CATSKILL FOREST ASSOCIATION, INC.

CFA NEWS

Winter 2022

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CFA NEWS

Winter 2022

CONTACT
Catskill Forest Association, Inc.
43469 State Highway 28 / PO Box 336, Arkville, NY 12406
Phone: (845) 586-3054 / Fax: (845) 586-4071
cfa@catskillforest.org / www.catskillforest.org

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Welcome, New Members!

CFA Welcomed 40 new members this quarter! Thank you for your new and continued support!

As a member you can see upcoming events and learn more about programs at; www.catskillforest.org .
Refer a friend or neighbor to the Catskill Forest Association and receive a gift from us.

From the President's Desk - Winter 2022

By: Mike Porter - Board President

Over the years I have been espousing a position that our State Forest Preserve is aging because of lack of management resulting in a negative impact on native wildlife. I have given my views based upon my observations several times and feel there are still things to share in regards to this subject. This article will take longterm real life observations at a couple of hunting camps in the region. I have been privy to the history of these camps through discussions with several older "camp members" and their next generation members. In my eyes, there is nothing more enlightening than actual experience with something. This article will take observations from members of 2 local "camps" and relate their history of deer and bear "takes" to the conditions of the surrounding forests.

One camp is in an area where there is a history of periodic logging operations and regrowth in the interim periods and is adjacent to Forest Preserve land. The other one is, also, adjacent to a large tract private holding and Forest Preserve lands. It is interesting that longterm records for each camp show ups and downs in deer hunting success based upon the successional stages of the lands surrounding the camps. The common factor that leads to the up and down stats is the management of surrounding lands; logging has varying histories with both camps.

Camp 1 was formed at a time when deer hunters were dissatisfied with hunting opportunities and results in our local area. Many of these hunters made trips to nearby valleys and mountain systems remote from here where deer take was more likely. In 1930 a hunting "camp" was established on a tract of land that was suggested as remote enough yet close enough to be logical for local hunters. In 1933 a cabin was built from

salvaged lumber hauled in by horse on primitive trails. During the first ten years it was considered success to see a deer in the area. In response to the WWII war effort, a major logging job was begun to help supply building materials for the war effort.

In the immediate time following the logging operation, deer began appearing in the logged-over forest. The deer take was much improved over past years. The only difference was the logging operation that had occurred in the recent past. Through the '50s and '60s deer takes were phenomenal with large, heavy antlered bucks regularly harvested. All members of the club and their kids had a great time with the experience of hunting in a great area. The club gained local notoriety for its hunting results.

Another logging job in the '60s again gave the deer populations a boost again and hunting success soared. Most members of the "camp" succeeded in filling their tags in the first day or two of the season. These results continued for several years. As time progressed and trees grew back to mature to old forest, changes in results began occurring as coyotes and bears began moving into the area. Both species can survive in older growth forests and are successful predators of white-tailed deer. Prior to this time period there were few reports of coyotes and bear being present in any numbers. Today they are plentiful and, potentially, a major factor in deer population. At the same time, there was a clear browse line in the forest indicating a large deer population. As years passed the browse line disappeared as there was a noticeable lack of undergrowth in the forests to provide deer with food and shelter. The population decreased.

Over the last few years the 3rd generation members of the camp are experiencing similar lack of success to the early 1930's. It is a novelty to see a deer in the typical hunting areas around this camp now. Last year, one hunter shot a deer on the first day and no other member even saw a deer during the season. Present were abundant sign of bears throughout the over-aged forest. It is possible that if there were a logging job in the next years, there will be an increase in deer population again. With present ownership of the private land that doesn't appear to be an option.

The second camp is somewhat younger, being formed in the mid '50s. It also has a smaller membership but does have extensive records of "take" from the camp. Hunting, as in camp 1 is shared between private lands and Forest Preserve. A noticeable decrease in size and number of deer taken is similarly present in this camp's log book. Also hunters have to venture farther into both lands to even have a chance at success. During the time from the camp's formation to recent times there has been a noticeable increase in older growth trees and bear and coyote populations. Again,

attributable to older forest being more conducive to their success. At the same time, there is a marked decrease in deer in the hunted forests. At both camps, when you travel to lower elevations and closer to civilization there are more deer. Go figure!

The Camps are both privately owned and have a history that goes back a significant enough period of time to make their results credible. What else goes back that far is the formation of the Forest Preserve in the Catskills in 1886. The Forest Preserve Act of 1886 created protected lands that were deemed to be "Forever Wild." These original lands were areas high up in the mountains or in inaccessible valleys and slopes. The land prior to the inception of the Forest Preserve had been heavily logged for bark and acid factories in the region. The tanbark industry coincided with the leather boom in the region. And resulted in huge areas of the Catskills denuded of trees to harvest the raw materials for industry. Agriculture was also creating vast sections of the Catskills to be cleared for farming.

The Forest Preserve Act was NYS's solution to extensive wildfire issues and all the other problems of denuded lands. The NYS constitution was amended to address this and "forever wild" became enshrined in NYS law. As a sidebar, NYS is the only state to have dealt with this land issue as a constitutional amendment. Pretty much, since 1886 no trees have been cut or removed for other than a few that were deemed to be dangerous to the public using the lands. In fact, the Act was so successful that NYS has purchased more land in adjacent areas to make the Forest Preserve in the Catskills one of the largest state lands in the Country. The Adirondack Forest Preserve is much larger as the whole Adirondack region is larger. This universal protection has worked as these lands are now forests. The problem with the Forest Preserve Act is that there is no provision for convenient amendment for when the "restocking" of trees through natural progression has reached a final goal.

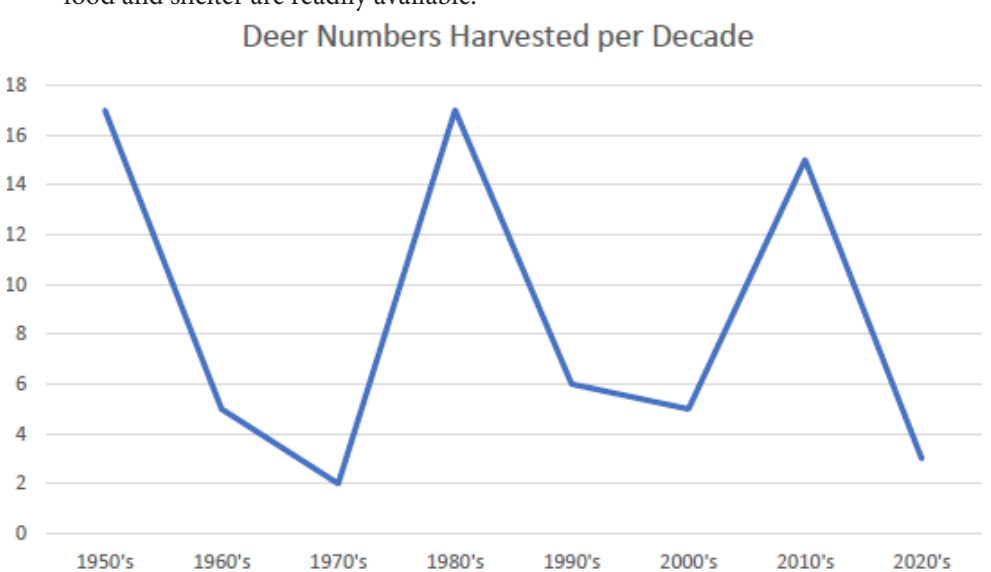
To this day there is no provision for management of the lands of the Forest Preserve to create habitat for its native wildlife. It has been shown that the populations of forest dwellers have "ebbed and flowed" with changes in the forest makeup. As a sidebar here, there are patches of State Land in the region that are managed for timber and wildlife but they are isolated sections of forest that are not contiguous with the Forest Preserve. These patches offer hunting and fishing just as the Preserve but with the added bonus of some management to insure that there is game available. To allow for management of the Forest Preserve lands there would have to be a Constitutional amendment to change the wording of the Forest Preserve Act.

As an editorial comment on this, I do feel that the Forest Preserve

Act has worked and accomplished its goal of allowing forests to regrow in areas where it was deforested prior to 1886. We now have more forest-covered land in the Catskills than at any time in the past 100+ years. Add to the State-owned lands and more recently abandoned farm lands returning to forest and and the more recent NYC land acquisition program and we have an abundance of trees and forest habitat. Since the forest is aging and having no interruption in succession there are definite problems for our native wildlife. Perhaps it is time to work to amend the Constitution to allow management of more accessible tracts of Forest Preserve and keep the original inaccessible and high elevation forests as they are.

