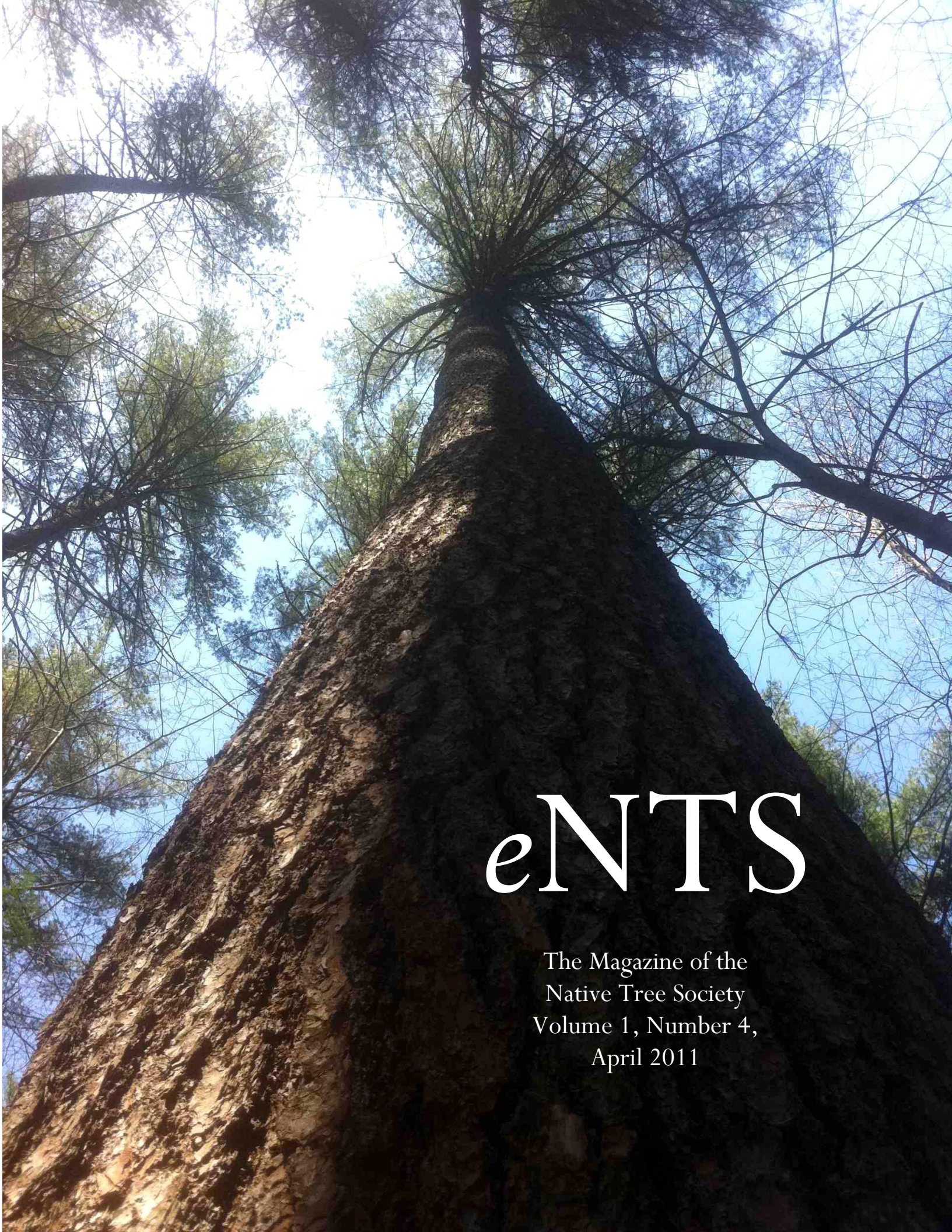

eNTS

The Magazine of the
Native Tree Society
Volume 1, Number 4,
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*e*NTS: The Magazine of the Native Tree Society

The Native Tree Society and the
Eastern Native Tree Society
http://www.nativetreesociety.org
http://www.ents-bbs.org

Volume 1, Number 4, June 2011

Mission Statement:

The Native Tree Society (NTS) and its parent organization the Eastern Native Tree Society (ENTS) are a cyberspace interest groups devoted to the documentation and celebration of trees and forests of the eastern North America and around the world, through art, poetry, music, mythology, science, medicine, wood crafts, and collecting research data for a variety of purposes. ENTS is the premiere tree measuring group of the eastern forest of the United States. This is a discussion forum for people who view trees and forests not just as a crop to be harvested, but also as something of value in their own right. Membership in the Native Tree Society and its parent organization the Eastern Native Tree Society is free and open to anyone with an interest in trees living anywhere in the world.

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Official membership in the NTS and ENTS is FREE. Simply sign up for membership in our bulletins board at http://www.ents-bbs.org Submissions to the website or magazine in terms of information, art, etc. should be made directly to Ed Frank at: edfrank@nativetreesociety.org The *eNTS: the Magazine of the Native Tree Society* is provided as a free download in Adobe© PDF format through the ENTS website and the ENTS BBS. The editorial staff of *eNTS: the Magazine of Native Tree Society* are solely responsible for its content.

COVER: Michael Taylor Pine, Mohawk Trail State Forest, MA. Photo by Robert Leverett, 2011.

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Editor's Corner

By Edward Frank

Webmaster - BBS Administrator
ENTS Magazine Editor-in-Chief
edfrank@nativetreesociety.org

This is a reprint of an essay I wrote and posted to the ENTS BBS on January 6, 2011. I thought it would be appropriate to revisit the essay here in lieu of a monthly editorial.

We Are Tree Hunters

Members of the Easter Native Tree Society are "Tree Hunters." We are a group of outdoor enthusiasts, hikers, climbers, adventurers, artists, and scientists obsessed with exploring the forests and woodlands of the world. Unlike the causal hiker, we are hunting trees. We are looking for:

1) Large and magnificent trees, the forest monarchs;
2) Ancient trees that exhibit the characteristics of great age;
3) And unusual trees with character.

On a broader scale we are hunting for stands of trees that:

1) Include a groves of large or exceptional trees;
2) Remnant patches of ancient or old growth forests;
3) Stands of trees that represent unusual assemblages of tree species or growth patterns, some of the elfin forests of stunted trees growing on exposed mountain tops might be one example.

One major goal of the Eastern Native Tree Society is to introduce others to the greater forest experience and to share with them the passion of forest exploration we all feel. We collect these trees by noting their locations and accurately measuring their size. If the height and girth measurements of the trees we locate do not meet certain quality standards, then tree simply can't be counted as part of the collection. We use topographic maps, air photos, and GPS units to note the tree locations, measuring tapes to measure girth and crown spread, and a combination of laser rangefinders and clinometers to measure tree heights. These procedures for measuring girth, crown spread, and height are outlined in our "Tree measuring guidelines for the Eastern Native Tree Society."

Why are we hunting trees? We explore these sites because we enjoy being in the forest. We are searching for big trees. We have the thrill of discovery when we find a big tree. Even if we don't find a new height record, we always find something to pique our interest. It is that sense of discovery and exploration that drives us. We are those intrepid explorers setting out against the blank slate - exploring the forest marked "There be dragons here." A second factor is that with this type of field research there is a chance for an individual to make a contribution to the field. The tree hunter is not just another nameless cog in a larger machine, but has a chance to make a meaningful contribution to science on an individual basis. People have a genetic imperative to explore their world. Searching for big trees and documenting notable patches of forest allows the tree hunter to fulfill that imperative. The tree measurements are worthwhile in themselves as a scientific endeavor. The measurements allow the tree hunter to make a contribution to science as an individual, to participate in a larger cooperative team effort, and to give back to the community. They also serve as a validation to the individual of their own individual accomplishments or accomplishments as part of a small team. They are something the tree hunter can point at and say. "I explored that patch of forest, I measured that tree."

What can we learn from our efforts? Mankind has been associated with trees and forests since they first existed and have been utilizing trees that entire time. We have learned volumes about growing trees and timber production. But there is still much we do not know. We have been using basic forestry measuring trees for wood volume for hundreds of years, and these measurements are adequate for those purposes. However, even today we do not have height measurement data that is accurate enough to characterize how tree height changes within a species with variations in latitude or elevation. We do not know how large many common species of tree can

grow to be. We have even less of an idea of the maximum age that can be reached for all but a handful of tree species. You can't hope to understand the broader processes that are taking place in our forests if the only information you have on the forest are productivity estimates for the commercially valuable fraction of the tree species that might be present in that forest. You can't properly manage or conserve a resource if you do not understand what it is that you are managing. Recently ENTS members documented the largest eastern hemlock (Tsuga canadiensis) ever found in the GSMNP in western North Carolina. Most of these trees have since succumbed to the invasive insect the hemlock wooly adelgid. The government and private landowners can not hope to manage forest resources adequately in the face of invasive insects, diseases, and similar threats if all we know about them is timber production statistics. Our data can help answer some of these questions.

We share much in common with groups interested in geocaching, with peak baggers, and hikers, but with our own twist. We are not trying to locate caches of items hidden by others, and found by hundreds of others before us, we are trying to find our own big trees and find our own unique patches of forest. Sure we share our finds with other tree hunters, but the overall goal is exploration of the new rather than the repetition of what others have done. Peak baggers are climbing mountains and locating impressive faces and vistas from topo maps and air photos. The go out into the field and capture these locations. Tree hunters share much of the same process. We talk to people and our over maps and air photos trying to find patches of old growth forest to visit. The difference is that when we go out into the field, we are always unsure of what we will find in terms of trees, whether we will find an ancient giant, or young grove regrown after the latest round of logging. Peak baggers know they will find a mountain peak. Hikers enjoy the walks through the forest, the scenes before them. They may take photos or simply commune with the forest and the feeling of the primordial. Tree hunters share these experiences. Perhaps more of the hiking for tree hunters is off the trail, but the experiences are similar. Tree hunters also bring back measurements and similar information about the places they visit. This is something that can be shared with others and archived for the future. The degree to which an individual simply experiences the forest versus the number of measurements they might take varies from trip to trip and from individual to individual. But the process of mentally cataloging the forest allows one to see things that otherwise would pass unnoticed, and brings forth a deeper, or at least different, connection with forest than is achieved through a casual passage along a hiking trail.

Edward Frank

Everett Woods-154.5' sycamore, Ohio ht. record

by Steve Galehouse » Sun Apr 03, 2011 7:27 pm

Today Rand Brown and I explored Everett Woods in Summit County, Ohio, an area I visited quickly a few weeks ago, and an area which held some tall trees according to LiDAR data. We spent about five hours measuring, staying primarily in two narrow valleys, and we weren't disappointed: we found what is likely the tallest recorded sycamore for Ohio at 154.5', a tuliptree at 154.4', a black walnut at 133', a black oak at 129', and a northern red oak at 135', as well as many other tulips in the 130-140' range. The topography is very steep, but we did manage to get girth measurements on a number of trees. A very enjoyable day of measuring. A summary below(click to enlarge), and Rand will follow up with some photos.

Common Name	Botanical Name	Height (ft)	Height measurement
American Basswood	Tilia americana	109.0'	Clinometer/laser rangefin
American Sycamore	Platanus occidentalis	154.5'	Clinometer/laser rangefin
Bitternut Hickory	Carya cordiformis	118.6'	Clinometer/laser rangefin
Black Cherry	Prunus serotina	135.0'	Clinometer/laser rangefin
Black Oak	Quercus velutina	102.0'	Clinometer/laser rangefin
Black Oak	Quercus velutina	112.8'	Clinometer/laser rangefin
Black Oak	Quercus velutina	129.0'	Clinometer/laser rangefin
Black Walnut	Juglans nigra	133.0'	Clinometer/laser rangefin
Blackgum	Nyssa sylvatica	97.7'	Clinometer/laser rangefin
Cucumber-Tree	Magnolia acuminata	125.0'	Clinometer/laser rangefin
Northern Red Oak	Quercus rubra	123.0'	Clinometer/laser rangefin
Northern Red Oak	Quercus rubra	126.0'	Clinometer/laser rangefin
Northern Red Oak	Quercus rubra	135.0'	Clinometer/laser rangefin
Sassafras	Sassafras albidum	101.0'	Clinometer/laser rangefin
Slippery Elm	Ulmus rubra	101.0'	Clinometer/laser rangefin
Slippery Elm	Ulmus rubra	117.0'	Clinometer/laser rangefin
Sugar Maple	Acer saccharum	108.5'	Clinometer/laser rangefin
Tuliptree	Liriodendron tulipifera	122.4'	Clinometer/laser rangefin
Tuliptree	Liriodendron tulipifera	125.0'	Clinometer/laser rangefin
Tuliptree	Liriodendron tulipifera	125.9'	Clinometer/laser rangefin
Tuliptree	Liriodendron tulipifera	126.0'	Clinometer/laser rangefin
Tuliptree	Liriodendron tulipifera	127.0'	Clinometer/laser rangefin
Tuliptree	Liriodendron tulipifera	128.5'	Clinometer/laser rangefin
Tuliptree	Liriodendron tulipifera	136.5'	Clinometer/laser rangefin
Tuliptree	Liriodendron tulipifera	138.0'	Clinometer/laser rangefin
Tuliptree	Liriodendron tulipifera	138.9'	Clinometer/laser rangefin
Tuliptree	Liriodendron tulipifera	142.5'	Clinometer/laser rangefin
Tuliptree	Liriodendron tulipifera	143.9'	
Tuliptree	Liriodendron tulipifera	144.0'	Clinometer/laser rangefin
Tuliptree	Liriodendron tulipifera	144.0'	Clinometer/laser rangefin
Tuliptree	Liriodendron tulipifera	144.5'	Clinometer/laser rangefin
Tuliptree	Liriodendron tulipifera	149.0'	Clinometer/laser rangefin
Tuliptree	Liriodendron tulipifera	149.0'	Clinometer/laser rangefin
Tuliptree	Liriodendron tulipifera	154.4'	Clinometer/laser rangefin
White Oak	Quercus alba	102.9'	Clinometer/laser rangefin

