Re: Savoy Mountain pine, MA

by dbhguru » Tue Oct 25, 2011 1:22 pm

John, Splendid! The super pine in Savoy adds another location where Massachusetts white pines reach heights to 150 feet or more. We now have:

Mohawk:	117
Bryant:	15
Ice Glen:	3
Hawley:	1
Savoy:	1
Monroe:	1
Total	138

It is reasonable to conclude that the entire Northeast would have been sprinkled with large, tall white pines in colonial times and that western Mass, and the Berkshire region in particular, would not have been exceptional. However, in today's forests, the Massachusetts Berkshires stand out. Long live the great whites.

Robert T. Leverett

Sigurd, Grandfather, and Thoreau

by dbhguru » Tue Oct 25, 2011 5:46 pm

A Visit to Sigurd, Grandfather and Thoreau
By Robert T. Leverett

Our Start

On Oct 23rd, Monica and I arose early, made the bed, put on hiking clothes, and headed north. Our first destination was The Charlemont Inn for a quick breakfast and a visit with our friend Charlotte Dewey, the Inn's manager. After that, we hopped back into our Subaru Forester and drove straight to Monroe State Forest, following a scenic route along the Deerfield River. The path we took is the historic route that once served as a toll road for travelers crossing the Berkshires. It is a drive we've done many times before, but one that never gets old. Our destination was the Trailhead at Dunbar Brook. We were half serious about trying out an experiment in Japanese "wood-air-bathing", which we read about for the first time in one of our friend Joan Maloof's excellent books. We both agree that Dunbar is the place to try out Shrinrin-Yoku. The basic idea is to absorb the compounds of the forest by breathing them in as free molecules, released by the trees and a myriad of other forest organisms, but mainly by the trees. The molecules enter the lungs and make their way into the blood stream, presumably imparting health benefits. I think that I wood-air-bathe every time I walk in a forest. Now I am more aware of what is happening.

Of course, I had more mundane tree measuring objectives. I always do. This trip, I needed to check on the growth and health condition of the huge Sigurd Olson, Grandfather, and Henry David Thoreau white pines growing on the north-facing slopes above Dunbar Brook. I was pretty sure that I'd find them in good condition, since other than flooding along the bed of the brook, Hurricane Irene had maintained a light footprint on the lower slopes as she swept through the region. Nonetheless, I knew I wouldn't rest until I was certain the pines were okay.

The Walk In

The day was cool with partial cloudiness and no insects – ideal. We were off to a good start. The nature path enters a thick stand of mature hemlocks that cast dense shade. The sudden drop in the level of light is instantly noticeable. I'll bet the same thought flashes through every head: Hey, who turned off the lights? But the very low levels of light exact a price. Flowering herbs are rare in such conditions.

The hemlocks lining the start of the trail grow on a steep slope with numerous rock outcroppings. The trees range in age from 70 or 80 to as much as 240 years, courtesy of actual ring counts. As a consequence, this area of Dunbar was initially confusing to me to interpret when I was mapping the Massachusetts old growth for the Department of Conservation and Recreation (DCR). There were plenty of old-growth indicators present, but other

physical features spoke to a past disturbance, perhaps a century and a half ago. After overstory removal, the suppressed hemlocks, previously relegated to an understory role, were suddenly released. Bathed in fresh sunlight, they put on spurts of growth to take their places in the canopy. They form the forest we see today, but even after 150 years, none of them has reached great size. The growing conditions are too austere.

Threading one's way along the slopes, it is easy to see why the hemlocks can't become forest giants. The next image speaks to the challenges of growing on the slopes.

Passing through the hemlocks, we entered a hardwood-dominated forest. After the July drought, the rains had returned, some torrential. The result is luxuriant undergrowth that persists even as we approach the end of October. The sun peeked through holes in the clouds, warming us after we'd passed through pockets of cold air that bottle up along the Dunbar Brook corridor. Water oozed from the springs that were being constantly recharged by the near record-setting rains. Travel along the trail was messy in spots, so we paid extra attention to our footing and tried to walk in a manner to minimize trail damage.

The bright fall colors filtered through gaps in the forest canopy. Autumn finery in the crowns of the trees and the deep green of the ferns and mosses on the forest floor generated a tapestry of vivid colors, each accenting the others, all competing for attention. We had caught Dunbar Brook at its best.

I should explain that Dunbar is noted for its variety of herbs, including blue cohosh, foam flower, several species of violets, trilliums, oxalis, and wild ginger, to name a few. Many Massachusetts forested locations have a similar variety, but few match Dunbar in abundance. Herb communities are highly developed, especially the trilliums and wild ginger. But the richness doesn't end with the herbs. There are ferns, mosses, liverworts, lichens, and fungi at every step. The ferns, mosses, and liverworts rise to visual prominence as the herbs wane.

The second image showcases a boulder field covered in ferns and mosses that caught Monica's eye. The combination appeared to us as the temperate climate counterpart to a tropical garden. There are usually six to eight species of ferns in these nutrient-rich boulder fields. As for the mosses and liverworts, there are simply more species than I can track.

It quickly becomes apparent to visitors that boulders and rock ledges help define the Dunbar Brook corridor, and the rocks come in all sizes. In some areas they appear uniform, as though nature had purposely chosen one size to distribute here, another there. One also encounters conspicuously large boulders, sitting alone. Polypody ferns cover the isolated boulders across their tops, while two or more species of large ferns typically grow around their bases. The faces of these glacial remnants support thick carpets of moss. Some of the boulders are just

too massive to be completely covered by the mosses, allowing patches of the underlying rock to show through. But you still don't see bare surfaces. No square inch is left un-colonized by one or more species of lichen.

There is a hidden corner of Dunbar where one can imagine having entered the abode of Tolkien-like beings. Do nature spirits really inhabit these places, spirits that work tirelessly to weave the fabric of an integrated forest community? I don't know, but I can think of no other place in all the forests of Massachusetts that induces, so satisfyingly, the feeling that real forests are truly cooperative ventures.

Photographic images are often poor communicators of what I am attempting to promote. One misses the fragrances, the changing light, and tactile experiences. In a photograph, one cannot hear the sounds of tumbling waters or feel their spray. Still, something can be captured in the silence of an image, a crystallization of the memory of the moment. Accordingly, I present polypody ferns on top and mosses on the sides of a large boulder.

The mosses cover not only the rocks, but creep up the trunks of the hardwoods, expanding their territory as time goes on and imparting a timeless appearance to the woods, an appearance born of humid summers, snowy winters, and the absence of humans.

Mosses on the trunks of trees reach a developmental climax on the old sugar maples and yellow birches. In the image that follows, the green of the moss is accented by sunlight. This leaning yellow birch grows along the trail. Its roots are anchored around a rocky outcropping covered by a deep organic layer. The old birch lends a deep woods feel, characteristic of the Dunbar forests.

Ages of the trees vary widely, especially in the lower region of Dunbar Brook. The imprints of past land uses linger in some spots, but have been erased in others. Old growth dominates higher on the ridge, principally occupying the boulder fields. But even in terrain that discouraged early logging operations, tree ages vary significantly. Natural disturbances constantly create light gaps that support regeneration. The trees in these old growth forests come in all age classes.

Interestingly, along the trail corridor, many of the larger, more conspicuous trees are close to 200 years of age. Given the uses that the trail corridor received in the 1800s and through much of the 1900s, it is difficult to account for the advanced tree ages except as a confirmation of observations common throughout New England that swaths of ancient trees often follow old pathways. I presume that people were aware of the dangers of erosion and avoided removing trees immediately above and below a trail or road, especially between a pathway and a stream.

In Dunbar, each species has its niche. Large organisms like trees can take root on the tops of

rocks, utilizing the build-up of organic matter to gain a foothold. The little seedlings look innocent, if not cute. But after a few decades, a rock can find itself engulfed with the octopus-like roots, and split as roots grow into crevices and expand.

Both yellow and black birches specialize in natural tree-rock sculptures, but the yellows create the most impressive works of nature art. Sugar maple, hemlock, and occasionally other species colonize rocks, but never so well as the birches. These tree-rock partnerships excite our woodland imaginations as few other forest features do.

