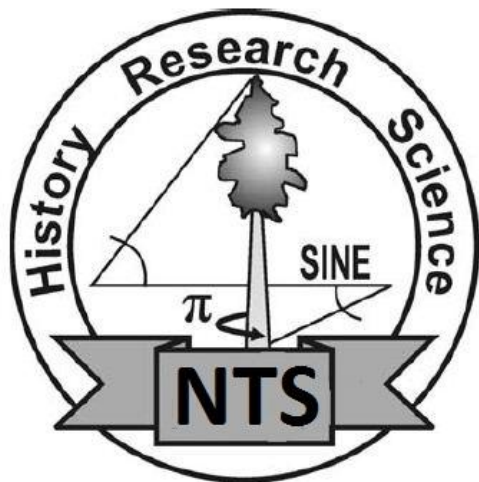




eNTS

The Magazine of the
Native Tree Society
Volume 2, Number 05,
May 2012



eNTS: 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>

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Mission Statement:

The Native Tree Society (NTS) is 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. 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 regional chapters is free and open to anyone with an interest in trees living anywhere in the world.

Current Officers:

President—Will Blozan
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Membership and Website Submissions:

Official membership in the NTS 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 NTS website and the NTS BBS. The editorial staff of *eNTS: the Magazine of Native Tree Society* are solely responsible for its content.

COVER: Beech with the white fungus is Aurantiporus fissilis, England. Photo by Anthony Croft.

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Those interested in reproducing materials (articles or photographs) from the *eNTS: the Magazine of the Native Tree Society* should contact the Editor-in-Chief and/or the associated author/photographer directly for permission.

Editor's Corner

By Edward Frank

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

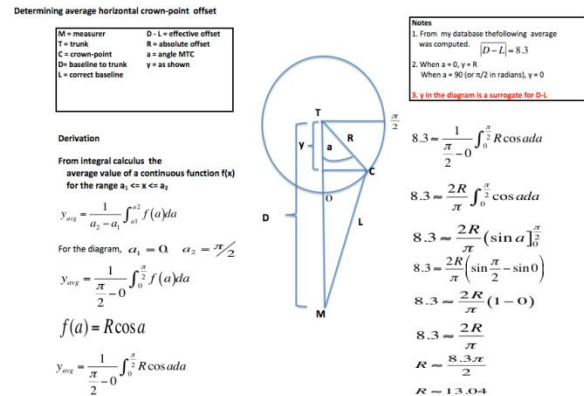
This has been another successful month for the Native Tree Society. One of the important events of the month was the creation of a series of interest groups within the organization. This was not a splashy event, like finding a new giant tree, but I think it will affect the organization as a whole for a long period of time. For a number of months I had been corresponding with Bob Leverett and some of the other long time members of the Native Tree Society about creating a series of interest groups to help emphasize the interests of the members and put a more coherent and professional face on our organization in our internet presence.

Groups are similar to committees, but are more loosely organized and without regular meetings. I am looking for members to volunteer to be Group Chairmen and Vice-Chairmen for each group. I have people in mind to invite to these positions if no one volunteers. The Chairmen and Vice Chairmen will not have any formal duties aside from outreach to potential new members and promoting the specific goal of the group and broader goals of the organization.



There was a series of videos of all of presentation at the Cook Forest, PA Advanced Tree Measuring Workshop held in April 2012. The videos took some time to edit, but what really took a while was that they each took on the order of twenty hours to upload to Youtube for each video. I hope this is the start of

trend of posting videos of our events and presentations to the internet.



Robert Leverett continued to develop his data regarding the comparisons between tangent based tree height measurements and sin based tree height measurements. Behind the scenes we are working with American Forests and LTI to develop a series of webinars on tree measurements. This is a tremendous opportunity for the Native Tree Society.



Michael Gatonska has been doing some very interesting stuff recording the different sounds produced by different types of trees. This exploration of the natural soundscapes opens a new horizon for the organization.

I won't go over everything the members of the NTS have accomplished this month, but a quick scan of the Table of Contents will show we have accomplished much. Let's keep the Native Tree Society moving forward and continue our explorations.

Re: Cook Forest, PA April 18-19

by **Sheri Shannon** » Tue May 01, 2012 11:22 am

NTS, Here are a few photos from the event passed along by Sheri Shannon of American Forests:



Joan Maloof, Old-Growth Forest Network and Sheri Shannon, American Forests



Dale at eastern White Pine - along the Longfellow Trail

Sheri Shannon



Group Shot April 19, 2012



Old-Growth Forest Network Dedication at Forest Cathedral Area, Cook Forest State Park, PA

[Cook Forest, PA April 18-19, 2012 - Videos](#)

by **edfrank** » Thu May 03, 2012 9:20 am

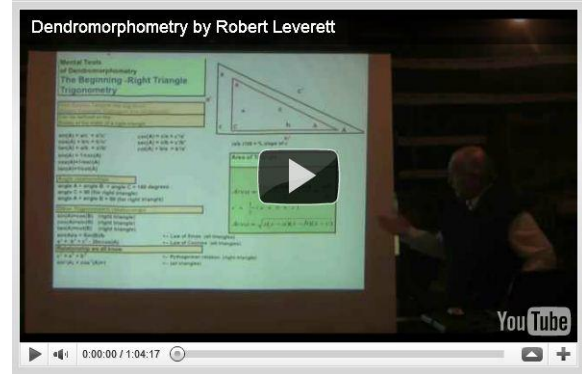
Below are videos of the presentations made at the Advanced Tree Measuring Workshop held by NTS and Cook Forest State Park, PA at Cook Forest on April 18, 2012 and some video of the two field sessions held that day. Videos were recorded and edited by Edward Frank. All of the videos were shot in High Definition and posted at 30 fps 720 HD format. The videos featuring Dale Luthringer and Joan Maloof will also be posted here later as a narrated slide show featuring the audio from their presentations used to narrate the Power Point slides used.

[Video: Dendromorphometry by Robert Leverett](#)

by **edfrank** » Thu May 03, 2012 9:20 am

'Dendromorphometry: The Art and Science of Measuring Trees in the Field' by Robert Leverett Part of the mission of the Native Tree Society is to develop ever more accurate methods for measuring the dimensions of trees. This involves testing new equipment, developing mathematical models and measurement protocols, and analyzing the sources of measurement error. Join co-founder and Executive Director of Native Tree Society, Robert Leverett, at the Log Cabin Inn Environmental Learning Classroom, as he takes us through the methods developed and used by the members of NTS, and shares the successes that NTS members are enjoying.

Advanced Tree Measuring Workshop
April 18-19, 2012, Cook Forest State Park, PA



<http://www.youtube.com/watch?v=S5CVjLIAGvs&feature=g-upl>

[Video: Dendromorphometry: Methods & Materials](#)

by **edfrank** » Thu May 03, 2012 9:22 am

'Dendromorphometry: Methods & Materials', by Robert Leverett and Dale Luthringer with Laser Technology, Inc. (LTI), and other NTS members, meet at the Log Cabin Inn Environmental Learning Classroom. Learn the latest tree measuring methods by comparing the old ways and learning the new with hands-on training using various measuring equipment in the field.



<http://www.youtube.com/watch?v=1XGDvtd5bnI&feature=relmfu>

Advanced Tree Measuring Workshop
April 18-19, 2012, Cook Forest State Park, PA

[Video: Longfellow Pine Hike, Cook Forest State Park, PA](#)

by **edfrank** » Thu May 03, 2012 9:24 am

'Measuring the Giants', by Dale Luthringer, Robert Leverett, and other NTS members, meet at the Log Cabin Inn Environmental Learning Classroom. Join us for an interpretive hike to re-measure the Longfellow Pine, tallest known tree north of the Great Smoky Mountains, last listed at 183.7ft high!



<http://www.youtube.com/watch?v=IbvCIVFf3Y8&feature=relmfu>

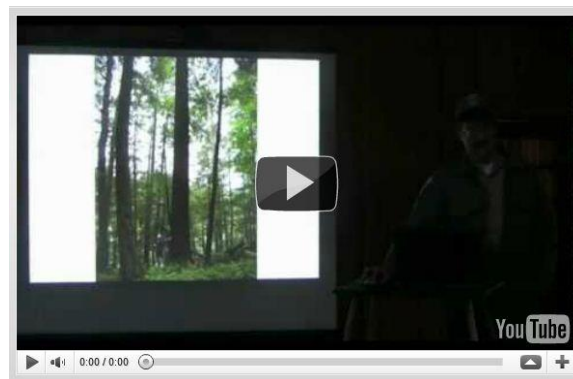
Advanced Tree Measuring Workshop
April 18-19, 2012, Cook Forest State Park, PA

[Video: Noteworthy Old Growth Forests of Western Pennsylvania](#)

by **edfrank** » Thu May 03, 2012 9:25 am

Presentation on the exceptional old growth forests and trees of northwestern, PA presented by Dale Luthringer, EES CFSP, at the Sawmill Center for the Arts Classroom.

Advanced Tree Measuring Workshop
April 18-19, 2012, Cook Forest State Park, PA



<http://www.youtube.com/watch?v=BLCJ568ii7U&feature=relmfu>

[Video: The Old-Growth Forest Network: America's Next Idea](#)

by **edfrank** » Thu May 03, 2012 9:27 am

'The Old-Growth Forest Network: America's Next Idea' -- Dr. Joan Maloof, professor emeritus Salisbury University.



