

[Re: Portraits of Tree Parts](#)

by **Don** » Thu Jan 17, 2013 2:44 am

Mario- Great stuff! Use of color contrast, narrow depth of field, all very nice!!

After I thought about what you've done, and the context, I started thinking of my favorite dendrologist, George B. Sudworth, the first Chief Dendrologist with the USFS. In my mind, his greatest accomplishment was his book "Important Trees of the Pacific Slope", where he and assistants, via horseback, mule back, and horse drawn wagon, collected extensive data (most incredibly were his defining range boundaries for each of the species) from British Columbia to Baja California. In less than a decade! For more info, see:

<http://www.foresthistory.org/ASPNET/People/Sudworth/Sudworth.aspx>

But I've digressed...Sudworth's book had the greatest pen and ink drawings...I don't know what today's digital software is capable of, but photographically

accurate depiction of plant structure, in black and white would certainly be in line with traditional botanical rendering... Just a thought.

Don Bertolette

[Re: Portraits of Tree Parts](#)

by **mdvaden** » Thu Jan 17, 2013 1:37 pm

It's almost certain I will try some stuff in Black & White too. Even with the portraiture of people, I've tried some conversions. Like in the subject example below. Even liked the background grasses in this better as B&W.

And the photo from the redwoods is an old one from before I was interested in photography, but I saved the file. Looks sort of crappy in color, but apparently it's an entirely different beast converted to Black & White.



One for Giant Redwood / Sequoia and one of Golden Western Red Cedar.



M. D. Vaden of Oregon

[Re: YouTube, "The 40 Greatest Trees" Any omissions?](#)

by **edfrank** » Wed Jan 16, 2013 4:54 pm

John, Excellent video. This hits most of the major trees in the world. It is subjective about what trees to include and what trees to not include. So don't change anything. I voted for the Kalaloch Western Red Cedar as it is the only one of the major trees I have seen myself. It is awesome in person. I hope to see more of the Sequoias and redwoods in the near future.

On Facebook each week one of the pages puts together a graphic with images depicting six or eight of the biggest sciences stories of the week. It is very impressive and inspirational to see big things that are happening in science. I would like to see a monthly highlight of NTS finds and accomplishments put together to inspire others in the fields of science and art with the work we are doing and the majesty of some of the trees. I do this with the magazine, and have considered trying to create a similar graphic for out work, but could not see how to best summarize what we are doing with odd shaped tree photos.

Perhaps a video presentation like this would be the way to go. Thanks very much.

Edward Frank

[Re: YouTube, "The 40 Greatest Trees" Any omissions?](#)

by **pdbrandt** » Wed Jan 16, 2013 6:31 pm

Great video, John! Thank you for educating me. I'm glad to see the Sag branch Tulip Poplar made it on the list. It is the only one I have seen in person...yet...

Patrick Brandt

[Re: YouTube, "The 40 Greatest Trees" Any omissions?](#)

by **JohnnyDJersey** » Thu Jan 17, 2013 9:11 pm

Thank you Robert, Ed, and Patrick. Ed, I think producing some sort of film clips are a great way to "get the message out" about what NTS is all about. Im just an amature guy using Windows Movie Maker. Other than the "fun" aspect of doing a video list like that, I really make them for the average guy who has no or little interest in the amazing trees that are out there.

I'm a "reclaimed wood" furniture salesman and I guess the salesman in me gets excited to share what Im passionate about, one of a kind trees. Ive actually "made" a couple big tree hunters out of people I know by using my own photos, stories, and videos like this one. Im selling the trees I guess you could say.

Kinda off topic but I come across reclaimed slabs and furniture made out of Redwoods and even other ancient trees like Kauri Pine that were cut over a hundred years ago. Makes me wonder if I've sold pieces of trees larger than the General Sherman or Tane Matuah. I'm sure I probably have. Its sad in a way but by doing this I guess I'm helping save the current large trees from being used to build that same table or cedar chest. Just a thought.

105 foot tall American Beech

by **pdbrandt** » Thu Jan 17, 2013 4:22 pm

I don't know how impressive this beech tree will be to more seasoned measurers, but I located a 104.9 foot American Beech (*Fagus grandifolia*) in the historic section of downtown Chapel Hill that had me pretty excited. I understand beech trees can grow to 125-130 feet in the Smokies so this tree is not doing too badly at all for the piedmont of NC.



The Chapel Hill Beech

Patrick

Re: 105 foot tall American Beech

by **Will Blozan** » Thu Jan 17, 2013 8:48 pm

Patrick, Not bad! Beech are notoriously difficult to measure and I rarely have the patience due to their exceedingly dense crowns of fine twigs. As for a piedmont site I only know of trees measured in Tanglewood Park near Clemmons, NC. Jess Riddle and I measured them to the high teens back in 2007. http://www.nativetreesociety.org/fieldtrips/north_carolina/tanglewood_park2.htm Nice find!

Will Blozan

[Larry Tucei's Mission](#)

by **dbhguru** » Thu Jan 17, 2013 10:58 am

Larry, With respect to your compliments in the sine versus tangent post, thanks. I do what I can do, but, you and other Ents are the real driving force behind what we do. The maximum height list for Mississippi is a case in point. It exists nowhere else. You have given us new information on an important species by organizing individual measurements into one simple, inclusive list. You provided us the raw information before, but in separate postings. Assembled in one place, the numbers take on added importance. The total becomes greater than the sum of the parts by revealing a picture of what the species are doing in the deep South. I think Jess Riddle was alluding to that. And we can rely on your measurements!

As a numbers person, I'm constantly searching the Internet to see how others deal with statistical information on topics of interest to me. Occasionally, I'll track erroneous numbers through a series of threads to get an idea of how wide spread is the misinformation. After a while, accuracy doesn't seem to matter because the mis-information is so ubiquitous that it desensitizes us. And erroneous numbers are included in ostensibly reliable sources. For example, I've seen different elevations listed for the same mountain on the same page of a document. The author probably cut and pasted from multiple sources, but such insensitivity to conflicting numbers read that, information), especially so close together, is literally mind boggling to me. It is as if the actual numbers don't matter. It some general kind of idea that is important, such as the message that a mountain is high or special, or that sprinkling some numbers in a narrative is the appropriate thing to do. Lots of writers employ this model. Throw more than an occasional rounded-off number out there and the lethargic public will nod off to sleep.

From what I've seen, NTS is the only major

organization on the Internet that people can turn to to get reliable information on maximum tree dimensions. And so far as I am aware, you are the only human on the planet that has taken on the mission of documenting for posterity the great live oaks of the South. I look forward to working with you to model some of those very special trees. I hope to try out the simple photographic method with Excel I've been fiddling with that is showing promise.

Robert T. Leverett

[Re: Larry Tucei's Mission](#)

by **Larry Tucei** » Thu Jan 17, 2013 12:32 pm

Bob, Thanks for the compliments. I hope I can live up to all your expectations. I have contacted the owner of the Ms State Champion Live Oak (Walkaih Bluff Oak) and he is waiting for me to set up a date to come up and start the volume measurement. I'm attaching a couple photos of our state champ. The champ measures, CBH-33' 1" Max Spread-166' and Height-63'.

The owners of Oak Alley are also waiting for me to set date to come back down and help them with measuring and general aging of their Oaks in the back of the mansion. I went to Oak Alley back in April 12 and re-measured all of the Oaks that I did in the past to make sure I had no errors. I updated my Oak Alley listing with new measurements and did have a few corrections but in all not many. They sent me a copy of measurements taken from their Oaks back in 1977 so I could work with growth rates from then to the present. I will open a new post on this at a later time with details. I also plan on returning to many other areas of Louisiana for some new Live Oak additions to and to the Live Oak listing.

Larry Tucei



Walkaih Bluff Oak

Re: Larry Tucei's Mission

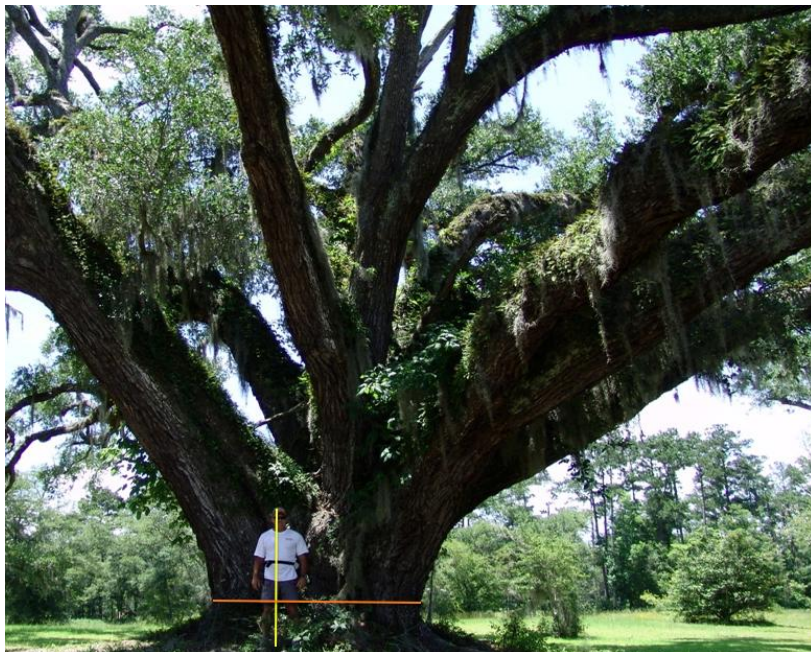
by dbhguru » Thu Jan 17, 2013 5:55 pm

Larry, I took the opportunity to analyze the champ's diameter through the Excel photo measurement process.

