

What is going on atop the high Catskills’ ridge-lines, generally above about 2800 to 3000 feet, is a completely different story. Like the top of the Adirondack’s Creighton Hill, high-elevation soils in the Catskills are also shallow-to-bedrock. They are also exceedingly stony. Because of these two factors, they hold little water despite the fact that the eastern Catskills’ peaks receive more mean annual precipitation than anywhere else in the state.

It may seem paradoxical, but drought stress is common up high. Let’s climb a typical peak and see what happens. Hardwood species will drop out with increased elevation and with predictable regularity. [Some people attribute the “drop out” of tree species with increased elevation mainly because of climate: the growing season is shorter up high. This is true, but colder temperature effects are considerably less than soil water availability. The high-elevation seeps and springs confirm this.]

The first tree species to drop out as we climb will be basswood – typically at about 2500 feet. Then white ash usually disappears as one approaches 2800 feet. These are followed by sugar maple at around 3000 feet. Black cherry, beech, and red maple can tolerate droughts better than sugar maple so that these three can climb higher on the slopes and dominate many western Catskills’ ridgelines between 3200 and 3600 feet; these three, on a few peaks can reach elevations of between 3800 and 3900 feet. Yellow and paper birches can tolerate droughts the best and grow highest yet – often mixing in with balsam fir on those eastern summits where the conifer is present at elevations up to 4000 feet.

How do we know that water stress is the main factor preventing most hardwood species from climbing to the very summits between 3500 and 4000 feet? If we could find localized sites where these species DO occur, well above the elevations where they normally drop out, we might have an answer. Such localized sites do exist! They are seeps and springs where water frequently flows down the surface and drought stress is rare. On such sites, basswood might climb to an elevation of about 2800 feet, white ash to 3000 or 3100 feet, and sugar maple as high as 3700 or 3800 feet. The high-elevation wetlands must have water flowing through them – i.e. seeps and springs - to maintain



white ash and sugar maple populations. Wetlands with nearly stagnant water, i.e. bogs, support a very different assemblage of trees – primarily yellow birch and often red maple.

#### CAN SOIL WATER-HOLDING CAPACITY BE QUANTIFIED?

The answer is yes. One can collect soil samples, bring them to a laboratory, measure their volume,

weigh them, let them dry out, and weigh them again. This would yield more accurate results, but what about a quick, rough approach in the field?

One way is by measuring soil depth to bedrock, either by direct observation over exposed ledge-tops, or by coring with an auger. I have done both and have hundreds of measurements throughout the region.

The other way is by estimating the volume of stoniness by eye – very approximate but still useful. What percent of the soil volume is occupied by gravel-sized rock fragments, about 1/8 inch in diameter, and larger? These large fragments hold very little water.

Here are some results:

Sugar maple seldom grows on soils less than 24 inches to bedrock, and grows mostly on soils with between 10% and 33% rock fragments.

Beech, black cherry, and red maple seldom grow on soils less than about 18 inches to bedrock, and can grow on soils with 20% to 50% rock fragments.

Yellow and paper birch can grow on soils as shallow as a foot to bedrock and stoniness of as much as between 40% and 80%.

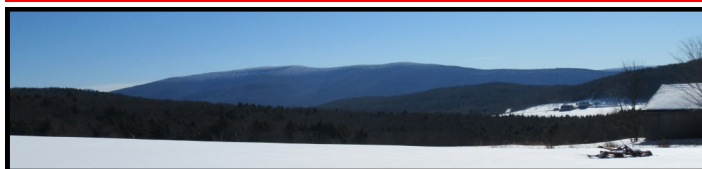
#### FOREST HISTORY

The hardwood species have sorted themselves out all on their own over a water availability gradient over thousands of years since forests invaded the region. How long have these hardwoods been in the Catskills? Except for yellow birch which has been in the region for at least 13700 years, fossil remains of other hardwoods in peat bogs are scarce. I suspect that the other hardwoods, especially the two maples, have been in the Catskills far longer than the radiocarbon dates I already have for them:

red (fire, bird, or pin) cherry – 12400 years  
beech – 7700 years  
black cherry – 6200 years  
red maple – 4900 years  
sugar maple – 800 years

As more fossils are found and dated, I would not be surprised if most or all of these species have been here for at least 10000 years.

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# THE GROWING DEER DEBATE

BY RYAN TRAPANI, CFA'S EDUCATION FORESTER & CERTIFIED DEER STEWARD (QDMA)

What do Foresters, bird-watchers, hikers, gardeners, organic farmers, orchardists, and natural resources professionals have in common? They are all impacted by the white-tailed deer (*Odocoileus virginianus*). At one time, a person could go in the backyard and plant some corn or an apple tree and watch it grow; both of my sets of great-grandparents in Ulster County did just that. In most places today, such free-range planting is either a scarce luxury or a waste of money and time, since crops, plants, trees, and shrubs are often browsed to death by hungry deer. What happened? How did we get to a place in time where such a wild and majestic animal has been labeled as a pest? How can we have healthy deer populations while also providing healthy forests that contain a wide array of plant species and habitats? Also, how can we foster a local food movement when costly deer are eating everything? Protecting deer from crops and other plants via fencing, tree tubes, repellents, and hunting is extremely expensive! What about growing future tree species so important to the wood products industry: oak, maple, cherry, walnut, and others that are often browsed to death before reaching maturity?

Many landowners, organizations and govern-



Heavily browsed evergreens in the yard and a planted apple tree protected by a tree tube. (The apple tree would surely be gone if not protected!)

ment agencies are struggling to find answers to these questions. The deer issue is unique and fascinating because it reflects our relationship to each other and the environment so much. Deer are a keystone species in the temperate forests found outside our doors. “A keystone species is one that has a disproportionately large effect on its environment relative to its abundance,” according to Wikipedia. Deer are voracious herbivores that can have significant effects on plant vegetation. As a consequence, some layers of a forest

are reduced or removed, which in turn reduces or removes associated wildlife. For a cottontail rabbit or a ground-nesting songbird, forest cover near the ground is extremely important for survival. When this layer is removed by deer-browse, exposure to predators and weather can greatly reduce their survival. Other examples are more specific. Deer prefer to browse oak. Some species – including gray squirrels – heavily rely upon acorns. If oak seedlings are not allowed to grow to maturity, decades later the forest may be missing one of its most significant food providers.