The next image shows a yellow birch that long ago passed its 150th birthday. I expect the tree is at least 225 years old now, maybe older. The venerable old birch has huge roots that snake down the slopes, disappearing and reappearing. The supporting rock on which the birch began life became engulfed long ago. But from the trail, the details are hidden by luxuriant undergrowth. When the tree is closely approached, the root-rock and moss-bark partnerships reveal themselves. I have heard visitors gasp on seeing the intricate weave of roots.

In the image, a large area of decay visible along the trunk forewarns that the old birch is approaching the end of its life as a standing tree. But when that event occurs, its job will be far from over. Once its living tissues die, our birch will begin a second career, returning its nutrients to the forest and providing food for a host of small organisms that collectively perpetuate the web of forest life.

Below, our birch is seen through a wreath of colorful beech leaves.

The availability of light defines species colonization. Some trees are genetically adapted to grow in dense shade. Other species require abundant light from the outset. The paper birch belongs somewhere in between, but when plentiful, it usually signals an extensive, past disturbance. That is the ecology. On a more artful theme, a neighbor of mine once described the white birches as the candles of the forest.

A short stretch of the trail features a cluster of mature white birches that are attractive any time of year, but were exceptionally beautiful on our visit. The contrast between their yellow crowns and the white trunks with the greens and rust colors of the forest floor begged for a photograph.

There are many fine woodland walks in Massachusetts, each with its own appeal. Some give us feelings of comfort. Old rock walls beside oak-lined trails promote a sense of security. We know that people once occupied the land and tamed it. Other woodlands, like Dunbar, have a wild look and evoke different emotions, revealing the raw power of nature. For both types of woods, poets tease out their sensory impacts and express them in meter. Artists utilize color palettes. However, my specialty, as most of you know, is capturing a forest's fecundity through numbers, and in this arena, the Dunbar forest has few peers.

The Destination

A feature that inevitably grabs the attention of the tree-conscious are the huge white pines along the nature trail. Most of these highly conspicuous trees date to the middle 1800s. At that time substantial land clearings gave the pines a foothold. Thick stands of young trees likely followed with each tree fiercely competing with its neighbors. Over time the stands self-thinned, and today we are left with a scattering of super pines that thrust their crowns high above the surrounding hardwoods. These conspicuously big trees satisfy our desire to experience a species in the fullness of its development. As best as I can tell, the pines do not all date to the same period. The majority of the older looking trees are probably between 150 and 190 years of age. A few are obviously younger, but all exceed 100 years.

Remembering that most of the pines date to a period when there was considerable land clearing, there would have been subsequent smaller openings, allowing for a limited number of trees to seed in. They are the younger ones we see. The collective existence of these bona fide New England natives reflects pioneer values, i.e. a countryside meant to consist of fields and farms with woodlots on hillsides.

The pioneer land ethic may speak to the origin of the pines, but time has allowed the surviving trees to express themselves as their own beings, as the true monarchs of the New England woods. And each is like a child to me that must be periodically checked upon. But on our October visit, time was limited. I had three trees in mind. Reaching them required that we cut off the trail and head up the steep north-facing ridge that becomes part of Spruce Mountain in its upper elevations. Not far from our first destination, I made a quick check on a beautiful black cherry tree that I call the "Dunbar Cherry". I photographed it from the top of a small rise. Its columnar form makes a statement for the species. In Massachusetts, a single-trunk black cherry 8.6-foot girth and 111 feet tall is a cherry to be reckoned with. Meet the Dunbar Cherry.

The Sigurd Olson Pine

After leaving the cherry, we reached the first of the three post-colonial-aged giants - the Sigurd Olson Pine. But first a few words about Olson. He was a towering figure in the environmental movement. He was one of the principal drafters of the 1964 Wilderness Act, and instrumental in getting the Boundary Waters Canoe Area Wilderness established. Olson was also an accomplished nature writer. He was a recipient of the John Burroughs Medal, the highest award that a nature writer can receive. Today, Olson remains a towering figure in the annals of wilderness protection, and so the naming of an outstanding pine in Monroe State Forest for him seemed appropriate. Let's take a look at Sigurd's pine.

The pine is obviously large, but how large? Suppose I tell you that it is 12.3 feet around at the height of my chest, and that its highest twigs sway in breezes a full 130 feet above its large, widely rooted base. Do these numbers mean much? I suppose it depends on who hears them.

If you are a timber specialist, the dimensions may convey either of two messages. They may suggest that this huge tree has been allowed to stand far too long, that its value as lumber has been compromised. Better the pine had been converted to planks a hundred years ago. Alternatively, the dimensions could remind the timber specialist that the pine is a behemoth, dwarfing the slender young trees being cut so soon in today's myopic financial climate. In this second interpretation, Sigurd's existence serves to remind lumbermen how compromised our woodlands have become.

How might the dimensions sound to other ears? To an architect or engineer, Sigurd's height will compare to a human- designed building about 12 floors high. To a big tree aficionado, Sigurd's girth will stretch the reach of two large people. To a naturalist who emphasizes the qualitative over the quantitative, the numbers simply convey the idea that the pine is a huge organism, fulfilling many roles such as cleaning the air and providing sanctuary for numerous life forms. And finally, to the poetically inclined, the numbers suggest a Treebeard, an overlord of the forest.

Monica was especially drawn, not only to Sigurd, but the environment surrounding the huge pine. She could linger and relate to her surroundings in comfort. Not all of Dunbar's terrain is conducive to meditation. On the slopes above, one must worry about tumbling down or turning an ankle.

The Grandfather Pine

From Sigurd, we moved uphill toward our final destination - two even larger pines growing on the boulder-strewn ridge side. I needed to check on and re-measure both, for each holds a special place in my heart. They were the first truly great New England white pines I discovered in searching for colonial and pre-colonial era trees that possessed the power to rekindle the spirit of New England past.

The pine highest on the ridge is the larger of the two in terms of girth (circumference). I named it the Grandfather pine, and rightly so. Grandfather bears the distinction of being the only New England white pine that the Eastern Native Tree Society (ENTS) has

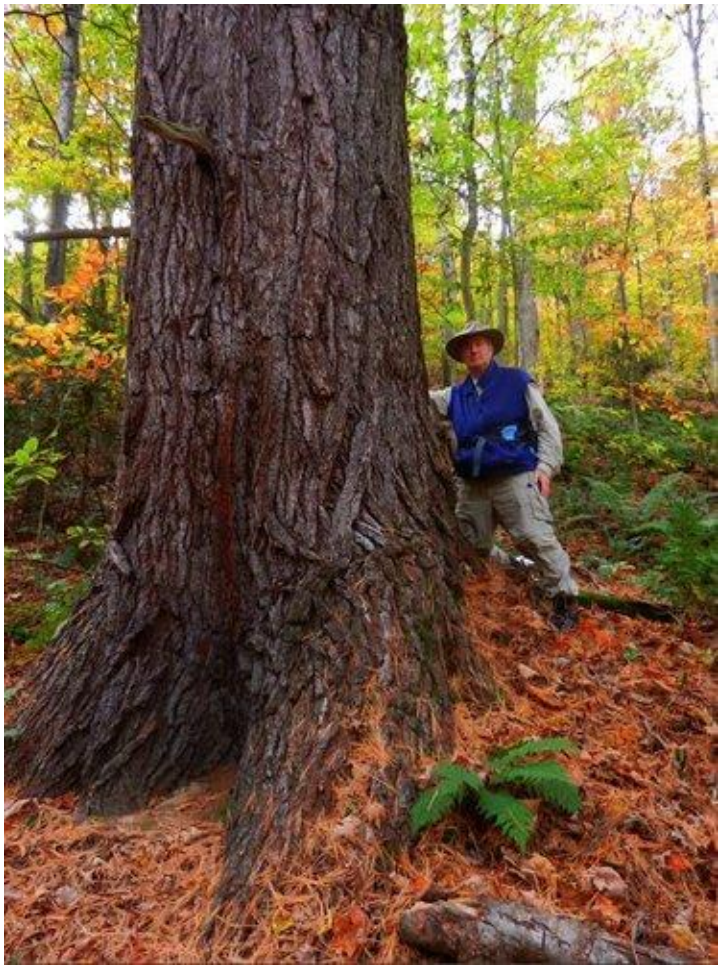
modeled to trunk volume surpassing 1,000 cubic feet, the high bar volume mark for the species. Furthermore, Grandfather carries its branches on a single trunk, distinguishing it from multi-trunk, awkward-looking field pines, the result of damage sustained by early white pine weevil attacks, which killed their terminal leaders.