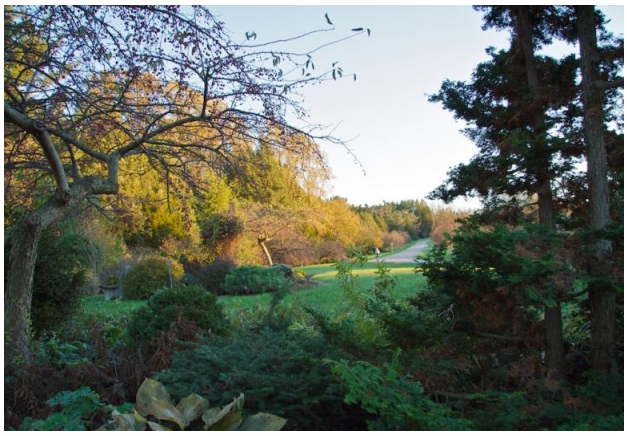
Steve Galehouse

Secrest Arboretum

by Rand » Sat Apr 03, 2010 8:38 pm

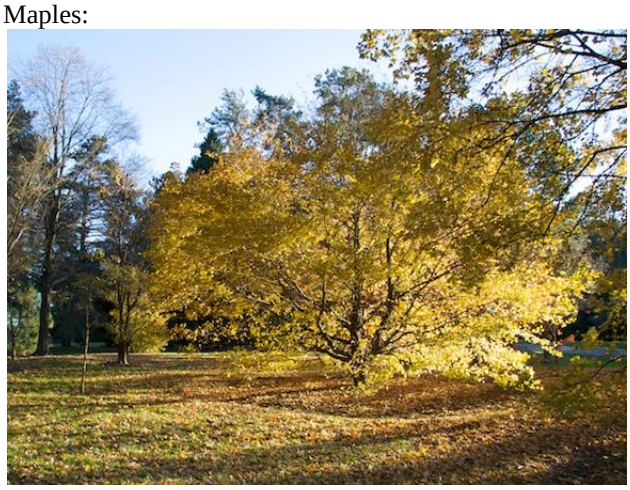
Secrest Arboretum is a pretty arboretum outside of Wooster Ohio in the north central region of the state.
Terrain is gently rolling.
Nice collection of exotic conifers and nice landscaping in general. Pictures are from fall 2006.

Landscape:

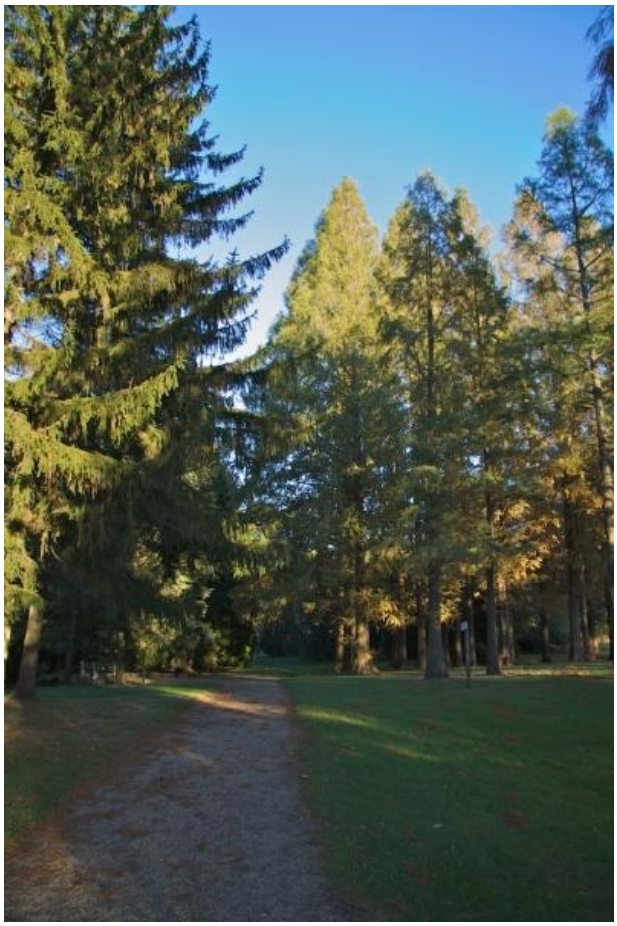


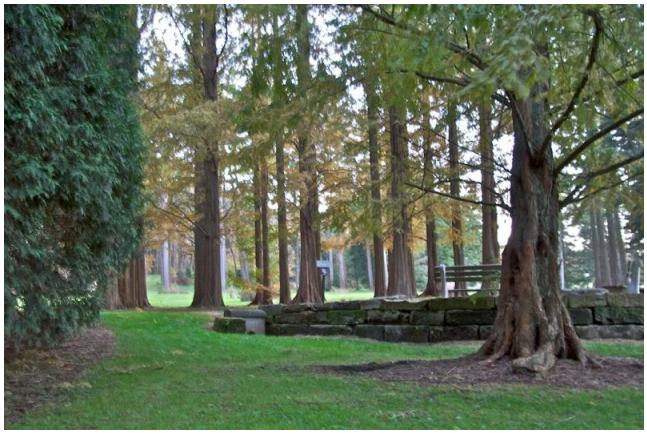
White pines:

Maples:

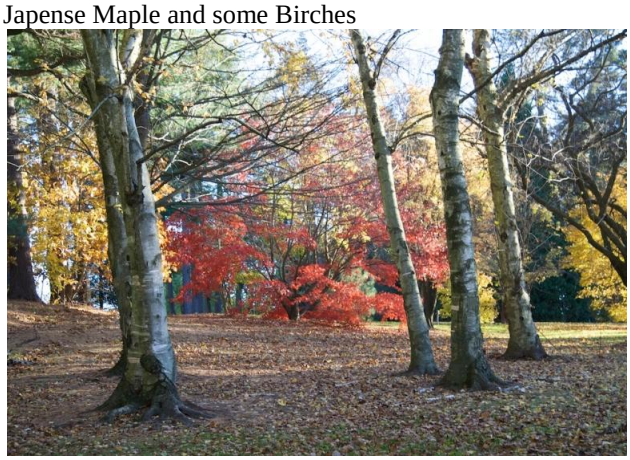


Dawn Redwoods:





Japense Maple and some Birches



Randy Brown

How good is our equipment?

by dbhguru » Mon Apr 04, 2011 11:32 am

The latest project with redwood guru Michael Taylor has once again turned my attention to sources of error in tree measuring. The mathematical models that we apply can be worked out conceptually to be faithful to the laws of mathematics, but the implementation of a technique requires equipment and that introduces a flood of headaches. Most people who use lasers and clinometers appear to trust to the designers of the equipment and whatever they say about it, but I've never been that trusting of a soul.

Recently, I returned to test my TruPulse 360's distance measuring accuracy. Past tests, a bit on the crude design, led me to believe that my instrument was accurate to between 0.2 and 0.3 feet most of the time and on occasion, inexplicably, it could miss by about a foot - usually short by a foot. However, I decided to give it a more exacting test. It registers in units of half a foot. But like earlier laser rangefinders, you can move forward or backward until you get a change to the next half foot and presumably at that spot the instrument is as accurate as its going to get.

The following table shows a test I did this morning, taking extra precaution to identify the point of change over as accurately as I could.

Tape Dist-ft	TP 360 Dist-ft	Diff-ft	Diff-Inches
5.8333	6.0000	0.1667	
11.5000	11.5000	0.0000	
12.4583	12.5000	0.0417	
13.3333	13.5000	0.1667	
14.3750	14.5000	0.1250	
17.4167	17.5000	0.0833	
22.4375	22.5000	0.0625	
23.9167	24.0000	0.0833	
23.9167	24.0000	0.0833	
25.8750	26.0000	0.1250	
33.6250	33.5000	0.1250	
43.5833	43.5000	0.0833	
	Avg	0.0955	1.145833

As can be seen, the tested accuracy of the TruPulse against a tape measure, which was tested against a second tape measure, shows an average difference of about 1.1 inches. I expect were I to investigate accuracy achievable over a 250-foot distance, I'd find that if the target can be clearly seen, we would see accuracy to +/- 1.5 inches as an average. This is better than I had thought the instrument delivers.

Taylor is now working with a programmable solution for the catenary problem with tapes stretched over long distances such as 300 feet. He'll have a computer routine that works off only a couple of measurements, but eliminates the sag problem. He'll give me the solution in Visual Basic and I'll reprogram it in mighty Chipmunk Basic. Who could ask for more?

Mike's ultimate objective is to be able to calculate the amount of re-growth at the top of the redwood canopy, where even a half inch makes a difference. This is the solution that Steve Sillett is looking for and how he sees turning all this leg work into practical results.

All should know that your faithful ENTS measuring laboratory never sleeps. It's onward and upward to the tippy top of the highest twig, and ever present to employ in solving the trickiest of problems is our old workhorse "twigonometry" and ample use of logarithms.

Robert T. Leverett

Ladybird Johnson Redwood Grove, CA

by Don » Sun Apr 04, 2010 5:43 pm

WNTS Forum Members-
Having a free day in the northcoast of California, I chose to revisit a number of locations once quite familiar to me, including a hike into the Ladybird Johnson Redwood Grove near Orick, California.
To encourage fellow WNTS-ers, I used a point and shoot camera, an old laptop, and Microsoft software (MS Word, Internet Explorer), to illustrate how quick and easy it is to capture an afternoon outing or a weekend hike.
It's spring somewhere, time to get out and rejoice in our local woods and forests!

Ladybird Johnson Redwood Grove Trip Report.doc

A Narrative with Images, Ladybird Johnson Redwood Grove Trip Report

Faced with a day on the northwestern coast of California, and no scheduled responsibilities (yea!), and a rental car idling patiently, I chose to re-explore some old haunts from my university days.

My starting place was Arcata, California which is just north of Humboldt Bay, near the intersection of highways 299 and 101. The real problem ahead of me was to narrow down the field of interesting places to go! Having spent much field time (some associated with classes, some not…;>) in Northwestern California, I had only a day to spend reviving my recall.

Choose I must, and I chose to first visit Moonstone Beach, known not so much for its geological treasures, as the 'driftwood' that arrayed itself along Moonstone and Clam Beaches, from several nearby rivers delivering logs and stumps overlooked by loggers upstream. An ample source for students seeking a beach bonfire, Moonstone Beach also had a fine restaurant (Merryman's) overlooking the coastal panorama. I recall having eaten there for a special occasion, and having selected an entré no longer offered these days, abalone, stuffed with local crab…mmmmmm, mmmmmm, mmmmmm!

But this is a trip report featuring trees and forested ecosystems, not sealife! So continuing north, I chose a road that ran right along the coast (really right along, if fact one lane for a stretch where the perennially instable road base was prone to slide out), with wonderful views of the coastline and Trinidad Head.

Here is a small harbor created behind the "Head" where a small cadre of fishermen ply their trade for little more than a sustaining pittance, but much to the favor of locals who rely on fresh fish. Also located here is a locally famous smokehouse (continuously

operated by one family for the last 86 years, where I never fail to purchase an array of smoked provisions the equal unavailable for hundreds of miles. Oops, seafood again…

From Trinidad Head, I chose to take another narrow coastal lane (called Stagecoach Road) which passed through coastal tree varieties such as red alder (Alnus rubra, favored by the smokehouse…:>), vine maple (Acer circinnatum), Bishop pine (Pinus contorta var. contorta), and an incredibly diverse community of coastal vegetation that opportunistically covers the ground nearly as soon as it is exposed. Stagecoach Road returns to Highway 101, which we take north briefly before encountering the entrance to Patrick's Point State Park, the next stop on my northbound agenda. Passing through rather nice stands of Sitka spruce (Picea sitchensis) with its 'silver dollar bark' peelings, and bristly needled branches (discovered the first time one tries bushwacking through dense thickets!), the Park's focus is Patrick's point which we duly attend to. The 'Point' juts out into the Pacific Ocean, just before retreating back to a long sand spit that formed several lagoons (Big Lagoon, Dry Lagoon, Stone Lagoon, and Freshwater Lagoon). Patrick's Point has been long a site favored by gray whales for the shallows that form nearby where barnicles get 'brushed off' by the whales in their seasonal passage between Baja California and Alaska (sorry, more marine life, we're talking a real diverse ecosystem).