Even more interesting is that the white-tail’s key-stone nature does not stop at the forest edge, but instead leaps and bounds into our backyards, farms, stores, and wallets. If squirrels and turkey miss the acorns from an oak tree, the wood products industry will miss its wood. Oak lumber would surely be missed since people demand this tree’s pretty, yet durable wood for flooring and kitchen tables. In more domesticated settings are found orchardists, gardeners, and farmers spending thousands of dollars either fencing in their crops or swallowing losses from deer-browsed trees, fewer bales of hay, or half-eaten sweet corn. The producer must pass this cost down to his customer, whose wallet is then nibbled in turn for a few more bucks when fruit or vegetables are purchased.

In addition, there has been plenty of data out there to suggest a deer browse epidemic. The Nature Conservancy labeled it worse for our forests than global warming by stating, “In our opinion, no other threat to forested habitats is greater at this point in time – not lack of fire, not habitat conversion, not climate change. Only invasive exotic insects and disease have been comparable in magnitude. We can argue about which threat is more significant than another, but no one who walks the eastern forests today can deny the impact of deer to forest condition.” (<http://blog.nature.org/science/2013/08/22/too-many-deer/>)

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The forest floor completely dug up by hungry deer.



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Plants, trees, and shrubs that are found to be palatable by deer are eaten first; these plants are either reduced in size, or are killed after prolonged browsing. Less preferred species are browsed more as nearby food sources decline, creating a prominent browse-line throughout the forest. Non-preferred species are left behind to propagate and spread; these include many species that qualify as invasive species targeted by environmental groups. Some invasives are native and some are not; however, non-natives receive far more attention than natives. Whether the plant can trace its roots back to the Empire State or not, there is one commonly shared denominator – deer. They both share deer-repellant traits: low nutrition in their parts, thorns, prickly foliage, ability to sprout or spread via roots, toxicity, seed dispersal, light tolerance, etc. Invasive species have become four-letter words in the natural resources community. Millions of dollars are spent to combat these plants via herbicides, hand-pulling, cutting, mechanical removal, public information campaigns, research, publically funded internships and grant-monies, etc. Although well-intentioned, I feel these people are treating symptoms, not causes. Deer are the cause. Or are they? Is it their entire fault?



**You can see the browse line in the background, where the deer have eaten everything they can reach, but in the foreground is Garlic Mustard, an invasive species that they do not eat.**

Deer have been here for thousands of years. Of course, so have humans. Both species



**An electric deer fence with regeneration to the left, where deer can't go and no regeneration to the right, where they can. Can you see the deer browse line on the evergreens?**

are extremely adaptive. Both have probably had a mutualistic interaction with each other for thousands of years. "Mutualism," according to Wikipedia, "is the way two organisms of different species exist in a relationship in which each individual benefits from the activity of the other." Native Americans used deer for meat, hides, and bone-tools. In return, Native Americans manipulated their landscape by burning which promoted ideal conditions for deer. It has been well documented that burning can promote many fruit and nut trees depending on its timing, frequency, and intensity. But, how does this relate to today's relationship?

In most of New York State, people no longer depend upon the local deer herd for a living. Therefore, I believe they have less incentive to provide ideal forest conditions for enhancing the local deer herd. However, that does not mean that other people somewhere else would not like to benefit from eating venison. Conversely, farm products that do make up a significant portion of New Yorkers' diets cannot be found locally either. Most of our food is trucked in from far away beef and vegetable farms, and orange and olive tree orchards. The point is that there are things locally we do not use that others may want, and things we do not have and demand that others are willing to bring to us. Somewhere in there and in between is the market for us all to figure out. Demand for venison in nearby cities (or far away cities) may be a future market, if it were simply legal to pursue. Currently, legally purchased venison consumed in the United States is mostly derived from New Zealand deer farms. People in high-end restaurants in New York City are demanding venison. Since they cannot purchase any from upstate New York, they are forced to purchase from the other side of the world in New Zealand. Only high-end restaurants can afford to pass on these costs to their wealthier consumers. However, if local venison were available, deer meat would be more likely to visit less affluent appetites.

The concept of legalizing "market hunting" is extremely controversial. Many sportsmen – among others – seem to be vehemently against it. Commercial hunting is thought to be the main culprit in the demise of



**From Forest only to the hunter's table in New York State.**

many wildlife species, and led to the current system of wildlife management: The North American Model for Wildlife Conservation (NAMWC). However, it is the

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context in which commercial hunting occurred that may be the most important factor. During this time, deer, bear, buffalo and others faced fierce competition for resources with cows, horses, sheep, and goats. In addition,

## The War Between The Cousins

— Not In My Woodlot! By: Dr. Michael Kudish



**Red Maple (Acer rubrum) shown in the left photo and Sugar Maple (Acer saccharum) shown in the right photo.**

As a part of our dendrology (mostly tree identification) course at Paul Smith's College, I would hike forestry students up Creighton Hill, a knob about two miles southeast of the campus. This field trip served as an introduction to Adirondack soils and their relation to tree distribution. We noticed that red (or soft) maple was much more abundant than its cousin sugar (or hard) maple, both on the rolling plateau at the base of the hill and on its summit. In contrast, sugar maple was much more abundant than red maple on the middle slopes.

We realized that the rolling plateau from the college to the base of the hill is a glacial outwash plain with exceedingly sandy soils. [Glacial outwash is a deposit made by a meltwater river that no longer flows.] These soils drain so rapidly after a rain that they create water stress for the more water-demanding species such as sugar maple. Red maple can tolerate repeated droughts better so that red maple predominates and wins the "war". This is a soil QUALITY situation because the soils are deep to bedrock.