But in its youth, Grandfather suffered no such damage, so it grew tall and straight. Today, the huge tree has achieved a breast-high girth of 14.2 feet. It carries water to its highest twigs 145 feet above its spreading base. Its limbs have become thick. We calculate that Grandfather's combination of trunk and limbs holds between 1080 and 1100 cubic feet of wood. The trunk alone exceeds 1,000 cubes. This allows Grandfather to sequester nearly 14,000 lbs of carbon. How can we know this?

In 2007, Will Blozan, President of ENTS, climbed and measured Grandfather. Will to circumferential measurements every few feet to develop a geometrical model of the trunk. We concluded that Grandfather held 977 cubic feet of wood in its trunk. We calculate that the tree is adding volume at the rate of about 8 cubic feet per year. So today we believe its volume to be between 1,000 and 1,010 cubes. To emphasize how large this is, so far, we have not found Grandfather's equal anywhere in Massachusetts for single-trunk white pines, and Grandfather has only one competitor in all New England.

It is important to note that very few white pines are lucky enough to seed in just the right places to have a chance of reaching a size suggestive of what the species is capable of achieving, based on anecdotal accounts of yesteryear. Even if a pine does get a good start on life in an ideal location, it is highly unlikely that the pine will be allowed to grow for a century, let alone two.

Let's now take a look at Grandfather. Again I pose for scale.



The Thoreau Pine

On the ridge just below Grandfather, the other giant rears its head. It is probably an offspring of Grandfather. Judging by outward characteristics, junior began life between 150 and 170 years ago. Consequently, this second pine would have been a seedling or sapling when Henry Thoreau passed on. It is appropriately named the Thoreau Pine.

Both Grandfather and Thoreau thrust their crowns far above a 100 plus-foot tall hardwood canopy. You would think they would be easy to see. However, spotting either pine from the ground and lower on the ridge is practically impossible. The vegetation is much too thick. So who found Grandfather and Thoreau and how?

Well, it was around 1987, if I recall correctly. My son Rob and I were out searching for big pines and we were scrambling around on the opposite side of

Dunbar Brook from Grandfather and Thoreau, about a third of the way up the ridge, as I recall, when we both sang out simultaneously. There on the other side of Dunbar were the crowns of what were obviously two huge pines. From where we stood, they appeared to overshadow any of the pines we had previously seen. A much younger Bob, full of woodsman spunk, and his athletic son spoke not a word. We tore down the ridge headed in the direction of the two pines. We jumped in and forded Dunbar Brook without a thought to getting wet or slipping on the rocks. We were on a mission. Once on the other side, we scrambled up the banks, continuing in the direction where we thought we'd find the trees. As if guided by an unseen hand, we homed right in on the pines that were to eventually be named Grandfather and Thoreau.

Thoreau, the lower on the ridge of the two, loomed high overhead, and the significance of the discovery quickly became apparent. Here was a tree to fan the flames of tree passion, to appeal to the imagination of artist, poet and lumberman alike. The rest is history. I eventually attracted a group of foresters to visit the tree with me. They were duly impressed. Later Jack Sobon, a timber framer and architect friend who happened to own a transit, and I, measured the Thoreau pine to a height of 152.4 feet +/- about an inch and a half. I'm unsure of its exact circumference at the time, because we didn't mark the point on the trunk at which we measure its girth, but the Thoreau pine would have been at least 12 feet around. These two measurements, height and girth, were taken around 1990.

With the transit-based height measurement insuring accuracy, the Thoreau pine became the first of its species in Massachusetts to be accurately confirmed to a height of 150 feet, fulfilling the descriptions of great pines of yesteryear, the passing of which Thoreau bemoaned.

Climbing up the ridge from the Sigurd Olson pine, I pointed out Thoreau's crown to Monica. You can't see Grandfather's crown until you reach the base of Thoreau, so its is Henry's tree that greets guests coming up the ridge from Dunbar Brook, and Grandfather for those descending the ridge.

The appearance of Thoreau is always electrifying for me. I instantly feel the connection. Here is a view that Monica and I saw after leaving Sigurd's tree.

The impact of Thoreau's tree grows as one move's closer. But to experience it fully, one must hug Thoreau and gaze upward into its broad crown. It is then one experiences an OMG moment.

I would have preferred that Monica stand next to Thoreau for scale, but she insisted on me. In the next image, you can see the straight trunk.

Recalling my estimate of Thoreau's 1990 girth of 12 feet, the tree now measures an impressive 13.3 feet around at chest height. It is an easy measurement to take., however, Thoreau's height has always been a challenge to measure. The tree grows on a steep slope with tall hardwoods all around, and it has a broad, flat crown with many twigs that vie for dominance.

Thoreau has lost its apical dominance: there is no longer one leader that grows straight to maintain a single trunk and visibly the highest point. After all, Thoreau has seen many seasons pass, and has taken numerous hits from wind, ice, and snow. The only way we were going to be sure of its height was to climb and tape drop measure it. So, in 2004, Will Blozan of ENTS and Dr. Robert Van Pelt from the University of Washington headed a team that climbed Thoreau and established an absolute height through tape drop of 160.2 feet.

However, subsequent ground-based measurements never confirmed the 160.2-foot height because of visibility problems described above. So, a couple of growing seasons ago, Thoreau was climbed again by Andrew Joslin and Bart Bouricius and a height of 156.5 feet was obtained. Had Thoreau lost is highest leader, or had a different top been measured? We couldn't be sure, but Thoreau lost status. Monroe State Forest was no longer the only location in Massachusetts other than Mohawk Trail State Forest with white pines reaching the important height threshold of 160 feet. I felt let down. We needed to take another crack at locating the highest sprig in Thoreau's crown. So, on this occasion, I established a viewing location from well uphill where I could see both crown and a point on the trunk where I had placed a highly reflective marker.

After multiple ground-based measurements taken with my Laser Technologies Inc. TruPulse 360 hypsometer and my Nikon Prostaff 440 laser rangefinder, while Monica sat patiently beside Grandfather absorbing the molecules, I satisfied myself that I had found the Thoreau's top. I am pleased to announce that Thoreau has regained its status, in fact it has been elevated. My measurements of a sprig on the opposite side of the crown from the 156.5-foot tape drop gave exactly 160.2 feet. I doubt that it is the same point as measured in 2004. Rather it probably represents a spurt of growth from internodes on the west side of the crown. You can see the particular growth candle in the uphill image of Thoreau, #1 of the three. The 160.2-foot spot is the rightmost vertical growth candle in the image. In fact, that sprig appears to be the highest point viewed looking uphill, but this sprig is difficult to locate from above Thoreau, and impossible to measure from below.

So how is it that Thoreau has gained additional status? There are 14 white pines in Massachusetts that reach the height of 160 feet. Thoreau is one of them. There are two pines in New England that have the combined dimensions of a 12-foot or greater girth and a height of 160 feet or more. Thoreau is one of the two. But Thoreau is the only white pine in New England we know of that combines the dimensions of girth, 13 feet or more with a height of 160 feet or more. In fact, with the death of the Cornplanter pine in Anders Run, Pennsylvania, Thoreau is the only pine in the Northeast that achieves this distinction. Viva la Thoreau.

Time to Return

From Grandfather and Thoreau, we made our way down the ridge, back past Sigurd Olson, and on to Dunbar Brook. Following a rocky route along edge of the brook, we returned to the trail, where the walking instantly became easy. I had accomplished my mission and could relax. I settled into just enjoying what a New England fall is all about. The early cloudiness had abated. The sun had broken through and rays of light spotlighted the crowns and trunks of the trees. The foliage of the beeches was especially beautiful.

In the image below we see Monica making her way back on a carpet of leaves with dappled sunlight illuminating the trunks nearby trees.