<http://www.youtube.com/watch?v=TjR161SilSg&feature=relmfu>

Old-Growth Forest Network
<http://www.oldgrowthforest.net/>

Advanced Tree Measuring Workshop
April 18-19, 2012, Cook Forest State Park, PA

'Video: 'American Forests Big Tree Program' by Sheri Shannon

by **edfrank** » Mon May 14, 2012 3:32 pm

'American Forests Big Tree Program' by Sheri Shannon

Advanced Tree Measuring Workshop
April 18-19, 2012, Cook Forest State Park, PA

'American Forests Big Tree Program' Sheri Shannon, Education & Outreach Manager for American Forests, at the Sawmill Center for the Arts Classroom.



http://www.youtube.com/watch?v=572K_3ao8iM

American Forests Big Tree Program
<http://www.americanforests.org/bigtree/>

Silver Maple and Red Oak soundscapes

by **michael gatonska** » Tue May 01, 2012 1:15 pm

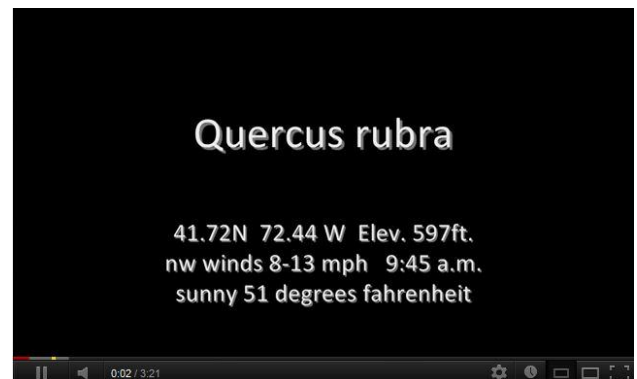
During a fairly chilly day in early April, I captured this soundscape of a Silver Maple. The weather was cloudy, soft but steady showers. There are basically three levels of activity in this recording. The first level, or foreground, is the percussive blips and pings of a soft rain hitting the roof of a porch from where I

made the recording. The second level of sounds, or what we may consider the middleground, is the banter and varied songs of quite a few different birds. Finally, in the background, we can hear the sound of the silver maple, periodically gushing in with its masked tones as the winds would pick up and then recede.



<http://www.youtube.com/watch?v=rC86jSvGThY>

This is the first in a series of soundscapes that I captured of a Northern Red Oak tree. Recorded in very early spring, the dry dead leaves of the red oak still remain affixed to their branches. In winds of varying speeds, the leaves create a rhythmic and musical rustling that increases and decreases in sound-activity-intensity and dynamic levels as the leaves react to wind/meteorological conditions. I hear this soundscape as a single and distinguishable sound, even though the partials are nonharmonic; a percussive effect with no clear pitch, but clearly identifiable and characteristic of the red oak during this time of year in New England.



<http://www.youtube.com/watch?v=FkUoOBvhdzo>



Photo of the Silver Maple recording site:

I just started capturing audio of trees with leaves. Once I find a fairly isolated cottonwood or a cluster of them and the wind conditions are right, I will record - there are tons of cottonwoods along the CT River.

In the meantime, I just recorded a walnut tree and an elm, and I am experimenting with a much wider and deeper parabolic dish. Because I have to collaborate with the wind, I am trying to develop some techniques to drastically minimize or eliminate any points of distortion in the audio.

Michael Gatonska

“What is essential, is invisible to the eye” –Antoine de Saint-Exupery

http://www.youtube.com/user/EcoEarSoundscapes?o=0&feature=results_main

Re: Silver Maple and Red Oak soundscapes

by **michael gatonska** » Fri May 04, 2012 5:15 pm

Hi Andrew-

I recently picked up a bigger and deeper dish that I just tried out. I am hoping to be able to use it in heavier winds, to prevent any distortion. I am also trying to come up with a method to attach the dish to a branch, in order to remove the 'human' touch...

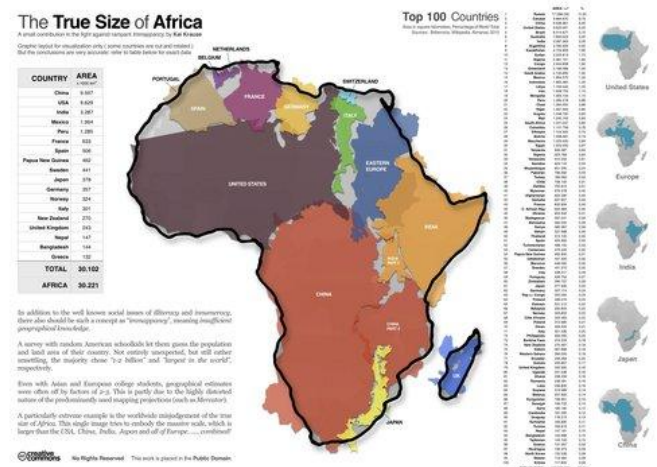
A while back I had found a pretty good internet page that really went into some detail on the dish, since I was looking into the same question(s) you have asked. In a general way, the dish really helps to focus in on and bring distant sounds into hearing.

http://www.wildlife-sound.org/equipment/stereo_parabol/index.html

Michael Gatonska

The true size of Africa

by **edfrank** » Sun May 06, 2012 3:30 pm



<http://flowingdata.com/2010/10/18/true-size-of-africa/>

<http://www.informationisbeautiful.net/2010/the-true-size-of-africa/>

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

Spring equipment tests

by dbhguru » Tue May 01, 2012 4:49 pm

NTS, It is that time of year when I check the calibration of my individual lasers. This time, I decided to compare all of them against the absolutely correct distance, which I can get from my Bosch GLR825, which is dead on. Its advertised accuracy is +/- 1 millimeter.

I shot distances to 16 targets without trying to find the changeover points. I didn't use a tripod, so these field tests simulate what one often does in the field. Afterwards, I put my LTI TP200 on a tripod and did 15 trials, first locating the changeover point for the TP200. The litmus test was the comparison to the GLR825 distance. The results all speak for themselves. The TP200 presently is my most accurate instrument, slightly surpassing the TP360 when used in the field.

Robert T. Leverett

Field conditions: no tripod or point of change-over															
No.	GLR825	PS440	TP200	TP360	F550	PS550	Bushnell 800	Best performer		PS440	TP200	TP360	F550	PS550	Bushnell 800
1	77.06	78.00	77.00	76.50	78.00	76.50	79.50	TP200		0.94	0.06	0.56	0.94	0.56	2.44
2	84.80	85.50	84.50	84.00	85.00	85.50	87.00	F550		0.70	0.30	0.80	0.20	0.70	2.20
3	96.60	97.50	96.00	96.00	97.00	96.00	96.00	F550		0.90	0.60	0.60	0.40	0.60	0.60
4	137.20	138.00	136.50	137.00	139.00	138.00	138.00	TP360		0.80	0.70	0.20	1.80	0.80	0.80
5	159.50	160.50	160.50	160.00	158.00	159.00	159.00	TP360/PS550/Bushnell		1.00	1.00	0.50	1.50	0.50	0.50
6	91.35	91.50	91.00	91.00	92.00	91.50	93.00	PS550		0.15	0.35	0.35	0.65	0.15	1.65
7	162.15	163.50	161.50	161.50	161.00	160.50	162.00	Bushnell		1.35	0.65	0.65	1.15	1.65	0.15
8	67.27	67.50	66.50	66.50	67.00	67.50	69.00	PS550		0.23	0.77	0.77	0.27	0.23	1.73
9	87.77	88.50	87.50	87.00	89.00	88.50	87.00	TP200		0.73	0.27	0.77	1.23	0.73	0.77
10	160.00	162.00	160.00	160.00	158.00	159.00	162.00	TP200/TP360		2.00	0.00	0.00	2.00	1.00	2.00
11	122.58	126.00	122.50	122.50	125.00	124.50	123.00	TP200/TP360		3.42	0.08	0.08	2.42	1.92	0.42
12	194.16	196.50	194.50	194.50	198.00	195.00	195.00	TP200/TP360		2.34	0.34	0.34	3.84	0.84	0.84
13	88.12	90.00	88.00	87.50	88.00	87.00	90.00	TP200/F550		1.88	0.12	0.62	0.12	1.12	1.88
14	104.77	106.50	105.00	104.50	106.00	105.00	105.00	TP200//PS550/Bushnell		1.73	0.23	0.27	1.23	0.23	0.23
15	146.81	145.50	146.50	146.00	145.00	145.50	144.00	TP200		1.31	0.31	0.81	1.81	1.31	2.81
16	114.18	114.00	114.50	114.50	114.00	112.50	111.00	PS440		0.18	0.32	0.32	0.18	1.68	3.18
Avg	118.40	119.44	118.25	118.06	118.75	118.22	118.78		Avg Diff	1.23	0.38	0.48	1.23	0.88	1.39
Used tripod and point of change-over															
No.	GLR825	TP200	Diff												
1	42.52	42.50	0.02												
2	57.14	57.00	0.13												
3	87.55	87.50	0.05												
4	104.56	104.50	0.06												
5	89.08	89.00	0.08												
6	95.46	95.00	0.45												
7	104.03	104.00	0.03												
8	106.30	106.00	0.30												
9	108.84	108.50	0.34												
10	90.63	90.50	0.13												
11	15.86	16.00	0.14												
12	21.00	21.00	0.00												
13	24.45	24.50	0.05												
14	25.76	25.50	0.25												
15	20.63	20.50	0.13												
16															
Avg	66.25	66.13	0.14												

[Re: In search of the Boogerman Pine and the Sag Branch Tulip, GSMNP](#)

by **pdbbrandt** » Thu May 03, 2012 11:50 am

Thanks everyone for your comments. I strongly believe that the more children (and people of any age) we get out into nature to enjoy trees, the better stewards we'll be of the Earth. Here's a neat program that gets kids climbing into the trees to learn about forest ecology:



<http://www.youtube.com/watch?v=qdPFNQhWmdA>

I'd like to see more programs like this!

On another note, my daughter gave a presentation yesterday at school about her trip to the Smokies. She found a cool way to animate the high resolution stitched picture I took of her at the tree. That slide from her powerpoint presentation is attached below. If you have the latest version of powerpoint and switch to "presentation view" the picture should pan up the tree, then back down the tree as you press the space bar (or the right arrow key). Apparently that got some oohs and ahhs during her presentation. The other pictures of tulip poplar leaves and flowers were taken in another poplar we climbed back at home.