This story of hunting camps is not limited to the two I have discussed here. My father-in-law was a member of a camp in a nearby town that experienced similar ebbs and flows. The major difference with his camp was that the members owned a large tract of land and actively managed it to help with taxes and wildlife management. Nearby state land was not Forest Preserve but was labeled a Wildlife Management area and therefore continues to produce deer and other wildlife. A clearcut to work towards a program known as the Young Forest Initiative was completed recently and is now populated by young growth trees and other more open growth plants. Just today, Becky and I drove past the clearcut and remarked about how "red" the area was as red maple is rapidly repopulating the area. This will lead to increases in deer and other Catskill wildlife populations.

Maybe we will see the awakening of lawmakers to this problem of old growth and the clear data from the local hunting camps and, at least, some of the easier access Forest Preserve will be released to become more like the Wildlife Management area west of here. If not, there will be continued lack of wildlife in the Forest Preserve and more deer in our villages and towns where food and shelter are readily available.



Mountains & Their Trees

By: Ryan Trapani - Director of Forest Services

Sugar maple, eastern hemlock, red oak, and apple. I'll get back to them. The Adirondacks are higher and some of their summits reach above tree line, the highest in the state. These mountains also boast beautiful lakes that lend well to the idyllic Adirondack canoe or lakeside Adirondack chair. The lofty Rocky Mountains resemble a painting; One need not climb a tree-less summit to gain a view. Instead, these mountains reach out at one from a car window. Their rugged topography is what most probably think about when mountains are dreamed of. The Great Smoky Mountains are the "crown jewel" of the eastern Appalachian Mountains, of which the Catskills are a part of. Elevations reach their highest point in this part of the mountain chain and diversity of trees is immense. They also claim one of America's most famous outdoorsman – Davy Crockett – as well as a National Park, Great Smoky Mountains National Park.

While the Adirondacks have higher peaks and many lakes, it is at the expense of trees that prefer well-drained soil and more fertile land; Sugar maple are present, but better soils are located outside the area. Hemlock does grow there abundantly in places. Oak seems to be constricted to its fringes and along the Hudson River where more human disturbances occurred. Apples are mainly lacking due to limited agriculture in the past and perhaps poor soils and limited growing seasons. Black spruce and black ash are two trees the Adirondacks have abundantly that the Catskills does not; They can tolerate these wetter sites far more. The higher elevations are home to many boreal species like balsam fir, mountain paper birch, mountain ash, balsam poplar, red and white spruce. Where the Rocky Mountains gain in rocky prominence, they fall short on trees. The easily gained view is at the expense of trees thirsty for adequate rainfall. They do have Ponderosa pine, Douglas fir, and Colorado blue spruce – all trees that can tolerate drier weather – but hemlock, maple, oak, and apple are scarce in this elevated desert. The Rockies are home to one shrubby

little guy called the gambel oak. The southern Appalachians include both northern hardwoods (maple, beech, birch, hemlock), and central hardwoods (oak, hickory, tulip poplar, chestnut, etc.). They even have boreal species at their upper limits that resemble what you might find in the Adirondacks or topping out on some Catskill high peak. Hemlock and oak are happy in these hills (barring the woolly adelgid), but apple and sugar maple seem to prefer our cooler northern weather. Sugar maple remains tight-lipped about its sweet secret down in these southern parts.

The Catskills may not have Davy Crockett, but we do have Naturalist John Burroughs who celebrated its "wild" portions or where "the works of man dwindle" as well as those donning the cow, honeybee, and bird outside his window. The Catskills are not as extroverted as the above-mentioned ranges. Instead, our mountain's jagged edges have been buffed and rounded off by time and dense forests, interspersed with land once farmed commercially. Forests are quiet, introverted places, and their trunks make for good "Adirondack Chairs" anywhere. The hills are about trees and streams, but mostly trees for me, and the right combination thereof. Few of our mountains offer views without deliberate clearing of them. Its geology too lends itself to well-drained soils, good for a variety of long-lived hardwoods like sugar maple, red oak, and apple. Hemlock can tolerate moister soils, but it too doesn't like its feet too damp either.

In other words, I think it's fitting to summarize these mountains by these four trees. They mean a lot to me and have influenced much of my time and activities throughout the "seasons" of the forest. Some other mountains or areas may have one, two, or three of these species, but few have all four, or in such abundance and health, growing in proximity to each other. Some like to trade baseball cards or talk about their favorite quarterback; It's all good and fun. I like to compare trees.

Hemlock – Bark & Brookie

First is hemlock. It is neck and neck with sugar maple if I had to choose a tree to be the official one for these mountains. I choose it because of its fame. It used to be more abundant before the tanning industry. It is most patient and efficient at using limited sunshine. In other words, its deal is waiting for overhead trees to die and gain access to sunlight. It can wait 50 or 100 years. Imagine solar panels as efficient as a hemlock needle? The lack of disturbance from humans in the Catskills perhaps in part made this tree so successful in the first place. If the forest is left alone, it feeds right into hemlock's dainty little needles, and cones. It also grows in large abundant stands making it easy to harvest in one place, for say bark-peelers or as a deer wintering yard to avoid heavy snowfall. The use of its bark for tanning cowhides in the early 19th century literally created many of our mountain hamlets today: Hunter, Tannersville, Prattsville, Samsonville, Cochecton,

Debruce, Claryville, to name a few. After tanning blazed the way, agriculture, bluestone quarrying, acid wood, etc. used these narrow bark roads and "improved" the landscape to feed a hungry population.

One more thing about hemlock's claim to fame is its relationship to brook trout. When I think of trout fishing, I think of cold streams and hemlock-rimmed streambanks. The Catskills are the birthplace of American fly-fishing, and we owe it in part to its geology. We also owe it to hemlock for keeping its waters nice and cold for oxygen-dependent brookies. I love seeing a healthy tea-colored stream full of little brookies darting beneath roots, rocks, and rifts, owing its color to water filtering through miles of tannic hemlock needles. That stream is surely "troutable."

It is sad to see hemlock falling to exotic pests today like the hemlock woolly adelgid and elongate hemlock scale. Each year – from about Memorial Day to August – I peel the bark from these dying trees and use them to tan deer hides. It makes a beautiful reddish leather like those tea-colored streams, and something I find to be as important to our Catskill heritage as the next tree.

The Stately Maple

Sugar maple may be the official tree of New York State, but it is most at home in these mountains. Did you know that New York State has the most potential maple taps in the world? Even more specifically, Delaware County – smack dab in the heart of these hills – has the most in New York State. The Catskills are just perfect for this tree. We have well-drained soils that are calcium rich. The lack of disturbance may not be good for the next mentioned tree but is good for this shade-tolerant perennial hardwood. The less humans cut or burn, the more maple seems to do well due to its shade-tolerant nature. Even more amazing is that it grows in thick stands making it easy for sap gatherers wishing to make maple syrup. Imagine if it grew as sporadically as basswood? That would be some pain. Here is a truly American sugar that Thomas Jefferson once praised should be used to replace the "slavery sugar" from the Caribbean.

"Make your own sugar, and send not to the Indies for it. Feast not on the toil, pain, and misery of the wretched," a Farmer's Almanac of 1803 said.

Adding to this tree's fame is its autumnal golden foliage. In a good year, it really lights up the landscape. Its wood is beautiful and is used to make some of the best-looking and longest-lasting flooring. Apparently the best baseball bats are made from maple if made correctly, according to Leatherstocking Hand-Split Billet Company located in the Catskills near Oneonta who supplies Major League Baseball.

Trees from Human Influence

The remaining two trees are somewhat more dependent upon humans. They don't necessary like being near hemlock and maple since

the former can "swallow them up" or outcompete them for sunlight. Instead, they thrive after some sort of human disturbance: Cutting, farm abandonment, fire, etc. The Catskills – being mountains – may have less historical human disturbance at their higher elevations and interior locations – but nonetheless were disturbed, far more than perhaps the colder or less habitable Adirondacks. At first glance, this might seem great for forests, but not necessarily for all trees. The land was mostly cleared – up to around 2,500 feet – according to Catskill Forest Historian Dr. Michael Kudish. "Clearing" or cutting so that trees don't grow back was mostly from agriculture. Many believe this to be a bad area to farm and perhaps that is truer for growing crops. However, for grazing animals it offers abundant spring water and grass, once cleared. In addition, it is debatable how much of it was influenced by Native Americans. These people may not have cleared the slopes, but the larger river-bottoms contain deep, rich soil (i.e. Margaretville) where anything could be grown. Instead of clearing the adjacent ridges, they may have been burned instead. Ridges are "safer" to burn since they normally burn uphill. Burning improves conditions for fruit and nut-bearing trees and shrubs and better habitat for deer, among others. Clearing for agriculture by settlers and prior burning by Natives is what may have given us these other two trees.