I used your height as 73 inches (sort of how I remember you looking back in 2006) and guessed

that the photographer was 50 feet away from you and you were 8 feet away from the center of the tree. Note where I took the girth in the image. At that point using my assumptions, the photo measurement is 33.25 feet. Can you give me better numbers to use if the 50, 58, 73 aren't good? If I have the distances to the reference object and to the target(s), I should be able to come close to measuring the width of more or less circular objects.

Robert T. Leverett



$$T_m = \frac{R_a}{R_x} \frac{T_d}{R_d} T_x$$

T_m = measured diameter, target object
 R_a = actual diameter, reference object
 R_x = Excel size, reference object
 T_d = distance, target object
 R_d = distance, reference object
 T_x = Excel size, target object

Object	Type	Excel Size	Actual Size IN	Dist ft	Measured Diameter IN
Trunk	Target	2.76		58	127.02
Person	Reference	1.84	73	50	
				In Ft	10.585
				Girth in Ft	33.25375824

$$T_m = \left(\frac{73}{1.84} \right) \left(\frac{58}{50} \right) 2.76 = 127.02$$

Re: Larry Tucei's Mission

by dbhguru » Thu Jan 17, 2013 7:58 pm

Ed, Uh, you caught us. Larry is two feet, one an a quarter inches tall. The scandal of the century. Yes, when using the photographic method, at least some girths will be taken of the regular way. However, the standard procedure will be to place a ruler or yardstick in the photo at a know distance and in direct line with the camera. We want to know the length of the reference object to a high degree of accuracy. A lot more work is needed to develop proportionality factors and the method may not prove worth the effort. But so far, so good.

Robert T. Leverett

Re: Larry Tucei's Mission

by Larry Tucei » Thu Jan 17, 2013 10:33 pm

Bob, I think that distance from camera to tree would have been more like the 70' number. The next time I photograph a tree I will get the distance from the camera to the tree and get the tape in the photo as well.

Larry Tucei

Re: Larry Tucei's Mission

by [dbhguru](#) » Fri Jan 18, 2013 9:37 am

Larry,

I've factored in a distance of 70 feet to you. I've also put another line in at approximately chest height. You can see the results. Do they seem close or not close?

A ruler in the image does make a big difference. However, the big unknown is the role of optics. These measurements are working for my Canon and my iPhone. Beyond those two, I have no idea what will happen. So step one is an experiment with your camera. We can discuss the design of the experiment if you're game.

The ultimate goal is to model the limbs and trunk areas of a tree that you can't easily get to. The photo measurement using Excel process is simple. Anyone with a camera, laser rangefinder, clinometer, and of course Excel can do it without having to learn a complex software package. There's a place for the latter, but I'm searching for "low labor" solutions. This may or may not prove to be one.

For those who have a reticled monocular, that is still the safer way to go to take width measurements at a distance. BTW, be sure to double click on the image to expand its size.

Robert T. Leverett



R_a = actual diameter, reference object
 R_e = Excel size, reference object
 T_d = distance, target object
 R_d = distance, reference object
 T_e = Excel size, target object

Object	Type	Excel Size	Actual Size IN	Dist ft	Measured Diameter IN
Trunk	Target	2.76		78	122.0142857
Person	Reference	1.84	73	70	
				In Ft	10.16785714
				Girth in Ft	31.9432653

$$T_m = \left(\frac{73}{1.84} \right) \left(\frac{58}{50} \right) 2.76 = 127.02$$

Object	Type	Excel Size	Actual Size IN	Dist ft	Measured Diameter IN
Trunk	Target	3.14		78	138.813354
Person	Reference	1.84	73	70	
				In Ft	11.5677795
				Girth in Ft	36.34125111

Re: 2013 Tree Climbers International/NTS Event October 9-14

by [pattvjenkins1](#) » Fri Jan 18, 2013 6:59 pm

Hi Everybody, The word is OUT and the website is READY! This is your formal invitation and summons (if I may be so bold) to the 2013 Tree Climbers Rendezvous. Everyone that I've spoken with about this is so very excited about meeting and spending time with you all (I could actually hear some people's eyes get bigger and bigger when I told them all about

it) and the possibilities that will open up as a result of this gig. No kidding.

I wouldn't be surprised if we have a full house at 300 (yes, there is enough room and there are enough trees), which puts a premium on your registering early. All the details are on our website (<http://treeclimbing.com/index.php/climbing/the-2013-rendezvous>). We can't wait to have you in Atlanta. Every first and last one of you.

Patty Jenkins ,Executive Director
 Tree Climbers International, Inc.

[138.5 foot loblolly pine in Durham, NC](#)

by **pdbrandt** » Fri Jan 18, 2013 7:46 pm

I've been pouring over the NC LIDAR data and have located a few areas of interest not far from home. I stopped at one area showing 135-145 ft pine trees on my way home this evening.

Here is the LIDAR map of the area showing a couple of points above 140 ft right along Anderson St in Durham. The key to the pixel colors is seen on the left.

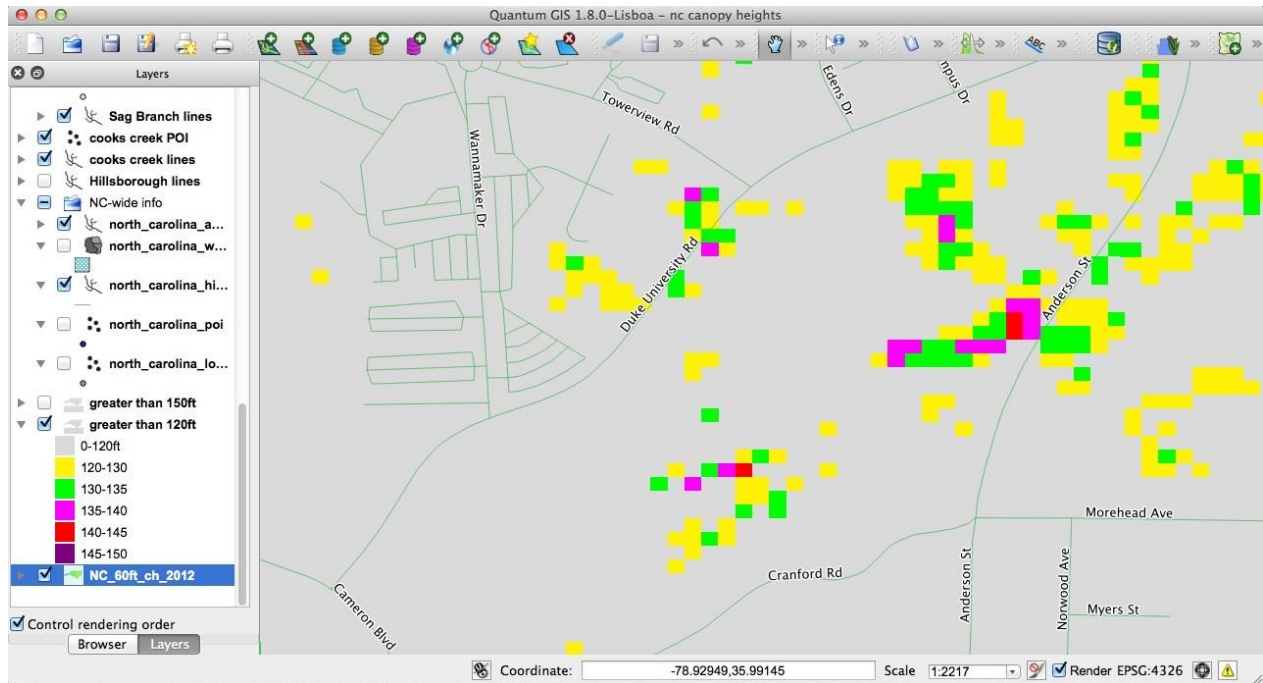
The pines at this site are spindly bean poles that shoot straight into the air in someone's front yard. Very impressive for trees that probably aren't much more than 50 years old. The tallest of three I measured just as daylight fled is 138.5 feet tall. The LIDAR data I

have access to predictably overestimates tree height by 5-15 feet depending on the steepness of the terrain. A picture wouldn't do the tree justice so I took a little video clip which you can see below:



<http://m.youtube.com/watch?v=Pbn6o212XII>

Patrick Brandt



138.5 foot loblolly pine along Anderson St

[New Record Pond Pine \(kind of\)](#)

by **Tyler** » Fri Jan 18, 2013 11:58 am

Hey guys,

Just wanted to share this find from Cheraw State Park.