The Meaning of It All

In a recent gathering of the Friends Network to our state forests and parks, I was inspired by a lady from the Boston area who was doing everything she could to stave off development along a nature corridor bordering the Charles River. Her persistence reflected her deep love for small, vulnerable surviving nature corridor. She spoke proudly of the foxes, coyotes, various species of birds, and rare plants that would be lost were development to convert the precious green space into a corporate venture. People come to the aid of nature when it is threatened in places they hold dear. It was with this sense of mission that I sought to get parts of Monroe State Forest declared as a forest reserve. With the help of others, most notably, the Massachusetts Audubon Society and the DCR, I can say with relief, that the Dunbar corridor is part of Forest Reserve #9. I believe with many who have walked the trail along Dunbar Brook or looked into the Deerfield River Gorge from the observation platform on Hunt Hill, that there is no amount of protection too much for this forest gem. Many will walk the trail and feel the sense of peace and tranquility induced by the tumbling of Dunbar over large glacial boulders. They will marvel at the mature forest and how luxuriant it looks. Only a few will ever know the exact whereabouts of the great pines that overlook the cascading brook. The seclusion of Sigurd, Grandfather, and Thoreau is essential for their protection. Trees like these can literally be loved to death. Yet, their effects can still be felt. Forest giants cast long shadows. Their massive energy fields extend beyond their trunks and branches.

The massive forms of Grandfather, Thoreau, and Sigurd are not only inspiring to see, but more fundamentally, reflect the raw power of Dunbar's forests. Fortunately, visitors do not have to negotiate tricky boulder fields and steep slopes to experience this primal power. A simple, relaxing walk along the nature trail will do it. The rewards are spiritual renewal and an unforgettable experience in wood-air-bathing.

Robert Leverett

Lidar + Spectrometer

by Rand » Wed Oct 26, 2011 9:51 pm

But the LiDAR is only one of CAO's strengths. To truly understand an ecosystem, scientists need to know more about its characteristics, including aspects that can't be been by the naked eye. This is where CAO really sets itself apart—its VSWIR Imaging Spectrometer can pick up the chemical and spectral (light-reflecting) properties of individual plants thousands of feet below.
CAO's keystone sensor – the Very High Fidelity

VSWIR Spectrometer. Photo courtesy of the Carnegie Airborne Observatory. This sensor—built by engineers at NASA's Jet Propulsion Laboratory—is the first of its kind. The spectrometer can detect dozens of signals such as photosynthetic pigment concentrations, water content of leaves, defense compounds like phenols, structural compounds such as lignin and cellulose, as well as phosphorous and other micronutrients. These signals can build signatures to distinguish individual plant species as well as other measures of forest condition. The result is a system that can map the chemical and spectral attributes of a forest that may have more than 200 species of tree in 50 hectares.

"When leaves interact with sunlight, the compounds bend, stretch, and vibrate at different patterns and rates. These different rates lead to different scattering of light," said Asner. "The spectrometer picks up on this and we've been able to deduce chemicals from these signatures."

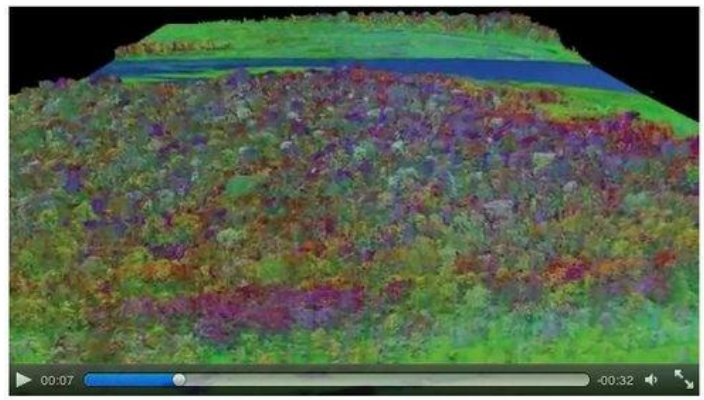
"This is the gateway to understanding the chemistry of the system," he said. "We can make a map of where trees are growing the fastest. The spectrometer is the breakthrough sensor."

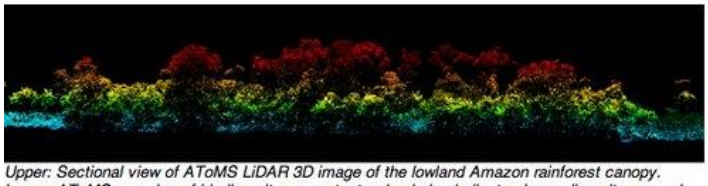
Robin Martin, a plant biochemist at Carnegie who helped develop CAO and is also Asner's wife, says the chemical detection "tells us about the health and function of the forest."

"The CAO allows us to combine the chemical measurements with forest structural information to convert those chemical signals into biodiversity estimates."

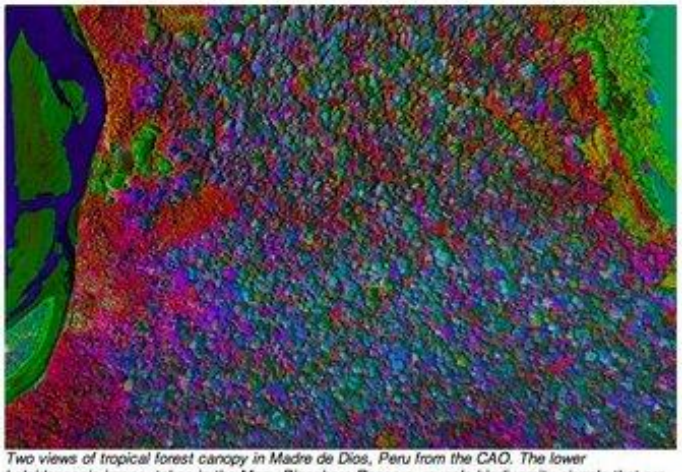
The VSWIR spectrometer is augmented by the third sensor, which is also a spectrometer, albeit one with a zoom lens, allowing researchers to read the growth chemistry of the forest with high spatial resolution.

"A lot of times species are closely intermingled in the canopy," says Asner. "The big gold sensor [the VSWIR] can see tree crowns, while the zoom lens lets us see within the tree crown, picking up vines and epiphytes."





Upper: Sectional view of AToMS LiDAR 3D image of the lowland Amazon rainforest canopy. Lower: AToMS mapping of biodiversity – constant red coloring indicates lower diversity secondary vegetation, and multi-color canopies indicate highest diversity portions of the forest. From northern Madre de Dios. Photos courtesy of the Carnegie Airborne Observatory.



Two views of tropical forest canopy in Madre de Dios, Peru from the CAO. The lower kaleidoscopic image, taken in the Manu Biosphere Reserve, reveals biodiversity signals that are missed with the naked eye. Photos courtesy of the Carnegie Airborne Observatory.

http://news.mongabay.com/2011/1024-asner_rainforest_monitoring.html

Rand Brown

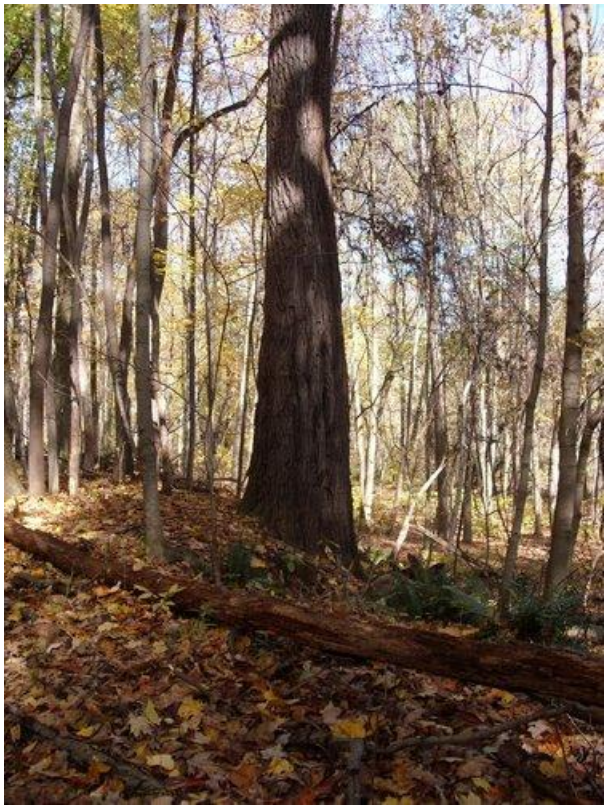
Augusta-Anne Olsen State Nature Preserve

by Steve Galehouse » Tue Oct 25, 2011 9:10 pm

NTS- Today I visited the Augusta-Anne Olsen State Nature Preserve in Huron County, Ohio. The preserve is situated along the Vermilion River and consists of a floodplain forest with somewhat elevated terraces and steep slopes leading to the river. The area is second growth, with a few older trees, with the lower terrace composed mainly of tuliptree and sycamore. The most interesting find was an American chestnut at 69.5' in height and 2' 11" in girth. The tree is affected by blight, but is still hanging on---the height measurement was to the tallest leaf; the defoliated top of the tree(probably dead) was an additional 10'-15' above the foliage. An old sugar maple, 101' in height and 12' 1" in girth, was also found, as well as a sassafras 10'6" in girth and 90.48' in height. The RH5 for the site is 117.44', the RH10 is 109.96'.