After taking in the coastal air, we again head north, to a long favored destination, Fern Canyon. Fern Canyon has to be desirable, otherwise few would take the challenge presented by Davison Road, an assemblage of potholes and muddy grades whose best ability is to separate the two-wheel drive vehicles from the all-wheel drive vehicles. Crossing over a small coastal pass, the road continues down to Gold Bluffs Beach where it turns north several miles to Fern Canyon.

Fern Canyon is the outlet for Fern (?) Creek, which has cut through sandstone deposits in a nearly vertical wall some 30-60' high, and pretty much completely adorned by ferns and other riparian vegetation. The 'Creek' wanders back and forth from wall to wall during normal flows, and serves to separate the serious adults from those who are kids at heart, by the simple division between those who'll accept wet socks as the cost of entry.

We were treated on our exit from Fern Canyon by one of several herds of Roosevelt elk that range from the coast, to inland sites such as Prairie Creek Redwoods State Park and the small community of Orick.

But the real focus, trip report wise lies along Highway 101 along the way back, called Ladybird Johnson Grove, a grove of redwoods dedicated for protection, at her insistence in the early 1960's. A personal note I'll include here, even though it dates me. Close friends of mine, old style bluegrass musicians, were asked and were happy to play music at the dedication, which they often said later, was as close as they ever came to playing before royalty…

I have included my fraternity brother friend with some of the redwood images that follow, for scale, and his perpetuity.

All photos were taken with an iPhone 3GS, which is not responsible for the user's (me…:>) inability to hold still enough in the low lighting that prevailed during most of the day, and certainly once in deep canyons and clouded forests.

While other cameras were available, I chose the iPhone's included 'point and shoot' 3 megabyte camera, to highlight the spontaneous nature of this trip report. I chose to do this, to encourage WNTS members to make spontaneous contributions, like this one, that didn't involve extensive 'cyber manipulations' of word documents or browsers.

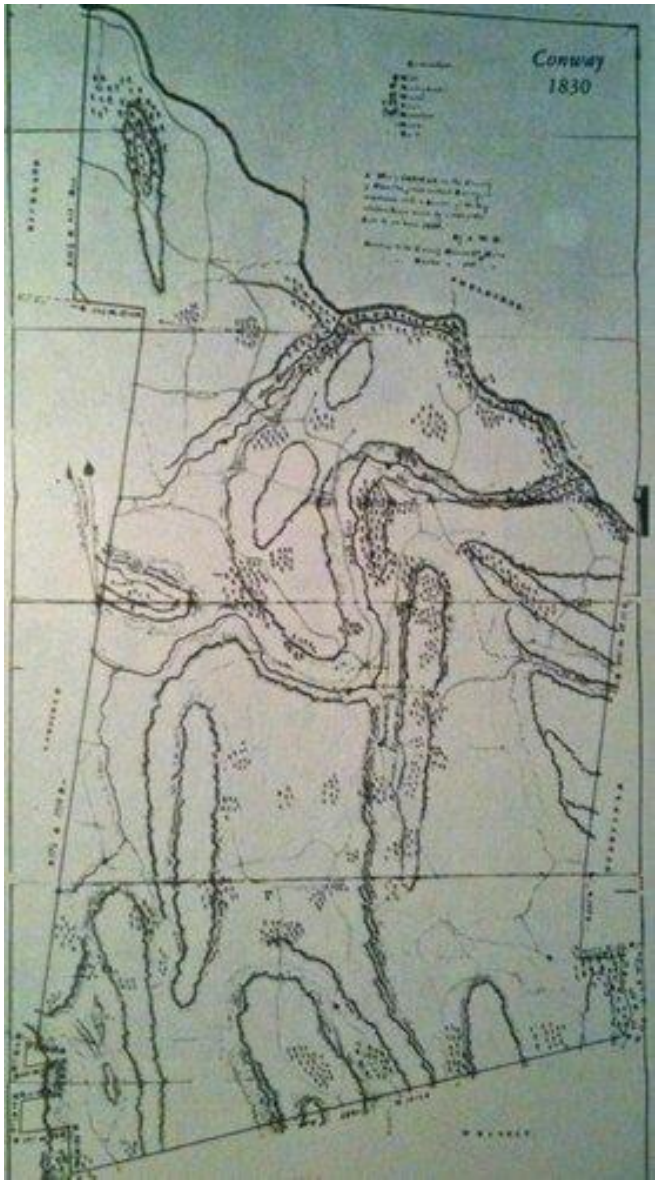
I used a download cable to connect my iPhone to my 5 year old Dell laptop, with Microsoft's Picture Wizard and Internet Browser which allowed me in two relatively simple operations to transfer camera images to a word document.

As our forum grows and the complexities of measurement arrive, I would like to continue a simplistic format to trip reports, but recognize that spreadsheets, figures, images, and embedded objects can add much to a report. But at our core, we'll keep it simple as is compatible with our goal…our appreciation of the native trees of the American west.

Don Bertolette - Moderator, WNTS BBS

1830's MA Forest Map

by jeffk » Tue Apr 05, 2011 9:42 pm



I'm attaching a photo of a map I ran across in a history of my hometown, Conway Massachusetts. The book covers the years 1767-1967 and deals mostly with human history. But much of that bears directly upon the the flora and fauna of the area. The map is a depiction of the town showing rivers, streams, hills, and "trees" as stated in the legend (you'll have to take my word for it as the copy in the book is almost illegible). At this point in Mass history (1830) about 80% of the western Mass landscape was cleared, much of that as pasture land for Merino sheep. What little forest remained in this landscape would have been very noticeable, and to my mind, would have been prominent landmarks in the mind of a map-maker. They may have been added merely for decoration, but the fact that a special legend was created and noting the locations of these forests - along rivers and along the sides of hills suggests that the trees depicted on the map were in fact mature forests left intact in 1830 because they were unsuitable for pasture or crop land - either inaccesible terrain or reserved as wood lots.

Sort of a treasure map for mature secondary growth forests! This map applies to my earlier e-mail in that the patch of woods described there falls within the map boundaries. I haven't figured out if this area is one of the tree-marked areas on the map yet but it certainly bears further investigation. The map has only a feature by feature correspondence with a modern topographic map, the interrelation of features is somehow distorted by the map making technology of the time. But certainly worth a trip to the local historical society to check out the original.(sorry for the poor copy here)

jeff knox

Welch Branch, GSMNP

by Josh Kelly » Thu Apr 07, 2011 2:57 pm

Welch Branch is a small stream that feeds Forney Creek, one of several large watersheds on the north shore of Fontana Lake that lack road access. Originally, the National Park Service agreed to build a road on the north shore to provide families access to gravesites that was lost with the flooding of Fontana Lake. However, after building the first of many tunnels necessary to complete the task, the Park Service re-evaluated the expense of that action. A more recent effort to have the road built ended with a cash settlement to Swain County, NC that will maintain the North Shore as one of the largest roadless areas in eastern North America.

On March 20th, Will Blozan, Michael Davie and I visited Welch Branch with high anticipation and quickly hiked through the abandoned tunnel at the end of the North Shore Road and several miles of pine and oak forests to get to the site. The drainage had first been noted as an excellent growth site by Jess Riddle using NC LiDAR data. Mike made a trip there in early March, but forgot his clinometer. Shooting straight up into trees he had readings over 180 ft.

On reaching Welch Branch, we left the Bear Creek trail and continued on a maintained foot path that goes up to an old homesite and cemetary on Welch Branch. Forney Creek was not heavily settled, but was heavily logged by the Norwood Lumber Company between 1909 and 1920, and slash fires were particularly intense in the upper watershed. The human history of the area is such that I didn't note any areas of old-growth on the trip.

Past the homesite, we climbed steeply into the uppermost of three coves with extremely tall tulip trees (Liriodendron tulipifera). All of the tributaries of Welch Branch flow southeast. Jumpup Ridge forms a steep, high western ridge to the site. Predictably the best growing sites at Welch Branch have east and northeast aspects.

In the uppermost cove, we located and measured six tulip trees over 170' tall and one over 180'. Two large red oaks, both passing the 11.5' x 145' threshold were measured. Many poplars in this and other coves were over 160' tall and were not intensively measured. With the use of LiDAR 170' is the new threshold for a "tall" tulip tree in the Smokies.

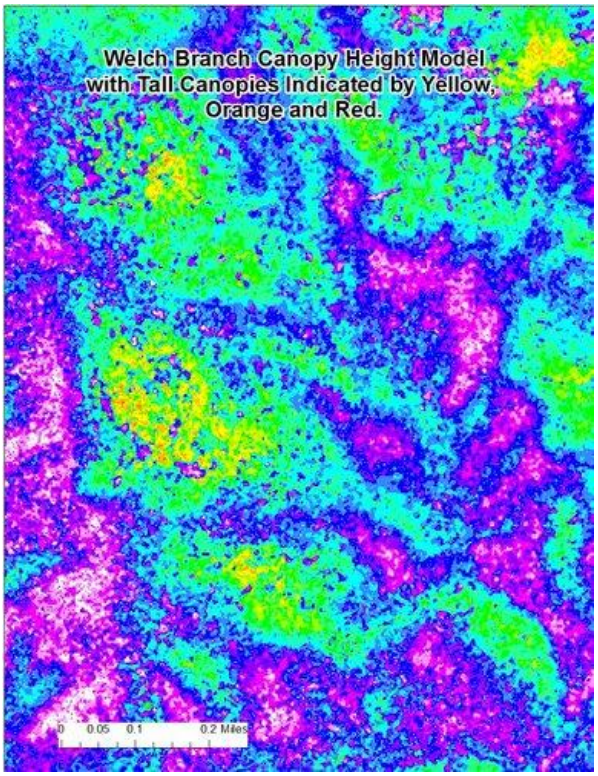
The central cove, as indicated by LiDAR, turned out to be the real treasure trove of tallness. We located, measured and waypointed 20 poplars over 170' tall in this cove – all twenty of those poplars fit inside of an eight acre polygon, making this spot one of the highest canopies, if not the highest canopy, of its size discovered by ENTS. In this area Will located a new height record northern red oak (Quercus rubra), a pretty tree 156.3' tall and around 12' gbh. The cream on top of the pie was a poplar going at least 186' tall and up to 187.4' on one measurement that is currently the second tallest known tulip tree in eastern North America, though it will probably slip in the rankings fairly soon.

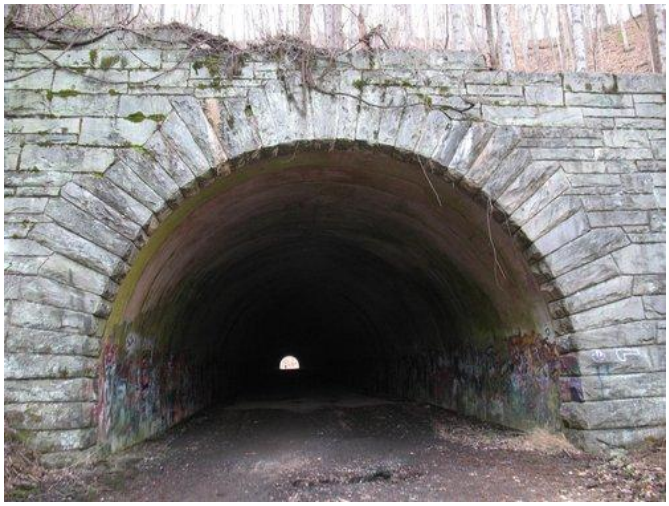
We finished up the day with a final cove and mopped up two more 170's for a total of 28 trees over 170' (51.8 M) in this one small watershed. ENTS has discovered no other site with some many trees over 170' in such a small area. While an upcoming post by Mr. Blozan will overshadow this discovery, Welch Branch appears to be one of the top five second-growth tulip tree sites in North Carolina and is truly mind-blowing in its tree growth. Though the site has great productivity for tulip tree, it is so dominated by the species that a Rucker 10 or even a Rucker 5 is not warranted. Tracking this site as it matures will be very interesting. In 10 years it is possible that the tallest tulip tree will be located in Welch Branch.