It would easily be the state champ but it is dead. I initially saw the tree a couple of years ago and it was already a snag.

Hit by lightning and falling apart now, it sways in the slightest breeze.



The girth is 10' 1" and I measured the height to a small break to 102'. Original height was likely in the 105' range.

Tyler Phillips

Photo Measurement

by **Larry Tucei** » Fri Jan 18, 2013 8:05 pm

Bob, I had a chance to go and re-measure the Ms State Champion Magnolia and a Live Oak on a friend of mine's place today. In the Live Oak photo the stick is 4' tall and 16' from the camera to the trunk of the tree. What is the CBH? Problem #2 The Magnolia-I have one 4' stick at mid-slope and one in front of the tree with my tape on it for reference, I should have done this at the Live Oak. The distance from the camera to the trunk on the close-ups of the Magnolia is 18'. On the third photo I forgot to get the distance from camera to trunk. What is the CBH? I will post on the measurements of both trees after your answers.

I went south of the big tree in the small creek where it grows and measured some Water Tupelo and I'll post on them later.





Re: Photo Measurement

by dbhguru » Sat Jan 19, 2013 9:40 am

Larry, I had to make a few assumptions. We need an exact distance to the center of the reference object and a distance to the center of the target (the center of the vertical plane running through the center of the tree and oriented 90 degrees to the camera). I'm assuming that the 4-foot reference stick is 16 feet from the camera and that the center of the tree is between 20 and 21 feet. I'm using 20.5 feet. I'm also assuming your height is 73 inches - just to have a second reference object. In the image below, we see where these assumptions take us.

I think 16 feet may be too close for the size of the target. I expect that 30 feet is probably needed for reasons not discussed here. Anyway, what is the girth at the yellow horizontal line? Maybe we can figure out how to tighten the inputs.

Robert T. Leverett



Excel Width	0.13	Excel Size	3.99211723	Ref
	0.08		5.92054052	Target
Excel Hgt	3.99	Ref	Stick	
	5.92	Target		
Act Hgt	4			
Dist	16			
	20.5			
Measured Hgt	7.600671116	Ref		
	23.87821254	Target		
		Girth		
Excel Hgt	5.0817	Ref	Larry	
	5.92	Target		
Act Hgt	6.083333333			
Dist	16			
	20			
Measured Hgt	8.85858407	Ref		
	27.83006263	Target		
		Girth		

Re: Photo Measurement

by Larry Tucei » Sat Jan 19, 2013 12:48 pm

Bob, The CBH is 20' on the money. I'll adjust my distance on the next tree to 30'.

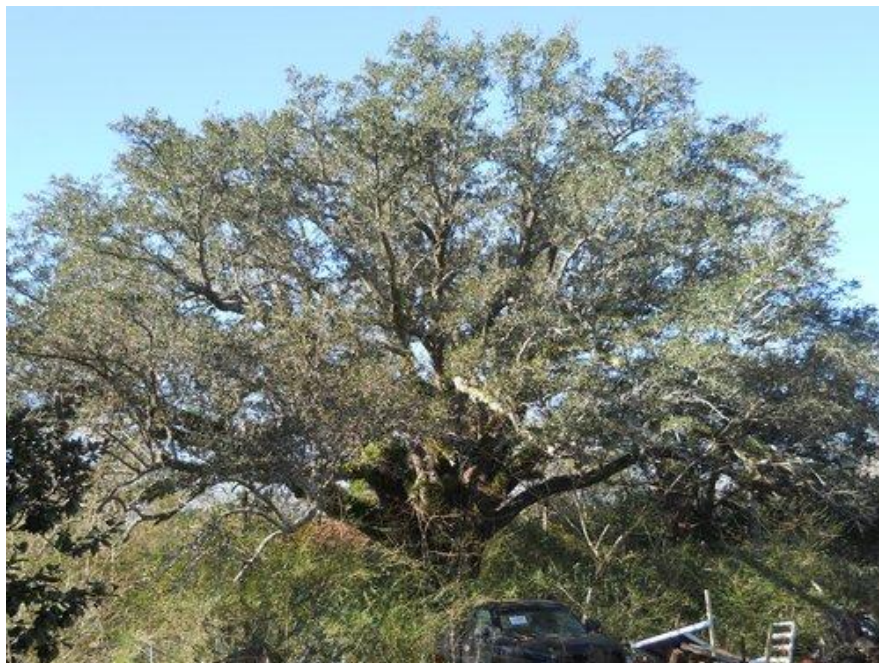
[Henry Meyers Oak](#)

by **Larry Tucei** » Sat Jan 19, 2013 2:06 pm

NTS, I measured a Live Oak on Friday located on a friend's property in southern Ms. I have seen this Oak numerous times and we had talked in the past about the tree. We named the largest Oak on his

hundred acre property after his father Henry Meyers. The Oak has been trimmed several times so the crown spread would be longer than what I measured. The measurements are CBH-20', Height-45' and Crown Spread- 105' x 90'. The Oak is a beautiful younger tree in the 100-200 year old class.

Larry Tucei



[seeLevel](#)

by **dbhguru** » Sat Jan 19, 2013 2:30 pm

NTS, we have a new iPhone app that shows promise. It is named seeLevel and it incorporates clinometer, level, and distance functions. But within these broad functions, there is a lot of capability. For example you can measure vertical and horizontal angles (iPhone 4 and above). You can establish plumb lines going up or down. You can even measure distances. It is wild! You look through the iPhone's camera lens, so you see the target and can put a crosshair on it. I just did the first test as to accuracy of the regular clinometer function and computed the height of an object using the angle to the top and base along with distances to top and bottom using a Bosch GLR825 so there would be no error in the distances. I used a tripod to steady all instruments. The tape measured height of the object is 3.17 feet. The calculated height came to 3.2 feet. YEEHAAA! Well, that's only one test. Lots more to come.

One of the clinometer functions of the app is rotational angle. You can align a reference line with a leaning trunk of a tree as seen through the eye of the camera and get the actual degrees of lean from the vertical. This app is only \$0.99. Even if it isn't super accurate, it has so much functionality that we can make excellent use of it, or so it appears now.

Part of the challenge is to figure out how to hold the instrument through progressive tilting, i.e. where is the centroid? The guide is not clear on lots of points, but I hope to communicate with the designer and get clarification. Between Don's new app and this one, we have a lot to work with.

Robert T. Leverett

[Water Tupelo\(*Nyssa aquatica*\)](#)

by **Larry Tucei** » Sat Jan 19, 2013 7:57 pm

NTS, I finished the Magnolia measurement and noticed a few gum trees down the creek a couple a hundred yards so off I went. I measured a couple of the largest trees in a small grove of *Nyssa aquatica*. These are really small compared to others I've seen in my journeys but I have never measured one from Ms. I'm planning a future trip to the Pascagoula River Basin and should get some really large ones there. The trees I measured both had heights to 96' and CBH of 7'4", 6'10".

Larry Tucei





Native (mumble) Society Cartoon

by pitsandmounds » Fri Jan 18, 2013 11:35 pm

True story . . . I can't make this stuff up . . .

Matt



American Chestnut maximum heights?

by eliahd24 » Sat Jan 19, 2013 11:02 am

Hi NTS,

I attended a wonderful lecture last night hosted by Trees Atlanta on the topic of the American Chestnut.

Tom Saielli, Southern Regional Science Coordinator for the American Chestnut Foundation gave the talk.

Though much of the information provided was old news, I certainly did learn a lot more of the specifics of their breeding program, backcrossing and hybridizing. Plus I learned that the historical range of the species was well into the Piedmont and possibly down into the Coastal Plain (where it was wiped out by a fungal disease a century before blight was introduced!).

One question I did not get answered was- how daggum tall did these things get?? There's plenty of evidence of the great girth these trees achieved.

There's also plenty of info on the historical range and

what % of the forest was made up of chestnuts, but I'm curious as to the where they stood in the canopy. Were they "seeing eye-to-eye" with the tuliptrees? Did they top out a bit shorter such as hickory or oak species? Just curious. Have any NTSers read historical accounts (newspaper clippings, books, etc.) of the height of these (almost) lost giants?

Eli Dickerson

Re: American Chestnut maximum heights?

by Rand » Sat Jan 19, 2013 12:52 pm

Will Blozan's commented before that his feeling is that it was 'like a big red oak'. Looking at the stumpiness of the tree in the following picture I find it hard to disagree:



Historic photo of an American Chestnut from Morris Arboretum of the University of Pennsylvania.