 [Sag Branch Tulip Poplar.pptx](#) 1.04 MiB

Patrick Brandt

[Native Tree Society Interest Groups](#)

by **edfrank** » Thu May 03, 2012 3:34 pm

NTS, For a number of months I have been corresponding with Bob Leverett and some of the other long time members of the Native Tree Society about creating a series of interest groups to help emphasize the interests of the members and put a more coherent and professional face on our organization in our internet presence. Groups are similar to committees, but are more loosely organized and without regular meetings. I am looking for members to volunteer to be Group Chairmen and Vice-Chairmen for each group. I have people in mind to invite to these positions if no one volunteers. The Chairmen and Vice Chairmen will not have any formal duties aside from outreach to potential new members and promoting the specific goal of the group and broader goals of the organization.

Bob sent out the following note to the other core members of the organization:

Hi Folks,

Sometime back, Ed suggested that he believed the time had come to take NTS forward organizationally. Ed developed the concept of an Executive Committee and a series of Groups. Ed and I have been communicating on the idea since. What follows is the result. We present to you all for consideration. At first, I was reluctant to go forward, worrying about adopting a burdening structure that diverted us from what we enjoy most. But after having thought it through, I don't see any negatives, and agree with Ed on the positives. But we must move forward as a group. I have no more say-so than the rest of you. So the time has come to present our ideas to the rest of you, the other officers of NTS. In the list of groups, we propose chairman and vice chairman. These are just suggestions based on our appraisal of interest or available time.

Ed's point to me in a telephone discussion is that this structure presents a more coherent and professional view of NTS to the outside world regardless of how active the groups are. Even if only window dressing, the structure has value in communicating our

credentials and experience. And all groups do not need to be established at the outset. As a minimum, we would establish the Executive Committee, the Scientific Advisory Committee, and at least the Science Advisory Group; Arts, Aesthetics, and New Media Group; Dendromorphometry Group; and Internet and Communications Group.

Bob

Comments and suggestions from all of the member are welcome. I will great a new forum for groups, and sub-forums for each individual group in which specific group management posts can be made.

People who want to nominate themselves or others for a Chairmen or Vice Chairmen position can email me individually

Edward Frank

Native Tree Society Interest Groups

Introduction

The Native Tree Society has grown over the years since its founding in 1996. The organization has expanded from its original core focus area of New England and the central Appalachians to areas all across North America and with pockets of active members located elsewhere in the world. The numbers of members have increased over this time and we have developed a notable internet presence for the organization. We have outgrown our original name, the Eastern Native Tree Society, and recently transitioned to become simply the Native Tree Society. We have formally created two sub-chapters in the organization, the Eastern Native Tree Society and the Western Native Tree Society, to acknowledge the expanding membership within those two geographical regions. In discussing the history of the organization Robert Leverett wrote: "We didn't want to have to acquire assets, worry over schedules, newsletters, and a fiddle with a lot of administrative details that would detract from the mission. Creating ENTS primarily as an internet based -organization seemed to be the answer."

The time of ENTS being a small, informal

organization has passed us by. We need to develop a more formal structure for the organization as it continues to grow and expand, while still remaining true to our overall mission. Towards that goal we plan to incorporate some organizational structure into the Native Tree Society. First, we are going to expand the membership of the Executive Committee beyond the current the original or founding members to eight members. Second we would like to create a Scientific Advisory Board to provide scientific guidance in the design and implementation and review of scientific research being conducted by or on behalf of the Native Tree Society. Third we see the need for a series of Groups, each headed by a Chairman and one or two Vice Chairman, that will serve to reflect and showcase the interests and expertise of our members. Members may choose to join and to participate in as many different groups as they chose.

Executive Committee

The Executive Committee will provide executive and administrative functions for the organization. It will have the power to create or disband other formal committees, boards, groups, chapters, and other subgroups within the organization. It will appoint or approve the chairmen and vice chairmen, or other titled head of each formal subgroup and also to remove or replace those subgroup heads as they deem necessary. The Executive Committee will have the responsibility to review and approve or disapprove any commitment or contract by the Native Tree Society that involve other individuals, organizations, groups, or agencies. It will oversee the day to day functions of the Native Tree Society organization. Individual members of the Executive Committee will have the discretionary power to make day to day decisions involving the organization without prior approval of the entire committee, but major decisions will be subject to review and approval of the full committee. General business of the Executive Committee may be conducted via telephone, email, conference, or other similar means. A majority of the members will meet in person at least once per year to discuss issues involving the Native Tree Society organization. The proposed committee will consist of the following positions in NTS (ENTS and WNTS): President, Vice President, Executive Director,

Webmaster, Editor of Bulletin. This includes, Will Blozan, Don Bertollette, Lee Frelich, Michael Taylor, Bob Leverett, Ed Frank, Don Bragg, and Steve Galehouse.

Scientific Advisory Board

The Science Advisory Board would consist primarily of credentialed members of the organization and other members with representing specific areas of expertise that would serve as advisers to the group on scientific matters. They would not be required to endorse any specific finding or papers published by the organization, nor would their names appear on any research report by the organization in which they were not a participating author. The members of the Scientific Advisory Board would provide scientific guidance in the design and implementation and review of scientific research being conducted by or on behalf of the Native Tree Society.

(There are many PhD's loosely associated with NTS or that hold memberships, various Master's and BS people also, and authors of books on Old-growth. I don't think it would hurt anyone's professional standing to be a member of a "scientific advisory Board." I would include those with degrees in non-forestry related fields to emphasize the variety of expertise along with those with forestry degrees. For example we have Ernie Ostuno – meteorology, Larry Baum – PhD in Theoretical Physics, Edward Frank with geology, Doug Bidlack with PhD in entomology, etc.)

Groups

As part of the ongoing evolution of the Native Tree Society, we propose a series of member groups to better highlight and reflect the expertise, experience, and interests of our members. These are essentially a less formal equivalent of a committee with a larger membership in each group. NTS members may ask to be added to any group, or may opt to be removed from a particular group, and may be members of more than one group at one time. Members can participate as they have time or desire to do so and are encouraged to participate in all aspects of the organization no matter what group or groups in

which they are members. Each group will be headed by a Chairman and one or two Vice Chairmen. The groups would serve not only to spark interest within the NTS itself, but would also emphasize the focus of the organization as well to non-members considering working with or joining the Native Tree Society. More groups can be created or the initial groups can be reorganized once the groups structure is in place. These are the initial groups we are planning to create:

Arts, Aesthetics, and New Media Group: Members who are professional artists, musicians, photographers, or otherwise have an abiding interest in this subject. We have had many posts by Jennifer Dudley, Andrew Joslin, Karl Cronin, and recently some really neat stuff by Michael Gatonska. We have artists, photographers, and videographers in the group that can and do contribute.

Forest Canopy Research Group: Members involved in or interested in forest canopy research. Aside from Will Blozan, Bart Bouricius, and Robert Van Pelt, we have not made great strides in this area, but it is an up and coming field that we need to emphasize. Perhaps we can attract more people and get more deeply involved with canopy research. Tree Climbers International and NTS are planning an event in 2013 to spur more canopy research by average tree climbers.

Tree Climbing and Recreational Activities: The purpose of this group is to promote outreach and coordination with other groups involved in outdoor recreational activities such as recreational tree climbing, geocaching, hiking, and birding. We have many people who are recreational tree climbers. Efforts by Andrew Joslin have helped us link up with Patty Jenkins (new NTS Member) of Tree Climbers International as a partner for future efforts. We share much in common with other outdoor enthusiasts and we hope to forge working alliances with some of these groups and attract new members from their ranks.

Dendromorphometry Group: A group for those seriously into tree measurement and would include among others Robert Leverett, Michael Taylor, Will Blozan, and Dale Luthringer and others involved with detailed tree measurement and modeling.

Multinational Coordination Group: Members who are interested in expanding our membership and contacts into areas around the world. Initial membership would also include international (non US) members and members involved in tree and forest research working in different countries around the world.

What can we do to increase membership in areas outside of the United States? What can we do to increase our ties and relationships with groups from elsewhere in the world? We need to develop a network of tree related organizations encompassing the entire world.

Dendrochronology and Old Growth Forest Group: Members involved with dendrochronology and investigations of old-growth forests. You really can't be serious about studying forests if you are not considering dendrochronology and old growth forest systems. One of our founders, Dr. David Stahle is a dendrochronologist, Dr. Neil Pederson is a prominent dendrochronologist working all over the world. Other members are also involved with dendrochronology.

We have people like Robert Leverett who has authored books on old growth and Dr. Joan Maloof, founder of the Old-Growth Forest as members. This should be a point of emphasis in our organization.

Forest Ecology and Processes: Members involved with or interested in forest ecology and processes.

Forestry and Arboriculture Group: Members who are professional foresters, arborists, landscapers, and naturalist working in parks and arboreta. We have very few foresters in the group and I would like to see more. There are many arborists in the NTS, but those represent only a tiny fraction of those who work as arborists around the world. Some of the neatest trees are found in urban settings. I would like to see some outreach to the arborist world so that interesting trees they encounter are documented.

Measurement and Exploration Group: Members who are contributing measurements to the group or detailed site descriptions of places they explore. A group for the general membership - a place to get started and participate open to the generalists among us.

Internet, and Communications Group: Members who are involved with tree related internet activities, maintaining tree websites, databases, etc. Many people have websites about trees. Some of State Coordinators for American Forests. The goal of the group would be to help each other with our individual websites and with the NTS internet presence. Mitch Galehouse has contributed enormously with the ongoing development of our internet database.

LiDAR, and Computer Modeling Group: Group working on the increased utilization of LiDAR and other modeling efforts to better locate, explore, and document tree sites. I would like to see some training videos developed (I have ideas) for people trying to get started using the tools.

Edward Frank

Handful of Heavyweight Trees Per Acre Are Forest Champs

by **edfrank** » Thu May 03, 2012 9:02 am

Handful of Heavyweight Trees Per Acre Are Forest Champs

<http://www.sciencedaily.com/releases/2012/05/120502184416.htm>

Science Daily (May 2, 2012) — Big trees three or more feet in diameter accounted for nearly half the biomass measured at a Yosemite National Park site, yet represented only one percent of the trees growing there. This means just a few towering white fir, sugar pine and incense cedars per acre at the Yosemite site are disproportionately responsible for photosynthesis, converting carbon dioxide into plant tissue and sequestering that carbon in the forest, sometimes for centuries, according to James Lutz, a University of Washington research scientist in environmental and forest sciences. He's lead author of a paper on the largest quantitative study yet of the importance of big trees in temperate forests being published online May 2 on PLoS ONE.