American chestnut 69.5':

Sassafras 10' 6" girth x 90.48':



A detailed report with more photos here:
http://alpha.treesdb.org/Browse/Sites/897/Details

Steve Galehouse

Will Blozan wrote:
http://www.nativetreesociety.org/fieldtrips/ohio/greattrees/great_trees_of_ohio.htm

Re: Augusta-Anne Olsen State Nature Preserve

by Steve Galehouse » Wed Oct 26, 2011 10:32 pm

I remember this post from several years ago, but I forgot the reference to Augusta-Anne Olsen Preserve---I'm sure several of the trees you measured then are the same as I measured earlier this week, certainly the white oak, sassafras, and chestnut are the same individuals, and likely the red oak and buckeye. In that you noticed three years ago the chestnut had a dead top, and it still does but is alive, is encouraging. The preserve is a nice area, but it is always surprising to me that areas like this are so under-utilized by the public. I was the only person present on the trails on a warm, glorious Fall day, and there was no-one in attendance at the preserve facility. Attached are measurements from 10/25/11(the white oak girth was estimated due to the slope, and flying solo).

Common Name	Botanical Name	Height (ft)	Girth (ft)	Girth (in
American Beech	Fagus grandifolia	100.6'	9.7'	116"
American Chestnut	Castanea dentata	69.5'	2.9'	35"
American Sycamore	Platanus occidentalis	105.5'		
Bitternut Hickory	Carya cordiformis	122.0'		
Eastern Cottonwood	Populus deltoides	116.9'		
Northern Red Oak	Quercus rubra	100.5'	12.3'	147"
Ohio Buckeye	Aesculus glabra	80.0'	5.7'	68"
Pignut Hickory	Carya glabra	109.9'	6.2'	74"
Sassafras	Sassafras albidum	90.5'	10.5'	126"
Sugar Maple	Acer saccharum	101.0'	12.1'	145"
Tuliptree	Liriodendron tulipifera	126.9'		
White Ash	Fraxinus americana	111.5'	8.4'	101"
White Oak	Quercus alba	104.8'	12.0'	144"

Rand, let me know when you might be you for another foray. I'm planning to remeasure the tall tuliptree sometime in November---with the 50" of rain we've had this season, I think it might break 165' now.

Steve Galehouse

Another odd-looking oak, OH

by Steve Galehouse » Mon Oct 24, 2011 5:45 pm

I came across this tree yesterday at Boston Run in NE Ohio---at first I thought it was a white oak with exceptionally broad lobes and/or shallow indentations, but on closer inspection the leaves of this tree turned out to be bristle tipped, although very inconspicuously, making it aligned with the red/black oaks. The leaves are large, rather thick in texture but not leathery, and not glossy on the upper surface. I've frequently seen foliage like this on oak seedlings, but this tree was about 30' tall and had the same type of foliage throughout, without leaves that become more deeply incised towards the top of the tree, which is typical for black oak and occasional for northern red. Other red oaks in this woods included northern red, black, and scarlet. Neither blackjack nor bear oaks are native to this part of the state. Any ideas?

Bristle tips barely visible on leaf margin:

Steve Galehouse

Re: Another odd-looking oak

by Steve Galehouse » Wed Oct 26, 2011 10:40 pm

NTS- Thanks for all the replies---I think the tree must be a red or black oak which looks aberrant due to a sprout response. If I can get back to the area this Fall, I'll look for acorns. The lack of any sheen to the foliage leads me to think northern red rather than black.

Steve Galehouse

Re: External Baseline Method

by dbhguru » Wed Oct 26, 2011 9:49 pm

NTS, Attached is the latest and greatest tangent-based method workbook. If anyone wants to discuss the method and the error analysis, please let me know.

TangentBasedMeasurementsNewest.xls

Unfortunately, I'm not good at catching my own errors. Fortunately, Michael Taylor is, and going through the process now, proofing. I'll no doubt have another version of the workbook in a few days. Soon we'll be able to reduce the EBM process to a few easy to follow rules and the spreadsheet to do all the calculations.

Michael believes that if we have the right equipment, EBM can out perform the Impulse Laser 200LR. That's saying a lot. However, Michael excels at designing inexpensive equipment that out performs the big stuff. So far he has a pretty good track record, and that offers hope. There's not much chance that many people will be able to afford a TruPulse 360. Using that instrument on a tripod, I can get accuracy to 0.1 degrees for angle measure. However, using an instrument Michael sent me, I can get accuracy to at least 1/60th of a degree, and with some statistics, close to 1/100th of a degree. Now, that is accuracy.

Robert T. Leverett

Re: Sigurd, Grandfather, and Thoreau

by dbhguru » Thu Oct 27, 2011 2:04 pm

The Dunbar Brook corridor of Monore SF is arguably the climax forest experience in the Commonwealth. I have to be carefully when pitching the features of Dunbar to others. Everyone has his/her favorite woodland, and far be it from me to diminish a cherished place of another. However, most woodland walks in Massachusetts are ordinary. A few are good, but virtually none outstanding in all the ways we might want. Dunbar has it all. Once you've gone there, it is hard to be satisfied settling for less. If you make it up next year, you get a personalized tour of MSF.

I wish the area showed up better on Google Earth, but it doesn't. Here is a look at the 3 great pines I wrote about on Google Earth. The upper most is Grandfather, the middle one is Thoreau, and the lower is Sigurd. Makes me want to say Google - Schmoogle.

Robert T. Leverett

Sylvia Plath and Trees

by tomhoward » Thu Oct 20, 2011 7:21 pm

ENTS, Here are some of my ideas about Sylvia Plath and trees:

I have been reading Plath for the past several months, and the beauty of her poetry is startling and often unearthly. Her mental problems did not stop her from writing some of the most beautiful poetry I have ever read. She loved trees and wrote many poems in which trees figure prominently.

In the following poems trees are important: "Mayflower" (1957) – compares forest to a church, ref. to Glastonbury Thorn, "On the Difficulty of Conjuring Up a Dryad" (1957), "On the Plethora of Dryads" (1957), "Virgin in a Tree" (1958), "A Winter's Tale" (1958), "Child's Park Stones" (1958) – pines in Child's Park, Northampton MA over the park's oddly shaped stones, "Dark Wood, Dark Water" (1959), "Polly's Tree" (1959), "Two Campers in Cloud Country (Rock Lake, Canada)" (1960) – about Rock Lake in Algonquin Provincial Park, Ontario – the last 2 stanzas perfectly capture the sound of the wind in the pines, "Parliament Hill Fields" (1961), "I Am Vertical" (1961), "Widow" (1961), "Stars Over the Dordogne" (1961), "The Moon and the Yew Tree" (1961) – one of her greatest poems, deep, mysterious, about a huge ancient yew tree where she lived in Devon England – the poem's first line is probably the best first line in the English language, "Little Fugue" (1962), "Crossing the Water" (1962), "Pheasant" (1962), "Elm" (1962) – darker side of trees, "Berck-Plage" (1962), "For a Fatherless Son" (1962), "Letter in November" (1962), "Winter Trees" (1962) – the title of a posthumous collection of her poems, "The Munich Mannequins" (1963), "Mystic" (1963).

Sylvia Plath loved trees, and she seems to have especially loved pines. She was born in Boston, lived most of her short life in Massachusetts. She should be a good candidate for a dedicatory tree in the glorious White Pine Grove of Bryant Woods.