On the summit, the soils are so shallow to bedrock, that although they are less sandy and can hold more water per cubic foot, there just isn't enough soil to support sugar maple. It is a soil QUANTITY situation. Red maple out-competes sugar maple around the numerous bedrock outcrops and ledges and wins the "war" again.

But on the middle slopes, the glacial till and

soils are deep to bedrock and less sandy. [Glacial till is a deposit made directly by the melting ice. There is no river involved.] There is enough water to support sugar maple; it can out-compete red maple on these sites because sugar maple is more shade-tolerant and wins this "war".

After studying the distribution of the two maple species for a number of years, I came to the conclusion that there was a silent "war" going on between the competing cousins. Which cousin "won" the war was dependent on soil water holding capacity.

**TO THE CATSKILLS AND CFA MEMBERS' WOODLOTS--**

What does the "war between the cousins" have to do with the Catskills? ..... Plenty up on the high ridgelines, but little in most CFA members' woodlots.

Most of the woodlots are at relatively low ele-



vations, between 1000 and 2500 feet. Soils here are deep to bedrock and not excessively sandy. Catskills outwash is uncommon. Where it does occur, it is in valleys and is not particularly sandy. Drought stress on forests is rare. These soils hold adequate water to support the more water-demanding species such as sugar maple, white ash, and basswood. They also can support a wide diversity of other hardwood species such as beech, red maple, black cherry, yellow birch, hop hornbeam, striped maple, northern red oak, black birch, paper birch, red cherry, and aspens (discussion on conifers here would require a whole other CFA News article).

Competition among young trees on woodlots that have developed on abandoned pastures is not intense because the trees are young and small. There is plenty of water, light, and mineral nutrients for everybody. Competition among older trees on woodlots that have been logged is also not intense. Therefore, most CFA members won't observe much of a "war" going on

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between the cousins in their woodlots. If a forest on a CFA member's woodlot has not been logged in about a century or more, the large, old trees do compete intensely. Here, the most shade-tolerant species win: beech and sugar maple.

**MEANWHILE, UP ON THE HIGH RIDGELINES --**



layer naturally warmer than the outside air during winter, the snow when fresh has a high isolative capacity. This creates an environment that is wind free, warmer, and insulated; all resulting in more habitable conditions for any animal living within.

Take ruffed grouse for example. Mortality rates are highest at times when temperature is frigid and there is no subnivean snow layer. Grouse rely heavily on the snowpack to roost in during storms, windy days, and cold nights. They feed during the day filling their crops with catkins, the male flowers of aspen, birch, and alder, then burrow under the snow for hours to days at a time. Without the subnivean layer, grouse are forced to roost within denser pine, fir, and spruce stands where microclimates may be more favorable, but food availability is often scarce.

As many are most familiar with, whitetail deer often have the highest occurrences of winter kill when the snow depth reaches its maximum for the year. They do not have the ability to raise their legs above the snowpack like moose, or walk on top of the snow like caribou. This results in deer being forced to dragging feet and wading through the snow which is energetically costly, as we can all relate to. But deer often herd up and move to wintering grounds within hemlock, spruce, and pine stands where snow depth is less, wind is blocked and dense canopies create a microclimate allowing

for temperatures to be a few degrees higher.

As more and more snow piles up, other species are brought to new food. The snowshoe hare, specialized for winter with camouflaged fur and large feet, is provided with an ever increasing food source as more winter snow arrives. Feeding on maple buds and bark on top of the snow, snowshoe hares are elevated with each storm, allowing them to feed throughout winter and never running out of forage. Without a snowpack though, hares are demoted to feeding on less palatable food like balsam and pine as the deciduous vegetation runs out.

The world in winter shows to be full of life resisting the struggles brought on by the winter cold. A reduction in food supplies along with frigid temperatures brings about some amazing adaptations for animals. With the next snowfall, take a walk through the woods and observe the tracks littering the ground, each tell a story of survival and wit brought on by the will to survive until the spring thaw.

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In an effort to broaden our membership rolls and increase awareness, CFA is offering an incentive to existing members to recruit new members. Because each of us know other landowners with forested acreage or who have other interests,

this is a good opportunity to recruit a new member.

CFA offers so many services and opportunities that it seems logical to encourage new membership. In addition to being part of an organization that promotes long term forest health and vitality there are many other reasons to join; onsite visits, marking for timber and firewood harvests, educational programs, the Forest Festival (held this year on July 25, "From The Forest" airing weekly at 6 PM on WIOX radio.org or FM 93.1 or Channel 20 on MTC cable, and many other educational workshops.

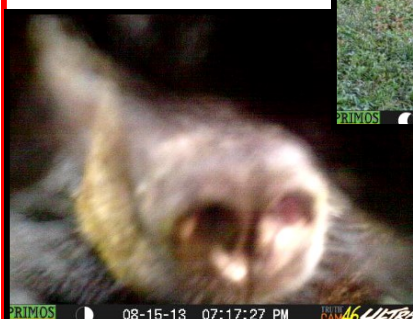
As an incentive to our members, CFA will give a CFA ball cap to anyone successfully recruiting a new member. Anyone reaching a friend or neighbor with acreage may contact the CFA office to receive a registration package. Upon submission of the package to CFA offices, a neat ball cap will be sent to the successful member.