[Re: Handful of Heavyweight Trees Per Acre Are Forest Champs](#)

by **Don** » Fri May 04, 2012 2:48 pm

Anybody who has travelled to and/or lived near the West, and had a chance to pass through/visit the Classic Mixed Forest band of vegetation that runs the length of California's west-side of the Sierra Nevadas, or the Temperate Rain Forest that runs from the California border (coastal redwoods) up through Oregon and Washington, HAS to be amazed at the remaining forests of high density, high volume, mixed species trees. While I haven't had the chance to talk with Mike Taylor on this, I suspect he'd have something to add...he's seen some of the best!

I was pleased to see the following statement:

"Before the fires were started, crews raked around some of the large trees so debris wouldn't just sit and burn at the base of the tree and kill the cambium, the tissue under the bark that sustains trees," Lutz said

as I had come to similar conclusions, after studying the effect of raking debris/duff away from the base of all large ponderosa pines within the plots studied in my research at Grand Canyon National Park. This prevented the cambium and root system from injury that it would have sustained from the burning duff.

Once the fire burns into the duff, it no longer needs oxygen, and burns more intensely and longer, much like peat burns without oxygen. I concur with Lutz's conclusions and support the management of wildfire in returning such forests towards pre-settlement wildfire regimes, which is to say, a lower burn intensity, higher frequency wildfire regime.

Don Bertolette

[Re: Handful of Heavyweight Trees Per Acre Are Forest Champs](#)

by **Bart Bouricius** » Sat May 05, 2012 6:07 pm

This is Important information, I remember in the late 80's when I was more involved in tropical forest preservation, there was an article by a tropical forest

ecologist pointing out that in tropical moist and rain forests, the bulk of the sequestered above ground carbon was in the boles of the forest giants. Why should it be any different in other forests. As we log the oldest trees, we are creating a massive carbon debt that essentially can never be repaid, especially considering how long it takes for these trees to grow, and how much damage the logging does to the soil by exposure to sun and drying, creating conditions where the invasive plants do best. If you think about it, the old concept of carbon neutrality relative to regular managed deforestation, even if it were true, would mean that the forests, which next to the oceans, are probably the most important carbon sink on the globe, can not possibly fulfill this function as long as they are being regularly cut. I think we need more than a few museum old growth trees, but a commitment to vastly increase the area on which we will permit the trees to get old and stay indefinitely unmolested.

Bart Bouricius

[Re: Handful of Heavyweight Trees Per Acre Are Forest Champs](#)

by **Rand** » Sat May 05, 2012 8:28 pm

When I visited the sequoia's I noticed that most big trees had burn scars in the concavities between the major roots. Judging by the heaps of duff re-accumulated I'm assuming that is where they came from. Here's a couple of pictures comparing the Boole tree today versus a historical picture:





You can see the piles of duff and the greater fire damage.

BTW if anyone gets a chance, burning a piece of sequoia bark is fun to watch. The resin just sorta boils out of the fibrous matrix, leaving behind a carbonized mass that looks a lot like steel wool.

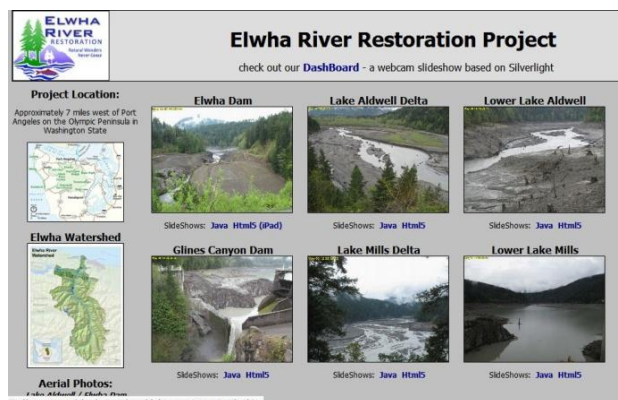
Surprisingly enough, it's the same principle used by the heat shields in the early space program to protect vehicles from re-entry.

http://www.centennialofflight.gov/essay/Evolution_of_Technology/reentry/Tech19.htm

Rand Brown

Re: Elwha River Dam Removals begins

by **Rand** » Tue May 01, 2012 10:17 pm



Some updates on the demoliton:

<http://www.video-monitoring.com/construction/olympic/js.htm>

Rand Brown

Re: Elwha River Dam Removals begins, WA

by **PAwildernessadvocate** » Wed May 02, 2012 9:26 am

Here are a couple of articles about the silt from dam removal now entering the Strait of Juan de Fuca from the Elwha. Most of this is from behind where the lower dam was, as that dam is now completely removed.

I'm sure all of this sediment will replenish Ediz Hook quite nicely now. (Ediz Hook is the big spit that creates the natural harbor for Port Angeles - sort of like Presque Isle & Erie.) Hang on just a little longer salmon, very good times are a-comin' soon!

This whole process almost makes me wish I was living in Port Angeles again so I could watch the whole thing unfold first-hand!

<http://www.peninsuladailynews.com/article/20120429/news/304299982/0/news/the-big-muddy-sediment-plume-pours-out-of-newly-freed-elwha-river>

The big muddy: Sediment plume pours out of newly freed Elwha River

http://seattletimes.nwsources.com/html/fieldnotes/2018106884_big_slugs_of_sediment_hitting_the_elwha--new_aerial_photos.html

Elwha sediment not just mud, it's nourishment

Kirk Johnson

Yep, another one, MTSE, MA

by dbhguru » Sun May 06, 2012 8:38 pm

NTS, yesterday I went to my forest Mecca, not satisfied that I had resolved the height of a pine I measured to 149.4 feet on April 30th. Below is a copy of the report I sent to selected people in DCR and others yesterday.

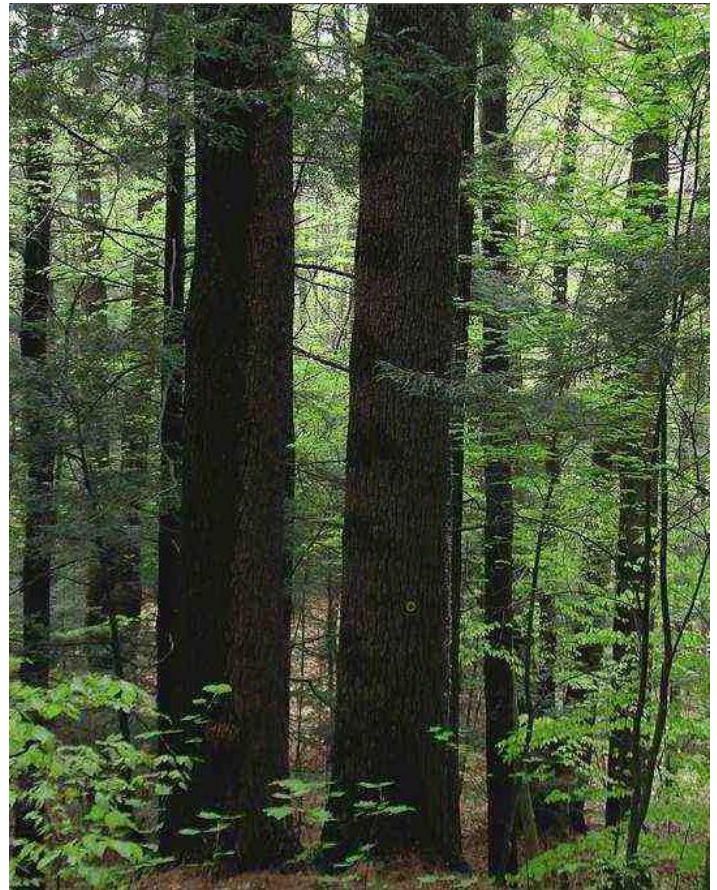
Today I returned to Mohawk to answer the big question. Is the white pine that I measured to 149.4 feet on April 30 possibly taller? I was fairly close to it when I got the 149.4 feet. (Dave, I told you 149.7, but made a mistake in my math.) My hypotenuse shot on the 30th was only 50 yards. But today after searching for about 15 minutes I found an acceptable location and marked the spot. I then went to the tree and placed a yellow marker at 7.4 feet above mid-slope. From the distant location I had marked I then got a hypotenuse distance of 63 yards to the crown. I moved forward slightly and still got 63, but couldn't see the crown spot as well. From the measurement location, I finally settled on a hypotenuse distance of 63.1 yards to the crown spot. I got measurements of between 44.1 and 44.3 degrees for the angle. Lots of shots were 44.2 degrees. So, 44.2 it was, the most prevalent return and also the average of the high and low. The yellow marker was 11.0 feet below eye level, determined with my TruPulse 360. But, I had to shift right to a location 0.5 feet lower than my spot to adequately see the marker (also determined with the 360). So from my location, eye to base was $7.4 + 0.5 + 11.0 = 18.9$ feet and height above eye level was $63.1(3)\sin(44.2) = 132.0$. The sum = 150.9 feet. However, I wasn't through. My Prostaff 440 tends to shoot long by 1.0 feet. So to be absolutely conservative, I subtracted a foot off the hypotenuse shot to get $(63.1)(3) - 1 = 188.3$ feet. My height calculation then became $188.3\sin(44.2) + 18.9 = 150.2$. Ah, we can all sleep at night. Number 125 confirmed.

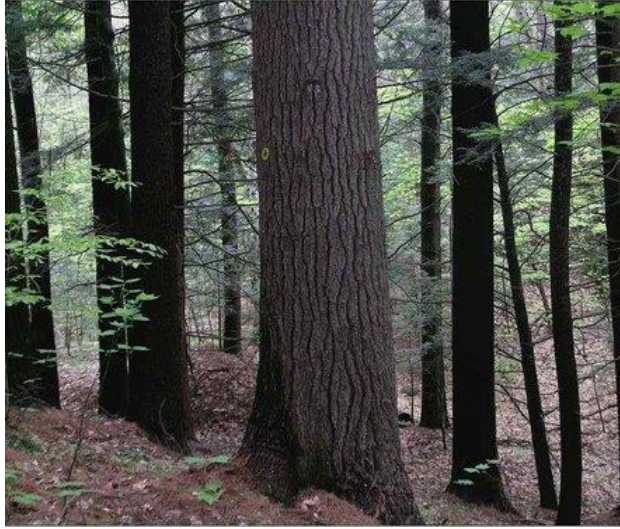
The pine is quite attractive, so I named it "Purty Pine". We southerners can't say "Pretty". Images are attached. Oh yes, Purty Pine's girth is a modest 8.6 feet (31.7 in in diameter), but straight as an arrow.