Re: American Chestnut maximum heights?

by eliahd24 » Sat Jan 19, 2013 12:57 pm

Yeah, but open grown vs. forest grown is apples and oranges. I've seen some very stumpy Tulips in the open that barely crack 100' tall, but then there's the 192' skyrocket of a tulip in the Smokies.

Re: American Chestnut maximum heights?

by dbhguru » Sat Jan 19, 2013 2:00 pm

Eli, Without detailing the research that Will Blozan and I have done over the years, I have little doubt that the American chestnut fell well short of the tuliptree in stature within a forest grown environment. I think that 120 to 150 feet represented the maximum heights for forest-grown chestnuts. There might have been a few slightly taller ones, but not by much. Even forest grown chestnuts show much more rapid taper than the tulips. Also, the anecdotal accounts I've read or heard support the height dominance of the tuliptree.

Robert T. Leverett

Re: American Chestnut maximum heights?

by edfrank » Sat Jan 19, 2013 2:35 pm

NTS,

I have an extensive collection of book texts from <http://www.archive.org>, Google books, and project Gutenberg of tree and forest books from the 1800's and early 1900's. I don't recall reading of any chestnuts with height much greater than 100 feet.

Here are two significant references:

J. S. Illick, J. S. 1914. Pennsylvania trees.
Commonwealth of Pennsylvania, bulletin 11, June 1914.

Castanea dentata, (Marshall) Borkhausen.

FORM—A large tree usually attaining a height of 60-80 ft. with a diameter of 3-4 ft., but may reach a height of over 100 ft. with a diameter of 10 feet. A tree with a diameter of 17 ft. has been recorded from Francis Cove, western North Carolina. Open grown trees have short trunks with deep, widespreading crowns. Trees in close stands tall, with little stem taper and few lateral branches.

Hale, P. M. and Curtis, M. A. 1883. The Woods and Timbers of North Carolina, P. M. Hale Publisher, New York, NY.

CHESTNUTS.—1. CHESTNUT. (*Castanea vesca*, Linn.)—This is an inhabitant of all the cooler parts of the United States. With us it is chiefly confined to the mountains from Ashe to Cherokee, and is found but sparingly on hills in the Middle District as low down as Guilford and Randolph. It finds its proper soil and temperature on the sides of our high mountains, where it probably acquires as large dimensions as anywhere in the Union; stocks being sometimes met with which, at 6 feet from the ground, measure 15 to 16 feet in circumference. Its usual height is from 50 to 70 feet, but is sometimes 90, with a capacious and well formed top. The wood is light, tolerably strong, elastic, and capable of resisting the effects of atmospheric changes. Its durability gives it great value for fencing, and the rails, which are split out straight and easily, are said to last 50 years. For shingles it is superior to the *Oaks*, but is liable to warp. It is sometimes used for cooperage, but is too porous for anything but dry

Here is an excerpt from another thick treatise on American Trees:

Gibson, Henry H. 1913. American Forest Trees. Hardwood Record, Chicago 1913. 738 pages.

CHESTNUT
(*Castanea Dentata*)

FIVE species of chestnut are known, three of them in the United States. One of these, *Castanea alnifolia*, is a shrub and has no place in a list of trees. Chestnut and chinquapin are the two others. They are in the beech family to which oaks belong also. The ancient Greeks designated these as food trees (*Fagaceae*), not an inappropriate name for chestnut which probably furnishes more human food than any other wild tree. Its range extends from Maine to Michigan and southward to North Carolina and Tennessee. It attains its greatest size in western North Carolina and eastern Tennessee. It is one of the few well-known woods of the United States that does not bear a half dozen or more local names in the various localities of its growth, but the wood is invariably known as chestnut.

Trees vary in size from sixty to 100 feet in height, and from two to four in diameter. Trunks six feet through occur where trees have grown in the open, but such are not tall, and are not valuable for lumber. Chestnut trees are sometimes heard of in this country with trunks ten and twelve feet through, but such must be very scarce, because no one seems to know just where they are located. It is not improbable that in rare cases such sizes have existed. In France and Italy trees much larger are well authenticated, but that chestnut is of a species different from ours.

I have looked before, so this is not just a causal perusal of all of the books, but a fairly complete search.
Edward Frank

[Re: American Chestnut maximum heights?](#)

by **eliahd24** » Sat Jan 19, 2013 3:48 pm

Interesting. This is exactly the kinda info I was looking for. Sure wish I could have seen chestnuts in their heyday. Hard to imagine what a forest with a 1:4 or 1:2 ratio of chestnuts to other species (depending on who you talk to) would have looked like.

[Re: American Chestnut maximum heights?](#)

by **Will Blozan** » Sat Jan 19, 2013 10:38 pm

Dude, you'll never know. A tidbit of historical information that will always be in speculation. I still feel it would mimic n. red oak in height but it is no more than an educated (via observation) hunch. Historical height information is almost never to be trusted, especially when associated with a grandiose eulogy of the tree. Everyone is a hero after they die.

Will

[Re: American Chestnut maximum heights?](#)

by **Jeroen Philippona** » Sun Jan 20, 2013 1:51 pm

In Europe there are very few American Chestnuts, but there is one large specimen tree planted in 1902 in the Arboretum Tervuren near Brussels in Belgium. It has a height of 36.90 m (121 feet). See: <http://www.monumentaltrees.com/en/bel/f...uren/4149/>.

In this arboretum and the neighbouring Sonian Forest record heights can be found for Belgium for several species and even some European record heights, like the tallest European Beech for Europe as well as the tallest Pedunculate oak for Belgium.

See a list at:

<http://www.monumentaltrees.com/en/bel/f...ervuren/hd>.

This area has very good growth conditions for tall trees with aeolian Loess soils.

Funny is that the American chestnut is 3 feet taller than the tallest European Sweet Chestnut (*Castanea sativa*) we have measured till now in Europe, which is 36.0 m (118.1 feet), which is far less than several other hardwood species in Europe.

Till now we did not measure European Chestnuts in forest plantations which can be found in SW Germany and probably in Italy and some other SE European countries as well as Turkey, the Caucasian and Iran. Perhaps there are natural forests in those countries, I will have a look if there is somewhere information to be found about these.

When growth characteristics of both species of Chestnut are comparable, I expect that American Chestnuts were not often taller than 36 m (120 feet).

Jeroen Philippona

[Tunnel Tree - a remarkable sequoia](#)

by **F.Jakobsson** » Sun Jan 20, 2013 4:02 pm

If you've read about the Tunnel Tree in Wendell Flint's book *To Find the Biggest Tree* (2002) and wondered what to look for I have attached a photo with the undersigned in front for comparison. The tree is, to quote Flint, "a remarkable 57 feet across its vast base" and stands in Atwell Mill Grove west of the Paradise Ridge Trail (Flint's book has a map). I have never seen a photo of it before - hope it inspires a visit!
Fredrik

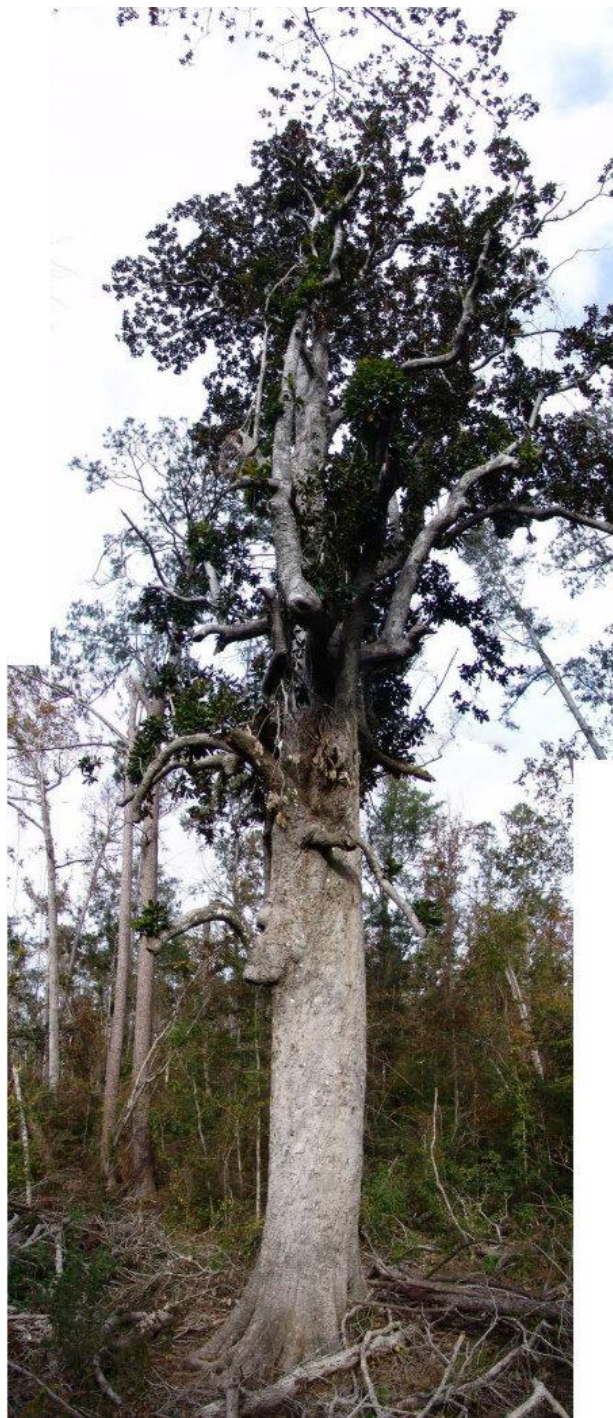


[Ms State Champion Magnolia \(Single Trunk\)](#)