## CFA Hat – \$15

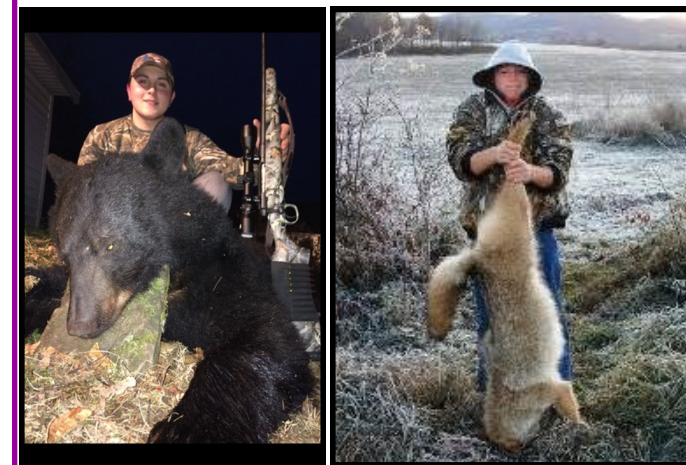


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since no one owned the wildlife – much like fisheries outside national borders – there were few inhibitions to liquidate available species. "Hey, if I don't shoot him, someone else will." Or, "why not kill that bear; no one owns him." To make matters worse, many state governments incentivized the killing of various predators via paid bounties. In other words, a lack of ownership of wildlife resources fostered a race for their extraction or liquidation in the 19th century when demand for these



**Black Bear & Coyote populations declined dangerously.**

resources was high. Adding to this race was fierce competition with livestock and agricultural resources and hence a vast continent-wide reduction in wildlife that had once seemed limitless. The (NAMWC) sought to transfer this "homeless" wildlife resource to the "public trust." Although well-intentioned, it simply removed it from one homeless shelter to a more official one; the state. Wildlife species did come back, in part due to some well-timed hunting regulations and various other conservation practices that reintroduced wildlife where they were scarce. However, these practices pale in comparison to the under-emphasized, massive habitat changes that have been occurring throughout the 20th century: farm abandonment. Farm abandonment has accidentally served as a catalyst for reintroducing and growing this wildlife resurgence more than any official management tool can take credit for. Conservationists claiming full-credit for this comeback is akin to someone showing up half-way through a very successful party and later claiming credit for its creation. Sure, they may have told some jokes and brought a couple of sixers, but the party had already begun. Early successional growth of plant species via farm abandonment first led to the arrival of smaller prey species – grouse and rabbits – and more recently to larger ones like deer and moose. Eventually, as the food chain goes, larger omnivores and carnivores will also move in: bobcat, coyote, lynx, fisher, bear, wolves, mountain lions, etc. In the absence of agricultural competition and the resurgence of circumstantial habitat, wildlife has grown regardless of ownership framework, policy, or altruistic concern. It has been an unplanned exercise in success. It has been mostly spontaneous. It has been a wild progression; one that has been welcomed and encouraged, until now.

The lack of a responsible wildlife ownership framework upon private property – mixed with competition with livestock and agriculture – may have led to the



**The deer are loving the abundant abandoned farmland.**

demise of many species in the 19th century. However, the opposite may be true today. Now that wildlife has rebounded – due mostly to circumstantial farm abandonment – public ownership entrusted to the government is still struggling with managing those same species. The only difference now, is that the problem has reversed; there is over-abundance in many areas. Still, the challenge remains, how does a central planning authority know how to efficiently manage a wildlife species? Can it be done? The problem is that there is a publically-owned wildlife resource that is mostly dependent upon private land. The costs and responsibility for this publically-owned resource is being born mostly by a few landowners who are neither compensated nor incentivized to do better.

Perhaps a step in the right direction is to change how or who is responsible for wildlife. The idea that wildlife can be "owned" may sound distasteful to some, but should not be dwelled upon. What individual ownership of wildlife does – that is when they're on your property – is divide power among individuals so that no single special interest group or large entity can control the entire resource. Respect for and enforcement of private property rights mixed with diverging landowner viewpoints and management goals is less likely to lead to any catastrophic extirpation of species. Instead, there might be more diversity in land-uses as well as protection of species, since landowners can potentially profit from long-term management of species upon their land. Sure, not all wildlife can be held restrictively to one's land, but improving habitat can lead to more and healthier wildlife. The owner can feel better that his investment in habitat may pay off through sales of meat, hides, hunting leases, mere observation, or recreation. On parcels that are

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simply too small to be improved for wildlife, or where damages to landscaping have become intolerable – such as in suburban areas – landowners can at least tap the market for recouping some of their costs via the sale of venison or some other unforeseen market.

Still, it is unlikely that the modern-day North American Model for Wildlife Conservation will be changed any time soon. It is highly ingrained in our learning and treated as an assumed truth; merely ques-



tioning it causes mass disdain and heartache. However, that doesn't mean its consequences are living up to its intentions and perceptions. Even if wildlife was to be set free of its state-bondage tomorrow, and deer were allowed to be sold for a five-star meal, there would be other hurdles. Demand for forest recreation has grown leaps and bounds in the last 60 years. However, many landowners are not benefitting from this increase. Unfair competition from an increase in state land-acquisition programs over the last 100 years may be reducing any private start-ups. Landowners who desire to make their property into a nature preserve or forest recreation paradise may find it hard to compete with a state-funded preserve down the road that is perceived to be "free" for its users. In addition, private non-profit preserves like the Mohonk Preserve in southern New York State pay no property taxes, which means their costs are significantly lower than "for profit" owners who are paying taxes. On the meat side of the plate, there are plenty of road-blocks. Beef is significantly subsidized via government incentives upon grain and waterworks projects in the western US. In addition, the beef industry may be able to tolerate the high costs of USDA certification programs, but could a fledgling venison market? Perhaps the mere fact that millions of wild venison meals are eaten each year without concern – despite any USDA oversight – should serve as testimony for less costly programs, but I wouldn't bet one buck.

If the idea of legalizing venison for commercial sale and/or transfer of wildlife to private responsibility sours your taste-buds, then perhaps the plate could be made more appetizing with a small side of regulation. In Sweden, wildlife is owned by landowners and harvested meat can be sold. However, quotas are established by biologists. The Swedish experience could be transferred to New York State, where DEC wildlife biologists could



continue to set limits on the deer take. Let's be honest, wild deer are not cows and cannot be confined to one property or fenced in as cheaply. Resources – such as deer – are more appropriate for some kind of government protection, since exclusion of this resource and its transferability between ownerships is less practical. State deer biologists could still regulate populations via extremely liberal quotas or bag-limits. In this way, deer populations are removed from any perceived threat of extirpation. Landowners could also be compensated for their efforts via leasing, sale of meat or hides, user fees,

etc. Foresters and farmers who are sick of their assets being nibbled away are allowed more options for removing problem deer. Environmentalists who are managing for rare plants like American ginseng, American yew, rare orchids, or an oak-savannah forest in Wisconsin will be able to, since deer populations can be reduced more easily. Consumers at the supermarket will pay lower prices for apples since less costly fences will have to be erected around orchards for protection.