Oak – One Edible & Useful Tree

Wherever fires have been historically abundant – i.e. Long Island, New Jersey, Hudson Valley, portions of the Catskills, southern US – oak, hickory and chestnut have thrived. They have deeper root systems to escape ground fires and if top-killed are good at sprouting. Their drier leaves – compared to maple, beech, birch – tend to promote ground fires, perhaps to reduce competition. It is too bad we lost chestnut; this tree would surely be mentioned above oak for its beauty and utility. So, we are left with red oak that replaced it. Of the predominantly found oaks – red oak, white oak, and chestnut oak – red is the most shade tolerant. It grows on well-drained sites and perhaps more south or west-facing slopes that were once more easily fired, farmed, or disturbed by humans. Oak makes my list because it adds blood or life to the landscape. It directly benefits wildlife (acorns), and indirectly humans seeking wildlife. Bear, deer, turkey, raccoon, birds, even amphibians are supposedly more abundant in oak forests. To me, it also can mean seeing and killing deer and taking venison home. Oak has become even more attractive to me since I've gotten into tree climbing. Its smooth wide branch unions lend well to hanging a line and climbing about like a squirrel. Its architecture and strength are second to none. Ever notice how long a dead oak branch will remain attached? Branch and trunk are so tightly inter-woven you could string a few cars from them. If you like your oak, it does ask you remove or cut out competitors. It just might reward you with

venison and more.

Apple

What is more American than apple pie? There was a time when cider was the most abundantly consumed liquid in the US, perhaps in the 18th Century. Unlike oak – which might be a pyrogenic legacy from Native American burning – apple is an agricultural one from the 18th and 19th Centuries. If given ample sunlight and protection from pests, deer, and bear, its fruit rewards more than any other. My little apple press will crank out a gallon-and-a-half of cider in no time. One medium-sized tree can make 30 gallons of cider, and a 'Standard' tree can last a lifetime or more. Apple – in my opinion – might be the Catskills' most under-rated tree. I got thinking about the Wallkill Valley (elevation <300 feet) where I grew up. There were orchards nearby, but rarely did I ever find a wild or "volunteer" tree. It seemed once an orchard was abandoned, it disintegrated fast, maybe due to hotter and more humid weather conducive to pests? In the Catskill Mountains, there are wild apple trees growing anywhere fields have been recently abandoned or forests are young. Since seed-grown apples are random, you might just find the next best tasting apple. These volunteers are tough, acclimated to the site, and may last a hundred years. They too add character to the landscape by all the characters that frequent them. Humans and animals all love them. Its bark is an interesting flaky camouflage; its wood is gnarly and tough, but fragrant; and its architecture as variable as its fruit. I welcome this non-native to these hills. It is the bridge of the "Old World" to the "New World" and has made it its own. It can stay and whenever I can, I cut around it to preserve it in the landscape. They too surely represent our agricultural heritage more than any other tree. More than any of the four, it does ask the most from humans for its reward; It needs sunlight, often some pruning, and sometimes protection from "pests." But, if happy, it can reward for a long time.

Summary

Recreationally speaking, humans are most attracted to areas that offer bodies of water (i.e. lake, ocean) and high peaks with grand views. The Catskills have few bodies of water in comparison to other regions and our high peaks offer fewer views due to heavily forested summits. Instead, the Catskills seem most attractive to more introverted types seeking forests and small streams meandering through them. For me, it is the abundance and combination of the forementioned trees that I find unique to these mountains. The Catskills offer a great combination of tree species due to its geology and soil, but also prior land use history and lack thereof, making it hospitable for both disturbance-dependent and independent trees. Like its trees, it is a place for "wilderness" and for humans in the landscape; of wild summit and dairy barn; of ancient hemlock, and post-agricultural apple tree; all located in a relatively short distance from each other.

Piano Bars And The Head Of The Dry Brook Valley

By: Dr. Michael Kudish - Forest Historian

Could you imagine all 1000+ CFA members jamming into the Tent of Knowledge at the Cauliflower Festival in Margaretville on September 24, 2022? For all those members who could not attend, or could not fit into the crowded tent, I've decided to write a summary of the presentation on Piano Bars and the Head of the Dry Brook Valley. This major valley converges with that of the Bush Kill and the East Branch Delaware River at the CFA offices in Arkville.

I wanted to offer a presentation that would be of interest to the greatest number of CFA members so I chose this topic. It includes industrial forestry (sawmills, wood products, log roads), forest ecology (reasons for distribution of sugar maple and other species), and forest history (extent of first growth forest).

PIANO BARS

When I was working on my thesis, *Vegetational History of the Catskill High Peaks*, as a graduate student at SUNY ESF (College of Forestry), friends of mine – Larry and Betty Baker of Dry Brook – were feeding me unparalleled detail on the industries of this valley, including the sawmills. There were 22 of them. About half of them were located near the head of the valley and are included in this study. One of the major products of at least four of the mills was piano bars – the wooden connectors between the keys and the hammers that strike the strings. A special grade of sugar maple wood was required.

Over the decades, I had already drawn maps locating sawmills, log roads, and the boundary of 1st growth forest, but I never had integrated all of these features with the distribution of sugar maple. A field trip tour of the upper Dry Brook Valley with Betty Baker last spring prompted me to start integrating. The Tent of Knowledge presentation was the result.

Did the log roads stop at the upper limit of sugar maple? One would at first think so, but it's not so simple for three primary reasons:

1. HIGH ELEVATION SUGAR MAPLE GROVES

In the fall 2022 issue of CFA News, I wrote about high elevation sugar maple groves caused by springs and seeps and also by rare shale bedrock strata. Sugar maple requires lots of water in the soil – moving water that is, not stagnant water as in swamps. Therefore it grows, and dominates, the lower and middle slopes of the peaks where soils are deep and can hold much water. The upper limit of such nearly continuous, dominant sugar maple stands is usually at about 2800 to 3000 feet. This is the forest in which the log roads permeated.

But sugar maple is not limited to these lower and middle slopes. It has the uncanny ability to survive at much higher elevations throughout the Catskills, including the Dry Brook headwaters, between 3500 and 3800 feet. There are at least two dozen of such sites in the Dry Brook Valley where springs and seeps provide adequate water for this species.

The sugar maples this high up are stunted, deformed, and twisted. Their crowns are damaged by winds, heavy wet snow, and ice. The short growing season creates slow growth rates. These trees are barely marketable so the log roads did not climb to them.

2. LEDGES, TALUS, AND EXCESSIVELY STEEP SLOPES

The second reason why log roads did not climb to the high elevation sugar maple groves is because of what lies between the low and middle elevation nearly continuous sugar maple populations and these high elevation groves: excessively steep slopes, punctuated by ledges and bouldery talus. It is difficult to impossible to build roads up through them. On these steep and rocky slopes, soil water is scarce, so sugar maple is conspicuously absent. In its place grow more drought-resistant species – beech, black cherry, red maple, yellow birch, mountain ash, and locally balsam fir. These species also clothe the rocky, shallow-soiled summits of adjacent Graham, Doubletop, Big Indian, and Eagle Mountains.

3. OTHER FOREST PRODUCTS

The sawmills produced other products in addition to piano bars, and other species of hardwoods were harvested. One other

product manufactured was railroad ties. Another major product was custom sawing, where wood was cut for individual and specific local needs such as for farmhouses, barns, storage sheds, furniture, and the like. Therefore, some log roads continued up into accessible stands where sugar maple was absent: for example beech, black cherry, and yellow birch. Northern red oak is rare to absent at the headwaters of the Dry Brook Valley because Native Americans did not have a history of burning here (see numerous CFA News articles over past years for plenty of detail on this burning topic). In contrast, oak is common near the foot of the valley on Fleischmann and Pakatakan Mountains where Native American folks had been busy.

WHEN DID THE MILLS OPERATE?