Species	DBH (inches)	Height (ft)	Tag
Liriondendron tulipifera	35.59	187.4	WB20
Liriondendron tulipifera	33.66	183.9	WB21
Liriondendron tulipifera	34.00	180.7	WB3
Liriondendron tulipifera	Twin	179.2	WB16
Liriondendron tulipifera	29.84	178.3	WB22
Liriondendron tulipifera	31.69	177.8	WB31
Liriondendron tulipifera	26.46	177.4	WB6
Liriondendron tulipifera	31.10	177.3	WB12
Liriondendron tulipifera	Twin	176.4	WB24

Liriondendron tulipifera	29.65	176.1	WB19
Liriondendron tulipifera	35.08	175.6	WB1
Liriondendron tulipifera	25.55	174	WB18
Liriondendron tulipifera	29.96	173.5	WB14
Liriondendron tulipifera	25.67	173.1	WB30
Liriondendron tulipifera	28.74	172.8	WB28
Liriondendron tulipifera	23.35	172.6	WB13
Liriondendron tulipifera	32.87	172.3	WB8
Liriondendron tulipifera	34.30	172.3	WB9
Liriondendron tulipifera	35.35	172.3	WB11
Liriondendron tulipifera	35.20	172.1	WB15
Liriondendron tulipifera	35.20	171.6	WB4
Liriondendron tulipifera	33.15	171.5	WB23
Liriondendron tulipifera	24.25	171.5	WB27
Liriondendron tulipifera	Twin	171.4	WB25
Liriondendron tulipifera	Twin	170.8	WB5
Liriondendron tulipifera	31.81	170.3	WB10
Liriondendron tulipifera	29.76	170.2	WB17
Liriondendron tulipifera	39.06	170.2	WB29
Liriondendron tulipifera	32.24	169.1	WB26
Quercus rubra	57.1"	156.3	
Quercus rubra	47.40	146.8	WB2
Quercus rubra	44.50	145.7	WB7

Will Blozan, Michael Davie and Josh Kelly.



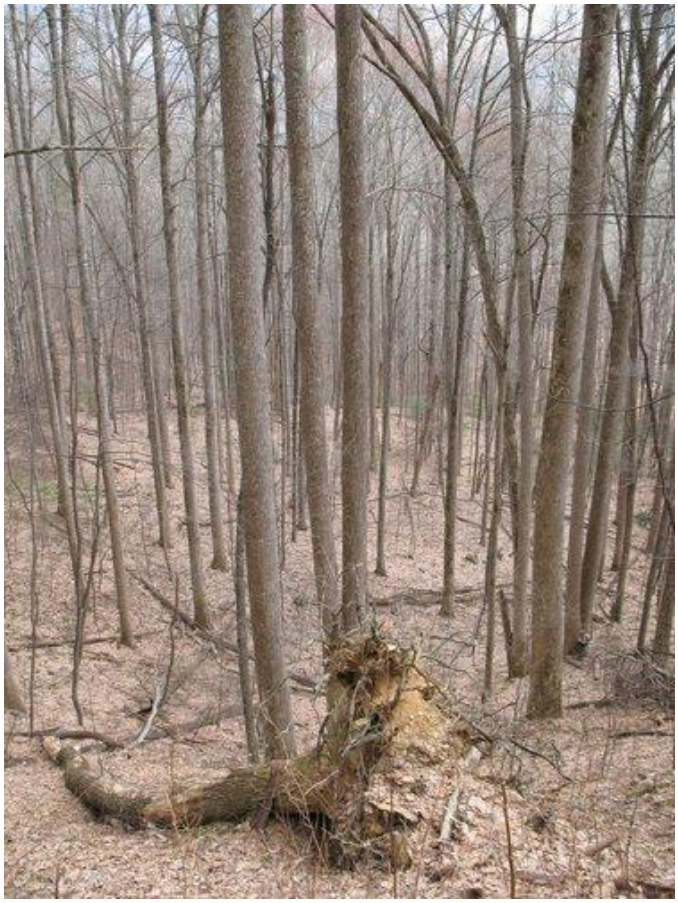


The tunnel on the Road to Nowhere - Will Blozan

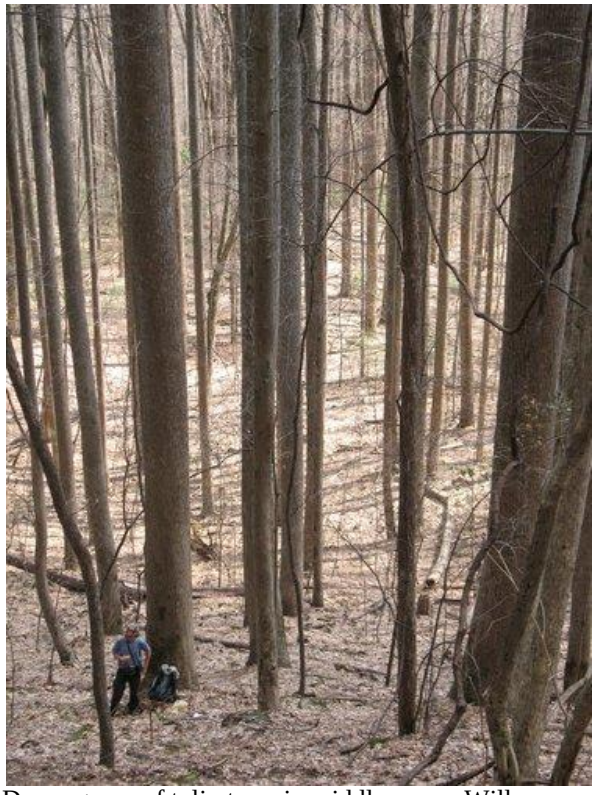
14.7' x 179.2 twin poplar - Will Blozan

NOTE: Topo map removed due to NPS restrictions pertaining to a recently obtained collection permit

Height record Northern Red Oak 14'11" gbh x 156.3' tall - Will Blozan



Tall tulip trees with human for scale - Will Blozan



Dense grove of tulip trees in middle cove - Will Blozan

Amazing grove in middle cove - Will Blozan

Live Oak growth rates_ Ruskin Oak

by Larry Tucei » Thu Apr 07, 2011 2:53 pm

In doing some research lately on the Rusink Oak, a beautiful tree growing in Ocean Springs, Ms. I found a measurement taken in 1939, also a photograph. The trunk then measured 17', I went back to the tree and measured it last week to 22'. The tree has a limb growing low off the trunk, but when the tree was younger the lower limb wasn't as large and low to the ground as it is now. This limb now is at the 4.5' from ground so if you measure the trunk with the limb in the way it is 27' 2". You have to measure it lower at around 3' from ground. Many Live Oaks have this problem so you measure under the limb or limbs to get better measurement as we all know. When I first started measuring Live Oaks it was difficult at times to meaured them. I tried to use the CBH standard but I began to relize that under the limb or limbs is more correct. Also muti-trunked trees are difficult. I have been going back over my listing and correcting errors. The growth rates for the Ruskin Oak are Cir/3.14= dia/2=rad. x 12/years= avg growth rate per year. I get .583" of growth in the 71 year period, that's fast. It is cool to see photos of trees from such time spans. Two photos one in 06 and one in 39.Ed, Bob, correct me if I'm wrong with this formula.

Larry Tucei

2006

Ruskin Oak 1939

The next hurdle - the catenary

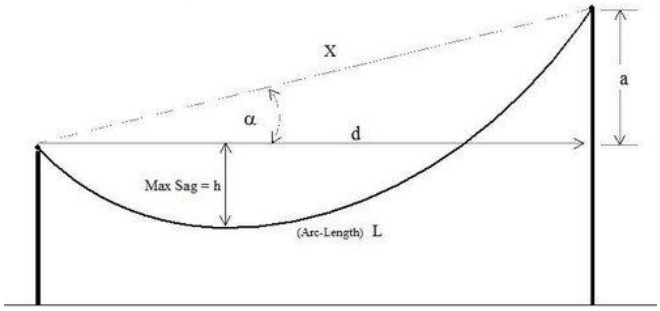
by dbhguru » Tue Apr 05, 2011 8:55 pm

The challenges associated with measuring trees takes on many forms depending on how accurate you want or need to be. In the world of champion tree hunting, accuracy has traditionally not mattered much to the keepers of the records, or the participants. That situation may be changing, but I don't expect any dramatic turnaround on a nation wide scale until tree measurers come to better appreciate the complexity of the shape that is being measured and what it takes to do the job. The video on measuring that we hope to shoot at the end of April for my friend Don Bertolette may be a big step forward. We have high hopes for it. But in any case, we the faithful will push on, looking at tricky measuring problems and finding solutions. The latest problem to present itself as a challenge is the catenary.

If we're going to create a large triangle on the ground such as needed to successfully apply Michael Taylor's Triangle Method, and we want to hold our equipment cost to a minimum, we may employ the old fashion tape measure to determine the lengths of the sides. However, anyone who has held a tape stretched over 100 feet or more recognizes that it sags appreciably. Can we determine the actual straight line distance between end points by mathematically eliminating the sag? Enter the catenary form and some ugly looking equations for solving the straight line distance if you know the length of the curve. What follows is a diagram from Michael Taylor. Let's take a look.

Taylor has worked out equations that compute the straight line distance between two points when their distance has been measured by a tape with a sag. However, the equations require at least one measurement, h, that is not easy to obtain, and appears error prone. So we're working on it. remember that the distance between end points forms a side of the triangle which will be used to measure the angles to the target (top of the tree). So access to the end points is not a problem.

Non-Uniform Tape-Line Catenary



$$d = \frac{\left[(L^2 - a^2)\cdot(a+2h) \pm 2\cdot L\cdot\sqrt{h\cdot(a+h)\cdot(L^2-a^2)}\right]\cdot \mathrm{TanH}^{-1}\left(a^2/L\cdot(a+2h)\pm\sqrt{h(a+h)(L^2-a^2)}\right)}{a^2}$$

When a can be measured directly, d & X can be solved for algebraically

$$X = \frac{\left[(L^2 - a^2)\cdot(a+2h) \pm 2\cdot L\cdot\sqrt{h\cdot(a+h)\cdot(L^2-a^2)}\right]\cdot \mathrm{TanH}^{-1}\left(a^2/L\cdot(a+2h)\pm\sqrt{h(a+h)\cdot(L^2-a^2)}\right)}{a^2\cdot\mathrm{Cos}(\alpha)}$$

Otherwise: $a = \mathrm{Sin}(\alpha)\cdot X$ Solve for X numerically

At the end of all this tortured analysis We hope that we'll be able to offer 3 prescriptions: the poor person's Triangle Method, a more sophisticated approach that will yield very accurate measurements comparable to a tape drop, and the Cadillac solution that can be used to measure annual height growth for extremely tall trees from long distances.

To change the topic, an on-going project is the limb modeling method that I developed for use at Poplar Forest. it is holding up well. Today I gave it another test. I ran my tape from point to point around the basement, changing direction and angle several times. I then positioned my equipment and measured each segment and ran the calculations through the limb modeler. I was lucky. The amount of tape that was reeled out varied from the calculated lengths added together by only 1/10th of foot. That has to be luck, but in any case, the method works very well. I don't think we're going to be embarrassed in Virginia. I'm going to polish up the limb modeler a little more and present it on the BBS in a few days.

Robert Leverett

Belgium: meeting on trees and tall beeches

by Jeroen Philippona » Sun Apr 03, 2011 5:33 pm

Saturday March 26th there was a nice meeting in the Sonian Forest. Three forrestors, three researchers of the Belgian Institute for Nature and Forest research (INBO) among who Peter van de Kerckhove, Leo Goudzwaard from Wageningen University (Netherlands), two Dutch arborists: Jeroen Snaaijer and Coen van Gompel, Marc Meyer from Tervuren Arboretum, Han and Gemma van Meegeren and Joost Werkhoven from Tilburg, Holland and Tim Bekaert, the maker of the website Monumental Trees.com and myself were there to witness the climbing and measuring of the largest and one of the tallest European beech trees (Fagus sylvatica) of the Kerselaersplein Forest Reserve. Climbers were the two arborists Coen and Jeroen from the arborist firm 'Pius Floris' from the Netherlands. They are experienced in tree climbing, but for pruning, not in tall forest trees for measurement reasons, so for them this was a new experience.

They needed over half an hour before they had shot a line over the first branch at 80 feet height. After that the climbing was not to difficult.
Peter van de Kerckhove had chosen this tree: it was not only one of the tallest as well as the largest in the reserve, but it also looked good to be climbed. He had measured it the day before whit his Lasertech Impulse Forest Pro as 44.5 m (146 ft); the cbh is 520 cm, 17,06 ft.

Leo, Marc and I now measured it with our Nikon Forestry 550 lasers and got around the same height. It was a rather difficult tree because of a broad crown, so that finding the tallest branch is not easy. Typically for beech is that measuring through the crown was not possible because of the dense branches.

The climbers had a measuring tape and an extandible telescope pole. Leo and Peter measured the tape at the forest floor while Marc and I tried to see if the pole was at the same height as the tallest treetop. This was not good to be seen, but Coen, who was at 41.3 m (135.5 ft) high in the tree tried to reach the pole exactly to the tallest top of the tree. So a next time we like to have a climber in a neighbouring tree as well to have a better vieuw.