In the unlikely event that such a framework was implemented, a few things could happen. The worst scenario would be that deer populations are severely reduced due to an unexpectedly successful market for venison. However, even so, deer take quotas would be enforced by NYS DEC Environmental Conservation Officers. Also, even this would not be too bad since reduced deer numbers should translate into healthier forest conditions and less agricultural and landscaping damage. However, deer hunters would surely complain about see-



ing less deer. The second scenario would be that nothing changes. Demand for venison continues to be low and has no effect on forest owners, farmers, the deer herd, and their overall impacts upon the general forest and domestic condition. The third scenario is ideal. The market for venison is decent enough to cost-share expensive forest management for improving quality wildlife habitat. Forest owners purchase land for hunting leases, recreation, hunting, and sale of venison. In order to make a profit or please their users or customers, quality habitat will be a prerequisite. In example, buying local beef ensures that good pastures and cows are preserved. In this case, users buying venison or a wildlife outing or hunting experience promotes quality habitat. The intentions of the landowner may be good, but in this case he has the means to carry out wildlife management. If his practices are harmful to wildlife and their habitat – and some will be – he is less likely to succeed since competition with other owners and unsatisfied users will bring less income. An example of this type of framework can be seen on large ranches in Texas. Hunters pay a considerable amount to hunt deer there since the opportunity of bagging a large healthy buck is high. In order for ranchers to keep their customers happy, ideal conditions must be preserved or created. Many of these ranchers are already (continued on Pg. 13).....

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well seasoned in animal husbandry and have transferred their knowledge from growing horns to antlers. Instead of simply growing grass or grain for beef, they're burning the brush to grow bigger bucks or setting strict hunting rules that preserve younger bucks. Younger bucks turn into bigger bucks that bring him more hunters and compensation. Compensation provides more incentive to enhance quality habitat. In the process, some excellent wildlife habitat is created. It's positive for the landowner, consumer, and the land.

Moving away from the North American Model for Wildlife Conservation will be a momentous paradigm shift. Not everyone will be happy, but are they now? The saying goes, "You can please some of the people all of the time, you can please all of the people some of the time, but you can't please all of the people all of the time".

# WILDLIFE IN WINTER

By John MacNaught (CFA's Wildlife Specialist)



It's a brisk morning in mid-February, the woodstove is cranking, a fresh blanket of snow has fallen and all seems still outside. But is it really still? In the distance across the field a deer can be spotted nipping the buds of young maple trees just inside the tree line, fresh tracks across the field reveals the movements of a red fox from last night as it was listening beneath the snow for its next meal. A group of black-capped chickadee passes through feeding on insect eggs and any seeds left available as they replenish their fat storage reduced from the cold night before... and beneath the snowpack, hidden from our sight, lies another world altogether full of life.

Under the layers of several feet of snow, life stirs about. A shrew in constant forage, forever in debt by its large surface to volume ratio, preys upon spiders above the ground to prevent succumbing to the cold. Under the bark of a decaying oak, insects in early stages of life resist freezing by producing glycerol within their body, a sort of anti-freeze. Within the hole of a forgotten log a vole seeks cover from the ears of a preying fox above the snow. When safe to move, the vole uses the protective snowpack to feed on the bark of saplings and fruit trees, girdling them as seen in early spring. An ermine, long and skinny, trades off rapid heat loss for a specialized design which allows it to follow the

voles through their tunnels and prey from within.

Throughout the night a deer lies within the snow to save precious calories, protected from the wind and insulated from the frigid air above. A ruffed grouse, arising only to fill its crop of catkins from a nearby aspen, roosts within the snow layer where temperatures remain constant - near freezing, even though air temperatures are below zero above. It is these animals and many others which resist the challenges brought on by winter cold. While others migrate to more favorable climates or hibernate within their den, the rest elude us into believing winter is still, when in actuality it is full of life.

When the snow piles up outside with several feet or more on the ground, many would assume a death sentence for wildlife. This is not the case for the majority. Most creatures thrive once the snow begins to pile up a foot or more. When this happens the snowpack is then referred to as the **subnivean** layer. (Subnivean is a Latin derivative – sub meaning 'under' and nives meaning 'snow'.) This layer opens up a new world for animals to feed, hunt, hide, and stay warm. But why is a blanket of snow ideal for wildlife? The opposite is often assumed as we associate with a herd of deer struggling to wade through the deep snow.

Within the subnivean layer a multitude of events are happening which allow for life to thrive. A temperature differential occurs within the snowpack creating nearly constant temperatures at 32 degrees Fahrenheit all winter long. This happens because the ground temperature is warmer than the air temperature, usually at or slightly above freezing due to warming occurring from the core of (continued on pg. 6).....

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the earth. This causes a temperature differential warmest near the ground and coldest near the surface of the snow. Not only is the subnivean



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- interface with DEC forestry staff.
- d. No stumpage tax on timber harvests.
  - e. Requires annual 10-year, rolling commitment, with verification of continuing forest certification enrollment.
  - f. Provides 70% assessment reduction for enrolled acres.
3. "Time of Harvest" option:
- a. Reduces required acreage for eligibility from 50 to 25 acres.
  - b. Expands definition of "eligible land" to include up to 50% not meeting current "forestland" definition.
  - c. Enrollment at time of voluntary commercial timber harvest.
  - d. No penalty conversion to this option for lands currently in 480-a.
  - e. Enrolls entire non-agricultural open space excluding developed areas of participating holding. Timber harvest (minimum 10 acres) can occur on any portion of enrolled holding.
  - f. Initial commercial harvest requires DEC-approved "Sustainable Harvest Plan", prepared by professional forester.
  - g. Fixed 15-year term enrollment period from time of harvest with no change of land use allowed on enrolled acres.
  - h. No management plan required for entire property.
  - i. No mandatory work schedule or required non-commercial practices.
  - j. No mandated harvest schedule or interval.
  - k. Future harvests permitted only under another DEC-approved harvest plan.
  - l. New harvest may extend 15-year term enrollment and assessment reduction, at owner's option.
  - m. No 5-year updates or plan amendments required.
  - n. No mandatory boundary line maintenance.
  - o. No stumpage tax on approved timber harvest.
  - p. Provides 40% assessment reduction for enrolled acres.
  - q. Penalties for violation of program terms (similar to current 480-a?).