One might wonder WHEN all this activity was occurring. The first Dry Brook sawmill was built in 1807 by the Seagers when the valley was first being settled. But it was not until the 1850s when there was an "explosion" of other mills popping up all along the valley. Activity continued well into the early 20th Century, but by the 1930s and 1940s only a handful were left and soon closed. Logging, of course, continues to this day but there are, to my knowledge, no more commercial mills in the valley.

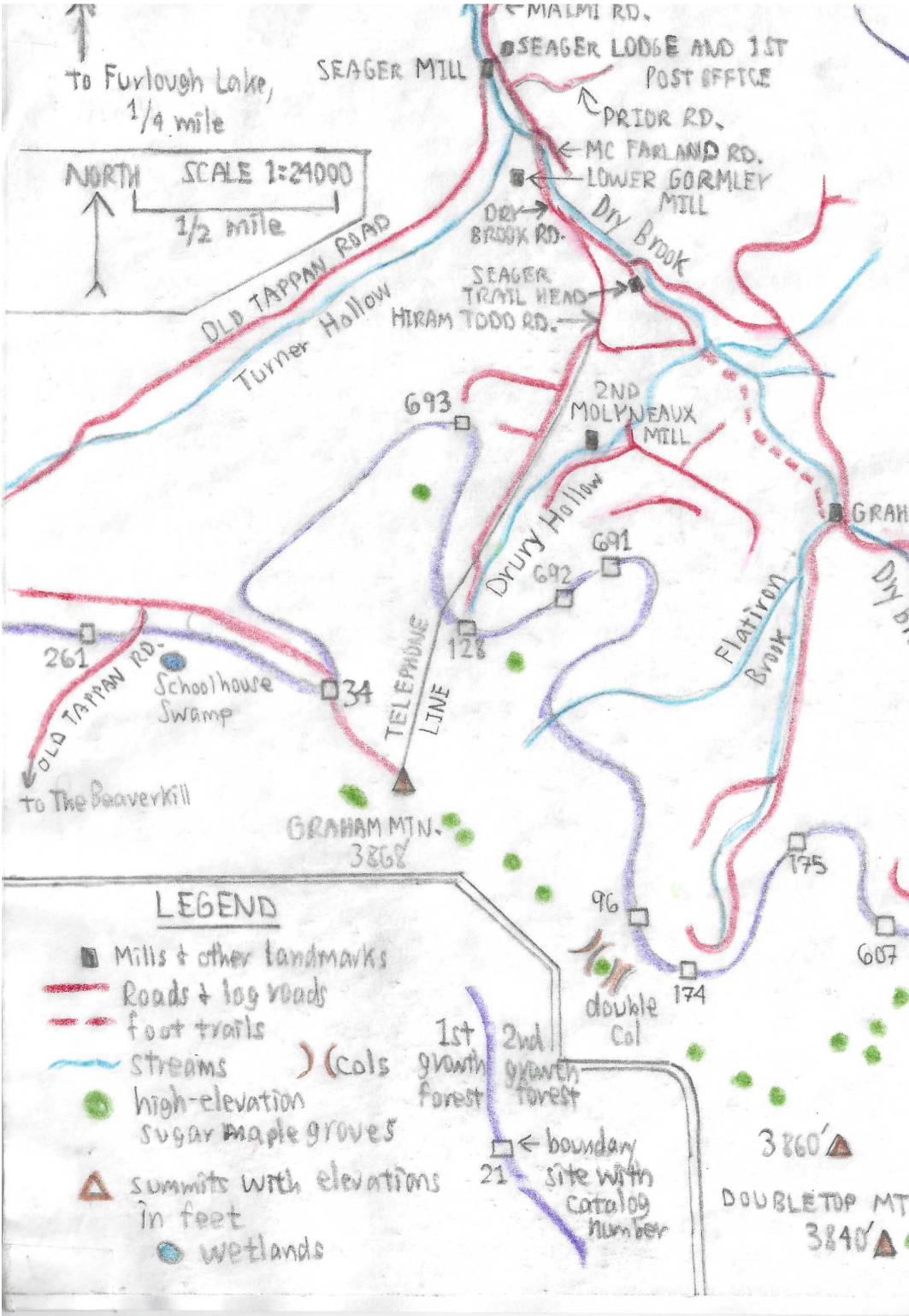
CONCLUSIONS

My initial idea that log roads simply stopped at the upper limit of sugar maple is not quite true. What is true, however, is that the upper limit of log roads DOES, by definition, coincide with the lower limit of first growth forest. Above the ends of these roads, the forest has never been logged, barked, farmed, quarried, or burned by people.

Much of the head of the Dry Brook Valley is privately-owned land and is off limits to the public. I had permission from the landowners to map the forest.

MAP

The accompanying map shows the mills, many log roads, some high elevation sugar maple groves, and the lower boundary of first growth forest.


To Furlough Lake, 1/4 mile
SEAGER MILL
MALMI RD.
SEAGER LODGE AND 1ST POST OFFICE
PRIOR RD.
MC FARLAND RD.
LOWER GORMLEY MILL
NORTH
SCALE 1:24000
1/2 mile
DRY BROOK RD.
Dry Brook
SEAGER TRAIL HEAD
HIRAM TODD RD.
OLD TAPPAN ROAD
Turner Hollow
693
2ND MOLYNEAUX MILL
Drury Hollow
691
692
GRAH
Flatiron Brook
261
OLD TAPPAN RD.
Schoolhouse Swamp
34
128
TELEPHONE LINE
to The Beaverkill
GRAHAM MTN. 3868
175
96
607
174
double Col
LEGEND
Mills & other landmarks
Roads & log roads
foot trails
streams
cols
high-elevation sugar maple groves
1st growth forest
2nd growth forest
summits with elevations in feet
21
boundary site with catalog number
wetlands
3860'
DOUBLETOP MT
3840'


PIANO BARS AND THE HEAD OF THE DRY BROOK VALLEY
MICHAEL KUDISH CFA NEWS WINTER 2022
MK 11/19/22
To Haynes Mtn.
EAGLE MTN. 3600'
592
Pine Hill-West Branch Trail
593
594
GRAHAM MILL
Shandaken Brook
LEAN-TO
3160'
21
DRY BROOK
1ST MOLYNEAUX MILL
212
Spruce Grove
UPPER GORMLEY MILL
Cone Rock Brook
607
608
32
3640' BIG INDIAN MT. 3700'
588
127
213
former Seager Wolf Branch Trail
31
bog
3480
Bog #305
to Biscuit Brook
PIGEON NOTCH

What should you Know about the 480-a Forest Tax Law…

By: Laurie Raskin

My name is Laurie Raskin, and I am the private consulting forester of DHW Forest Consulting, LLC. Over the years, I have helped private landowners with the initial exemption process of the 480-a Forest Tax Law (480-a), or have taken over currently existing 480-a properties.

First and foremost, the Forest Tax Law 480-a is a wonderful program. How awesome is it that you can save on your taxes for being a good steward of your forest! However, over the years the letter of the law has become a little mucky. Let's be real, there are about or more than 700,000 private landowners of forested acres in New York State (NYS), so creating a tax law (which is a 745-page document) that everyone can interpret can be quite challenging.

Well, what does this mean for you, your friends and family?

In this article we will discuss eligibility for the forest tax law, very important caveats of the law to know, and several matters to consider if you're already enrolled or want to become enrolled into 480-a, but first here is a little history.

Many moons ago, the New York State Department of Environmental Conservation (NYS DEC) decided that the it would be pretty cool if we could keep forests as forest. So, how is this achieved with all that society demands? In broad strokes, the former can be achieved to ensure that we decrease fragmentation and parcellation, increase the vigor and health of our natural landscapes, while doing everything we can to sustain the continuation of viable forest-based ecosystem goods and services. If we can do our best to ensure the former, then landowners can benefit from a tax abatement. Neat!

What do you need to be eligible for 480-a?

1. 50 acres or more of contiguous forested land.

2. Your forest stocking levels must be at or above 60 square feet of basal area, and/or 500 trees per acre (TPA). With documented NYS DEC permission, you can go below the above stocking thresholds, but in the case of a Seed Tree method of management that's scientifically justifiable, for example.

3. There must be an existing access, or known points on the property to create a viable access system.

4. You'll need a forest management plan (FMP) that must include a 15-year schedule of activities.

    - A FMP should also include at the minimum:
    - Ortho and topographical imagery maps that include stand boundaries and access points, property boundary lines, etc.
    - Stand description and prescriptions derived from your forester's field data, and proper silvicultural practices that meet your goals and objectives.