The tape + pole measurement was 41.3 m + 4.35 m so in total 45.65 m / 149.77 feet. So now the tallest accurate measured beech in Europe is very near to 150 feet! The climbers all in all were 3 hours busy with the climb; because they also wanted to climb a tall Plane tree (Platanus x hispanica) elswere, they did not climb more beeches in the Sonian Forest. With our lasers we measured several other beeches wich were also around 45 to 45.5 m, so perhaps there are some among them who reach over 46 m and over 150 feet. The beeches in this part of the forest were planted in 1777, so are now 234 years old.

Other species we measured in the Sonian Forest:
English oak - Quercus robur 41.6 m / 136.5 ft cbh 4.61 m / 15.12 ft. This oak was probably planted in the second half of the 17th century.

Norway maple - Acer platanoides 32.6 m / 106.96 ft cbh 2 m / 6.56 ft.
European ash - Fraxinus excelsior 37.6 m / 123.36 ft

European larch - Larix decidua 39.8 m / 130.58 ft
Giant sequoia - Sequoiadendron giganteum 45.6 m / 149.6 ft cbh 4.25 m / 13.94 ft - tallest of a small grove, planted in 1906.

Nearby the Sonian Forest is the Tervuren Arboretum: tallest measured tree there was a Grand fir, Abies grandis, 49.4 m / 162 ft tall.

Jeroen Philppona

Huge Willow Oak found in an old cemetery

by Barry Caselli » Sun Apr 10, 2011 11:26 pm

Last weekend I was photographing churches in a certain area of Salem County. In the cemetery of the Mt. Salem AUMP Church I found this big Willow Oak, which I had seen before. But previously I didn't know what kind of oak it was.
The file name means that it's in Cedarville in Salem County, as opposed to the Cedarville that's in Cumberland County.
When I was there I think I was estimating that this tree was in the 12 to 13 foot range, or larger. Unfortunately I didn't have a tape with me.
What an amazing tree, and perfectly healthy too.

Barry Caselli

Fire Regimes Albany Pine Bush, NY

by Jenny » Wed Apr 13, 2011 8:48 am

I attended the Natural History Conference in Albany last week and one of the activities was a field trip to the Albany Pine Bush lead by Neil Gifford, the Conservation Director. There was lots information about the management and species, but I came away thinking it's all about FIRE! In order to create different ecosystems/niches within the 3,100 acre preserve, the ABP is absolutely dependent on an intensive fire regime. I don't know if this is at all the same as the New Jersey Pine Barrens, which seems to manage itself pretty well from what I learned from Barry. And the APB is located amidst residential developments and the New York Thruway and even a nursing home. But they somehow do it.

http://www.albanypinebush.org/preserve_ ... eserve.htm

Here are some pre-Spring pics and they have worked their butts off getting ready.

Jenifer Dudley

Riding Run, CVNP, Summit Co., Ohio

by Steve Galehouse » Sun Apr 10, 2011 9:50 pm

Today I visited an area called Riding Run in the Cuyahoga Valley National Park. Last week Rand Brown and I found a record sycamore in an area close to this, so I thought this might hold some surprises. I have to report there are no exceptional trees at this site as far as height or girth, but there are quite a few trees of exceptional "character". The woods is unusual in that it is comprised of pine plantations(white, red, Scots, Austrian) on the ridge tops, with second or third growth hardwoods on the steep slopes---mainly tulip, oak, and white ash---white ash seems to be out-competing the other hardwoods in girth, and keeping up with tulip in height, but only 120-130' was the general canopy height.

A number of trees of several species which seemed to be "over-mature" and especially gnarly are part of the woods, and this was the most interesting aspect of the park. The old, gnarly trees must have been skipped in the timber harvest because they were viewed as defective whenever the area was last cut. A few pics:

An especially contorted beech:

White oak wolf, 77' H x 14' 2" x 75' spread:

A sugar maple designed by flying squirrels:

Steve Galehouse

Christ Church Yew, UK

by **TN_Tree_Man** » Tue Apr 12, 2011 8:42 pm

Looking over the post regarding some of Great Britain's old trees (viewtopic.php?f=196&t=2347) reminded me of an old yew (Taxus baccata) that I was able to see in 2007. The yew is located in the Christ Church cemetary in the old city region of Dover, Delaware. The shrub was planted in 1740 and continues to thrive. The folks at the church are very proud of their yew (as well as their history in the community) and will gladly show you around if asked.

Sorry about the picture quality. These are scanned from film.

(The brown spots I believe are from bagworms)

p.s. this is what will happen if you do not keep the hedges trimmed around the house!

Steve Springer

North Syracuse Pitch Pine Cut Down

by tomhoward » Thu Apr 14, 2011 9:15 am

Yesterday arborists cut down a pitch pine at an apartment complex near where I live. It was the only possibly wild pitch pine in North Syracuse, and it was a favorite tree. It was perfectly healthy and not in the way of anything. It was picturesque (but I took no pictures of it, assuming it would be there) like older pitch pines always are, and was about 55 ft. tall. Pitch Pine has been documented as a rare native tree in North Syracuse from as early as 1895 (I have that in my notes) but pitch pine is no longer here as a possible native. Until yesterday I could see this tree everyday from the apartment where I live. I have no idea how old it was, but it looked like maybe 80 or more years old. North Syracuse is about 40 miles west of the main native range of pitch pine. It is (or was) one of the rarest trees in Onondaga County.

Tom Howard

Belden Forest in Simsbury, CT

by sam goodwin » Fri Apr 15, 2011 6:39 am

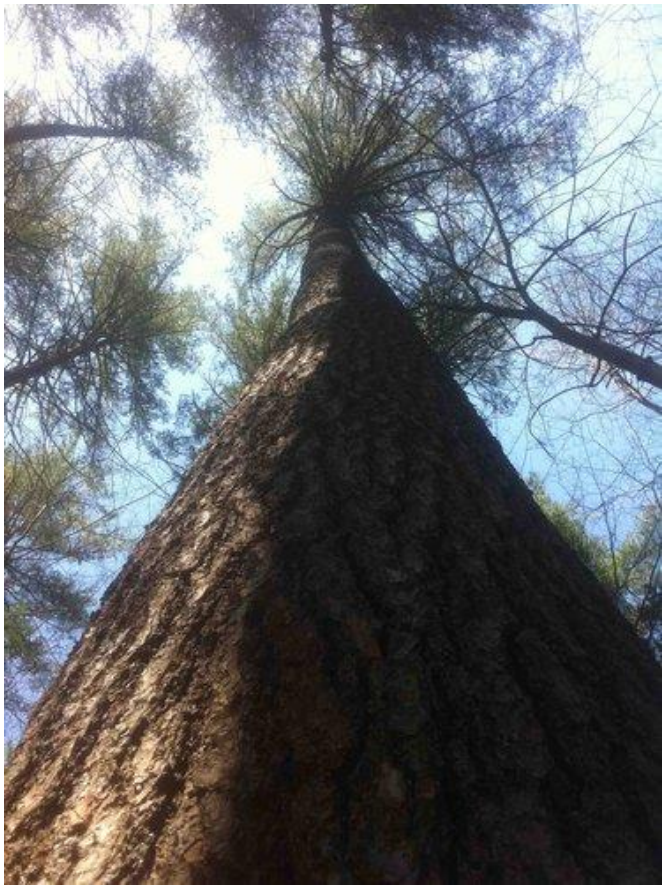
Belden Forest is a 42 acre forest, pretty much untouched for more then 100 years. A newspaper article in the Hartford Courant calls it a miniature version of the Cathedral Pines of Cornwall. I haven't been to Cathedral Pines so I can't tell if it is. There is a yellow blazed and blue blazed trails that follow the forest boundaries with trails that cover the interior. We walked all the trails. Starting at the eastern side trail head it is almost all white pines, young hemlocks and beech. The pines were 7 to 8' cbh and over 100'. The beech were in the range of 8' cbh and 90' tall. As you head northwest it became a few oaks, hemlocks and white pines, no beech. The northwestern and north end became black birch, hemlocks and white pines, again no beech. There are many, many large white pines in this forest, 8 to 10' cbh and over 100 ' high. The largest I measured was 10.5' cbh and 115' high.

Sam Goodwin

Back to the white pines

by dbhguru » Fri Apr 15, 2011 8:19 pm

Today I kicked off my official return to the white pine forests of my forest Mecca, Mohawk Trail State Forest. I immediately got down to work, re-measuring a tree I monitor near Cabin #6. This measurement led to 157.5 feet. An image of this beautiful tree follows.



I renamed the tree in honor of redwood guru Michael Taylor whose even more obsessed with tree measuring than I am. His contributions to dendromorphometry earn him a tree.

I then went to the mast pine area of the Trees Of Peace and set to work re-measuring an elusive pine that I named Mast Pine #2. Well, today I confirmed a height of 160.1 feet for this hard to measure tree. It becomes #11 in MTSF of pines over 160 feet. Needless to say, I'm feeling pleased as punch. The lordly tuliptrees now rule the East, but in New England the great whites are still king.

Robert T. Leverett

White Pines versus Tuliptrees

by gnmcmartin » Sat Apr 16, 2011 7:44 pm

All we have left of "old growth" of either species is a few "scraps," no disrespect of present standing trees intended. As for what we have today, the numbers of tall tulilps outdistances the white pines. But I would like to know more about the ultimate potential of both species. I am certainly not ready to give the crown to the tulips.

What I would like to know is more about the growth rates of each species in the second and third century of life. Both species may have a maximum life span of 400 years, give or take a bit, so they are equal there. One point that may be significant, is that white pine can maintain a single trunk to a greater height than a tulip. This may focus growth energy more effectively towards increases in height. The tulips Will has recently found maintain their central trunk to wonderful heights, but at the top the trees divide into many ascending limbs, creating many competing tops. I don't have any hard data about the effect this has on height growth, but I could guess that it may retard it somewhat in trees that have a clearly dominant crown position. When we talk about trees living to 250 or 300 years, a difference in height growth after 150 years of 2 inches per year is quite significant.

One reason why tulips may reign today is their faster growth rates for the first 50 plus years. Tulips have been documented to grow to over 140 feet in 50 years. The trees Will has found recently may have out done that rate. White pines, as far as I know--and my knowledge is limited, so I am ready to be corrected--cannot match that 50 year growth. 120 feet in 50 years is as much as I have heard about. Will has found some white pines he thinks may have grown faster than that, but I would be skeptical of any reports of 140 foot white pines in 50 years, without some real hard evidence.

So, since for the most part, the mass of trees we have of both species are relatively young--with a few exceptional individuals the loggers have spared--the early growth advantage the tulips have is telling.

Wait another 100 years, and keep the best young trees protected from disturbance until they reach 250 or 300 years of age, and see which wins. My bet is with the whites. But, maybe most of you remember an earlier topic I posted about why I doubt 250 foot white pines ever existed--I stick with that. But do I think they could grow significantly over 200--you bet!

Only time will tell ultimately, but some research, and some may have already been done, could shed some light on the matter. I don't trust any reports of heights of trees unless done by someone competent in our "sine top, sine base" method. The data we are generating is the only data I pay much, if any, attention to.

One more specific thought. I wonder if there has not been more prime growing sites lost from logging and land use conversion for white pine than tuliptree. Many areas once dominated by white pine that were logged, grew back primarily with hardwoods. Other prime growing sites with the best soils were permanently converted to farmland. In NE, many abandoned fields grew back up with white pine, but these formerly cultivated or pastured lands were left to grow back up with trees because the soils were poor, either to begin with, or were degraded by erosion and depletion of nutrients. Some old field sites, however, are better than others, and can produce impressive stands.

Tuliptree has had a better record of regeneration on formerly cut-over lands--many areas occupied by a mixed hardwood forest that were cut over, have grown back up with impressive stands dominated by tuliptree, and some of these sites have wonderfully tall trees. The logging practices of the past have much reduced white pine, but have favored tuliptree.

Well, just some thoughts about why we see more stands of tuliptrees today than stands dominated by white pine. All this may be beside the point, however. I think the best existing second growth white pine stands just need more time.

--Gaines McMartin

Range Finder Accuracy

by dbhguru » Sun Apr 17, 2011 1:46 pm

Here is a small comparison of results of a test conducted this morning on 6 different lasers. It is one of many tests I've done.