Off the top of my head, I have a few concerns:

1. The DEC seems to be focused heavily on reducing their work-load.
2. Without a form of reimbursement to the local taxing jurisdictions, there would be tremendous burdens placed upon

**Safeguard your investment. Tree shelters protect seedlings from deer, lawnmowers, & weed-wackers!**

**Purchase your 5' tree tubes from The Catskill Forest Association; \$4.50 each. Or 10/\$40.00**

**Wood stakes available: 60"x1" \$2.00 each or 10/ \$15.00**

Call Michele at (845) 586-3054



- them. (I feel that **Many** owners would opt to take a 40% reduction for a one-time harvest and 15 year easement.)
3. The "Time of Harvest" option is basically an inexpensive 15 year easement purchased by the State with a renewable option for the landowner.
4. Should the state have the option to break out of the contract they already have with the landowners with acreages of 50 through 999 acres?
5. Why are only the largest landowners allowed to remain in the Current 480-a program?
6. Green Certification is very expensive and really only cost effective on parcels at least 500 acres in size, so auditing on the ownership level would eliminate those with smaller acreages.
7. Will this work to incentivize landowners to actively manage their forests .... Or will they perform one small harvest and neglect the rest of their forest for 15 years?

In other news, John MacNaught will be joining the CFA staff family full time this coming spring! He has fit in well with the organization and has a lot to offer CFA as well as its members. He brings a strong wildlife and GIS component to add to CFA's forestry expertise.

We have many workshops planned along with the Annual Catskill Forest Festival on the last Saturday in July, the Annual Meeting set for Sat. the 3rd of October and a symposium on "The Growing Deer Debate" on Sat. the 31st of October. Please come see us at one or more of these. Also, don't forget to take advantage of one of our member programs listed at the

I would like to hear from you about your thoughts on this tax issue! CFA will be coming out with a formal statement on it and wants to represent its members fairly. We can not do that without your input. Drop me an email at: [jwaters@catskill.net](mailto:jwaters@catskill.net), write me a letter at: PO Box 336, Arkville, NY 12406 or call me at: (845) 586-3054.

end of this newsletter and listen in to our weekly radio show on WIOX named "From the Forest". (To listen in on your computer just use the address: [www.wioxradio.org](http://www.wioxradio.org).)

Please be patient for CFA's new website. It should be up and running soon! ([www.catskillforest.org](http://www.catskillforest.org))

I hope we have a wonderful spring and that you have all had enough wood to keep you warm this very cold winter. Remember that your wood for next winter should already be stacked, ready to dry. It's nearly impossible to get well seasoned wood just before or during the heating season!

Naturally, *Jim Waters*



Nothing could be truer. There will be some people that object to commercial hunting, saying, "You can't put a price tag on life." Or perhaps others will fear that market hunting will lead to "unfair chase" often referenced by sportsman or animal rights organizations; there's a good



The picture above shows a forest that is so thick, regeneration can not get started. The one below shows a thinned out canopy, allowing sunlight to hit the forest floor providing browse for deer as well as a future forest — if the deer population is kept in balance!



example of strange bedfellows. However, all of these notions are extremely subjective and are really personal viewpoints that should not be socially mandated. The state deer biologist should be tasked with ensuring a "sustainable" deer population; that is difficult and subjective enough. However, should he also be tasked with the regulation of hunting behavior to achieve his numbers? Should he be concerned whether someone uses a tree-stand, bow, or shot-gun? Or whether he hunts with dogs — which the Swedish have used for quite some time — or a canoe? I don't think so, but I could see how many could.

The issue with deer is a unique and fascinating one. It is a keystone issue in ecology, environmentalism, politics, ethics, and morality. It is an issue that I hope people will start talking about anew, and hopefully will not be complaining about decades from now. There is no doubt there will be strong emotions and opinions in this debate. However, the conversation must begin somewhere and doing nothing also has a price tag.

For more information on this topic, mark your

calendars for The Catskill Forest Association's event: The Growing Deer Debate, on October 31st @ Margaretville Central School from 9AM to 4PM. More details to come.

[www.catskillforest.org](http://www.catskillforest.org)

### Apple Tree Grafting

(Preserve the fruit of the past into the future!)



#### Benefits of

- ☐ Preserve your favorite apple variety
- ☐ Grafting is the only way to perpetuate a particular variety. Apples grown from seed are random.
- ☐ Deer browse! Grafting enables one to propagate plant tissue above the deer browse-line.
- ☐ Large & hardy root systems
- ☐ Lots of you may already have "wild" apple or crab-apples to graft onto!
- ☐ Established apple trees or crab-apples have large root systems that can be used to grow desirable (grafted) fruit from your choosing

#### Cost of Grafting:

- ☐ \$200 + mileage (includes \$50 membership)
- ☐ If graft doesn't unionize that year (leaf-on), \$125 will be returned to member; membership honored

#### When to Schedule:

- ☐ Now; Scion-wood must be collected in dormancy
- ☐ Grafting takes place between bud-swell & leaf-out (April – May)
- ☐ Reserve your spot now!

#### Grafting:



# THIS IS HOW CFA CAN HELP YOU!!!

(As well as how you can help preserve the forest and all of its benefits for generations to come.)