by **Larry Tucei** » Sat Jan 19, 2013 7:22 pm

NTS, Friday after I measured the Meyers Live Oak I went up to the Ms Champion Magnolia for an accurate crown spread measurement and gps coordinates. I've been to this tree many times and yet I'm still in awe of its great size. It's difficult to measure due to a couple of factors- it grows in a small creek bottom on the edge of a hill that makes the spread a tough measurement. I drove a stake in the ground at mid-slope that was 4' high then pulled a straight line to the trunk and went up 6" to get a CBH of 17' 3.5", I then shot the Height a few times and settled on 111', using the sine method. I shot straight up through a small opening in the crown and confirmed the height. I then used stakes to measure the edge of the crown and made a north-south measurement, east-west measurement and a northeast-southwest measurement. The crown spread measurements were NS 61', EW 63' and NE-SW 75'. One bad note people are still carving initials in the trunk and although this has been happening for decades I fear that it will harm the tree someday. This is the largest single trunked Southern Magnolia in the

United States that I can confirm. I did research looking for a larger one back in 06 and 08 but I couldn't find one. I have been going to this tree since 1992. Larry



[Re: Ms State Champion Magnolia \(Single Trunk\)](#)

by **Jess Riddle** » Sun Jan 20, 2013 3:46 pm

Larry, I love finding out about an individual tree that changes the way I think about a species. I don't think I've ever viewed southern magnolia quite the same since you posted about this tree. That whole tree shot is so impressive.

Jess Riddle

[Re: Ms State Champion Magnolia \(Single Trunk\)](#)

by **Bart Bouricius** » Sun Jan 20, 2013 10:09 am

What a magnolia, regarding the carving; people love trees and love to do things to them often there love and exuberance kill the object of their affection. Some part of that carving is based on an affinity with

the tree, though obviously ignorance plays a role here. As always, I see a part of myself in the destructive impulses regarding the trees.

Interestingly both loggers and arborists who are probably the most frequent posters here have a great ambivalence regarding trees. I justify my canopy walkway building by noting that I steer any construction away from the largest most impressive trees, but if I had my druthers I would never build anything in a tree. On the other hand I could not afford to go to the Amazon and search for the most magnificent trees. I do think that familiarity usually does not breed contempt and if anyone read the Golden Spruce, we can see this ambivalence in it's most revealing form here. Of course not just ambivalence, but a repudiation of past behavior.

Sorry to leave folks hanging, but you do need to read the book if you have not.

<http://www.npr.org/templates/story/story.php?storyId=4679760>

Re: Customary New Years Resolutions

by **edfrank** » Sat Jan 19, 2013 5:23 pm

Perhaps it is late in the month for New Year's Resolutions, but we still have almost 1 1/2 months to go, and I doubt that many of you have completed all of your resolutions, although many of you likely have broken them all by now. I offer these resolutions for the Native Tree Society as a whole:

1) Somebody (read Bob Leverett and Will Blozan among others) need to compile and complete an article comparing our clinometer- laser rangefinder measurements to the result obtained by tape drops.

Bob Van Pelt commented on the project I started in 2005 to both compare our own measurements with the results obtained from tape drops, and a compilations of errors that have propagated in big tree lists. "This is an extremely important issue that no pre-ENTS organization was ever able to accomplish. For that matter, even ENTS has only

become capable of doing something like this fairly recently." There should be a section on the errors found both with basic instruments like the Nikon 440 and 550 rangefinders, and with more accurate instruments like the Trupulse series. But we NEED to demonstrate our accuracy by comparing our measurements to tape drops, even more so than additional instrument calibrations. We need something in a single document we can point to and say "See Here."

2) Write the definitive article on Tree Measurement for Wikipedia. I am working on it now as a take this brief break to write this post. People look things up on Wikipedia first more times than not. We need to be the ones to write the article. This will reach more people than anything else I can think to do.

3) We need to adapt our large existing Databases of tree measurements held by Bob Leverett, Dale Luthringer, Will Blozan, and Jess Riddle among others so they can be imported into the TreesDatabase. We have a database, now we should use it rather holding onto our data in our own little fiefdom or procrastinating so that it is not ever submitted.

4) We need to make the joint Tree Climbers International / Native Tree Society rendezvous this fall a success by providing useful workshops and presentations to the audience of tree climbers that will be present.

5) I would like to see some progress be made toward getting a non-profit designation for the Native Tree Society for itself, rather than continuing to be a non-profit as a sub set of the Friends of Mohawk Trail State Forest.

Edward Frank

[Re: Customary New Years Resolutions](#)

by **pattyjenkins1** » Sun Jan 20, 2013 12:01 pm

A few additions to the lists of things to accomplish in 2013.

1. Create a credentialling program for tree measurers. I've said on the information about the [2013 Rendezvous](#) that you guys were going to be doing this in preparation for new people. It will be on the order of the day, as plenty of people will want to be credentialled.

2. Ed and Will talked about creating a tree-measuring guidelines brochure of some sort. Is this off the table? Maybe the Wikipedia article, reconfigured as a brochure (I can work with whomever to do this; I admit to being pretty good at this type of thing) would suffice.

3. It would also be very helpful to set up some sort of structure (maybe it already exists?, maybe just a "locator" like the TCI ["Climber Finder"](#) [which is for members only so it's secure?]) to enable newly-recruited measurers to ask for field help from experienced NTS.

4. On the database: I haven't spoken with TCI member Paul Giers in a while, but his compilation of all the state and national champs and big trees into **one big list** should be made use of somehow. My guess is that it would be invaluable to use it as a tool to find out which trees need re-measuring and which are not even standing at this point. I will get details of where that stands. I know he has completed most of it.

5. In response to Bob's excitement about forging a collaboration with professional and recreational climbers--I know of many who will second, third, and fourth Bob's sentiments. Myself being the first. My New Year's Resolution is to make the Rendezvous as successful as it can be by maximizing participation; as well as to maximize the extraordinary possibilities it holds for education and creating new citizen scientists for trees. Some

planning for post-Rendezvous structure(s) to help keep newbies inspired and active will help. This Board is obviously the best place to start. Nobody could fail to "get" the passion for trees and measuring them that you guys have. However, my experience with tree climbing teaches me of the necessity to keep finding and building ways to grow new, passionate leaders who can help sustain the work.

Patty Jenkins

P.S. [Kim Coder](#) was excited to learn about the Rendezvous and agreed to speak there. He's a great and very engaging speaker. It's been suggested to me that I ask him to talk about climate change impact on trees. But his lectures on basic tree biology/physiology are amazing and so easily understood. I think this would be good for tree climbers to hear. Many of them are unschooled in the science of trees altogether. Thoughts?

[Re: Customary New Years Resolutions](#)

by **DougBidlack** » Sun Jan 20, 2013 2:39 pm

Ed,

I absolutely agree with all your resolutions but I especially want to make some comments regarding point #1. As you mentioned, the evaluation of each laser should ideally fit on one page, but it should not begin and end with accuracy. I think that price, speed (amount of time required to get a measurement), and ease of use need to be on that table. Usually we only talk about accuracy and maybe price but speed and ease of use tend to get too little attention and I think this is a big mistake.

Making these tools easier to use and evaluating them on this basis, I think, will really help to get more people involved.

I remember the first time I went to work for my dad as a machine tool electrician (basically just wiring up

large machines that can cover several acres). He didn't just tell me how to do it. He took me, step by step and told me to buy this toolpouch, put these tools (he picked them out and told me exactly why he picked each one, even to the point of describing which electrical tape he used because of how it held up best outdoors after several years among other reasons) in the toolpouch in this order, and then he showed me exactly how to use each one. Very soon, he said, you will never have to look at your toolpouch. You will simply need a tool and you will simply reach back and grab it without thinking. This sort of handholding may seem almost childish. It isn't. It is probably the biggest hurdle to overcome in order to wire up a machine, measure a tree or anything else. The best way is to be taught one on one by a master. Lacking that, filming (or whatever it's called these days) a master and having someone explain exactly what he is doing at every step of the way will suffice. No detail should be left out. Even what clothing you wear, where each tool is placed, which hand you use to grab tool x etc. All this matters when it comes to measuring a tree as quickly and accurately as possible. There are likely many ways to use each set of tools, but some are certainly better than others. Methodology, process, is just as important as the tools we use. I know this only relates to point number one in a kind of sideways sort of way but I thought I should bring it up since I still think about it all the time...mostly because I am so darn slow.