So, now there are 5 pines in the Rachel Carson

Grove that reach 150 feet. All others are in the 130s and 140s. However, one is 149.2 feet. It has a good chance of being a 150 by August. MOHAWK RULES!!

Images of Purty Pine follow.





Robert T. Leverett

It's the baseline, stupid

by dbhguru » Mon May 07, 2012 2:14 pm

NTS, I spend more time than I probably should thinking of explanations to illuminate the tree height measuring controversy that continues in an undeclared, unofficial way. In these days of the infrared rangefinder and inclinometer combination that allows for direct measurement of the target, why are people hanging on to less efficacious techniques? Direct distance measurements couldn't be done in the old days. Now they can, so why don't things change? Cost for one, but that is probably not the primary reason. Regardless, the old methods will continue to live on. So, what procedure would I give a person with tape and clinometer for measuring tree height regardless of the shape of the tree? Well, I would tell them to inspect the tree's crown and identify a twig that to be called the top. Then look at the base and determine where to place the bottom. This becomes a more obvious need when a big tree grows on sloping ground. Once these two points have been chosen along with the point from which measurements are to be taken, establish a baseline to the base-point. If an assistant is used, it can be from the eye to the base-point. Record the distance and then take the angle from the eye to the base-point. Next, do the following calculation.

Height below eye level = distance from eye to base-point \times $\sin(\text{angle to base-point})$.

There are shortcuts. If the measurer is standing on level ground, Height below eye level is just the measurer's height, and the above calculation can be skipped. Alternatively, the measurer can identify the point on the trunk at eye level using the clinometer and then directly measure the vertical distance with the tape from that point to the base-point. As a variation of this last method, the measurer (if accompanied by an assistant) can stretch the tape from eye to the point on the level point on the trunk and take that distance and the angle to the base and do the following calculation.

Height below eye level = baseline \times $\tan(\text{angle to base})$

Which ever of these three methods is used, height from eye to base will have been determined.

Next establish a baseline from eye to the crown-point. Oh, boy is this a loaded instruction! Some measurers will automatically run the tape to the trunk. Others may think about it a moment, and then run the tape to the trunk. Still others might try to find a point directly under the crown point and mark the location on the ground. And there will be some who will be unsure as what to do. The first group is probably hopeless. That group has been programmed to blindly follow a procedure regardless of the shape of the crown. For the second group, there may be some hope. But there is plenty of hope for the latter two groups. The point, obvious to tree-measuring Ents, is that the baseline for the crown must not be seen as an automatic line to the trunk. The line to the trunk is for the base, not the top. The baseline for to the crown is its own thing and may require a lot of work to establish. Conceptually, it is the level line from eye to the point vertically below the crown-point where the vertical and horizontal lines meet forming a right angle. Once determined, the following calculation can be performed.

Height above eye level = level base-line \times $\tan(\text{angle from eye to crown-point})$.

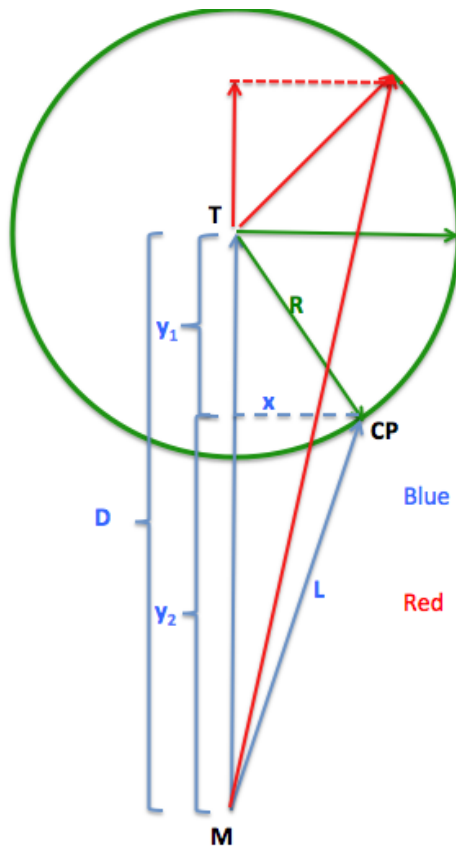
Total tree height = height below plus above eye level.

The point of these guidelines is to emphasize that with the tangent method, establishing baselines is not trivial matter, and that the baseline to serve for the base of the tree and the baseline to serve for the crown will almost always be different. One baseline will usually not serve both top and bottom, yet that is exactly the assumption built into hypsometers that use the three-point method: level distance to trunk, angle to top, and angle to bottom - a prescription for mis-measuring tree height.

At Cook Forest, I briefly spoke with Sheri Shannon on height measuring. She is well aware that different measurers use different techniques. Some use the stick method, some tape and clinometer, and some a laser. I didn't have time to discuss the issue in depth. That hopefully will be the subject of webinars. However, what I would have liked to discussed with

her, had time permitted, is the hidden factor, the mathematical model employed (knowingly or unknowingly) behind the scenes. The importance lies in understanding the model behind the scenes and whether or not it really fits the situation. Thus, the title of this posting, i.e. It's the baseline, stupid! Hypsometers with built in lasers and clinometers can be used - or more to the point, misused.

In an on-going effort to focus attention on where attention needs to be, I'm attempting to give the crank a few more turns. How do we spotlight the real issue here? Suppose we have a tree with its highest point horizontally offset by R feet from the base, the crown-point offset. Suppose we stand at a horizontal distance of D feet from the base. We could be at any orientation or angle to the horizontal line component of the line from crown-point to base. We could be in direct alignment, at right angles, or any angle in between.



View is top down.
L is the true baseline to the crown-point from the measurer.

Notes:

D = horizontal baseline from measurer to trunk.

M = measurer's location.

T = trunk's location.

CP = crown-point's location as measured horizontally from the trunk T.

R = horizontal component of crown-offset distance.

x = horizontal distance of CP from line TM.

For each value of x, there are two values of L. Red and blue lines show the two solutions. Blue = when the crown-point is on the side of the trunk as the measurer, and Red = when on the other side.

$$L = \sqrt{x^2 + \left(D - \sqrt{R^2 - x^2}\right)^2}$$

$$L = \sqrt{x^2 + \left(D + \sqrt{R^2 - x^2}\right)^2}$$

$$L_{avg} = \int_0^R \sqrt{x^2 + \left(D - \sqrt{R^2 - x^2}\right)^2} dx$$

$$L_{avg} = \int_0^R \sqrt{x^2 + \left(D + \sqrt{R^2 - x^2}\right)^2} dx$$

L_{avg} is the average length of the baseline L taken for values of x from 0 to R

If we designate the horizontal distance from our location of measurement to the trunk as D, and the horizontal distance from measurement location to the crown-point as L, we can investigate the minimum, average, and maximum impacts of the above eye level height from using D as the baseline instead of L. L is the right one baseline, and D is the wrong one, but under some circumstances, the results from using D will be acceptable. Given a random position, can we compute the minimum, average, and maximum actual baselines? The minimum and maximum are evident. When the eye, crown-point, and base all are in alignment (lie in the same vertical plane), then we have either a minimum or maximum baseline length. If the crown-point is on the measurer side of the trunk, L is at a minimum. If on the far side of the trunk, L is at a maximum. But what about the average? I set out to solve this problem in terms of an equation. Here are the results.

To get the average, we must turn to integral calculus. The two integrals shown give the solution for quadrants 1 and 2. Three and four are the same do to symmetry.

When the crown-point is on either the left or right side of the trunk, the equations allow you to play what if games for a specified crown-offset R and a surrogate baseline D to the trunk. Evaluating the integrals requires help. The CASIO fx-115 ES scientific calculator evaluates definite integrals so long as they aren't too complicated. The CASIO will evaluate the integrals in the diagram. The formulas for L give the true baselines and are evaluated algebraically for specified values of x and D, but the average L need the integral.

Since the objective is to determine L, R and x will generally be unknown. So, these formulas are meant only to allow the measurer to experiment and become sensitized to the consequences of using a surrogate baseline. The CASIO is inexpensive. As I recall, it was about \$20 at Staples. For what it does, it is a heck of a buy.

Robert T. Leverett

Biltmore Estate Trees, NC

by **bbeduhn** » Mon May 07, 2012 4:36 pm

I met with Bill Hascher, the head arborist at Biltmore Estate on Thursday. he showed me some old record holders and pointed out some areas I might like to measure. They use tags on many of their significant trees, numbering beyond 5,000 tagged trees.

Tag#

White pine I measured five this outing and got 3 150's

197	153.8'
1885	151.8'
1887	151.4'
1888	139.6'
no#	144.6'
3923	158.1' previously measured

Short leaf pine

216	107.4'	old, gnarled crown
3247	105.8'	
3249	104.2'	
3251	103.9'	
3243	103.0'	
3242	93.5'	
3179	96.7'	
no#	102.2'	
no#	102.8'	

Hemlock--these are doing extremely well with much new growth

165	134.8'
168	143.6'
4214	134.7'
1351	138.5'

Carolina hemlock

665	115.1'	tallest known at the Estate but has challengers
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Oriental spruce picea orientalis

1372	108.9'
1374	112.3'
1375	109.1'
548	102.2'
3980	119.4'

no# 122.9'

Norway spruce

1373 107.4'

2949 117.5'

?# 137.0' previously measured at 133.6'

?# 121.3'

Douglas fir

?# 108.8'

red pine

no# 116.4' dwarfed by white pines with
blown out crowns

silver fir abies alba not sure of species

1333 105.5'

4441 115.1'

Dawn redwood metasequoia glyptostroboides

1874 95.5'

3647 115.6'

3644 111.1'

4273 126.2'

4274 112.5'

4275 113.3'

4276 117.6'

?# 129.0' re-measure in the garden. New
top found

3967 91.6'

Bald cypress taxodium distichum

4280 100.4'

4281 116.7'

?# 126.7' below bass pond dam

3975 101.5'

Pond cypress?

