gordon and I started to talk to a woman who worked on Wall Street during the week and came up to her mountain home on weekends. She had three hives of bees in the country. She also kept a leucite hive in her City apartment! "You can see the bees come back in the evening from Riverside Park! They are incredible to watch!"

The next weekend we went to meet her bees. On a clear, sunny, early March day, her bees were having cleansing flights and, clearly happy, did not mind her opening and checking their hives. She worked without any protection.

Gordon went into the bee yard to watch her and stood fascinated. He apparently annoyed one bee. He got stung, but exclaimed in surprise that it was nothing compared to yellow jackets.

We left with bee catalogues and books, after tasting her "forest" honey (strong and rich). She even gave me some propolis to experiment with for healing.

After reading the books, we got gung-ho. We drove to the biggest, closest (2 hours away) beekeeping suppliers. Veils, gloves, smokers, tools. We got it all! We came home, assembled the hive and frames, then ordered the bees from Georgia to arrive here the first week of April.

So, I'd been praying for flowers. And they came the last week of March! Daffodils, forsythia, Kawazan cherry, Bradford pear, and of course our forest trees. I will plant a bee flower and herb garden for their summer pleasure. Behind the electric fence, their hives will be safe. I just hope the bees will be happy! ▲

Dr. Jane is a Wellness Coach. She is a Tree Farmer and MFO. May 24th at 2PM, she will be leading a Nature Walk at the D&H Canal Park for the Neversink Valley Area Museum on Rt. 209 in Cuddebackville.

***Tree Eaters: Stories of Herbs, Forests and Well-Being**, a collection of her articles, is $17.95 ppd. Call NYFOA 800/836-3566.*

The Marketplace

ATTENTION small woodlot owners/part time loggers - For FARMI winches and VALBY chippers, write Hewitt's Hill Haven, Locke, NY 13092 or call (315) 497-1266 (Before 8AM or after 6PM).

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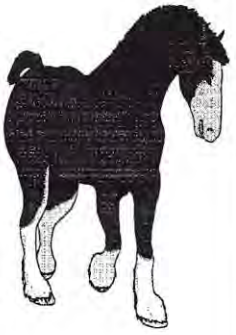

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R.J. Fox, Editor
RD#3, Box 88
Moravia, NY 13118
Fax/Phone (315) 497-1078
dfox@baldcom.net

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New York Forest Owners Assoc., Inc.
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MAY 6: WFL; 7:30PM; Topic TBA; Mendon Fire Hall; 716/586-9098

MAY 9: SOT; 10AM; Ponds (3) Walk; Whitney Point; 607/656-8504

OCT 3,4: NYFOA's **FAMILY FOREST FAIR**; Washington County Fairgrounds; Greenwich; 518/797-3705