Doug Bidlack

[Re: Customary New Years Resolutions](#)

by **dbhguru** » Sun Jan 20, 2013 7:23 pm

Doug, You make excellent points about going beyond simple accuracy tests. I often think of the number of steps needed to efficiently execute a procedure, but have not discussed them on the BBS for fear that the rest of you would think I was over

doing it. However, your post changes my thinking.

Patty, We can set up a joint tree climbing-measuring experiment at the rendezvous to help accomplish one of Ed's New Years wishes - a test of methods with tape drop comparisons. I'll discuss this with Will and get back to you with a proposal. It would be a first. You have the climbers and we could make a lot of comparisons if Will thinks it is feasible. The result would be the basis for a report.

Ed, The database needs an Excel interface along the line of that list of fields I listed in a previous post. Maybe we can start from there. The database must be efficient and work for those of us who are simply not hoarding our data, but using it for a variety of purposes toward worthy objectives. We can make the database work for us if we can establish an Excel interface that works for Will, me, and others. More on this over the next several days.

In terms of establishing ourselves in the eyes of the public as the masters of tree measuring, the advanced guide, I.e. dendromorphometry will happen. As I mentioned in a private communication, first I have to complete the chapter for Joan Maloof. Then I turn to the dendromorphometry book, which of course will heavily involve you.

Bob Leverett

[Re: Customary New Years Resolutions](#)

by **edfrank** » Sun Jan 20, 2013 8:07 pm

Patty, Doug, Bob,

Regarding the first item on the list - proof of accuracy. Yes we do need these other things compiled. What I think is most important single step or item is to show that our measurements are accurate with regard to measuring trees. The only way to do that is to show that our tree measurements compare

well to tree measurements obtained in another manner that people do believe is accurate. The only way I can see to do that is by comparing our ground based measurements with measurements obtained by tape drops during tree climbs. No matter how well we do the statistics or calculations of error for the rangefinders and clinometers, and no matter how valid those analysis might be, to have the methodology accepted we need to compare it to real life physical measurements obtained during tree climbs.

Edward Frank



Bird Injuries/Illnesses

by **Jenny** » Mon Jan 21, 2013 9:55 am

If in Maine or Southern New Hampshire: In the spirit of the Martin Luther King quote about helping people and animals in need, I'm a bird rehabber! If you ever see an injured gull, pigeon, starling, sparrow, hawk,...any bird - even a baby who has fallen out of a nest and can't be replaced. Get in touch with me with the location and I'll go. For pigeons, starling, sparrows and smaller birds, you can toss a towel over them, pick them up, put them in a dark box with air holes, and keep them in a warm spot. I'll pick it up or you can drop it off with me or, if it's closer, at a rehab center. The bigger birds...be wary! Gulls beaks are fierce(almost had my lip ripped off!) and raptor talons are downright dangerous. This is a picture of a severely injured pigeon, but even a bird huddled in a corner on the ground is probably sick or injured. Don't worry about disease! If you're concerned just use the towel for contact.

Jenny

The Floyd Otter Sequoia, third largest?? Never heard of it..

by **JohnnyDJersey** » Thu Jan 17, 2013 11:43 pm

I came across this link and I was very interested. I thought I could rattle off the list of top 10 or 20 largest Sequoias. I've never seen this tree listed on any website including Wikipedia or Michael Taylors Landmarktrees.net. Has anyone ever heard of or been to this tree? From the looks of it its obviously got the girth to match any of the giants. Anyway its an interesting read with great photos. Maybe Taylor or Vaden could weigh in on this one?

<http://www.bladeforums.com/forums/showthread.php/959096-Finding-the-Floyd-Otter-Tree-3-Giant-Sequoia>

[Re: The Floyd Otter Sequoia, third largest?? Never heard of](#)

by **Will Blozan** » Fri Jan 18, 2013 9:50 am

J- Great story and photos- thanks for sharing. I have forwarded it to the "authorities" for their take on this tree. Indeed it is a giant, but unless our western counterparts have personally measured it- the claim means nothing.

Will

[Re: The Floyd Otter Sequoia, third largest?? Never heard of](#)

by **mdvaden** » Fri Jan 18, 2013 11:54 pm

I've heard of the tree before. Either in conversation, or an email.

Don't remember if it was Michael Taylor, Zane Moore, or someone else who mentioned it. Good chance it was a man I met from Germany, who invested a visit or two, visiting some of the biggest Sequoiadendron.

Ha !! Sure like the pic ... especially since I dug a Coast Redwood photo out of the files last night. Probably a fused-stem though.



M. D. Vaden of Oregon

[Re: The Floyd Otter Sequoia, third largest?? Never heard of](#)

by **JohnnyDJersey** » Sat Jan 19, 2013 12:32 am

Will, I agree. For all anyone knows it could be a snag or broken off at 100 feet. Would love to get a pro out there to measure it and post a report. Great work btw on the Nat Geo photos and measurments. I have the photo of The President laminated and hanging in my office.

Mario, is that the screaming titans in the photo? Just curious, the fused tree in the background looks impressive as well, is it named? The Titans have always reminded me of the Boy Scout Tree, another fused giant. I imagine youve seen both, which one would you say is more impressive?

[Re: The Floyd Otter Sequoia, third largest?? Never heard of](#)

by **mdvaden** » Sat Jan 19, 2013 3:23 am

Yes ... it's the Screaming Titans, and of the 2 redwoods, it seems somewhat more outstanding. But I was rather surprised first time I saw the Boyscout Tree, at how giant it looks. I want to photograph it again this year. Like spend an hour. Also sort of curious to measure it's height too.

RE this Floyd Otter Giant Sequoia, I'd sure enjoy visiting it someday. I find the outline of the burned area to be one of it's most interesting aspects. It looks like there's an inner remnant of where one side died and burned centuries ago, then the other side kept growing and partially enveloped .

M. D. Vaden of Oregon

Re: The Floyd Otter Sequoia, third largest?? Never heard of

by **Mark Collins** » Sat Jan 19, 2013 10:55 am

Joe Zorzin asked: By the way, how many acres of old growth redwood still exist? Has all of it been examined by expert tree measurers?

Joe, to answer your first question, here are some stats from "Save the Redwoods League:"

- 1.) Of the original 2 million acres of ancient coast redwood forest (the size of three Rhode Islands), approximately 95% has been logged.
- 2.) Today, about 117,000 acres (5%, or almost three times the size of Washington, DC) of these ancient coast redwood forests remain.
- 3.) Most areas that were ancient redwood forests 200 years ago now contain redwoods that grew after the original forests were cut down. There is an urgent need to restore these damaged lands so they will once again resemble majestic ancient forests and provide homes for animals that rely on them.
- 4.) Approximately 77% of the world's remaining ancient coast redwood forests is protected in a park or reserve or by a land preservation agreement. The remaining 23% may be logged because it is either held privately or in a national forest.
- 5.) Since 1918, Save the Redwoods League has protected more than 190,000 acres of California land, the size of 16 Manhattan islands.

-These are sobering statistics in my opinion. I had no idea to the extent of the logging of the redwoods until I moved to Northern California. It took a few months for me to understand what I was seeing. It's hard not to be discouraged when all you see are enormous stumps and "skinny" trees pretty much everywhere the redwoods grow. –

Mark Collins

Re: The Floyd Otter Sequoia, third largest?? Never heard of

by **F.Jakobsson** » Sat Jan 19, 2013 11:10 am

Hi, I live in Sweden but the love for redwoods and sequoias has taken me to California a couple of times. These incredible trees pull like magnets! This is my first post.

Below are citations from the two editions of Wendell Flint's book *To Find the Biggest Tree* where I believe he writes about the Floyd Otter Tree since it's located nearby and upslope from the King Arthur Tree. Square brackets and italics are mine.