5. Every 5 years you'll need an update of your forest management plan, and your boundary lines must be re-painted.

Some important caveats of 480-a to know are:

1. Once 50 acres or more of a property is committed to 480-a, those committed acres stay with the land, and not the landowner. In other words, if you sell your property that is already committed in 480-a, then the commitment stays with the land, not you. This always brings up the following questions:

A. What if I sell my 480-a enrolled property?

Answer: It is important that you disclose to a Purchaser of your property that it is enrolled in the Forest Tax Law. Put them in touch with your private consulting forester or a NYS DEC forester, so they can help switch the name on the certificate of approval (COA). The COA is issued as one of the last steps in the initial exemption process. The COA has all of the pertinent information you need such as property ownership, mailing addresses, county, town, SBL #'s, acres enrolled, and a unique identification code at the top right which is your "golden ticket" to receiving the tax break once a year.

See Image 1 below as an example of a COA.

B. What are the ramifications, if any, should I decide to take enrolled acres out of the program?

Answer:

I. Let's assume that you have 85 acres enrolled in 480-a, but you want to clear cut 2 of those acres to build a home. The fees to take those two committed acres out would be 5 times the back taxes saved, and multiply that times 12% compounding annually for the years you've been enrolled. If you've been enrolled for ten or more years, then it's just times ten years no matter what.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Lands and Forests

CERTIFICATE OF APPROVAL

Certificate Number **12-345**

Property Owner(s)

ABC 123 Properties. C/O Jane Smith
1289 Armstrong Rd
Somewhere, NY 12345
Telephone #: (845) 111-2222

Original Certification Date **2/13/1995**
Date of Last Amendment **12/13/2019**
Last 5-Year Update **12/13/2019**

County	Town	Municipal Code	Roll Year	COMMITTED Acres	NON COMMITTED Acres	FULLY ASSESSED COMMITTED Acres	DATE ENDING
Delaware	**Wawarsing**	**512600**		**273.30**	**30.60**	**0.00**	

Tax Map Number	Roll ID	Deed Liber, *Page*	Total Acres:	Committed Acres:	F.A.C. Acres	Date Ending F.A.C.
11.-1-3	100695	4213 *109*	3	2	0	
11-1-1	154120	4213 *124*	4.1	4.1	0	
11-1-4	100050	4213 *120*	58.3	58.3	0	
3.3-3-27		4213 *112*	20.3	20	0	
3.3-3-37	103660	4213 *116*	80.2	69.2	0	
3.3-3-38.1		4262 *51*	29	24	0	
3.3-3-38.2		4262 *47*	29	29	0	
3.3-3-39	103675	4213 *124*	80	66.7	0	
TOTALS	**273.30 Committed Acres**		**30.60 Non-Committed Acres**		**0.00 F.A.C. Acres**	**303.90 Total Acres**

This is to certify that pursuant to Section 480-a of the Real Property Tax Law of the State of New York, the eligible tract described above has been accepted for certification by the Department of Environmental Conservation conditioned upon compliance with the work schedule below.

2020 To 2021 Commercial Harvest of 86 Acres in Stand(s) 1, 7, 10, & 11;.

2021 To 2022 No Treatments Necessary

2022 To 2023 No Treatments Necessary

2023 To 2024 Re-mark Property & Committed Acreage Boundary Lines as Necessary.

2024 To 2025 5-Year Update of Management Plan as required and Re-evaluate for harvesting or TSI Stand(s) #4,6,8,12,13,15,16 &17.

2025 To 2026 No Treatments Necessary

2026 To 2027 No Treatments Necessary

2027 To 2028 No Treatments Necessary

2028 To 2029 Re-mark Property & Committed Acreage Boundary Lines as Necessary.

2029 To 2030 5-Year Update of Management Plan as required and Re-evaluate for harvesting or TSI Stand(s) #5.

2030 To 2031 No Treatments Necessary

2031 To 2032 No Treatments Necessary

2032 To 2033 No Treatments Necessary

2033 To 2034 Re-mark Property & Committed Acreage Boundary Lines as Necessary.

2034 To 2035 5-Year Update of Management Plan as required and Re-evaluate for harvesting or TSI Stand(s) #2&3.

ACCEPTED BY REGIONAL FORESTER: Jeff Wiegert **13-Dec-19**
REGION 3 21 SOUTH PUTT CORNERS ROAD, NEW PALTZ , NY 12561 **DATE**

Here is what that looks like with the math as an example:
You've been in 480-a for 5 years, and want to take 2 acres out of the program immediately. Let's say you've been saving $100/acre. Therefore, over 5 years you've saved $1000.
$1,000 x 12% = $1,120
$1,120 x 12% = $,1254.40
$1,254.40 x 12% = $1,404.93
$1,404.93 x 12% = $1,573.53
$1,573.53 x 12% = $1,762.32

Therefore, you'd owe $1,762.35, plus any processing fees to disenroll 2 acres out of the program.
In addition, you'll need the help of your forester to take those 2 acres out of the program because your entire FMP and the COA must be updated to reflect what's happening on the ground.
Consequently, is of the utmost importance to decide how many acres and which acres you want to enroll into 480-a. Thinking forward is always best, so this way we can cover all of our basis now and into the future. You can always add acres into the program too.

C.What if I completely want out of 480-a?
Answer: If you've been in the program for less than ten years, then taking all of the committed acres out of the program would be computed where it's two times the back taxes saved, times 12% compounding annually for how many years you were in the program.
However, if you've been in 480-a for ten years or more, then it's 2 times the back taxes saved, times 12% compounding annually for ten years.
Lastly, if you don't want to incur the fees as stated above, but still want out of the program, then you will have to go up to full assessment, honor your FMP and COA for the next 10 years. Once you've done that, we'll notify the NYS DEC, they'll issue us an official letter for the county clerk, assessor and voila!

Note: Question C above can be computed using the same format as the answer to question B above it.

So, you can see that enrollment into 480-a is not just a product which allows you to save on your taxes. 480-a is a commitment which has benefits.

2.Some commitments to consider are:

A. If your forest ever dropped below the minimum stocking guide threshold, then you are responsible for bringing the stocking up. That can be achieved by planting trees, great!

B. If your forest is unhealthy, and needs remediation, then it is your responsibility to speak with a professional forester to come up with creative and financially feasible ways to help the forest become healthy.

C. Once enrolled in 480-a, you must have at least one commercial harvest within 30 years. Essentially, you have 30 years to make sure that your forest is continually producing a viable crop.

D. 480-a is a rolling commitment. Every year you send in your annual commitment to the assessor and the NYS DEC, you're jump starting 10 years. If you do not send in your annual commitment form, then you'll go back up to full assessment, but still be held liable for all aspects within your FMP and COA.

What other things should I consider with the Forest Tax Law 480-a? Note that the following considerations are suggestions.

1. If you find that enrolling all or part of your property into 480-a is worth it, and you're willing to commit, then it would be highly advisable to save some of your savings. Create a forestry budget with some or all of your tax savings. This will pay for your forester and those required 5-year updates. What if you needed to implement forest remediation? Then you'll have a little nest egg set aside. Let's face it, you'd end up spending this money on your taxes anyway, so sock some of it away for rainy day forestry funds.

2. If your forest is in need of remediation, then Regenerate New York may be the perfect solution for you. NYS is finally acknowledging that our forests have been poorly managed in the past, but remediation can be costly, so to help landowner's offset these costs, like a timber stand improvement, for example, Regenerate New York will pay for 75% of the costs. Keep in mind that the covered costs are specific in supporting afforestation/reforestation, forest restoration, competing vegetation control, and deer fence.

Regenerate New York is a cost share program that does not conflict with your 480-a.

The important take home messages are to follow up with due diligence, do your research, find a professional and knowledgable forester to help you, map out short term and long term goals and objectives, and be absolutely sure about what you're getting into.

Remember, the world of forestry can be so much fun and enjoyable. We just have to take our time, understand all the variables at hand, make an informed decision and then we can execute!

Cheers to forestry and our forests!

If you have any further questions, then you may contact DHW Forestry Consulting, LLC via their website at: www.DHWForestConsulting.com

Do Healthy Trees Exist?

By: Zane Lawyer -

One of the most common questions asked by landowners to their arborist or tree care professional is whether a particular tree seems healthy. It's a question that makes sense to ask about other living things we care about, say the family cat or dog, whose biology is like our own. But it's one that is harder to answer when it comes to the big, strange sticks dotting our yards. Hazards and defects are sometimes easy to point out but broader questions of what these may mean for tree health take a little more time to unpack.