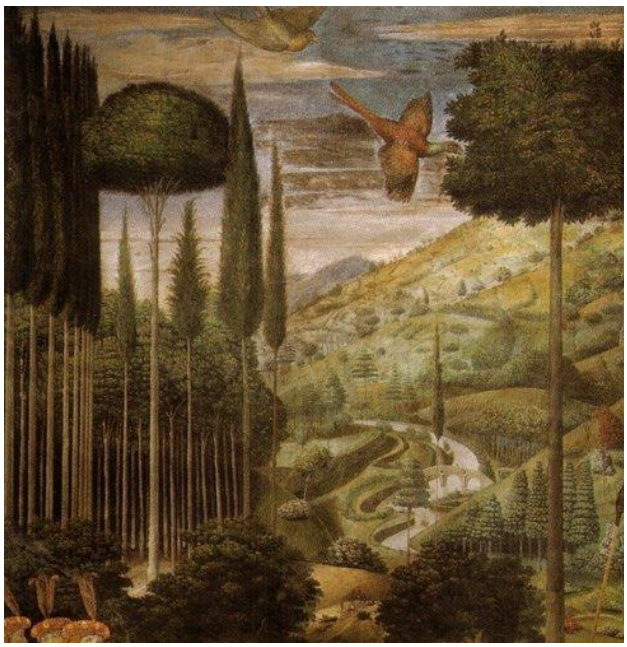
Tom Howard

Renaissance paintings including images of trees

by edfrank » Thu Oct 27, 2011 5:31 pm

Today, COMITATO NAZIONALE PER GLI ALBERI E IL PAESAGGIO (NATIONAL COMMITTEE FOR THE TREES AND THE LANDSCAPE) posted on their Facebook Page http://www.facebook.com/media/set/?set=a.478660786849.265267.177848121849&type=1 a series of images of Renaissance paintings including images of trees. I wanted to share them here for those of you not on Facebook. There is a reasonable change that a little culture will not kill you. The comments are by the committee.

The light shines in the fabulous fresco of the Journey of the Magi (1459-62) in the Chapel of Benozzo Gozzolli Medici Ricciardi in Florence in which for the first time, outlines a landscape of woods, forests, views, large trees of each species described in detail , with scenes of hunting, hare, deer, birds.



Detail of Landscape with woods. Journey of the Magi. Ricciardi-Medici Chapel - Florence.

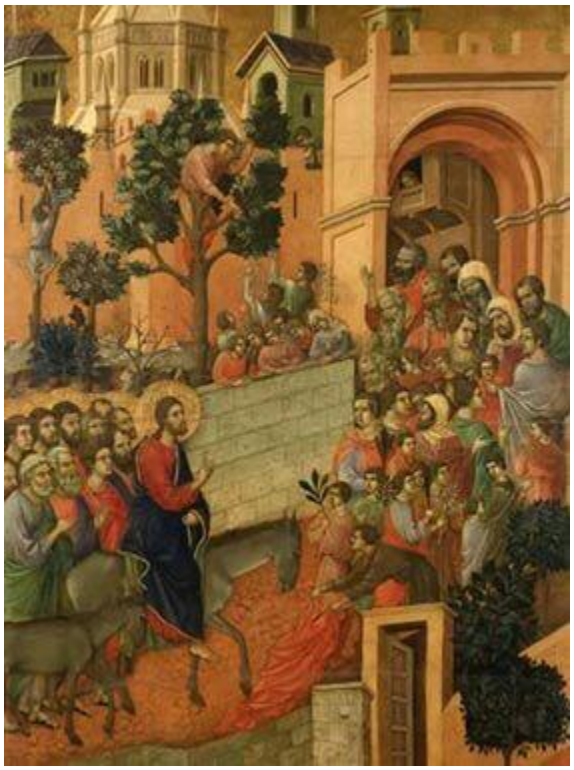
Detail of the rich landscape of woods and country roads bordered with hedges. This is one of the most beautiful landscapes in the entire history of Italian art. Journey of the Magi. Chapel Medici Ricciardi. Florence.

Journey of the Magi. Chapel Medici Ricciardi. Florence. Above left you can see the trees pruned into rings. These are examples of topiary Ars that were performed on specimens of Quercus ilex, or Laurus nobilis.

With the advent of the Renaissance, Medieval Dark Forest in the light penetrates. The intellectual renaissance, now at the center of the universe, is the nature of perspective drawing. Just in the hunt in the forest, by Paolo Uccello (1465) the forest is stripped of mystery and trees occupy space in order to induce the viewer to look towards the focal point, the "vanishing point" represented by a deer distance in which all lines converge and the attention of the scene.

Even more natural is the vision of St. Eustace by Pisanello (London - National Gallery), the first half of the fifteenth century, when the rider is in contact with all the characteristic fauna of the forest, from deer to rabbits to birds, with naturalistic extraordinary attention to detail.
http://www.progettoconalpa.org

In Gothic courts and in the works of Gentile da Fabriano, one begins to see a new vision of the forest, as in the predella of the Flight into Egypt, inserted in the altarpiece of the Adoration of the Magi (Florence - Uffizi), in which the teacher is a landscape light, where the woods and the trees begin to acquire their own dignity and naturalness, becoming indispensable frame for the representation of the central scene.
http://www.progettoconalpa.org



In the same period of Giotto, another master of Italian painting, Duccio da Buoninsegna in Siena area, the episode represents the entry of Christ into Jerusalem, and he puts a picture of a boy that climbs the tree. We are in the fourteenth century.

Check out the link above to see more images.

Edward Frank

Dating Yews - Could this Lamberhurst tree be the oldest in the country?

by Jeroen Philippona » Thu Oct 27, 2011 8:12 am

To have some more information about yews (Taxus baccata) in the UK and their possible age I recommend to look at the website http://www.ancient-yew.org/ of the Ancient Yew Group, wich is linked to The Tree Register of the British Isles (http://www.treeregister.org/).
The Ancient Yew Group gives a lot of information, including several articles and also some articles on research on the age of yews: http://www.ancient-yew.org/s.php/how-old-are-yews/2/8.
Nice is the Yew Gazetteer, were you can look for more than 1300 sites with ancient yews, with photos: http://www.ancient-yew.org/gazetteer.php.

With many very big, old yews it is not just regrowth from a rootstock: the standing trunk is thought to be very old in itself. The trees are growing very slowly, especially when over 20 feet in girth.
Because the largest trunks, with girth of 30 to 35 feet, are always hollow, counting of treerings is not possible for the oldest trees. One of the older yews is the one at Crowhirst, Surrey (near London): http://www.ancient-yew.org/siteInfo.php?link=269 and http://www.ancient-yew.org/treeInfo.php?link=385.
See also my own (somewhat old) site: http://www.bomeninfo.nl/english13a.htm .

But please read the articles on research that has been done: tree rings have been counted a lot for smaller trees of at least up to 335 years. Also some historical research has been done.

Jeroen Philippona

Tamassee Knob, SC

by james loftis » Sun Apr 25, 2010 10:50 pm

I spent a lot of time this week reading and reading again all that Jess Riddle has had to say about Tamassee Knob. Tamassee Knob, incidently, is 72.3 miles from my front door--about an hour and twenty minute drive to the feet of some of South Carolina's tallest trees. I should have prepared myself a little better by printing out the reports that Jess had written. I didn't find any of the trees that he has listed on the site...but I doubt I would have found them today, even if I had had step by step directions. The reason for this, is that I grossly underestimated the strength of today's wind. I had been on the trail for half an hour or so when I heard the first really big crash. The unmistakable, snap, crackle and BOOM! of a large falling tree. At the time I had not been very far off of the Foothills Trail, which doesn't really have too many imposing trees to speak of. Well, about twenty minutes after that, while walking on the Tamassee Knob trail itself, comming into the shadows of some pretty tall Tulip poplars (one of which was leening pretty severely) and a red oak (leaning and sporting a split buttress, very indicitave of failure) I heard the next distant report of another falling large tree. After this last omen, while standing next to these two struggling columns of woody tonage, I became very aware of every falling twig. Unfortunately, the falling twigs and dead wood of all kinds were in abundance. Maybe, in those few tense moments I lost my nerve-- or maybe, I am very attached to my own personal gray matter. Either way, I decided that I could always come back on a day when the wind isn't as fierce.

Suffice it to say, I will be back. So, if any of you ENTS out there live anywhere near the area and are up for a little bush-whacking, I'll be going back soon. This place is pretty much in my back yard. There is a 170' tulip poplar out there and I have a very nagging urge to see it! e-mail me if interested. And Mr. Riddle, if you are out there somewhere reading this and would feel gracious enough to point the way....? Otherwise, I will be using Mr. Riddle's own words to untangle this little (or, very large) Liriodendron riddle!