## STEP 1 –

Become a member of CFA. It's only \$50 per year.

- Quarterly Newsletter
- Help over the phone or when you come in to the office on anything that deals with owning forest property, from legal, trespass and surveying issues to hiring foresters & loggers, to management for various objectives...just about anything you can think up! Test us!
- Most workshops and woodwalks are free for members.

## STEP 2 –

Sign up and schedule an On-Site-Visit.



A CFA Forester will visit your property to discuss your intentions with the trees, woodlot or forest on your property to establish realistic goals and objectives with you. The forester will walk your property with you to give you insights and answer questions. A discussion will then ensue to come up with options for management treatments.

- ♦ For anyone with an interest in their property & trees.
  - ♦ 1/4 of an acre to 1,000+ acres
- ♦ Just bring an open mind and enthusiasm for doing something
  - ♦ Bring along others & make it an event!

Fee for new CFA Members — \$150 plus mileage. (Offer expires after 30 days from membership sign-up)

Fee for CFA Members after 30 days — \$200 plus mileage. Fee includes a one year membership renewal.

## STEP 3 –

Select from a list of programs specifically designed for you. (Details on next page)

- Woodland Use Guide
- Tree Marking Program
- Forestry for Wildlife Program
- **Apple Tree Grafting Program (Call for details—winter and spring only.)**



**"LIKE" Catskill Forest Association on Facebook!**



**We've also set up a Vimeo account where we post videos for you to enjoy.**

**(vimeo.com/channels/fromtheforest) — no spaces!**

**In addition, check out the [www.watershedpost.com](http://www.watershedpost.com) site, click on "sponsored content", then "From the Forest".**

## EXECUTIVE DIRECTOR'S MESSAGE

*Brrrrr Everyone!*

**WHAT??? .... New York's Forest Tax Law may finally see some changes?** We've had 40 years of talk about what's wrong with 480a and what it doesn't do but should or could. Nothing has ever come of these discussions. Currently only 3,300 landowners are enrolled out of a possible 50,000, representing about 16% of the eligible acreage. That's just 1.1 million acres out of 7 million. These numbers certainly show the program's extremely poor success over the past 40 years.

For the first time, however, we are seeing interest from the Governor's office. In Governor Cuomo's 2015 State of the State message, he said:

"In order to promote the growth of the sustainably harvested wood products industry in New York, DEC, DAM, and ESD, as the State's representatives on the Wood Products Development Council, will bring together stakeholders from forestry management companies, environmental groups, government agencies, and private landowners to discuss the opportunities and challenges the industry faces and ways the State can contribute to the industry's advancement, including by reforming the current property tax incentive program (480-a Forest Tax Law)."

Immediately, the DEC took this on...not allowing the other agencies through the Wood Products Development Council to take the lead. I believe they saw it as their responsibility mostly...so they jumped on it initially by themselves. They used past work from meetings with stakeholders such as The Empire State Forest Products Association, The Council of Forest Resource Owners, and The Wood Products Development Council. (CFA is represented by me being a director on the boards of the first two and being a state representative on the Wood Products Development Council.)

From the various meetings they produced a list of goals and objectives:

1. Increase the acres of forestland, wildlife habitat and open space conserved and enhanced under our incentive program.
2. Reduce the barriers to landowner participation and enrollment.
3. Address local government objections to the unfunded, state-mandated tax shift caused by 480-a.
4. Recognize, promote and provide incentives for participation in credible, comprehensive third-party forest certification programs that include science-based standards, annual, third party audits by accredited auditors, at the ownership level, and a written audit report documenting any non-compliances.
5. Focus management and oversight attention on timber harvests by requiring "approved harvest plans" that ensure sustainable, science-based forestry which improves forests, rather than degrading them.
6. Reduce violations related to mandatory work schedule issues, which lead to increased management workload and potential for significant penalties.
7. Reduce DEC's workload in managing the tax incentive program to allow them to focus on harvesting plans and practices and on monitoring compliance to ensure public interests are being protected.

The DEC has put together some draft 480a amendment proposals "for discussion purposes" that they believe will:

1. Reduce costs of enrollment and participation by eliminating the following mandatory elements:
  - a. Forest management plans
  - b. 5-year plan updates

- c. Plan amendments
  - d. Annual work schedule
  - e. Prescribed timber harvest schedules
  - f. Pre-commercial stand improvement work
  - g. Boundary line maintenance
  - h. Current 6% stumpage tax under 480-a
2. Reduce minimum acreage from 50 to 25 acres.
  3. Expand eligible acres beyond current "forestland" to include up to 50% "other" lands (not developed or in active agricultural use)
  4. Eliminate sole and mandatory focus on timber crop production.
  5. Allow wildlife habitat conservation and enhancement, open space, recreation and non-timber products as management objectives.
  6. Replace 10-year rolling commitment with a 15-year, fixed term commitment that can be extended.
  7. Revise the assessment reductions to 70% under the forest certification and 40% for the "approved timber harvest plan" option.

As part of the discussion, various elements with fiscal implications are also being discussed, but are outside the scope of amendments to the Real Property Tax Law. They would have to be addressed separately by the Governor and Legislature, through the budget process, but could conceivably be linked in the discussions:

1. Continuing and updating the State reimbursement for localities experiencing >1% tax shift due to 480-a enrollments.
2. Providing full state reimbursement to localities for 480-a exemptions.
3. Changing 480-a benefit from a real property tax assessment reduction to a refundable income tax credit to the landowner.

The DEC's amendment proposals have changed and will continue to change with input over the next month or so. CFA will be sending out a list of these proposals in a second mailing. We will be asking you for your thoughts and input so that CFA can formulate an official response.