3976 89.7'

sycamore

1055 131.5'

no# 117.4'

walnut (could be butternut)

1875 NLT 126'

1876 118.8'

ash (looks like white but may be different)

1042 114.5'

linden/basswood

no# 119.7'

China fir Cunninghamia many left to measure--
are naturalizing profusely

3985 81.1'

Blue atlas cedar

3944 97.6' 12'7.5" cbh

Nordmann fir many more to measure

3993 102.8'

3946 91.6'

I plan to spend more time and get as all significant
trees in the garden area, as well as finding more 150'
white pines and hopefully, a 150' hemlock. The
forest hardwoods will have to wait until November.

RI 5 for conifers 138.8'

RI 10 for conifers 127.27' so far

The dawn redwoods are truly impressive! They don't
all look as tall as they are but they are gorgeous trees.
The tall one in the garden has a very strong
challenger in a grove at the first intersection. That
grove has six redwoods, five over 100'.

The red pine is the one to the right, near a service
road. It looks tiny compared to the white pines. I
didn't get any true heights but shot straight up.
They're mostly 140's with their tops all blown off.
The underbrush is incredibly thick. I traversed most
of it on downed white pine logs.

The 143.6' hemlock is on the approach road. I've just
touched the surface on hemlocks. I'll look for the old
146' and 140's next trip. Where exactly behind the
house were they?

I missed the tall shortleaf and haven't even seen a
pitch pine on the estate.

The orientalis is in the garden on the main path, along
a stream, just before the bass pond. Most have
numbers on them but this one didn't.

The Carolina hemlock is in a small grove below the
road right before the gate in front of the house. There
was another Carolina hemlock right next to the 115.1'

but its top had been blown off. I should have measured it anyway. It's probably the old 109', but looks like low 90's now. I've topped 100' with Carolinas in a different spot as well and will spend more time there soon.

I go on the weekends normally. I just went during the week to meet with Bill. There's much more to do. The conifers are fairly easy to measure during leaf-on. The hardwoods don't appear to be quite as impressive but I'm sure there'll be some surprises.

Brian Beduhn

Big Ms Southern Magnolia

by **Larry Tucei** » Tue May 08, 2012 9:24 pm

NTS, I visited an old tree friend of mine the Big Southern Magnolia in Green Co., Ms. For the newer members I first saw this great tree in the mid 90's after reading an article in the Ms Outdoors Magazine that stated it was one of the largest Magnolia's in the South. After Hurricane Katrina in 05 I had to go and make sure the tree survived the storm- glad to see it made it. What was amazing as you see in the first photo many trees around it went down but it remained steadfast. I was new to measuring trees back then and got 18' 6" CBH, but that was at the bottom of the slope. The height in 06 I got was 115'. I went back to the tree in 2008 and my latest visit was Monday. I remeasured the CBH at mid-slope on Monday and got 17' 7" - the height was 111' but I don't believe I reached the top. The insects and humidity were not kind to me. I also measured the low point like I did in 06 and got 18' 6" again. The photos are in 06, 08, and 12. The great tree is looking good and hopefully will be around for sometime for others to enjoy. Larry



2006



2006



2008



2012

Larry Tucei

[Re: Washington Grove City Park, NY](#)

by **tomhoward** » Wed May 09, 2012 8:24 pm

NTS, Here is my report on the May 5 survey of Washington Grove:

On this beautiful cool sunny day, Larry Champoux and I had a glorious visit to this magnificent old growth oak forest east of Cobbs Hill Park in Rochester. This survey convinced me that this is the finest old growth oak forest I've ever seen. Washington Grove could contain the tallest White Oak, Black Oak, Sassafras, and Butternut in New York State, and it is also possible that the oldest Black Oaks in existence are in this grove. We need to get Neil Pederson up here with his increment borer, and since we had no access to laser rangefinders, we need to get some of the height measuring NTS up here.

These Oaks really look extremely tall for so far north, with Black Oaks and White Oaks seeming to be at least 120 ft. or more tall. The tallest Sassafras could be as much as 120 ft. tall, far higher than the tallest Sassafras I know of in upstate NY, 86-87 ft. trees in North Syracuse. It was a perfect time to be in the Grove, with the lofty Oaks in bloom, with tiny yellow (and sometimes orange) blossoms festooning the otherwise bare branches. Sassafras looked the same as the Oaks with yellow blossoms on bare branches. The tall Black Cherries in the canopy were in nearly full leaf. Also the many invasive Norway Maples that dominate the understory were in leaf. The Friends of Washington Grove are trying to remove the Norway Maples in an effort to bring the Grove back to its old growth state. The seemingly endless numbers of huge ancient Oaks have many of the characteristics of old trees as described in Neil Pederson's article, "External Characteristics of Old Trees in the Eastern Deciduous Forest", Natural Areas Journal, Volume 30 (4), 2010: 396-407.

Trees examined:

Black Oak log cross-section - 1.3' radius, inner .1' to pith missing, 260 rings on intact portion, about 20 ft.

above base, tree possibly lived close to 300 years

Black Oak log cross-section - .94' radius, 264 rings – as far as I know, the highest ever ring count for Black Oak (the max. age for Black Oak in Neil Pederson's Eastern Oldlist is 257 years), so this could be a world record age for Black Oak.

White Oak 28.5" dbh (7.46' cbh), old with balding bark, spiral grain, crown composed of few large crooked limbs, largest White Oak in small group of that species near Nunda Blvd.

near this White Oak Black Oak 36.8" dbh (9.63' cbh) – balding bark, stem sinuosity, crown composed of few large crooked limbs

Black Cherry same area 30.2" dbh (7.93' cbh), est. 110' tall

at edge by Nunda Blvd., growing next to shed in hollow, tall forest-grown Black Oak, est. 120' tall

Black Oak upslope 40.4" dbh (10.48' cbh), old tree with leaning trunk (many of the old Black Oaks have leaning trunks), crooked crown of few large branches

White Oak, forest-grown 33.1" dbh (8.7' cbh), spiral grain, big limbs in crown

Black Oak 36.9" dbh (9.71' cbh) – balding bark, low stem taper, stem sinuosity, crown with big crooked limbs, est. 115-120' tall

We walked to the northern part of the Grove, to a 2nd growth area with lots of young Red Oak in what used to be a quarry.

near boundary between old growth and 2nd growth: Red Oak at trail junction 46.8" dbh (12.26' cbh) – partly open-grown (only non totally forest-grown tree examined this day) with massive limbs, hole that looks like increment borer hole (it's possible that some of these trees have been cored, possibly by Bruce Kershner?)

Sassafras cross-section in younger area – 85 rings, 3.5" radius, 20' above base

Sassafras in younger area 16.9" dbh (4.42' cbh) – Sassafras common in younger area under dominant Red Oaks, and some large Black Oaks

We re-entered the old growth in a hollow with huge trees (and a fairly tall young Tuliptree, and many much larger Oaks). In this area:

huge Black Oak 40.5" dbh (10.6' cbh) – balding bark, stem sinuosity

In the hollow an old fallen log crossed the trail, and the spiral grain of the log was clearly visible.

Sassafras in hollow with trunk snapped off – about 155 rings counted on natural break, 4.5" radius

Oak log cross-section - species unknown – no bark – 270 rings, 8" radius

White Oak forest-grown in hollow near Nunda Blvd., a huge limb fallen out of its crown right by it, remaining crown composed of few crooked limbs; tree seems to be at least 120' tall, biggest forest-grown White Oak I've ever seen – 43.8" dbh (11.48' cbh)

near trail junction with many Black Oaks (site described in 4/7/2012 report with group of Black Oaks over 3' dbh), by north side of trail that branches off from Center Trail, Oak log cross-section – 250 rings, species unknown as there is no bark, 13" radius

This section, north of Center Trail, is possibly the tallest part of Washington Grove. It is a low-lying area dominated by towering White Oaks and Black Oaks that seem to be at least 110-over 120' tall. In this section:

White Oak by trail, forest-grown, looks like over 120' tall – 25" dbh (6.6' cbh), balding bark, a lot of Sassafras in understory.

Nearby another very tall White Oak rises above a large patch of invasive Lily of the Valley.

Black Oak in hollow 42.9" dbh (11.25' cbh)

old lightning scar, big crooked limbs in lofty crown,
easily 110' tall, with even taller White Oak nearby

big Black Oak Center Trail 43.1" dbh
(11.28' cbh) orange flowers

possibly biggest Sassafras 19" dbh (5' cbh)
– this tree is awesomely tall, possibly 115-120' tall,
as tall as the tallest Oaks around it, its crown sticking
up high above a tall leafy Black Cherry; this could be
the tallest Sassafras in NY State.

near just above – hollow Butternut with buttress base
27.3" dbh (7.15' cbh), est. over 100' tall,
possibly tallest Butternut in NY State

Earlier, we looked at a fallen White Oak in one of the
glacial kettle holes, a tree that was very tall – I
counted at least 150 rings on log cross-section, pith
hollow.

Washington Grove Trees 40"+ dbh from 4/7/2012
and 5/5/2012 surveys – 14:

Black Oak - 8
Red Oak - 5
White Oak - 1

Over 50" dbh – 2 Black Oaks (see 4/7/2012 report)

Tom Howard

wish to visit. The City of Rochester Forestry
Division has some interest in your work and the work
of other ENTS researchers so it will be important to
bring them into the loop. Thank you for showing us
how to look at these magnificent oaks with fresh
eyes. Let's keep moving forward! Stay in touch,

Larry Champoux

Random Comments

Don Bertolette wrote: "My perspective is that the
single greatest disappointment I have with
government land management agencies is the legacy
lost with, for lack of better word, their incontinence.
They, with remarkably few exceptions (and all in the
research area), seemed incapable of retaining any
long term records of silvacultural treatments across
the broadest spectrum of forested ecosystems,
perhaps in the world. Seemingly with each transfer of
silvacultural specialist, the files were emptied and
tossed. What a waste!"