Distance	NS50	FS50	N440	TP200	TP360	Bushnell 800	Abs Diff NS50	Abs Diff FS50	Abs Diff N440	ABS Diff TP200	ABS Diff TP360	Abs Diff Bushnell 800	
91.00	91.50	92.00	91.50	90.50	90.50	90.00	0.50	1.00	0.50	0.50	0.50	1.00	
91.50	91.50	92.00	93.00	91.00	91.50	90.00	0.00	0.50	1.50	0.50	0.00	1.50	
92.50	93.00	93.00	93.00	92.00	92.00	93.00	0.50	0.50	0.50	0.50	0.50	0.50	
94.00	94.50	95.00	96.00	93.00	93.50	93.00	0.50	1.00	2.00	1.00	0.50	1.00	
94.25	94.50	95.00	96.00	93.50	94.00	93.00	0.25	0.75	1.75	0.75	0.25	1.25	
94.50	94.50	95.00	96.00	93.50	94.00	93.00	0.00	0.50	1.50	1.00	0.50	1.50	
94.75	96.00	96.00	96.00	94.00	94.00	96.00	1.25	1.25	1.25	0.75	0.75	1.25	
95.00	96.00	96.00	96.00	94.00	94.50	96.00	1.00	1.00	1.00	1.00	0.50	1.00	
95.25	96.00	96.00	96.00	94.50	94.50	96.00	0.75	0.75	0.75	0.75	0.75	0.75	
95.50	96.00	97.00	96.00	94.50	95.00	96.00	0.50	1.50	0.50	1.00	0.50	0.50	
96.00	96.00	97.00	97.50	95.00	95.50	96.00	0.00	1.00	1.50	1.00	0.50	0.00	
97.00	97.50	98.00	97.50	96.00	96.50	96.00	0.50	1.00	0.50	1.00	0.50	1.00	
94.27	94.75	95.17	95.38	92.46	92.79	94.00	0.48	0.90	1.10	0.81	0.48	0.94	Avg
							1.25	1.50	2.00	1.00	0.75	1.50	Max
							0.00	0.50	0.50	0.50	0.00	0.00	Min

In this morning's test, the target was a moderately reflective orange disk 3 inches in diameter. The disk was placed on a grayish-white rock. The distance from tripod to target was measured by tape. You can see the results above of the test. However, this is only the beginning of the story. There are a number of factors to consider when evaluating the accuracy of an instrument used under laboratory and field conditions. The advertised accuracy of these laser rangefinders is often misleading, because the results are displayed to either the nearest yard or meter for some, the nearest half-yard or meter for others, and foot or half-foot for still others. The distance to the target; reflectivity of the target; background lighting; shape, size, and orientation of target, and foreground clutter all must be considered. I have an instrument that consistently shoots long by one display unit (not included in this morning's test). A past instrument shot consistently short. If you would like to see a full discussion of all the elements of laser evaluation, I'm happy to enter into that discussion.

My most accurate laser is my TruPulse 360, but it also won't shoot through clutter and is almost useless inside a dense forest. My work horse is the Nikon Prostaff 440, which is a little less accurate without compensation. But it does what none of the others will do. Soon there will be an addition: a Bosch GLR825. It will usher in a whole new era of measuring.

Robert T. Leverett

"Hokkaido" lacebark elm-an excellent Bonsai subject

by Steve Galehouse » Sat Apr 23, 2011 8:22 pm

Here is a photo of Ulmus parviflora "Hokkaido", showing the scale of the foliage. This is a really neat dwarf variety suitable for bonsai.

Steve Galehouse

Ramble Grove Asheville, NC

by bbeduhn » Mon Apr 25, 2011 9:42 am

This was a topic in January, 2010, but I wasn't able to add to that discussion. I did some measuring Friday in a very nice and very young white pine forest. These trees appear to be in the 60-70 year range. There are some older oaks mixed in away from the tallest pines but most oaks are young as well. Some heights from the grove

Pinus Strobus 124' 127' 128' 130' 132' 132' 137' 140' 141' 142' 144'! 144'!
White Pine

Pinus Echinata 92' 98' Shortleaf Pine

Tsuga Canadensis 103' 100' 98'
Eastern Hemlock

Pinus Rigida 121'! Pitch Pine
I got this shooting straight up and I don't believe I got part of a white pine. This seems too tall, however. James Parton got a 114" in the grove. It may be the same tree.

Quercus Coccinea 8' 11" 108' Scarlet Oak

Further down the trail, hardwoods exert themselves but the pines still dominate.

Pinus Strobus 125' 125' 126' 126' 129' 133' 135'
White Pine

There's a small grove two miles northeast of the Ramble Grove, also on the Mountains to Sea trail. This is a very promising but small grove with tuliptrees and white pines competing. My tuliptree heights were all low due to a fair amount of leaves so I'll have to wait until November for accurate measurements. I was hitting 100' to 105'. They're much taller. I couldn't get the tops of the tallest couple. There is likely a 150' there.

Pinus Strobus 128' 138' 142' 143'
White Pine

Alabama State Champion Live Oak update

by Larry Tucei » Mon Apr 25, 2011 4:18 pm

ENTS, Chris Francis an Arborist from Alabama sent me an update on the Olde Oak, the Alabama State Champion Live Oak. I measured the tree back in 08. Chris did some work on the tree for the owner who has developed an Apartment complex around the great tree. It looks like from the photos that his company did a great job in preparation for the developement. I'll have to go back and check it out. I hope the tree does ok. I wish the owner would not have developed the area but untill I see it for myself I cannot say. A link to Chris's website with photos of the Oak during the preparation.

"The construction project was the whole reason why we were called in there. No one knew it was the state champion tree; I had to order a new certificate for them. Apparently, there was a petting zoo and many other attractions on the site previously. The current owner has built an apartment complex around the tree and named it Olde Oak Apartments."

http://chrisfrancislandscapes.com/index ... &Itemid=35

Larry Tucei

Roadside Hawthorn

by James Parton » Sun Apr 25, 2010 3:36 pm

Last Friday I decided to re-visit an old friend who was in bloom at this time of year. It's a Hawthorn located just off the downramp from hwy 25 onto I-26 going towards Hendersonville, between Fletcher and Mountain Home. I last visited the tree back in the spring of 2005 when it was in bloom. I have noticed it bloom every spring as I pass by on my way to work or elsewhere. I stopped again to photograph it again this year. As far as the exact species I don't know. By my field guide it is the closest to Washington Hawthorn but still not an exact match. They are many species of Hawthorn and many hybridize.

I have always loved these unusual highly overlooked and often neglected trees. They have a beauty all their own.

James E Parton

Potential Adverse Impacts of Coring

by Neil » Tue Apr 26, 2011 9:24 am

Here is a short blurb we've crafted over the years on the impact of coring trees. briefly, plugging holes seems to not change the rate of rot from coring - it doesn't seem to help. it might not hurt. though, putting something from outside the tree into the tree might just aid in the transfer of fungus.

yes, there is an article out there suggesting trees should not be cored. the evidence to data does not support this thought.

Neil Pederson

Potential Adverse Impacts of Coring: Increment coring is the use of a increment borer to extract a 5mm sliver of wood from trees. Often human powered, the investigator drills or screws an increment borer into a tree at about 1.4 m above the ground. Quite often two cores per tree are removed. Coring creates wounds that may cause internal decay. There is no evidence, however, of tree mortality after increment coring (Meyer and Hayward, 1936; Lorenz, 1944; Hepting et al., 1949; Toole and Gammage, 1959; Hart and Wargo, 1965; Cleaveland, 1998; Eckstein and Dujesiefken, 1999; van Mantgem and Stephenson, 2004). In fact, little effect on mortality was observed when stem wedge sections were removed using a chainsaw (Heyerdahl and McKay, 2001).

Trees, like most biological beings, use natural defense mechanisms to maintain their vitality (Shigo, 1984; Loehle, 1988). This is especially true of vigorous dominant and co-dominant individuals (Meyer and Hayward, 1936; Lorenz, 1944; Hepting et al., 1949). Holes from more than half of all trees cored in core damage studies healed within 2-3 years. Trees that did not heal well were typically of short-lived species or suppressed individuals (Meyer and Hayward, 1936; Lorenz, 1944; Hepting et al., 1949; Toole and Gammage, 1959). There is little evidence that plugging a core wound does little to reduce the discoloration of wood or prevent potential decay (Meyer and Hayward, 1936; Lorenz, 1944; Hepting et al., 1949). Further, modern arborists do not seal the wounds because they have learned that leaving wounds open allows them to: 1) dry out and 2) naturally clean the wound like blood flow cleans our wounds, which discourages infection.

Generally the older a tree lives, the stronger its defense to disease and injury (Loehle, 1988). Since many species can live more than two centuries, biological theory suggests that trees have a defense system that allows them to sustain repeated physical damage. Therefore, evidence indicates that boring canopy dominant trees will not significantly change mortality rates in forest preserves. The small wounds created by coring will likely heal rapidly and be, in the long-run, insignificant injuries.

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Ander's Run Natural Area and Buckaloons Recreation Area, PA

by djluthringer » Wed Apr 27, 2011 3:20 pm

On 4/13/2011 Carl Harting, Steve Hallow and I met for a measuring trip to Ander's Run Natural Area and Buckaloons Recreation Area in Warren County, PA. It was great to get together with everyone. Even though we couldn't get on the river (the Allegheny is still too high), we got a lot done. Here's the stats for 4/13/11:

Anders Run N.A.

Species CBH Height Comments

E. larch 10.8(2x) 115.2 was 10.8(2x) x 114.8 on 3/5/09, 2nd tallest known in PA

Nordmann fir 7.3 96 was 7.2 x 95.5 on 3/5/09, 194 AF points, cored 117 rings slightly missed center, 3.5ft up fm base

Noway spruce 10.5 137.4 was 10.5 x 135.2 on 10/18/06, cored 141 rings to ctr, 3.3ft up fm base

white pine 7.1 133.8 Twisty Top
white pine 10 151 was 9.8 x 144.9 on 4/16/03, 41 49.460N x 79 16.511W
white pine N/A 160 Burl Queen, was 11.6 x 155.8 on 3/23/04, tac 419, 41 49.484N x 79 16.962W
white pine 11.4 160.2 was 11.3 x 159.6 on 3/23/04 tac 415, 41 49.547N x 79 16.628W

Anders Run now has 2, 160ft class pines, and 7, 150ft class pines. If the old state champ Cornplanter Pine was still alive, that'd make 3 living pines in the 160ft class. Anders is the 3rd best place in the state to see tall pines. 1st Cook Forest, 2nd Hearts Content, 3rd Anders Run.

Dunns Eddy Rd (~half mile down river from Anders Run, Benedict Farm)

shagbark hickory 14 87.5 state champ (likely old limb fuse at CBH) was 13.7 x 83.9 on 10/18/06, 270AF points

Irvine, PA (~half mile north of Buckaloons)

white oak 17.8 87.5 across road from church

Buckaloons Recreation Area

Am. hornbeam 2.7 33

bitternut hickory 5 75.1+
bitternut hickory 12 108 41 50.122N x 79 15.534W

black cherry 9.1(2x) 84.1+

black locust 6.6 85

black walnut 7.6 101.5

black willow 7.8 78.5

dotted hawthorne 1.9 45 tac 915, 41 50.270N x 79 15.366W tallest known in NE is on site 16 is 3.1 x 45.4

E. hemlock 6.2 96

E. larch 7.4 113.5

green ash 6.2 78.1+

hackberry 4.8 76.5

moss cypress 6 87.7 was 5.9 x 86.4 on 4/2/09,

3rd largest known in state, 166 AF points

N. red oak 7.1 107

shagbark hickory 6.6 89
shagbark hickory 5.6 89.5

silver maple N/A 100

sugar maple 8 84
sugar maple 9.8 84

sycamore 13.7(2x) 118.5
sycamore N/A 123.1
sycamore N/A 129
sycamore N/A 129
sycamore N/A 129.1
sycamore N/A 131.5

tuliptree 10.2(2x) 98

white ash 12.6 109 41 50.261N x 79 15.375W

white oak 14.4(2x) 88.5
white oak 8.8 102.5

white pine 11 108
white pine 10.8 127
white pine 9.2 135

Buckaloons Rucker Index = 108.8

E. white pine 9.2 135
sycamore N/A 131.5
white ash 12.6 109
tuliptree 9.9 108.5
bitternut hickory 12 108
N. red oak 7.1 107
white oak 8.8 102.5
black walnut 7.6 101.5
silver maple N/A 100
black locust 6.6 85

The 130ft class white pine and sycamore where nice surprises at Buckaloons. I had no initial intention of getting a Rucker Index for the site, but the further we progressed along Irvine Run into the "tallish" sycamore stand along the creek it was apparent we'd have enough data for an RI. Also, I could hear Ed in the back of my head giving me a rash if we didn't...

The fat bitternut on Irvine Run was also nice. It was the largest I've personally measured. The tree has been beat up pretty bad over the years, but is still a solid tree. Definitely has a little age to it. I wouldn't be surprised if it went over 200 years old.

Allegheny River

At the end of the day we went up-river on Hemlock Road towards the Kinzua Dam scanning the islands for tall trees. Steve Halow was able to measure one sycamore across the open water on Wardwell Island (about 3.2miles down river from Kinzua Dam) to 137ft high. There were other sycamore on this island that would also break into the low 130ft class. Ed, looks like we've got a future float from the dam down to the Buckaloons in the works...

Dale Luthringer

Montpelier and Poplar Forest Completed

by dbhguru » Thu Apr 28, 2011 8:26 am

I'll report at greater length on Montpelier and Poplar Forest, but for the present, let me say both projects were successful. For Poplar Forest, Will saved the day. My ground-based measuring did not work out because there was too much leaf out. So, Will took all the measurements from aloft. He'll be reporting on the results.