Basically, the proposals break it down into 3 programs:

1. "Current 480-a" Option:
  - a. Those in 480-a with 1,000 acres and greater can remain in their current program (eligible forestland gets an 80% reduction in assessment) indefinitely or get out now without penalty and either drop out altogether or go into number 3., below.
  - b. Those that are currently enrolled with 50 acres to 999 acres must choose between; (a) staying in the current 480-a for 10 years or (b) drop out immediately. Either way they would be forced out without penalty. They could then choose to drop out entirely or go into number 3. below. *(continued on page 4).....*

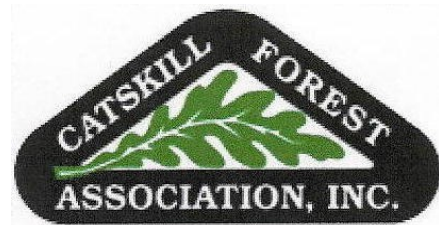
.....(continued from pg. 3)

2. "Green Certification" option:
  - a. Requires enrollment in a DEC-approved, independent, third-party forest certification program with annual audits, by accredited auditors, at the ownership level (currently, only FSC and SFI meet these criteria).
  - b. Minimum acreage for eligibility 25 acres.
  - c. No mandatory work schedule required and minimal



*Listen to "From the Forest", Wednesday evenings from 6 pm to 7 pm with Jim & Ryan. Streaming on the Internet — go to: [wioxradio.org](http://wioxradio.org).*





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

**For a CURRENT listing of CFA's  
EVENTS you must visit CFA's Web-  
site!**

[www.catskillforest.org](http://www.catskillforest.org)

Cover Photos:

***A stream in Ulster County, deer  
browse and an area to keep deer  
warm and safe from the cold and  
snow. (Photos by Ryan Trapani)***

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## CFA 'T' shirts:

**Adult & Children Sizes**



**\$10**

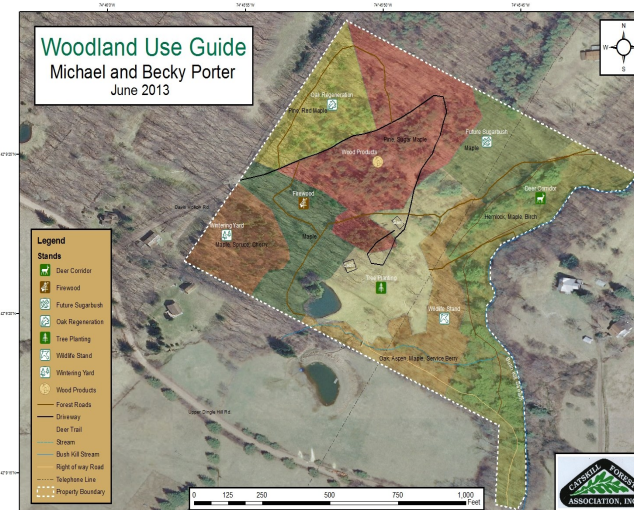
## Welcome New Members!!!

**2015**  
**January**

Brian Cook – Conesville  
Jenna Spevack – Andes

**February**

Brent Gotsch - Grahamsville



## CFA Woodland Use Guide!

Detailed maps, stand descriptions and recommendations, unique features' locations and descriptions. Lots of pictures included. GIS mapping and GPS locations of all features! (Call CFA to see a sample Woodland Use Guide.) **AN "ON-SITE-VISIT" FEE OF \$200 (INCLUDES MEMBERSHIP RENEWAL FOR ONE YEAR) PLUS MILEAGE** will be charged.

**The cost of the Guide is given after an onsite visit is done. Every property is different. This program is only done on 20 acres and less.**

## CFA Tree Marking Program!

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



**AN "ON-SITE-VISIT" FEE OF \$200 (INCLUDES MEMBERSHIP RENEWAL FOR ONE YEAR) PLUS MILEAGE** may be necessary for selecting, designating on the ground the area to be marked, and determining the acreage to be included. Otherwise the cost is just mileage plus \$100 per acre. **This program is only done on 10 acres or less per calendar year per**

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



## CFA Forestry for Wildlife Program!



DOES YOUR FOREST LOOK  
LIKE THIS?

- A technique used to improve the quality of habitat to provide the essential needs of the wildlife that you are interested in.
- Fruit and nut bearing trees and shrubs are favored to increase the food variety and availability for wildlife.
- Increasing understory cover will make animals feel safer while feeding, traveling, and bedding on your property as cover protects animals from predators.

Price estimates are developed at the end of an on-site visit. Every property is different.



WOULD YOU LIKE IT TO  
LOOK LIKE THIS?

For more information on any of CFA's Programs, call us at (845) 586-3054 or email us at [cfa@catskill.net](mailto:cfa@catskill.net). Our office is open from 9am 'til 4pm Monday—Friday. If you would like to sign up for a program, circle the program(s) that you are interested in, fill out the info on the back of this page and mail the entire page to us at PO Box 336, Arkville, NY 12406





PO Box 336  
Arkville, NY 12406

## MEMBERSHIP APPLICATION

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

Name \_\_\_\_\_  
Mailing Address \_\_\_\_\_

Phone #: \_\_\_\_\_ E-mail: \_\_\_\_\_

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

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

Do you own land in the Catskill Region? Yes \_\_\_\_\_ No \_\_\_\_\_

Property address: \_\_\_\_\_

Telephone #: \_\_\_\_\_ County: \_\_\_\_\_

Total acres: \_\_\_\_\_ Forested acres: \_\_\_\_\_ Pond Y / N Stream Y / N River Y / N

Would you like a CFA forester to come to your property to walk it with you, making suggestions and giving you impartial and confidential advice? (IT JUST COSTS \$200 PLUS OUR MILEAGE AND THE \$200 INCLUDES A ONE YEAR MEMBERSHIP.) Y / N  
(If so we will call you to schedule an appointment.)

Amount enclosed \$ \_\_\_\_\_

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

# CFA NEWS



The Newsletter of the Catskill Forest Association, Inc.

Volume 33, Number 1 - Winter 2015



### **INSIDE THIS ISSUE:**

“Wildlife In Winter”

Forest Tax Law Changes

“The War Between The Cousins—Not In My Woodlot!” - Dr. Michael Kudish

“The Growing Deer Debate”