Good hunting,
James Loftis

O'Neill Woods, OH revisit

by Steve Galehouse » Fri Oct 28, 2011 10:26 pm

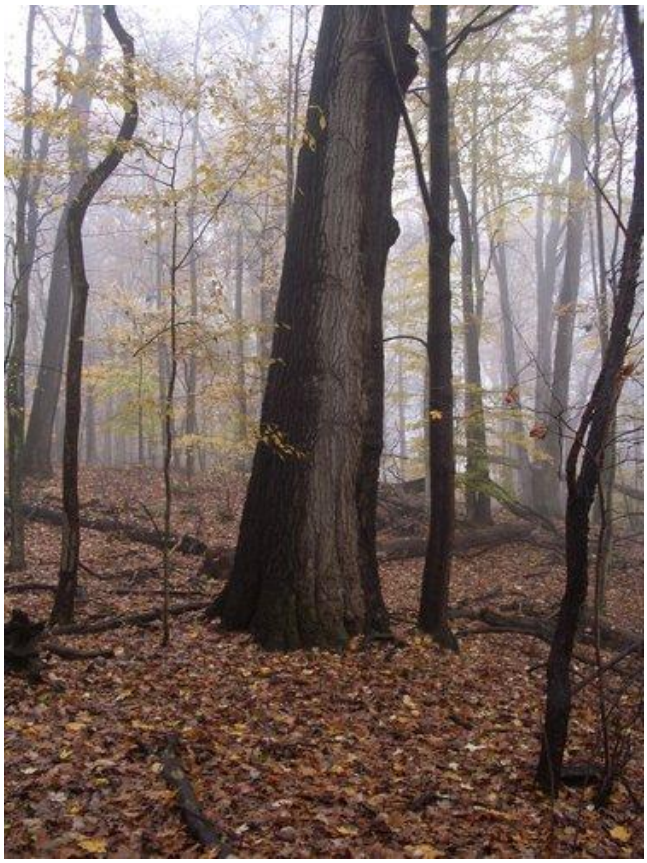
NTS- Today I met Rob Curtis, a biologist with the Summit County Metroparks, at O'Neill woods near Bath, Ohio. I had been in contact with Rob and Mike Greene, a naturalist for the parks, regarding the NTS method of measuring trees. Rob expressed interest, feeling that canopy height has a direct correlation with the health of the of the site, which I agree with entirely. Rob knew of a very nice white ash at this park, and it turned out I had already visited it last March. The ash is healthy, and an impressive 12' 3" girth with a height of 135.65'. I got a much shorter height last fall March, 123', probably due to the cold weather and hurrying through.

135' x 12' 3" white ash:

Rob had to go on to another commitment, but I think he saw the utility and accuracy of the laser/clinometer method. He had a TruePulse with him, supplied by the Metroparks, so I think some more good measurements for NE Ohio will be coming along(and it's encouraging the park system sees the value in the hardware). I'm hoping to familiarize him with Fusion/LiDAR this Fall.

I stayed at the site for a while, and found some other nice trees---a tuliptree at 158.3', a pignut at 128.8', a slippery elm at 116.7', and a red oak at 126.9'. A summary of what was found here: http://alpha.treesdb.org/Browse/Sites/913/Details

15' x 115' red oak:



158.3' tuliptree:

Steve Galehouse

Whirlwind Trip to Great Smokies

by jamesrobertsmith » Sat Oct 29, 2011 10:42 pm

My wife and I found ourselves in a weird situation of having some time on our hands and nowhere to go. Therefor we agreed on a one-day trip to Cataloochee in the Great Smoky Mountains National Park. Strictly an auto tour and some light strolling. Mainly we wanted to see the elk. We saw about 70 of them. Roughly half of the Park's herd of 150 animals.

Not a fantastic rack, but the biggest I've seen on any Smoky Mountain bull.

My wife took this one of me at a weird sycamore behind the schoolhouse in Cataloochee.

Who Has Posted the Most on the BBS?

by edfrank » Sat Oct 29, 2011 11:27 pm

Here is a screen shot of the top posters to the BBS. I am by far and away the most prolific. Some of my posts, perhaps a couple hundred are links to the website as part of trying to better integrate the two web presences. I also have posted many links to outside articles I found interesting. The vast majority of my posts are responses to other peoples posts or topics of my own. I thought some of you might find the line-up interesting. Click on the image to embiggen it.

USERNAME	RANK	POSTS	WEBSITE, LOCATION
edfrank	Site Admin	2400	http://www.nativetreesociety.org Reynoldsville, Pennsylvania, USA
James Parton		1515	http://www.nativetreesociety.org/projec ... estnut.htm Asheville, North Carolina USA
dbhguru		1377	Florence, Massachusetts
Larry Tucei		491	Southern Mississippi
Steve Galehouse		417	Bay Village, Ohio
jamesrobertsmith		368	http://www.jamesrobertsmith.net Matthews, NC
Joe		350	Massachusetts
Don		314	Anchorage, Alaska
gnmcmartin		263	Winchester, VA
Will Blozan		243	http://www.appalachianarborists.com North Carolina
Rand		236	Ohio
Kouta Räsänen		176	Germany
Jenny		169	New York City
AndrewJoslin		158	Jamaica Plain, Massachusetts
bbeduhn		138	Asheville, NC
eliahd24		125	Atlanta, GA
mdvaden		116	http://www.mdvaden.com Oregon
Marcboston		101	Massachusetts
RyanLeClair		96	Trumbull, Connecticut
tsharp		91	WV
tomhoward		90	
Lee Frelich		89	Minnesota

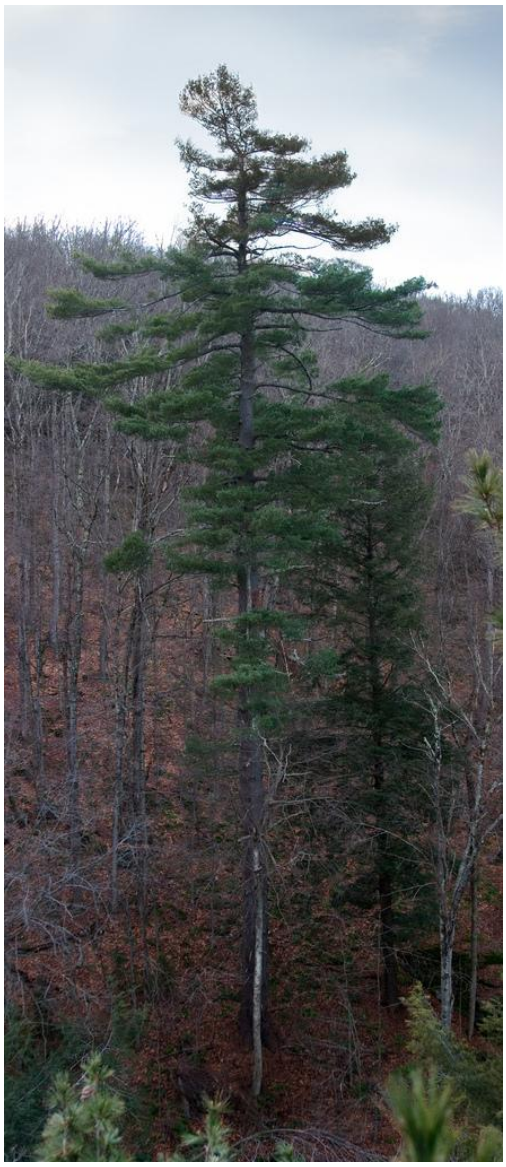
Re: Sigurd, Grandfather, and Thoreau

by AndrewJoslin » Tue Oct 25, 2011 8:12 pm

View from Thoreau below to Dunbar Brook, the brook is running from left to right through white pines along the banks

Andrew Joslin

Grandfather tree viewed higher on the ridge from the upper crown of Thoreau



North Syracuse Cemetery Oak Grove 10/30/2011

by tomhoward » Sun Oct 30, 2011 5:26 pm

NTS, On this beautiful cold sunny breezy day I had a glorious visit to the old growth North Syracuse Cemetery Oak Grove. The big snowstorm that hit the Northeast totally missed this area, not even a particle of snow here. So the great old oaks are totally intact.