An organism is considered healthy if it's free of pests or disease and has the capacity to resist stress. As an arborist, I know that trees undergo many environmental stressors throughout their life. I also know that trees accumulate hundreds, or even thousands of active infections the longer they live. To say whether this is a healthy situation or not requires a bit of preamble. So, before we can determine whether there can be considered anything like a clean bill of health for a tree it's important to understand their proper functions and how they've evolved to protect and defend them.

To thrive in its given environment a tree must first be supplied with the basic conditions for its survival. These include sufficient water, free movement of air, essential elements for growth and defense, optimal drainage, temperature, and light. When these conditions happen in the right amounts the tree can perform its proper functions. Roots taking in water and elements from their surroundings, evaporation from the leaf surface drawing them up and into the leaf cells where sunlight will power their conversion into sugars and metabolites. Complex tissues deliver the sugars to where they are most needed and break them down for their energy. Collectively, these are the processes of *absorption, transpiration, photosynthesis, translocation,* and *respiration, respectively.*

To protect these functions from environmental insults trees have evolved unique features of their anatomy; thick bark and cuticles, thorns, and leaf hairs to name a few. All of these have the same goal of helping them buy time in the face of repeated attacks by microorganisms, insects, animals, and human action. The more time a tree can buy, the more it can grow, store energy, and reproduce. Buying time is an excellent survival tactic if you can't flee from harm.

One of the best ways trees buy time is by having a highly *redundant* construction. Primitive woody plants invested all their energy into a single

stem reaching up to the sky. It was not until some mutation resulted in offspring with more than one growth point that *branching* emerged as a survival tactic. If one growing point is injured or killed, the other growing points will continue to grow. A single trunk will contain limbs, branches, twigs, and buds forming an awesome architecture of the same repeating pattern. The more branching a tree can produce in its lifetime the more expendable are each of the branches alone and the more opportunities a tree has to rebound from injury. This is especially vital in environments like the Catskill Mountains where wind and ice storms are forces to be reckoned with.

This built-in redundancy provides trees with a greater chance of survival as they age. Yet they can't keep generating new branches without limit or the energy required to maintain them will exceed what they can capture and store. As a result, trees must shed older branches to allocate resources to those in a better position to intercept the sun's rays. Trees are *shedding* organisms and will shed leaves and twigs periodically to maximize efficiency so as not to waste unnecessary energy. Dead or dying branches are not always signs of poor health but instead may be a response to changing conditions.

Another unique feature of tree anatomy which helps to buy time is that it is highly *compartmented*. By subdividing their tissues into discrete units, trees can separate areas for specialized functions thereby maximizing orderliness in a limited space.

Wood, a highly ordered arrangement of cells, acts as internal support for trees allowing them to get big and tall. Bigness and compactness are also excellent survival tactics when the space you occupy is limited. The orderly arrangement of wood emerges from an individual plant cell building up to groups of living cells and finally to a combination of living and nonliving cells making up an annual growth ring. These cells are the natural built-in boundaries of a tree and are altered following injury and infection. Trees cannot regenerate new cells to replace old cells in the exact same position, the ways animals do in the process of *healing*. As generating organisms, trees grow new cells over old ones as a way to form boundaries and wall-off their enemies. Trees don't heal, they seal. In life and in death, compartmentalization of cells is what makes the evolution of wood such a game-changer within the plant kingdom.

The process by which trees 'wall off' decay-causing organisms by partitioning their anatomy is referred to as CODIT, or *Compartmentalization Of Decay In Trees*. Unlike the static features of tree *protection* discussed so far, CODIT is a model of dynamic *defense* developed by renowned tree researcher and educator Dr. Alex Shigo (a.k.a. Dr. Rot) based on his

extensive studies of the process of woody decay in the sixties and seventies.

Simply put, Shigo's model describes how trees form four physical and chemical barriers or 'walls' following injury and infection. Say a tree trunk is damaged in a storm or is attacked by a wood boring insect that introduces decay as a result. The first wall that forms is a *vertical* barrier to keep decay from spreading to the crown or roots. The second wall forms an *inward* barrier to keep it from reaching the heartwood or inner support of the tree. The third wall forms a *lateral* or side-to-side barrier to keep it from girdling the trunk and breaking the crown's pump system. The fourth and final wall forms a chemical zone around the wound by plugging up cells with antimicrobial compounds (e.g., tannins, phenols) to create a lasting barrier to decay. CODIT and the generation of new tissue are two fundamental strategies trees use to combat decay. Understanding these allows arborists to make better decisions that won't limit proper tree function.

For over two hundred million years trees as a species have had to reckon with a wide range of environmental extremes and a host of disease-causing pathogens throughout their life. Pain is an evolved response that 'tells' animals to move. Trees are fixed in place so having a nervous system provides no survival value. The way trees have evolved to protect and defend themselves, Shigo realized, is as woody, compartmented, compartmentalizing, long-lived perennials that shed. For him, the strange forms of various tree species are the result of their unique patterns of protection and defense, not the other way around. Every little wound, every snapped twig or severed rootlet will be infected. But seldom do the pathogens spread uninhibited. If a healthy tree is defined as one without active infections, then there is no such thing as a healthy tree.

Instead, consider tree health as something always changing year to year based on what's happening around it. Consider how one or more of its proper functions may be impacted. Consider its site's history or the conditions present when it was first established. Consider what's changed since then, above and below ground. Understanding these in greater detail will help your arborist make a more accurate assessment of its health along with their knowledge of the species, the region, common pests, or disorders, and expected lifespan. Even then, their prognosis will only be a snapshot so it's best to schedule a 'check-up' every 5 years.

Agroforestry: Reimagining Land Stewardship for Small Landowners

By: Zahra Bellucci - Education Forester

Back in September, I attended a silviculture training just over the border in the Allegheny National Forest in Kane, PA. The training was designed to focus on the silvics—the art and science of growing trees—of Allegheny hardwoods, mainly for timber production. One of the last presentations of the training was on the subject of recommended treatments for degraded forests—forests that, for any number of reasons, had become unhealthy, vulnerable to disturbance, and were composed of an abundance of poor quality, low-vigor trees or undesirable species. Forests in this state can be difficult to regenerate—the trees in the canopy may not be a suitable seed source or may not be producing much seed at all, and degraded conditions can be sub-optimal for seedling survivability let alone germination. Combined with ever-increasing insect and disease issues and an overabundant deer population, regeneration doesn't stand a chance.

USFS Northern Research Station in Irvine, PA

This presentation was of particular interest to me because much of the privately-owned forest I have observed thus far in the Catskill region is still recovering from the legacy effects of past agricultural use and high-grading—a detrimental harvesting practice where all of the high-quality trees are removed and low-quality trees are left behind—or a combination of both. However, all of the attendees, with the exception of myself and one other forester from New York, were employed by the U.S. Forest Service or by the state of Pennsylvania. In other words, they were all professionals working for the public forestry industry. While a lot of the material presented was interesting to me as a lifelong student of forestry, its intended purpose was to be useful to those employed in state and federal positions working on larger operations. I struggled to consider how I might integrate the knowledge and recommendations into my own work as someone who does just the opposite—working for private, non-industrial forest landowners who don't always have timber production on their list of objectives. Many of the recommended treatments to improve forest quality relied upon the revenue of a large timber harvest to offset their costs, and considerable time, energy, and resources that most small landowners don't have access to.

Being in the beginning of my own career in forestry, I wanted to take advantage of the opportunity to ask the seasoned professionals around me if they had any advice. Many of them found my job description interesting and unfamiliar. It seemed there was a general lack of experience working with smaller, private landowners—any of them who had worked on private lands had either done so within an industrial or academic setting, or with much larger landowners. Still, I explained my dilemma: I work with mainly small, private, non-industrial landowners, consulting with them and helping them to learn about their land and develop objectives to be involved in its stewardship. Some are not interested in timber production, some are. Of those that are, many of them own forests that would not produce a large enough volume of sawtimber to be worth the time and resources it takes to organize a harvest. Further, landowners in this category often own forests that are recovering from the aforementioned "degraded condition" due to legacy effects. And, even if they had other goals besides timber production—say, recreation or wildlife habitat improvement—where would they get the money to pay for those management activities if not from a modest harvest? Would it be worth a forester or logger's time to invest in such a property? If not, what would their options be then?