To Find the Biggest Tree (1987), page 70:

"A letter to Harry C. Parker (1949) from Howard Stagner mentions a large tree in the Garfield Grove. This may be the large tree [King Arthur] I report in Chapter 3 on the large trees to be found in Sequoia National Park outside Giant Forest. *It is also possible that it is another nearby tree with a large base.*"

To Find the Biggest Tree (2002), page 58:

"The tree [King Arthur] is found by walking the main trail about halfway through the grove to where a small stream cuts across the trail, and the trail itself changes direction and goes to the northeast corner of the grove. From the trail walk uphill, paralleling the small stream just to its west. The tree is close to this watershed. *Two large trees stand above it.*"

To Find the Biggest Tree (2002), page 63:

"*There is one* [park inventoried tree at least 20 feet in diameter breast high] *in the Garfield Grove that I have seen from a distance that may be interesting.*"

Dwight Willard in his self-published book *Giant Sequoia Groves of the Sierra Nevada* (1994) writes on page 201 under the heading NOTED SEQUOIAS: Garfield section:

"*An unnamed 25 ft. diameter specimen is just upslope from the King Arthur Tree* (W. Flint 1993 p[ersonal]c[ommunication])"

In the 2002 edition of *To Find the Biggest Tree*, pages 58 & 60, Flint writes about measuring the King

Arthur Tree:

“It is a tiring hike [to the Garfield area] if you want to look round and get back to the campground in one day, but it can be done. [...] By 1977, the Garfield area had been inventoried, and several large trees were shown on the inventory map. In the fall of 1978, two fellow tree hunters, Bob Walker and Gus Boik, went with me to look for these trees. I spotted the largest one I could see [King Arthur Tree] and called Bob over to help me make a few measurements. Later my cousin Robert Bergen and I made a few more measurements. However, it was not until 1985 that we were finally able to make some transit measurements. Mike Law and I gathered most of the data, with Jerry helping out. The other members of the party were too pooped to do anything. I had to depend on poor instrumentation for one line and we needed two transit lines to really nail this tree down, but time ran out. As it was, three of us got back to the campground after dark.”

The tiresome hike and the time pressure to measure and get out before dark may have made it necessary to prioritize which tree to measure and the King Arthur Tree seemed to Flint to be bigger than the Floyd Otter Tree.

I will try to pay the King Arthur and Floyd Otter Trees a visit in autumn 2013. A planned trip in 2012 had to be postponed.

Fredrik

Re: The Floyd Otter Sequoia, third largest?? Never heard of

by **mdvaden** » Sat Jan 19, 2013 12:43 pm

Mark You almost certainly know where this spot is.

Odds are you've been there, or by it, several times if you go through Avenue of the Giants.



A stump from Calaveras .. at least they put it to some educational use.



M. D. Vaden of Oregon

Re: The Floyd Otter Sequoia, third largest?? Never heard of

by **Will Blozan** » Sat Jan 19, 2013 10:23 pm

Hey all, I put out an email to Steve Sillett and he has climbed the King Aurthur tree and seen the Floyd Otter tree as well. Based on his visual inspection (which is pretty damn honed) he felt the tree was not as large as stated. Still, to date, it sounds like the tree has never been accurately measured and Michael Taylor mentioned the possibility of getting out to get some preliminary measurements this year.

Very curious!

Will Blozan

Re: The Floyd Otter Sequoia, third largest?? Never heard of

by **mdvaden** » Sat Jan 19, 2013 11:32 pm

Will ... the shot connotes it's measurements could be lower than might meet the eye.

Some trees have big fire caves like the Church Tree coast redwood ... burned inside, but lots of remaining circumference. A trunk wrap on those would yield a volume close to the same as if they were solid inside. But this Floyd Otter tree looks like half of one side is nearly missing or flattened. And it's possible the average diameter is comparable to a solid bole tree 16 feet in diameter. If it's top was broken, etc.. it would be no surprise why Sillett mentioned it's not that big.

If I was going to photograph the Floyd Otter Sequoia, the widest looking view is still exactly how I'd take it. Just looks cool that way.

M. D. Vaden

Re: The Floyd Otter Sequoia, third largest?? Never heard of

by **JohnnyDJersey** » Sat Jan 19, 2013 11:54 pm

Mario your right. That is the best way to photo the tree. The fact the photo only shows up so high concerns me. Its funny because Ive photographed 100s of the east coasts largest trees and Im always experimenting and trying to take a photo that makes them look as large as possible esp when Im using myself as a scale for the picture.

Re: The Floyd Otter Sequoia, third largest?? Never heard of

by **edfrank** » Sat Jan 19, 2013 11:57 pm

I am wondering what you guys think in terms of measuring volume. If teh tree were hollow and wrapped completely by a thin shell of trunk, then the volume of space taken up by the hollow interior would be included in the tree volume (if not actual wood volume). I am wondering in this case where part of a side is missing forming a breach into the interior of the tree, does this mean that the volume occupied by the hollow interior is no longer counted toward tree volume, it certainly isn't wood volume, or if the volume should be calculated as if the breach in the side was not present? At what point of missing side or gap do yu no longer consider the hollow to be part of the tree volume?

Ed

Re: The Floyd Otter Sequoia, third largest?? Never heard of

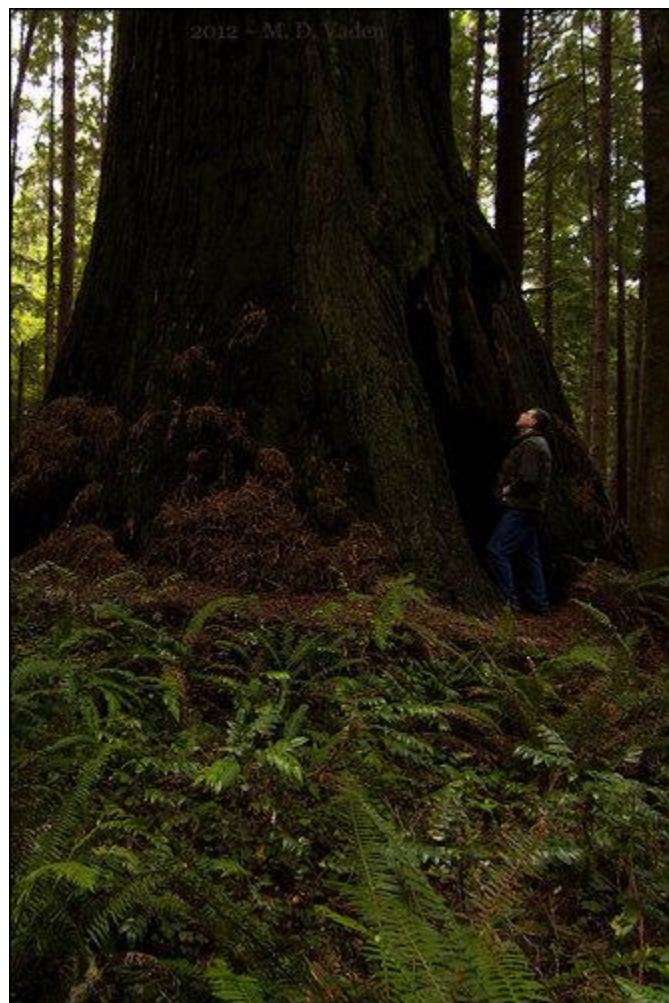
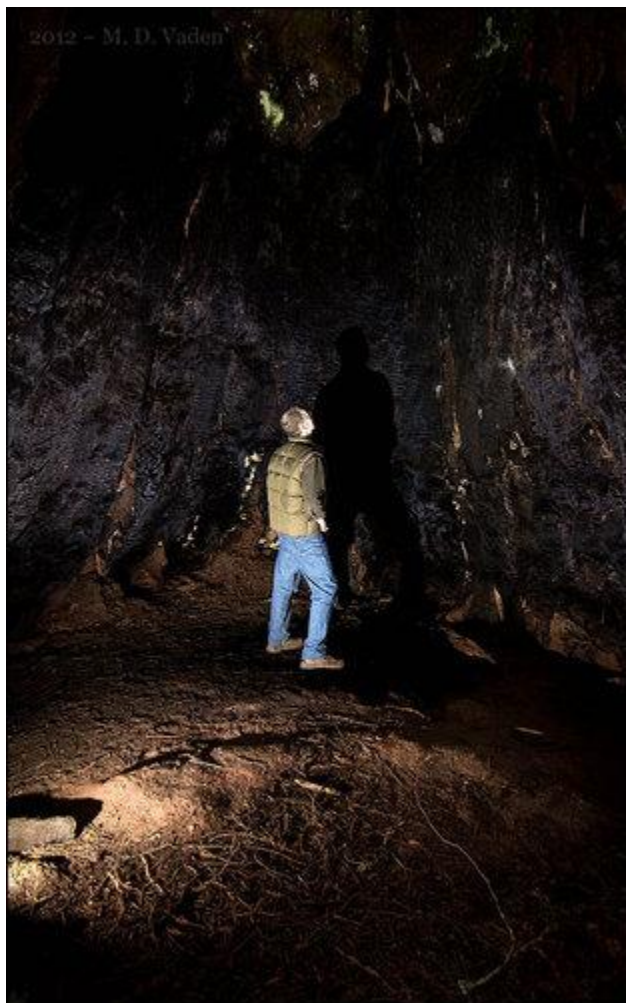
by **mdvaden** » Sun Jan 20, 2013 7:10 am

Good morning Ed. Heck, I went to bed early, and am already up at 3am, Pacific NW. May nap again around 5am for an hour, prior to helping someone dig for drainage today.