The oaks are approaching the peak of their autumn glory. Numbers of trees refer to the brochure on the grove developed in 1999. White Oak #33 is a radiant golden-bronze to red and purple. White Oak #32, which has the best color of any tree in the grove, is covered with glowing radiant purple leaves, utterly amazing color. The largest tree in the grove, Black Oak #27 (45.8" dbh, 105 ft. tall) is still mostly green. The grove's many Red Oaks are still mostly green also. White Oak #23 (31.1" dbh, 109 ft. tall) is a magnificent sight, its huge crooked crown filled with radiant, glowing orange-red-purple leaves, indescribably beautiful, its gnarled branches festooned with countless glowing leaves. White Oaks # 14, 15, 16, 22 , 24, are still mostly green. White Oak #25 (23" dbh, 107 ft. tall) is brown to golden-bronze. This tree has balding bark at least 50 ft. up. White Oak #19 (33.7" dbh) is turning brown, and White Oak #21 (32.4" dbh), the easternmost of the big White Oaks, is golden-brown, glowing in the sunlight.

A Red Maple at the east edge of the grove is still in full green leaf, yet most Red Maples in this area are past peak, and yellow Red Maple leaves are constantly falling from the subcanopy beneath the towering oaks. The grove is quiet except for the breeze rustling leaves high up. Waves of sunlight ripple across the glowing, leafy branches of the oaks. These big old oaks have a lot of individual character, each tree with its own twisted gnarly nature. All the big White Oaks have this gnarl factor, and Red Oaks #13 and 26, and Black Oak #27, are also crooked and ancient looking.

The young Beech tree (about 20 ft. tall), by the broken snag in front of towering gnarled White Oak #16, creates a pleasing scene with its bronze leaves, and the soaring columnar trunks of the old oaks, and the yellow leaves of the lower level of the grove behind it. The oldest tree in the grove is possibly the super gnarly Black Gum #34 (19.9" dbh, 78 ft. tall), and this tree is so crooked that it writhes into the subcanopy like a snake. The Black Gum is hollow to at least 6 ft. up or more, and this old tree is covered with dull bronze leaves.

All in all, a perfect outing to this wonderful place.

Tom Howard

External Links:

Growing Is Forever Video by NPCA
http://vimeo.com/20561818

Giant trees touch lives - Oregon heritage program puts spotlight on trees that have made history in state
http://www.mailtribune.com/apps/pbcs.dll/article?AID=%2F20110930%2FLIFE%2F109300311%2F-1%2Flife

With Deaths of Forests, a Loss of Key Climate Protectors - New York Times
http://www.nytimes.com/2011/10/01/science/earth/01forest.html?adxnnl=1&ref=todayspaper&adxnnlx=1317464706-yipIgxIkAn/qNN3QjFPuBA

Why an eccentric band of tree lovers is cloning an ancient forest
http://www.theglobeandmail.com/news/national/why-an-eccentric-band-of-tree-lovers-is-cloning-an-ancient-forest/article2135850/page1/

The enduring power of trees
http://www.theglobeandmail.com/life/summer/the-enduring-power-of-trees/article2128438/

Ancient Burr Oak tree in Merillville Indiana dies
http://www.ents-bbs.org/viewtopic.php?f=79&t=3065#p12240

A Revolutionary Technology is Unlocking Secrets of the Forest
http://e360.yale.edu/feature/carnegie_airborne_observatory_technology_unlocks_secrets_of_the_rain_forest/2447/

Forest Structure, Services and Biodiversity May Be Lost Even as Form Remains
http://www.sciencedaily.com/releases/2011/10/111003151823.htm

Timbers from dam hold record of past
Wood salvaged from Fredericksburg's 19th-century crib dam may hold clues to pre-Colonial climate.
http://www.fredericksburg.com/News/FLS/2011/102011/10022011/655354/index_html?page=1

Maintain the BWCA's 'wilderness' character
http://www.startribune.com/opinion/otherviews/130817278.html

Butterfly Flower Gardening
http://www.kremp.com/Butterfly-Flower-Gardening-articles.htm

Super-Tough Seed Coat Keeps Michaux's Sumac On Critically Endangered List
http://www.sciencedaily.com/releases/2011/10/111011154457.htm#.Tpgfx459BiY.twitter

Stefano Boeri's Vertical Forest Under Construction in Milan
http://www.treehugger.com/files/2011/10/stephano-boeris-vertical-forest-under-construction-milan.php

How to Choose a Handheld GPS Receiver
http://www.rei.com/expertadvice/articles/gps+receiver.html

Future Forests May Soak Up More Carbon Dioxide Than Previously Believed
http://www.sciencedaily.com/releases/2011/10/111013153955.htm

Trees don't lie about their years
http://thetamarind.eu/en/2011/10/19/english-trees-dont-lie-about-their-years/

2 Giant Sequoias Fall at Trail of 100 Giants
http://www.youtube.com/watch?v=6ucahb5GGeo&feature=player_embedded

Many gather to offer suggestions on downed giant sequoia
http://www.recorderonline.com/news/sequoia-50595-suggestions-giant.html

Cherry Trees Sculpted Over Time Into A Two-Story Tall Retreat
http://www.treehugger.com/files/2011/10/patient-gardener-outdoor-retreat-made-cherry-trees-shaped-over-time.php

Long fought victory - Major Victory Secures Roadless Rule
http://earthjustice.org/news/press/2011/federal-court-reinstates-roadless-rule

Could this Lamberhurst tree be the oldest in England?
http://www.thisiskent.co.uk/Lamberhurst-tree-oldest-country/story-13621622-detail/story.html

A world of sonic wonder
http://bbcearth.posterous.com/a-world-of-sonic-wonder-5725
http://www.enn.com/top_stories/article/43469

Saving a Vancouver icon from destruction: the story of Hollow Tree
http://www.vancouverobserver.com/city/2011/10/26/saving-vancouver-icon-destruction-story-hollow-tree

Urgent research for rare trees at Ormeau, Austrailia
http://www.goldcoast.com.au/article/2011/10/26/360355_gold-coast-news.html

Dr. Seuss' The Lorax Theatrical Trailer (2012)
http://www.youtube.com/watch?v=M_T6SsDvO7Q&feature=youtu.be

28 Oct 2011: Film of Extinct Woodpecker Unearthed by Cornell Researchers
http://e360.yale.edu/digest/film_of_extinct_woodpecker__unearthed_by_cornell_researchers/3188/
http://www.youtube.com/watch?v=Q0OCd6b1aXU&feature=player_embedded

Killing Wolves: A Product of Alberta's Big Oil and Gas Boom
http://e360.yale.edu/feature/alberta_canada_energy_boom_places_wolves_in_the_crosshairs/2459/

Dr. E. O. Wilson on Hurricane Creek
http://www.youtube.com/watch?v=_K_yzbHn3kA

Cause confirmed in bat scourge
A suspicious mold that turns bat noses a fuzzy white is a primary killer
http://www.sciencenews.org/view/generic/id/335566/title/Cause_confirmed_in_bat_scourge

Maps Depict Shift of Eastern U.S. Tree Ranges
http://e360.yale.edu/slideshow/climate_change_could_change_us_foliage_patterns/24/1/

In Central Park, Snow That Collected on Still-Leafy Branches Fells Even Hardy Trees
http://www.nytimes.com/2011/10/31/nyregion/in-central-park-storm-may-claim-1000-trees.html?_r=1

About: *e*NTS: The Magazine of the Native Tree Society

This magazine is published monthly and contain materials that are compiled from posts made to the NTS BBS http://www.ents-bbs.org It features notable trip reports, site descriptions and essays posted to the BBS by NTS members. The purpose of the magazine to have an easily readable and distributable magazine of posts available for download for those interested in the Native Tree Society and in the work that is being conducted by its members.

This magazine serves as a companion to the more formal science-oriented *Bulletin of the Eastern Native Tree Society* and will help the group reach potential new members. To submit materials for inclusion in the next issue, post to the BBS. Members are welcome to suggest specific articles that you might want to see included in future issues of the magazine, or point out materials that were left from a particular month's compilation that should have been included. Older articles can always be added as necessary to the magazine. The magazine will focus on the first post on a subject and provide a link to the discussion on the website. Where warranted later posts in a thread may also be selected for inclusion.

Edward Frank – Editor-in-Chief