Managing Parts of a Whole

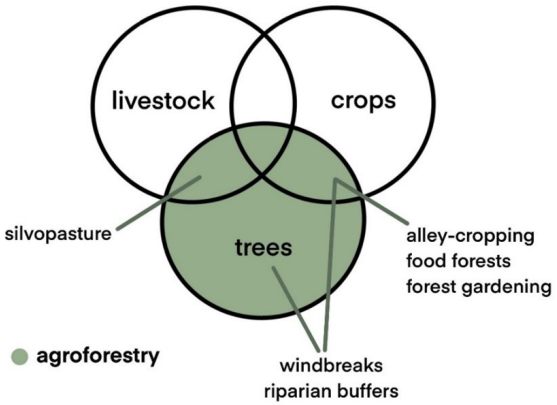
Although members of the Catskill Forest Association display a wide range of properties—some with less than an acre, some with well over 100 acres—it's been my impression that the majority own modestly-sized woodlots, often parcels of a once-much-larger farm that had been abandoned and reforested long before they arrived. However, while the property lines may have changed, the forest remains a part of one continuous landscape that is difficult not to manage as a whole. In the framework of traditional forestry, it seems that there is little offered in the way of managing small, parceled acreages of forest. This is where our organization comes in—helping to educate small landowners on what options are available to them, how we can help, and how they can take the management of their land in to their own hands. But even still, without the option of organizing a timber harvest, these management activities can be costly even on a small scale.

I spent the following weekend after the training mulling over these thoughts and trying to come up with new ways I could support landowners. I recalled a conversation with one of the other attendees—the other forester from New York—on the topic of agroforestry, and it dawned on me that this could be a promising future option for smaller landowners wanting to produce a revenue from their land through sound management. Not only that, but it could serve as a gap uniting two previously "separate" fields of land stewardship—farming and forestry. Even further still, these two fields permeate the land of the Catskill region. It seemed like the perfect match. Though agroforestry systems are not meant to be a blanket fit or solution for every stretch of land, they could certainly fill a niche that to me seemed overwhelmingly unsupported. So, what is agroforestry?

Vegetables and Trees? Cows in the Woods?

Agroforestry comes in many forms and can encompass many different meanings. It is not by any means a new practice, despite its relatively recent emergence in this corner of the world. In a simple definition, it is the intentional integration of trees with crops or livestock, or both, in one system. It has been practiced for thousands of years, most notably in sub-tropical or tropical climates such as in South America where coffee is grown—a plant that is intolerant of direct sunlight and needs the dappled light of a canopy overhead to thrive.

There are five main recognized areas of agroforestry: silvopasture, alley-cropping, food forests, windbreaks, and riparian buffers. Each of these categories could get its own article, but I will do my best to summarize. Things like "windbreaks" and "riparian buffers" may be familiar terms to



many already—they often exist naturally in our landscape, or are already commonly utilized by natural resource professionals or protected by environmental law.

Farmers often maintain windbreaks to delineate large fields and to protect crops, livestock, or the soil surface from high winds. In the context of agroforestry, when implemented thoughtfully they can also provide valuable islands of habitat to beneficial insects and birds that feed on common agricultural pests, increase pollination, and include valuable timber trees that the farmer can harvest for revenue or utilize for farm infrastructure (i.e. black locust harvested for fence posts). They can also contain trees and shrubs that produce an additional food or medicinal crop.

Riparian buffers refer to an area of vegetation maintained around riparian zones—edges and banks of rivers, streams, brooks, etc.—to serve a number of benefits such as shade to keep water at cool temperatures, provide habitat to many wildlife and insect species, and to protect waterways from erosion, sedimentation, and pollution. In agroforestry, these riparian zone buffers can be deliberately maintained and manipulated to not only provide these same benefits, but also produce forage or potentially salable crops to the landowner (think elderberry or willow).

Terms like alley-cropping, food forests, and silvopasture may not sound familiar and typically take some explaining to those who have never been exposed to agroforestry. Alley-cropping is the combination of annual and perennial crops with trees, most applicable to timber plantations or orchards. Crops like annual vegetables, fruit-bearing shrubs, flowers, herbs, and the like are planted between rows (in the "alleys") of timber or fruit trees to maximize land usage while also enhancing production as each plant may provide benefits to another. This can also be a way of producing an interim income for a farmer or timber producer while they wait for their main crop to mature, as trees can take a long time to mature. We also know that biodiverse landscapes are more resilient landscapes in that they provide habitat for many other species, and as a result can recover more quickly from pest and disease outbreaks as compared to a monoculture. If

one or two crops are lost to environmental conditions, there are still others to provide sustenance to the farmer or landowner. In addition, fallen leaves from trees provide a nutrient-rich mulch to the soil that can benefit annual crops and the soil microbiome.

Food forests are exactly as they sound—the combination of crops and trees to produce small forests manipulated at each layer for the purpose of providing food. These layers include the overstory, mid-story, shrub layer, herbaceous layer, soil surface, root layer, and vine (vertical) layer. Each of these layers can be intensively designed and managed to maximize production and to create microsite conditions to grow many different crops. For example, the overstory and mid-story may include taller trees like hickory or oak, and shorter trees like apple or pear. The shrub layer might consist of woody perennial herbs or fruiting shrubs. The herbaceous layer may have any number of culinary or medicinal herbs, flowers, vegetable crops, and more. The soil surface refers to ground covers like clover, strawberry, or even edible mushrooms inoculated into a wood mulch. The root layer could contain any plants with an edible root such as beets and carrots, or burdock and dandelion, with plants like tomatoes, cucumbers, or grapes in the vine layer. You get the idea—obviously, not all of the plants mentioned would be able to thrive in the same environment, but care can be taken to consider each plant's optimal growing conditions and placement within the system. When carefully planned, food forests can provide a diverse food system that mimics the natural environment more closely than a cultivated field. Integrating trees into an agricultural system can also improve water infiltration, air quality, and carbon sequestration. This category also includes forest gardening—where crops or wild plants are cultivated in an already existing forest or wild-simulated setting. Examples of this might be mushroom log inoculation, ginseng, ramp, or other wild edible plant cultivation, tapping maple trees for sap, and tending to pre-existing canopy trees that produce a fruit or nut—collectively referred to as "non-timber forest products".

Silvopasture is simply the combination of the words "silviculture" and "pasture". Silviculture is the science of manipulating the growth, structure, and species composition of forests. Pasture, obviously, refers to a field where livestock graze. Therefore, silvopasture is a grazing system that deliberately integrates forest and livestock. This may seem alarming, as most foresters were taught that livestock don't belong anywhere near the forest. However, the distinction between simply letting livestock run amok in a forested area and silvopasture is that the latter requires intensive management and the implementation of rotational grazing to be effective.

Silvopasture at Burns Family Farm in Lindley, NY

Silvopasture at Angus Glen Farm in Watkins Glen, NY

Just a few weeks after attending the training in the Allegheny National Forest, I attended a workshop led by Cornell Cooperative Extension of Schuyler County on silvopasture, which included visits to farms currently practicing or in transition towards silvopasture, as well as field lectures from professionals with both forestry and agricultural backgrounds to provide a multi-lens perspective from either side of the equation. Where farmers lack in their knowledge of trees and forested ecosystems, they bring to the table a plethora of knowledge about their livestock including information on forage, health, behavior, and overall management. Where foresters lack this knowledge about livestock, they bring valuable information about forested ecosystems and what they require to maintain health, support wildlife, and to meet the goals of landowners. With both knowledge bases combined, something much greater is unlocked. Suddenly, woodlots on farmland, whose management was previously left on the back burner or that provided little to no service to the farmer besides a few loads of firewood each year, are now a valuable asset to the farm and its functioning. Livestock enjoy the benefits of diversified forage, shade trees on hot summer days, and a "living barn"—dense groups of trees (typically conifers) that provide shelter from extreme weather, specifically insulation from harsh winter temperatures that we experience in the Catskill Mountains. Not only that, but bringing trees into pasture can serve the dual purpose of increasing animal welfare and income for the farmer and providing increased habitat to native fauna that previously did not exist. In some circumstances, certain livestock can even be strategically grazed through areas of forest riddled with invasive herbaceous plants to aid in their removal and suppression.

Each one of these areas in agroforestry not only allows a landowner to maximize their land use, but they offer important safety nets for both forestry and agriculture in a changing climate. Although the Catskills are somewhat of a "sheltered" space when it comes to the effects of climate change—local research has shown that the Catskill mountains have yet to see significant changes in the environment due to climate—it's important to begin discussing ways to maintain its resilience by implementing environmental practices that prepare us for these coming shifts. Weather events like increased rainfall or extended dry periods and more extreme hot or cold temperatures require planning to protect our farms and forests.