At Montpelier, Will did succeed in relocating the tuliptree he measured in 2004. It is now 168.7 feet in height. A neighbor is 168.6 feet. These are the tallest accurately measured trees in Virginia. Montpelier rules! More to come.

Robert T. Leverett

Cucumber-tree in the suburbs, OH

by tsharp » Thu Apr 28, 2011 10:41 am

ENTS: I recently had the privilege of measuring a large cucumber in Stark County, North Canton, Ohio. The girt was 24.5'. height 90.5', and crown spread 84' which gives it a AF score of 406. The tree is in a back yard and the crown extends over two neighbors yards. This is the AF National Champ and a picture can be seen on Ohio Big Tree web page:

I have been so used to getting lower heights when measuring behind other people that I was somewhat taken aback that my height measurement was 11.5' higher. In a brief conversation with Brian Riley, the Ohio State big tree coordinator he confirmed that he used a tape and clinometer for his height determination. Even though I was rushed because of an approaching thunderstorm and not ideal conditions(gusty winds) i believe i got an accurate height. This tree is worth visiting. It is only about 2 miles off of Exit 109 of I-77. It is in a gated development but I had no trouble gaining access and the owner graciously allowed me to park in her driveway and measure the tree. Steve, Rand if you get a chance I would love for someone to double check on the height.

Turner Sharp

Green Lakes State Park, NY 4/24/2011

by tom howard » Thu Apr 28, 2011 10:43 am

On this date (Easter Sunday) Jack Howard and I went to Green Lakes State Park to measure the tall trees of the Tuliptree Cathedral southwest of Round Lake. We also confirmed that the height of the tall White Pine at the south end of Green Lake is 120 ft. as measured 4/30/2010. Trees in the Tuliptree Cathedral were last measured with laser rangefinder by Bob Leverett on 5/4/2002. On 4/24/2011 I used the Nikon 550 Laser Rangefinder, which has trouble seeing through clutter near the bases of trees and through the dense lofty canopies of these towering trees, but I still got a large number of good heights. Some of these heights may be underestimated due to the difficulty of determining and hitting the exact high points of these broad crowned trees. The Tuliptrees here are the tallest trees yet measured in central NY and the tallest trees I've ever measured with the laser rangefinder; they are most likely the tallest Tuliptrees anywhere for so far north; Green Lakes is close to the northern limit of the species.

Trees measured 4/24/2011:
Height in feet first followed by dbh (when measured):

Tuliptree 135
Tuliptree 133 these 2 near Hemlock cored 11/17/2001 to 330 years old
Tuliptree 141 40" dbh balding bark toward view toward Round Lake
Tuliptree 138 slender tree cored by Bruce Kershner 5/4/2002 to 160 years old
Tuliptree 133

Tuliptree 141
Tuliptree 145 32.9” dbh near small Hemlock
Tuliptree 147 37.1” dbh near Hemlock tallest tree measured in central NY, possibly same tree that Bob Leverett measured 2002 as tallest at 144.7
Tuliptree 138 39.6” dbh next to above
Tuliptree 139 big tree across trail
Tuliptree 147 in hollow when seen from trail also tallest measured
Tuliptree 126 slender near bridge over stream

Bitternut Hickory 139 19” dbh next to tall Tuliptree, 135.6 ft. in 2002, at 139 ft. this tree could be tallest Bitternut Hickory in NY State.
Bitternut Hickory 130 slender
Bitternut Hickory 125

Sugar Maple 117
Sugar Maple 116 slender balding bark
Sugar Maple 105 average tall tree in forest across stream

Hemlock 108
Hemlock 131 45.3” dbh Onondaga County champion, possibly tallest Hemlock in NY State, possibly oldest tree in Onondaga County, est. over 450 years old (est. from 392 rings on smaller long dead stump, and est. age of 330 years on smaller Hemlock cored 11/17/2001 by Fred Breglia)
Hemlock 130 38.1” dbh next to champion just above
Hemlock 106 28.4” dbh next to biggest Sugar Maple
Hemlock 120 slender
Hemlock 113+ tree cored 11/17/2001 between 2 taller Tuliptrees, could not hit top but 113 ft. is well below highest point, tree measured 116 ft. 2002

Basswood 111 across trail upslope
Basswood (?) 118 35.3” dbh across trail upslope, bark not quite like Basswood but branch pattern looks like Basswood
Basswood 106 near biggest Sugar Maple

Due to clutter conditions I was not able to get heights on the following in Tuliptree Cathedral:

Tuliptree 42.9” dbh near edge of stand – big and old
Tuliptree 48.8” dbh possibly largest Tuliptree in stand, log lodged against trunk

Sugar Maple 51.6” dbh, biggest in stand, one of largest in central NY, spiral grain, shaggy bark, leaning trunk, possibly 300-350 years old – Bob Leverett measured the tree to 117 ft. tall in 2002

Trees measured outside Tuliptree Cathedral:

Group of tall Tuliptrees on steep slope above southwest shore of Round Lake:
3 trees measured – 111, 109, 125

Group of Tuliptrees above northwest shore of Round Lake at trail break – tallest 116, 115

Basswood on trail between Round Lake and Green Lake – 101 ft.

A beautiful place with spring wildflowers starting to bloom, 2 meromictic lakes with unusual green-blue color; Round Lake was still as a mirror with the old growth forest on its shores reflected in the water, like a forest in an inverted sky.

Tom Howard

Tree Measuring Video Begins

by dbhguru » Thu Apr 28, 2011 8:19 am

Well here we are in Cook Forest, PA getting ready to start filming the tree measuring video, which if successful will be used by America Forests. I'm a bit nervous, since there is a lot at stake here. I'll report on our progress. Big Ed will do the filming. The project has been undertaken in support of Don Bertolette, Alaska's champion tree program coordinator. Don has the connection to American Forests.

We will cover methods for measuring trunk girth, crown spread, and tree height. We'll do each piece basically as a stand alone segment. Right now the wind is howling and I don't think we'll get much done today except choose the trees to be measured, measure them, and plan the dialogue. Tomorrow, we'll commence filming. Monica and I will be staying in a cabin at Cook, so there won't be an opportunity to report to the BBS. That will take place upon our return to Massachusetts.

Oh yes, while I'm here, we'll re-measure the Longfellow Pine…

May 5, 2011

I got a taste of what we're in for over at Cook Forest. The amount of takes and retakes will mount, as you say Joe. The 10 to 1 rule sounds realistic. But I have ultimate confidence in big Ed. He is not one to cut corners, leave out detail, or be colloquial. So I have confidence in the outcome. How the project will get coordinated across cyberspace is presently a mystery to me, but I sincerely believe that the video series is one of the most important mission that we'll ever undertake in ENTS. Invoking the old adage that one picture is worth a thousand words, well, one good video may prove more useful that a thousand email exchanges or BBS postings. We can show live examples of troublesome trees. We can combine blackboard graphics with live material. We can film a debate among Ents as to which sprig represents the highest point of a tree and then demonstrate how we determine for sure. The possibilities are endless.

Actually, I hadn't thought of filming a discussion among Ents about where the top of a trees lies, but why not? People viewing the video could quickly translate the video situation to trees that have challenged them or open their eye to the process.

Robert T. Leverett

A tree and Linguistics

by edfrank » Fri Apr 29, 2011 9:20 pm

Alan Weakley posted this item on Facebook linking to an article on Wikipedia. He wrote: "As a botanist and a linguist (and interested in culture and religion), I find this article and its extensive discussion of "linguistic background" ... rich. I can't fully appreciate it because my knowledge of eastern cultures, and logographs and ideographs, is primitive. Interesting, though a distraction [figuring out what member of the Pentaphylacaceae is in AL and SC, and that leads one down odd byways]."

http://en.wikipedia.org/wiki/Sakaki

Sakaki (Cleyera japonica) is a flowering evergreen tree native to warm areas of Japan, Korea and mainland China. It can reach a height of 10 m. The leaves are 6-10 cm long, smooth, oval, leathery, shiny and dark green above, yellowish-green below, with deep furrows for the leaf stem. The bark is dark reddish brown and smooth. The small, scented, cream-white flowers open in early summer, and are followed later by berries which start red and turn black when ripe. Sakaki is one of the common trees in the second layer of the evergreen oak forests.

Sakaki wood is used for making utensils (especially combs), building materials, and fuel. It is commonly planted in gardens, parks, and shrines.

Sakaki is considered a sacred tree in the Shinto religion along with other evergreens such as *hinoki* 檜 "Japanese cypress" and *kansugi* 神杉 "sacred cryptomeria". In Shinto ritual offerings to the kami 神 "gods; spirits", branches of sakaki are decorated with (shide) paper streamers to make tamagushi.

The Japanese word *sakaki* is written 榊 with a *kanji* character that combines *ki* 木 "tree; wood" and *kami* 神 "spirit; god", depicting "sacred tree; divine tree". The lexicographer Michael Carr notes,

Continued on from here is an extended discussion on the iconography used in the trees name. Check it out.

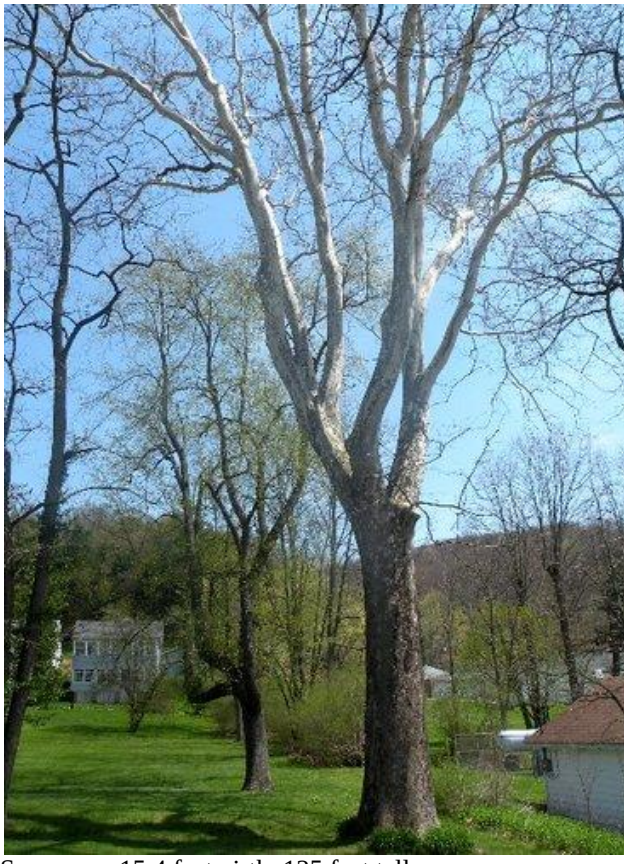
Ed Frank

Islands in the Tionesta PA Area

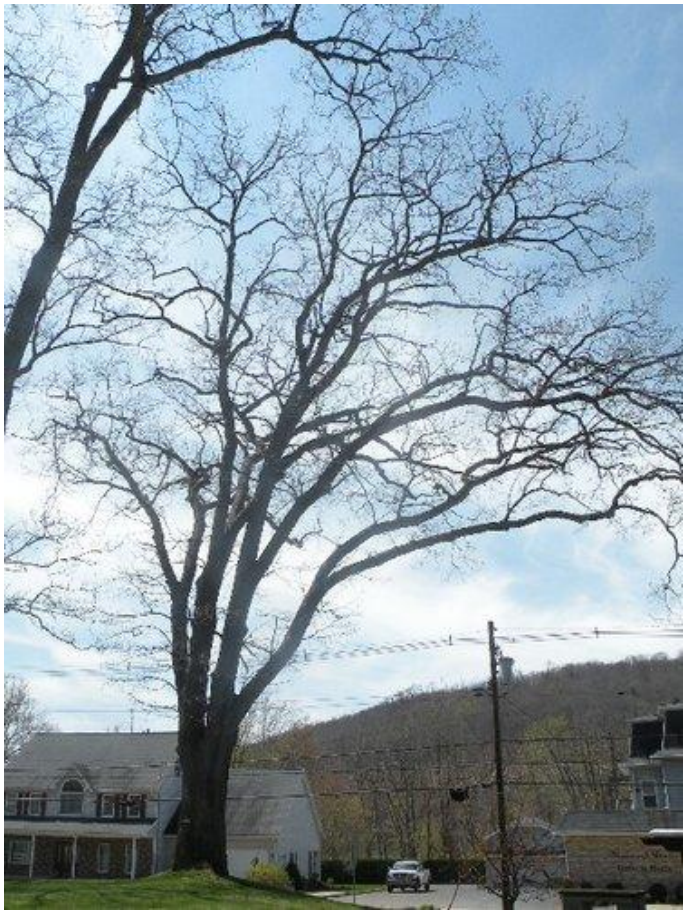
by edfrank » Sat Apr 30, 2011 10:56 pm

I woke up this morning to a bright sunny day. Bob and Monica had bugged out back to Massachusetts. I could not get in touch with Carl. Dale was out studying 18th century french military tactics, apparently in case Cook Forest is attacked by 18th century British soldiers. What was I to do?