Re: Washington Grove City Park, NY

by **larrychampoux** » Mon May 14, 2012 8:26 pm

Tom, Once again this is great. Your initial research
is garnering some important notice from many people
who are actively interested in preserving Washington
Grove. It is truly groundbreaking for our community
of forest advocates and it will be very helpful to our
future efforts to persuade others to help protect these
trees. These tiny simple facts --the height of a tree or
its girth or its age-- have the astonishing capability to
reverberate through a community. I am looking
forward to your next visit and to any other folks who

Single trunk vs. Multitrunk Revisited

by edfrank » Fri May 11, 2012 2:39 pm

Counting a multitrunk tree as a champion is like super-gluing two fat guys together and calling the combined pair the new champion fat guy.

For size comparisons it is important to compare like things to like things. If you mix both single and multitrunk trees together you are mixing different things. A tree for champion purposes needs to be defined as a single trunk, meaning it has a single pith at ground level. Multitrunk trees are worth measuring and documenting, but they should not be lumped together with single trunk trees for comparison purposes.

If you start talking about tree genetics and growing from the same root, then that begins a myriad of complexities that make the situation even worse. Two trunks from a rootstock may be genetically the same, but so are all of the clonal trees in colonies like the Pando Aspen Colony. Since they are all genetically the same and may be interconnected through the roots, should a tape be wrapped around all 47,000 stems covering 106 acres and call that the girth? In multitrunk trees there typically is a pinched section of bark between the trunks, clearly indicating they are separate trunks.

It is better in both practical terms and conceptually to define a tree as a single stem, even if the larger organism may have multiple trunks. The examples of unusual multitrunk specimens, trees like banyans, clonal colonies, self grafted series, fallen trees with limbs sprouting, etc. should certainly be documented, but each on their own merits, rather than lumping them in with measurements of single trunks.

If there was one aspect I would want to see cleaned up in champion tree lists, it is the persistent inclusion

of multitrunk trees. They should not be on lists that are designed to compare the biggest individual - read single trunk - trees. This is something that could be resolved with better adherence to a champion guidelines that specifies single trunk trees only. I would even be in favor of a separate list for multitrunk trees, or trees with other unusual forms, but the two categories should not be mixed.

This is something that can be fixed on champion tree lists. Multitrunk trees should be removed from consideration. This action does not require any expensive equipment on the part of those people measuring the tree. It does not require any special knowledge on the part of the measurers. It does not exclude anyone interested in measuring trees from the process. It would assure the integrity of the lists and reward people who find the actual giants of a tree species, rather than game playing by people who would nominate unworthy multitrunk trees as champions. Nothing annoys me as much with champion tree programs as allowing multitrunk trees to be included in the same listing category as single trunk trees.

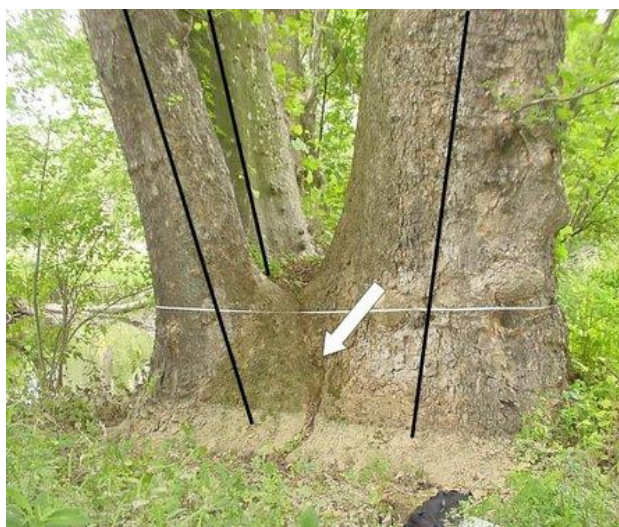
There are examples of individuals or groups of individuals using faulty tangent based height measurement processes simply because these have yielded taller heights than more reliable sine top/sine bottom laser rangefinder/clinometer measurements available to them, but these are examples of **cheating** on the part of these individuals rather than a problem with the champion program itself.

Will Blozan recently posted some examples of multitrunk trees:



Ohio champion cottonwood

And here are some pith trace examples:



Ohio champion sycamore



Seven sisters live oak clump

The pith lines need to merge before ground level for something to be considered a single trunk tree. If there is more than one pith line at ground level it is a multitruk tree. If there is only one pith at ground level, then it is a single trunk tree. Low branches could come out below 4.5 feet, but above the ground level and the tree still be a single trunk tree.

In the tree measuring guidelines, (all three of the documents, the original version, the one published in the Bulletin, and the updated version) NTS SP #1a Tree Measuring Guideline of the Eastern Native Tree Society -Revised

http://www.nativetreesociety.org/measure/Tree_Measuring_Guidelines-revised1.pdf Will Blozan writes:

"I use a "pith test" to define what a multitruk tree is. If the tree has more than one pith at ground level it is a multiple-stemmed tree. Note I did not say 4.5 feet above the ground. This is because the 4.5 foot height is a forestry standard and is an arbitrary and convenient place for most people to measure a tree. Some trees, like flowering dogwood or rhododendrons, may branch well below 4.5 feet but have a single pith at ground level. In the case of such trees, I would measure the narrowest point below the lowest fork. More detailed discussions of how to measure multitruk trees and trees with other odd forms is presented on the ENTS website."

As for the question of whether a particular tree is a double or single trunk, there will be arguments between experienced measurers about whether a particular tree is a double or a single. Many old doubles have grown together so that the trunk is regular in form and on the face of everything no longer appear to be doubles. The opposite situation is where there is a large low protruding branch. If the tree and branch grow large enough, the low branch appears to look much like a second trunk. When faced by wind and weather it is possible that these may split along the attachment line to look as if they are two trunks. In many cases there is sufficient doubt that the only way to know for sure would be to cut the tree down at ground level and see what the cross section shows.

Some people consider it being conservative to consider something a double if they can't tell for sure otherwise. I think this corrupts the data set more so than an occasional misclassified tree. For anyone measuring trees in the field, I would recommend they make detailed observations in the field, and then go with the best guess as to whether the tree is a single or double, and report that. Field inspection trumps photos except in the most egregious examples. This is not to say that if someone else goes out and looks at the tree will reach the same conclusion, but we hope so. Measurers should try to build in their mind characteristics that might distinguish singles from double or multitruk trees, and apply these mental lists to what they are seeing in the field.

We are not defining whether something is a single or multitruk tree based on genetics. The multitruk tree may be growing from the same root mass and have identical DNA in all of its trunks. For measurement purposes we are classifying a multitruk tree as a different measurement category than a single trunk tree because of its growth pattern, not because of different genetics. There may be some cases where there actually are two different specimens of the same species of tree growing together to form a fused mass, but these would be I would guess an extremely rare circumstance. There are occasional examples of two different species growing together - the Hugging Trees in the multitruk tree classification scheme I previously proposed

http://www.nativetreesociety.org/multi/index_multi.htm. I would expect that hugging trees of different species would be more common than two different trees from the same species. In any case these should not be considered in the same measurement category as single trunk trees.

Are we becoming splitters or lumpers when it comes to tree measurements? I think I am a splitter as needed to maintain what I see as a valid data set. I want to make sure the big tree lists maintain an internal integrity. On the other hand, I have championed the idea that we should be collecting data on multitruk trees and trees of other weird forms. That was the point of the article I wrote: Multitruk Trees, Woody Vines, and Other Forms:

http://www.nativetreesociety.org/multi/index_multi.htm I want to include these other forms in our dataset, even if they are not the idealized single trunk model and have proposed ways to measure them.

The columns for inclusion of multitruk trees are in the spreadsheet I wrote, and I have been working with Mitch Galehouse in his implementation of the NTS Trees database so that the multitruk specimens can be properly recorded. So I would counter that you can be both a splitter and also be pushing for a broader inclusion and representation in the dataset.

There needs to be a balance between lumping and splitting when looking at sets of data. If you lump too many things together then they become a mish-mash of different objects that lack a coherent theme that is useful for expanding your understanding of the set. If there is too much splitting, then each individual is its own class and you can't look at relationships between objects as easily. So really I don't think it is a matter of splitters versus lumpers.

We are splitting the data only to the degree needed to make it useful, and further lumping would only hurt the overall goals. I want to keep records for and acknowledge the superlatives of the different forms, but see it as a detriment to mix different form trees together in a single list.

Edward Frank

[Re: Single trunk vs. Multitrunk Revisited](#)

by **Don** » Sun May 13, 2012 12:02 am

Ed- I find much to agree with in your comments in the above post, revisiting the issue of single versus multi-trunk champion candidates. You've done a great job of assembling images with pith lines, diameter locations for examples.

But I'm thinking we differ *a little* with what to do with those pesky multi-stemmers. I too believe that single stemmers should be in their own category.

However, I'm of the opinion that there are some REALLY impressive multi-stemmers out there, and they need respect to. Just not in the single stemmer field. Part of the solution would be to have a second column, for multi-stemmers.

But the real conundrum here is parity. How does one treat both categories fairly? While many are quick to toss forestry traditions aside, for whatever reasons, note that American Forests have chosen to take three measurements to determine 'bigness'. The first two, girth and height, which are two parts of a formula that can be used to determine a quantity of 'bigness', albeit a derivative, volume. The crown spread is a visual thing, as a crown's largeness in its full foliar stage is certainly one of the things a viewer considers in assessing 'bigness'.

For me, the underlying assumption for measuring the diameter/girth is that girth is a measure that can be used to approximate volume, for any given height. Yes I know, not all trees are perfectly round, nor cylindrical, but for the sake of argument, let's say they are.

To take the diameter/girth measurement of a multi-stem of the Ohio Champion sycamore, as shown in the above photo would only approach a gross approximation of the volume of the first five feet, where certainly there is a massive amount of wood. To project volume, that is greatly diminished above five foot, based on the cbh/dbh would be naught but pure folly.