Being a Steward

While I could go on describing the many benefits and iterations of these practices, suffice it to say that there are, in fact, many. Their ability to be adapted to different landscapes and climates make them a

particularly useful tool for land management, and I believe, an especially valuable tool going forward as future uncertainties continue to grip our lives and environment. With events from the last few years, many folks are once again embracing a "back to the land" mindset where agroforestry practices can certainly play an integral role. Not only do they allow landowners to maximize land use and access greater financial security in land-based careers, but they offer important safeguards against the looming environmental shifts caused by climate change. Weather events like increased rainfall and flooding or extended dry periods, along with more extreme temperatures—both hot and cold—require careful planning to protect our farms and forests. Agroforestry, while not suitable for every tract of land or every type of landowner, may be a way to navigate these changes and allow us to adapt and overcome, especially where other options are not available. Although CFA doesn't currently offer any agroforestry-specific services, many of our existing programs can easily be integrated into agroforestry practices. As someone with a background in both forestry and agriculture, I hope to be a staff resource for members interested in taking the leap towards agroforestry. I also hope that I have not made these practices sound intimidating—although they often require intensive management, there are certainly ways to implement or scale them to a practical level.

Circling back to the subject of degraded forests, I also believe that agroforestry is especially valuable in land remediation, as it is "regenerative" at its core, meaning the practices actively promote the continuous regeneration and overall health of the ecosystem rather than simply reaping what is sown again and again. The entire purpose is to create an ecosystem that all life can participate in, where the full potential of the land is realized and maintained through intensive management to provide as many social, economic, and environmental benefits as possible. In other words, it begs the landowner to pay attention. When we pay attention to our environment, we can't help but notice its patterns. When we notice its patterns, we can discern when things are out of balance or have begun to change. When we can discern imbalance in the environment, or simply when we are so in tune with its cycles that we feel compelled to participate, we develop a deep relationship with the land that is long-lasting and mutually beneficial. To me, this is the true meaning of land stewardship.

Business Meml

Amex Bois Franc—Hardwood Inc.
CP 186 succ Bureau-Chef
Plessisville, Québec, Canada
(819) 998-0520

Arkville Caboose LLC
(845) 586-1122

Catskill Mountain Forestry Services
607-330-5701
catskillmtnforestry@yahoo.com

Coldwell Banker Associate Broker Sue Doig
845.706.4311

Coldwell Banker Timberland Properties
info@timberlandproperties.net
845-586-3321

DELAWARE BULLDOZING CORP.
(607) 538-1185
klafever@delawarebulldozing.net

Field & Stone
607.832.4488

Flowering Sun Ecology Center
floweringsunecology@gmail.com
(802) 303 3745

Freshtown Supermarket
(845) 586-4384

Frost Valley YMCA
(845) 985-2291

Gardens by Trista, Inc.
(607) 588-6762

Left Bank Ciders
150 Water Street, Catskill, NY
www.leftbankciders.org

Eric Dahlberg Construction, Inc
(607) 588-6449

Christopher Hopstock Architecture
adschopstock@gmail.com
646-673-1402

nber Spotlight!

Jeffrey Keiter Landscape Architect
jeffkeiter.rla@gmail.com
(917) 723-8810

Margaretville Telephone Company
845-586-3311
mtc@catskill.net

NYS Chapter American Chestnut Foundation
https://www.acf.org/ny/

Part 2 Events
(845) 244-0353

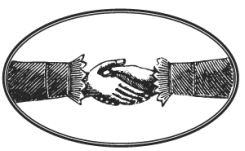
PGK Logging, Inc.
(607) 326-6923
pklogger242@hotmail.com

Rose Mountain Cottages
(718) 208-3399

Rush Brook Lodge
rbl@actorsart.com

Sluiter Agency, Inc.
(845) 586-2641

Sundial Studios Architecture & Design, PLLC
(718) 852-6708
kyle@sundial-studios.com



The Hunter Foundation, Inc. / Fromer Market Gardens
518-589-4143

The Wright Law Firm, LLC
(609) 759-2500
info@njlegaladvice.com

Upper Delaware Welcome Center
(845) 252-3100

White Feather Farm
dallas@whitefeatherfarm.org

Wolf Hollow Camp
(917) 497-7670
mail@gfeazell.com

CFA 40th Anniversary
2022 Work Truck Campaign

As we approach our 40th anniversary we are especially grateful for your part in helping this organization flourish and protect the health and well-being of the forests in our region. Since 1982 CFA has expanded to serve more than 1,100 members who own more than 85,000 acres of private land across the Catskill Mountains.

To continue our mission CFA currently relies upon field staff's privately-owned vehicles and on average, field staff are driving 10K-15K miles per year. Rising costs of fuel, vehicle depreciation, and maintenance costs coupled with increased program activity has made personal vehicle use unsustainable.

That's why we're announcing a new campaign to raise *$50,000 by year end* so that CFA can expand our reach, deliver our programs more effectively, and support our growing staff. We are asking you, our loyal members, for your support to purchase a CFA work truck! Contributions directly impact implementation of our 10 year-round programs that promote knowledge of forest ecology, educate the public and enhance the economy of the Catskill region. Programs and a short description are on the next page.

Will you help today and give any amount? A new truck will allow our staff to safely store chainsaws, pesticides, hand-tools, and other tree care paraphernalia and will support our ability to retain staff. The truck will also serve as a valuable promotional tool as it will display the CFA logo and contact information. Every donation goes a long way to promote the good word of forestry and the Catskill Forest Association, since it will "get around."

Here are some ways you can make a tax-deductible donation:

- Donate online at catskillforest.org/donate
- Call (845) 586-3054
- Send a check to Catskill Forest Association, Inc.
- Stop by the office

Thank you again for your support that helps steward the land for future generations!

Sincerely,
Ryan Trapani
Director of Forest Services

Programs & Services

Learn more at catskillforest.org/programs

Program	Description	Time
Consultations	*One-hour property visits by field staff to help you learn about what your property holds*	All Year
Apple Tree Pruning	*Pruning helps keep apple trees healthy and improves quality and quantity of yields*	Jan. - March
Apple Tree Grafting	*A horticultural technique to help bring old, neglected trees back to fruition*	April - May
Forest Bird Program	*High-Nesting Bird Boxes for ducks, owls, etc. And/or Canopy Bird Feeders that protect against squirrels & bears*	All Year
Invasive Species Management	*Care for trees against invasive insects, and care for forests against invasive plants*	May - Sept.
Portable Sawmill Program	We bring a state-of-the-art portable sawmill directly to your property and mill your logs to lumber, on the spot	Spring - Fall
Property Mapping	Custom property maps highlighting the property features you want to see	All Year
Tree Care: Cabling	Preserving large-sized individual trees with structural defects.	Spring - Fall
Tree Care: Structural Pruning	Establish dominate leader for tree structure.	Spring - Fall
Tree Planting	CFA will find prime placements for up to 3 trees	Spring - Fall
Wildlife Habitat Management	Forestry practices to help improve your woodlot for wildlife	All Year

CATSKILL FOREST ASSOCIATION, INC.
PO BOX 336
43469 State Highway 28
Arkville, NY 12406
catskillforest.org
(845) 586-3054

MEMBERSHIP APPLICATION

Become a member at www.catskillforest.org/membership or send a check/cash with this application to:
Catskill Forest Association, Inc. PO Box 336, Arkville, NY 12406.

NAME: _____

MAILING ADDRESS: _____

_____

PROPERTY ADDRESS: _____

_____

PHONE: _____ **EMAIL:** _____

TOTAL ACRES: _____ **FORESTED ACRES:** _____ **POND [ ] STREAM [ ] RIVER [ ]**

CATEGORIES (PLEASE CIRCLE)

BASIC ($75)	CONTRIBUTING ($175)
Events free or discounted; *CFA News* Subscription; CFA Member Property Sign; Access to CFA Programs	SAME AS BASIC + 10% Discount on Services;
BUSINESS ($200)	**SUSTAINING ($500)**
SAME AS BASIC + 5% Discount on Services; CFA Website Listing; Email Referral Advertisements; Free Booth at Forest Festival	SAME AS BASIC + 15% Discount on Services;

ADDITIONAL DONATIONS

GENERAL OPERATING FUND	**$**
ENDOWMENT TRUST FUND	**$**
SCHOLARSHIP FUND	**$**

Total Amount: $_____