I decided to head up to Tionesta to scout some of the minor islands in this stretch of the Allegheny River yet to be investigated as part of our ongoing study. The first stop was at the Sarah Stewart Bovard Memorial Library in Tionesta. I was hoping to find some hard copies of material I was using for a more detailed report on our Allegheny River Project, in that regard I struck out. In 2008 Dale Luthringer had measured two large white oaks and one large sycamore present on the library and adjacent grounds. I took the opportunity to get photos of two of these trees.



Sycamore, 15.4 feet girth, 125 feet tall



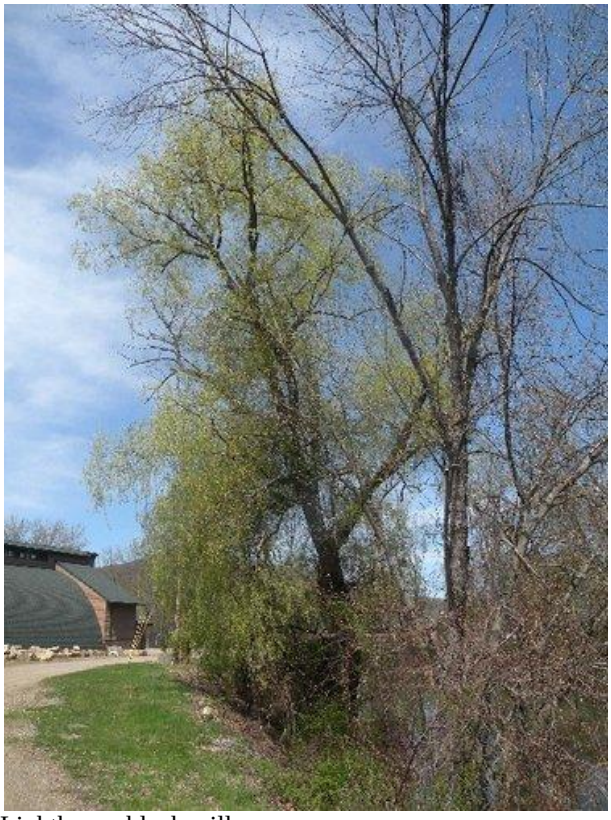
White oak, 13.5 girth, 84.2 feet tall

The next stop was Tionesta Island located in the Allegheny River at the mouth of Tionesta Creek. At least it was the uppermost of the Tionesta Islands in an 1855 map of the region by Babbitt. Babbitt writes: "TIONESTA ISLANDS - Of these Islands there are thirteen in number and extend down about two miles. Some of them are under a high state of cultivation and are owned by various individuals."

Lighthouse

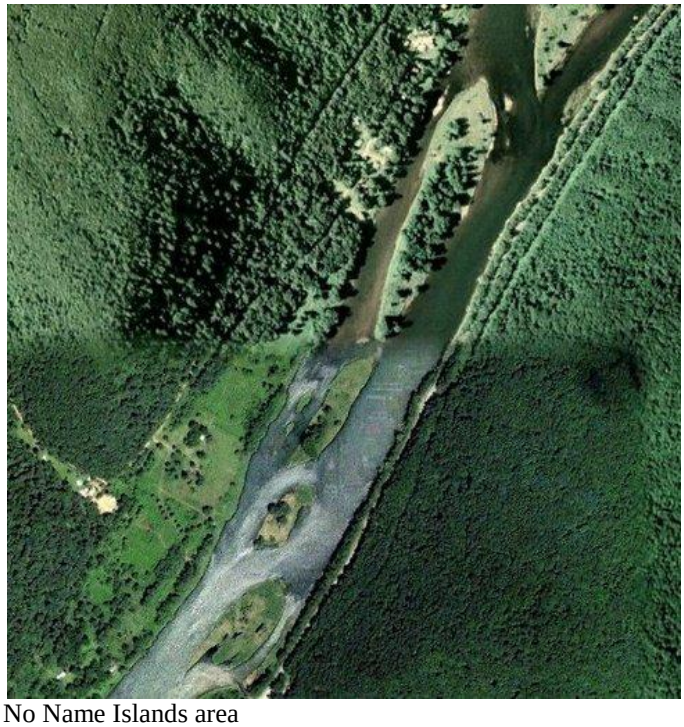
For many years the island was a gravel mine. Interestingly in 2006 a lighthouse was built on the island: "Tionesta, Pennsylvania recently dedicated the Sherman Memorial Lighthouse in honor of area resident Jack Sherman who designed and built the six-story lighthouse as a permanent tribute to his family's legacy. The lighthouse sits on the northern end of a 22-acre island that will soon also house the Fishing Museum of Pennsylvania. The lighthouse will serve as a lighthouse museum with a collection of 180 lighthouse replicas on display." Since that time the island has been called Lighthouse Island.

The channel that flowed along the eastern side of the island has been bridged by a road, likely during the gravel mining phase. It appears, but can't tell for sure during the present high flow, but I believe that some large culverts allows the water to flow under the road. Most of the trees were cut in the recent past and none were of any great size. The most notable was a large black willow on the eastern channel side of the island near the lighthouse.



Lighthouse black willow

Presently the island is basically flat on top with only a few trees scattered around the banks on the edge of the island. During a quick recon I found black willow, American Sycamore, red maple, silver maple, black locust, white ash, and a hawthorn sp. I am sure on a return trip we could find enough species to quickly do a Rucker Height Index, but it would not be very high. It had been my intent to measure one today, but I discovered my laser rangefinder was not in my gadget bag. I had visions of it being whisked away to Massachusetts. After all how did Bob acquire so many instruments? (I later found it in my laptop bag when i returned home.) The uppermost edge of refugee Island #1 visited by Carl Harting and Dale Luthringer on October 8, 2008 lies immediately downstream of the Tionesta island.



No Name Islands area

The next stop was a few miles up the road and upstream to No Name Island. No Name Island is lowermost of the seven islands that make up the Allegheny River Islands Wilderness. It is about ten acres in size. We had passed it several times while canoeing, but had not landed because the trees growing on it were rather small. Still, it was part of the wilderness, and we need to visit the island and do some measurements. I could not actually get to the island today, but I wanted to take some panoramas from the shore. There is a commemorative wayside marker along Route 62 dedicated to Howard Zahniser (1906-1964) a wilderness advocate instrumental in getting the Wilderness Act passed in 1964. No Name island lies immediately opposite the wayside marker.

No Name Island (upper end pan)

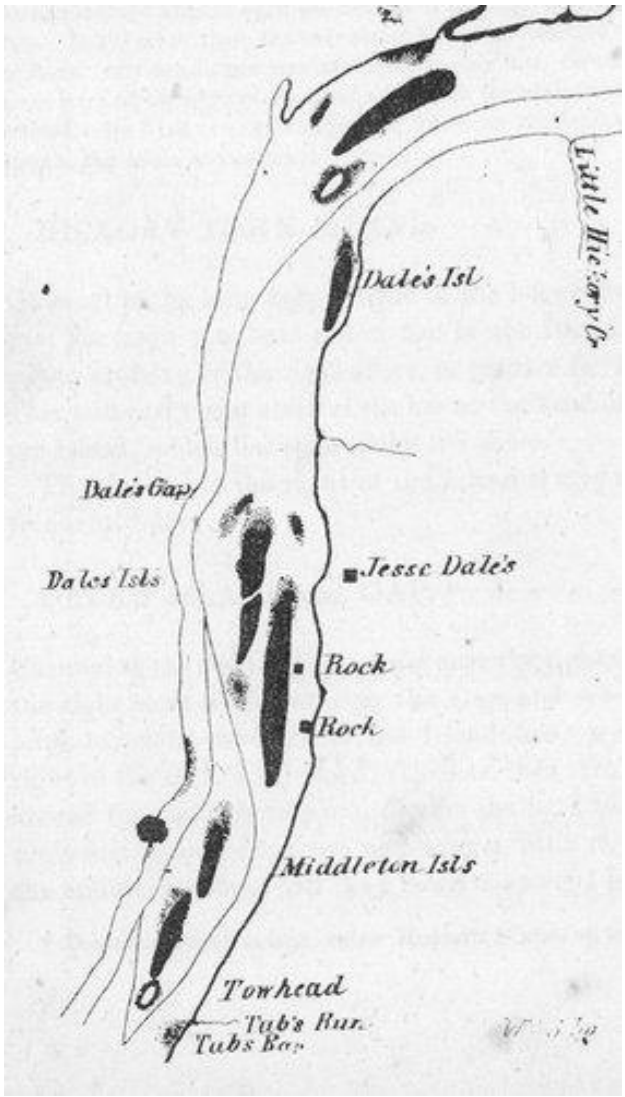
No Name Island (lower end pan)

No Name Island Lower End

Central portion of No Name Island

No Name Island 2 (Middleton island 2)

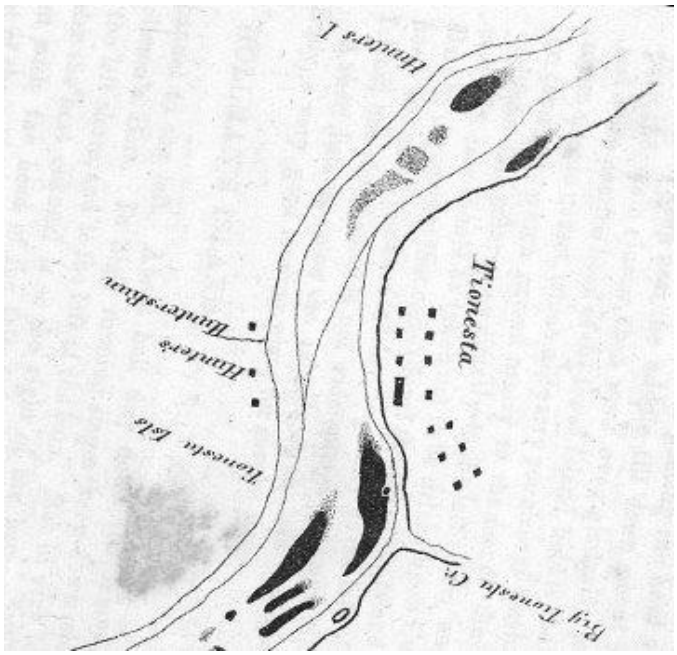
No Name Island 3 (towhead)



No Islands, Dale's Island, Dale's Island's (Baker Island), Middleton Islands (No Name Island)

Interestingly the island actually had a name on the 1855 map by Babbitt. He listed three islands found here a the Middleton Islands and a "towhead" for the islands. The uppermost of the Middleton Islands is what is presently called No Name Island. Visible from shore are silver maple, sycamore, and black willow. None are very high.

Hunters and May's Islands



Hunters and may's Islands to Tionesta from Babbitt 1855

Next I went back downstream a short way to find two islands marked on the 1855 map, that are now attached to the shoreline. Hunters Islands are shown on the Babbitt (1855) map as an island on the west side of the Allegheny River. The opposite Hunters Island on the map is May's Island referred to in the text "then turn out to the left so as to be close to the

tow-head while passing it at the foot of the Island, and when past it work over to the left, so as to pass about midway between Hunter's and May's Island." May's Island is presently completely occupied by the Eagle Rock Campground associated with the Eagle Rock Motel, canoe rental, and kayak rental. The present owner told me that the occasionally flowing very channel that separated the island from the shore proper was filled in when the campground was constructed in 1972. There are few trees left in the campground area. They are almost exclusively silver maple trees. One sycamore is also present. None are of any large size, but should be measured simply for the sake of thoroughness. It is relatively small in size and would not take long to complete. An eagles nest can be found on the far shore in a white pine downstream from the motel.

May's Island (Eagle Rock Campground)

Hunter Island (downstream end)

Hunter's Island could be seen across the river. This is also privately owned. The owner of the campground indicated this former island had also been connected artificially to the shore by its owners. This island is undeveloped. There is one large sycamore that stands much taller than the rest of the trees on the island. It would be worth measuring and likely can be reached during normal flow from the far shoreline without need for a canoe.

The final stop of the day was an island on the 1855 map marked as "Dale's Island." Actually it is the uppermost of three islands in the Dale's Island's group. The lower two of the islands have since that time merged to form Baker Island. Present day maps shows the island to now be a peninsula. During the high flows present today, it was once again an island. It is on US Forest service land behind a school.

Dale's Island

Dale's Island

I stopped and spoke to some of the homeowners that live on the adjacent property and we talked about our river Islands project and Dale's Island. There were some good sized silver maple trees, and sycamore trees, but nothing of exceptional size. Under normal flow conditions the channel between the island and shore is dry and these trees could be easily measured at that time. I also saw black willow, basswood, and white ash trees on the island area proper. I am sure a 10 species Rucker Height Index could be generated fairly easily. The lower end of the peninsula floodplain adjacent to King Island could be seen across the river.

Edward Frank

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