Better to take girth measurements above the fork and just above the swelling caused by the forking, for each of the boles, then project volumes based on an average of the three boles, whatever their heights were. Cognizant of the goal to obtain a girth, an average of the three bole girths would be a much, much better approximation of the Ohio Champion sycamore.

Where we run into problems is with very large trees, so large that we humans just don't have the dimensions to physically measure them. But that's another topic, with a more 'remote' solution.

I hope that this dialogue you and I are having, will prompt others to further comment and refine, this sure to become a bigger issue in the future.

Don Bertollette - Moderator, WNTS BBS

[Re: Single trunk vs. Multitrunk Revisited](#)

by **edfrank** » Sun May 13, 2012 7:07 am

Don, I have always thought that multitrunk trees deserve measurement and consideration. I had this discussion at my first NTS event, before I ever became a member with Colby Rucker. The point I was making here is that single and multitrunk trees should be a separate category. For multitrunk trees I don't really think the girth is a representation of volume as it is in single trunk trees. They are so varied in form that one measurement doesn't even come close to characterizing them as a group. For these multitrunk trees I think girth is more like a "beauty contest" where the meaning is simply about appearance of size of the tree rather than an analog for size. Your comments about measuring above the mergers would I am sure be a better approximation of size.

The Da Vinci sequence <http://www.ents-bbs.org/viewtopic.php?f=143&t=3271> "Expressed mathematically, Leonardo's rule says that if a branch with diameter (D) splits into an arbitrary number (n) of secondary branches of diameters (d1, d2, et

cetera), the sum of the secondary branches' diameters squared equals the square of the original branch's diameter. Or, in formula terms: $D^2 = \sum d_i^2$, where $i = 1, 2, \dots n$. For real trees, the exponent in the equation that describes Leonardo's hypothesis is not always equal to 2 but rather varies between 1.8 and 2.3."

The argument made above is that the Ohio champion cottonwood and Ohio champion sycamore should not be considered champions at all because they are multit trunk trees. I am not disagreeing with your main point, but what I suggested was designed as a shorthand for a more the more complex problem that could be applied to all of the multit trunk trees.

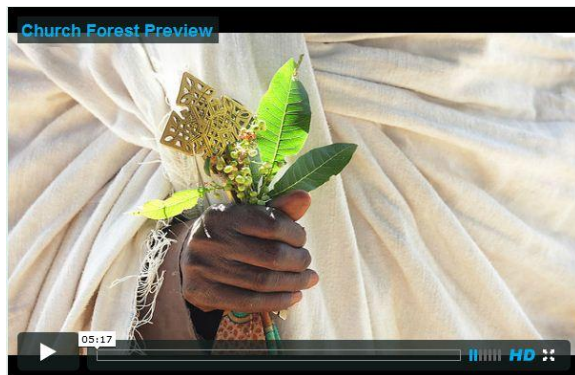
Edward Frank

[Church Forest Documentary - Preview](#)

by **edfrank** » Wed May 09, 2012 4:14 pm

Church Forest Preview
by Greg Vander Veer Plus

This a 5 minute preview for 'Church Forest'-- a feature documentary film currently in post-production. For more information please visit churchforest.com or email us at churchforestmovie@gmail.com.



<http://vimeo.com/41595169>

For 1500 years the Ethiopian Orthodox Church has protected the forests that surround their places of

worship. These sacred groves have become the last remaining forests in the region, yet sadly they are disappearing rapidly.

Having gained unprecedented access to the unique culture of the church forests, this film reveals a mystical world where priests and scientists struggle to come together, despite vastly different beliefs, in collaboration to maintain the last vestiges of an ancient and crucial ecosystem.

Church Forest is currently seeking funds to complete post-production. Please spread the word and help us bring the message of our film to the world.

- Peter and Greg

[Re: Church Forest Documentary - Preview](#)

by **Joe** » Thu May 10, 2012 9:24 am

I wonder if they'll ever be able to allow these remnant forests to grow outward. Perhaps the international community could fund purchasing acreage and fencing it?

Joe Zorzin

[Re: Church Forest Documentary - Preview](#)

by **Bart Bouricius** » Fri May 11, 2012 8:02 am

It will be interesting to see what can be done with these last vestiges of forests that once clothed the landscape. My fellow Canopy Construction Associates colleagues Meg Lowman and Phil Wittman were involved in making this video. Phil who will be staying at my house from the 16th to the 28th while we do annual inspections and maintenance of our canopy walkways in Massachusetts and NY, was the second climber shown in the film.

Bart Bouricius

Re: Entering Trees Into Our Database

by **dbhguru** » Sat May 12, 2012 12:01 pm

NTS, I'll add a few comments to what Ed has said. The TruPulse and Impulse lasers from LTI have the sine method implemented in their circuitry, but the method is not the HT routine commonly advertised and used for tree heights. With the TruPulse line, the Vertical Distance (VD) return implements the sine method.

The new Nikon Forestry 550s include the 3-point height routine (trunk distance shot-crown angle-base angle), which is an implementation of the risky tangent method. It is the two point routine that does the job we need.

Except for the people who thoroughly understand the behind the scenes mathematical models, use of the tangent method is a prescription for introducing errors of varying magnitude, some extraordinarily large. The people who pressured Nikon to add the 3-point method are either damn slow learners, just lazy, only measure young plantation conifers, or are really unconcerned with accuracy. Sorry, for being so blunt.

We have had many, many discussions in NTS on the right methods to use in measuring the common tree dimensions of girth, height, and spread. We have Will Blozan's tree measuring guidelines, Ed Frank's beginner's guidelines, and countless posts from yours truly. Newcomers may find themselves overwhelmed with all this material. To them, I say please don't hesitate to ask questions. We will always respect from where you are coming from and be anxious to help. It would be unfair of us to expect you to wade through all the material in the BBS, especially when you are new and may have previously received advice from others about how to properly measure trees.

Robert T. Leverett

Re: Entering Trees Into Our Database

by **fooman** » Wed May 16, 2012 5:48 pm

dbhguru wrote: Yes, the use of the Forestry 550 is no longer a guarantee of a sine-based measurement.

Do you mean the new Nikon Forestry Pro (<http://www.nikon.com/products/sportoptics/lineup/laser/forestrypro/index.htm>), rather than the old Forestry 550 (<http://www.nikon.com/products/sportopti...aser/f550/>) or the identical (with the old Forestry 550) 550AS (<http://www.nikon.com/products/sportopti.../index.htm>). The Forestry Pro is not the Forestry 550 ...

To summarize:

Forestry 550 = Good mode (sine method for height and two point measurements)

550 AS = Good mode (sine method for height and two point measurements)

Forestry Pro = Good mode (sine method for height and two point measurements) and Bad mode (3 point method)

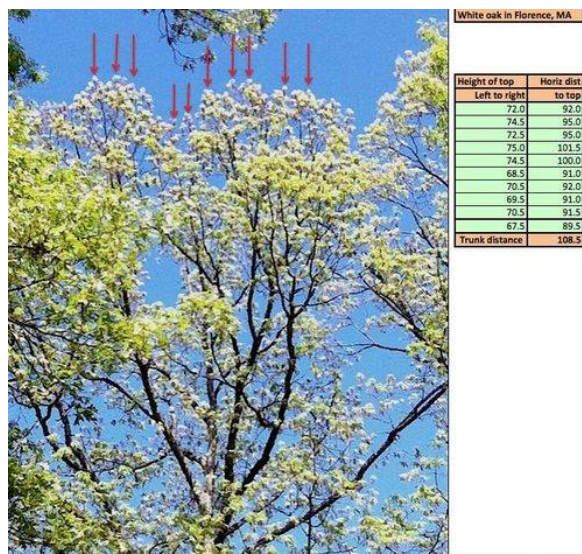
When I do height measurements with my Forestry 550, I use the height mode to scan along the tops to find the highest. As this does not involve a baseline, it must use the sine method (angle, plus length of hypotenuse). I then use the 2-point mode to measure from base (if visible) or a nearby reference (if base not visible) to the highest top. Followed by a measurement between the base and the reference, if that is required to get a total height. Given that the two point measurement is difference between two normal (sine-method) heights in the Forestry 550, that is a pretty robust method, as far as I know.

Cheers,
Matt Smillie

Please take a look at this treetop

by **dbhguru** » Sat May 12, 2012 3:49 pm

NTS, Those with an interest in the tree measuring aspect of NTS, take a look at the following.



The tops of this white oak visible from the chosen vantage point and the data in the accompanying table reveal the challenge of measuring tree height with tape and clinometer. Note that the horizontal distance to every one of these tops is less than the horizontal distance to the base. Using a baseline to the trunk and the angle to anyone of these tops would over-estimate the tree's height. If the measurer chooses the highest looking top, the over-estimate will be greater. This illustrates the problem of using a baseline to the trunk for the actual baseline needed for the chosen crown point. In the coming weeks, I plan to do a lot more of this kind of analysis combining an image with tabular data. It appears to be the best approach to laying bare the elements of the problem.

Robert T. Leverett

Re: Tree Haiku

by **Jenny** » Mon May 14, 2012 8:04 am

Not about trees, but an homage to a baby Starling I was caring for that died this morning. A bit macabre.

Baby Starling found
Too fragile for First Avenue
Concrete bed for death

Jenny (sad. s/he had been on the street too long and was dehydrated. It is so hard to bring them back from serious dehydration.)

Jennifer Dudley

Random Comments

Joe Zorzin wrote: "Unfortunately, few industries can handle nebulous visions and the world is run by industries- the more sensitive folks tend to avoid conflict, but they need to get out there and do battle-- I always think of Thoreau who refused to pay a tax that he believed help finance America's aggression against Mexico and found himself in jail because of it- when his buddy Emerson arrived at the jail and peered through the bars, he said to Henry, "what are you doing in there" and Thoreau replied, "what are you doing out there?"

Visuals and calculations

by **dbhguru** » Sun May 13, 2012 12:38 pm

NTS, the following 4 images show a young northern red oak across the street from our house. It is still apically dominant. The red arrows point to the highest top.