Anyway, not sure exactly how Sillett does his volume like for the largest 10 Coast Redwood or Giant Sequoia. Bet Blozan must know, whether the encapsulated hollows count in trunk volume. Guess it's okay to count the hollow, because it's "trunk" volume, and maybe not "wood" volume.

But take the Church Tree Coast Redwood for example. Attached are an inside shot I took of it with remote flash units, and an outside shot. it's burned and hollowed, but a tape wrap around the circumference has but one option to encircle the entire burned area.

One the Floyd Otter Giant Sequoia, about the only practical option is the same thing ... walk the perimeter and let the tape cling where it sits. it truly would be the "trunk" volume.



M. D. Vaden of Oregon

[Re: The Floyd Otter Sequoia, third largest?? Never heard of](#)

by **Jess Riddle** » Sun Jan 20, 2013 3:41 pm

I hadn't heard of the Garfield Grove, and it's not labeled on the USGS topo maps, unlike most of the groves in the area. What caught my attention in the descriptions (besides the photos of giant trees), was the location of the grove on a steep slope. All of the largest sequoias I've read about grow on flat ground or gentle slopes. The Garfield Grove's ability to support such large trees on steep slopes makes me wonder if the site has some unusual soil or moisture qualities that help support that growth. I also wonder

if those attributes would allow associated species to reach exceptional heights.

Seeing this post really makes me want to hike in that grove. Thanks for posting.

Jess Riddle

Bigness Measures

by **Don** » Sun Jan 20, 2013 9:03 pm

edfrank wrote: I am wondering what you guys think in terms of measuring volume. If the tree were hollow and wrapped completely by a thin shell of trunk, then the volume of space taken up by the hollow interior would be included in the tree volume (if not actual wood volume). I am wondering in this case where part of a side is missing forming a breach into the interior of the tree, does this mean that the volume occupied by the hollow interior is no longer counted toward tree volume, it certainly isn't wood volume, or if the volume should be calculated as if the breach in the side was not present? At what point of missing side or gap do you no longer consider the hollow to be part of the tree volume?

Ed- With regard to your volume question, I have reason lately to be honing my thoughts on measurement, volume and such. A month or so back, I was thinking that we could have two trees with the same height, crown spread and girth, but one could still be "bigger" than the other. In between the dbh measurement and the height measurement, the trunk might be very nearly cylindrical on one and have significant taper on the other. The difference in volume between the two would be significant. In my mind, volume gets at defining "bigger", better than the traditional AF formula. Difficult to measure? Uh, yeah! but if we're looking at the pinnacle of each species, it would seem reasonable.

I had initially thought of volume as a tie-breaker in the event of identical AF formula scores. After some thought it could serve that purpose well...a logical extrapolation of that would be the next level of

bigness. For clear comparison purposes, Tree A is 350' tall alpine fir, 100' girth, 50' crown spread; Tree B is a balsa tree with identical dimensions. They were exhaustively modeled and determined to have the same volume, with identical taper. How to break the tie? Mass, as determined by our trees' respective specific gravities, as determined by extrapolating from amazingly long reach increment borers. In a laboratory, you'd make these determinations using kiln-dried (3% moisture) samples. In the field, what their moisture levels were in situ, would be the standard.

Presumably the math would determine that *Abies lasiocarpa* had the highest specific gravity, hence would be the tiebreaking champion.

- 1)AF formula
- 2)Volume
- 3)Mass

Don Bertollette

Re: Bigness Measures

by **edfrank** » Sun Jan 20, 2013 10:04 pm

Don, You have a plan and that is always a good start.

If nobody comes up with a better one or more popular one (it isn't necessarily better plan) yours may be the way to go. Personally I am not as enamored with the idea of volume being the most important aspect as are many of the other NTS members. I am not thrilled by the AF formula either. It is a tool, that can be used to order trees based upon an arbitrary standards. It does have merit in regard to catching the interest of the public. It rewards people with a national champion with a certificate and a place in the directory. This serves to encourage participation. NTS should do something like that.

I personally don't see that any one parameter is any more important than any other in regard to what is an impressive, nor what should be a champion tree. We all are impressed by Hyperion, the tallest redwood, even if it isn't the tree with the largest volume. The General Grant is impressive because of both its girth and volume. Many of Larry's live oaks have fat trunks, but the crown spreads of many of them are

amazing. I can look at the issue in terms of living mass. Most of the trunks are dead wood except for the thin outer layer, and the leaves, so crown volume and density might be the critical value to measure.

look at the Arbol de Tule in Mexico with its massive lower trunk - it is bigger at the base than the sequoias but the trunk doesn't extend that high and it has maybe a third or fourth the volume of the big sequoias. I don't think any of the things we are measuring are that much more important than the others so that they should be given priority or weighted to emphasize that parameter.

I also wonder about the viability and rationale for comparing different species. Each has their own niche and their own role and each are evolved for where they live and what role they play ecologically.

No matter how you cut it, it is pretty clear that the giant sequoias are going to be bigger than sassafras on a mixed species list, no matter how big the sassafras might be. So what is the purpose of having these two species, for example, on a single mixed list? You can quantify that comparison, but...

I really like the TDI concept where the values of each parameter are compared with the maximum values for that parameter for that species. It can combine different combinations of parameters, and different numbers of parameters into a single list for a single species. Some compilations have been done for white pine, but they only considered height and girth. I really am a fan of crown spread and crown volume and wish it had included all three.

I like special purpose lists dealing with only one parameter. What is the biggest tree can be addressed in terms of a single parameter. What is the tallest tree? What is the fattest tree? What is the tree with the largest volume? For a mixed set of parameters I would favor the TDI system and comparisons within the species rather than between species. Your plan is reasonable, but there can always be more than one plan depending on the end purpose of your compilation and what you need to compare to achieve that end.

Edward Frank

[Re: Bigness Measures](#)

by **Don** » Mon Jan 21, 2013 12:53 am

Good points Ed, I guess for me it gets down to a system that measures trees fairer for the broadest array of species. For all the reasons you mentioned. Defining 'big' shouldn't be that hard, but it's a nut nobody has cracked yet. Time to get started...

Don Bertolette

[Re: Bigness Measures](#)

by **dbhguru** » Mon Jan 21, 2013 9:29 am

Don, Ed, I doubt that we'll ever crack the "biggest definition" challenge in a way that doesn't compromise a favorite feature of somebody. Tropical trees give one a whole new appreciation for crown spread and projected crown area. But species like the Cook Pine make crown spread insignificant as a consideration. Banyan trees focus attention on trunk - root mass.

Redwoods direct our attention to height through trunk and trunk size near the base. Crown spread shrinks in importance. The one size fits all has always been problematic and always will be.

An important consideration in all this is how easy is it to measure a dimension? More on this topic later, but I have not an inconsiderable amount of experience trying to focus attention on measuring volume. What we talk about in the comfort of our chairs and what we are willing to do out in the field is not a trivial consideration.

Robert T. Leverett

Walhalla Fish Hatchery, SC

by **bbeduhn** » Mon Jan 21, 2013 5:29 pm

1/19/2013

"Wow!" That's what I said when I got of my car.

This place is something special. I felt like a kid in a candy shop. There's a picnic area and a fish hatchery in a very small area, which is just loaded with big white pines and hemlocks. This site is well known to ENTS. Will found two of the tallest recorded hemlocks and some very tall pines here. There are at least three dozen healthy hemlocks in the picnic area. Two are quite large, including the largest living one I've seen since the blight.

picnic area

black birch	NLT 101'
pignut hickory	NLT 121'
sourwood	90.1'
holly	64.2' 70.0' 74.5' 76.4' 77.3'
hemlock	107.3' 116.9' 130.7' 2.8' d 135.3' 3' d
white pine	133.2' 136.9' 136.9' 144.0' 153.6' 155.9' 157.7' 162.0' 169.4'

hatchery

hemlock	112.3'
white pine	130.2' 134.5' 135.5' 137.1' 158.3'

near hatchery these were in rhododendron thickets so I guessed at the base.

hemlock	~119.8' +/- 5'
white pine	~155.2' +/-5'

The pines are gnarly, some lean dramatically and most have multiple reiterations. Photos coming.

Brian Beduhn

Whitewater River NC

by **bbeduhn** » Mon Jan 21, 2013 4:37 pm

1/19/2013

The Whitewater River is one of the tallest rivers in the Eastern United States, listed at 411', but with punctuated drops combing to form that figure. The forest appears at times to be old growth and appears at others to be mature second growth. The fattest trees are dead hemlocks, so it appears that it was definitely selectively logged for the most part. The Coon Branch Natural area borders this area to the south, at about the NC/NC state line. I had previously measured the SC side and Coon Branch has been visited numerous times by ENTS.

red hickory	NLT 116.5'
pignut hickory	NLT 108' NLT 110' 117.6' 122.4' 125.6'
mockernut hick	NLT 115' 112.3' 113.9'
black oak	NLT 108'
black locust	NLT 120' NLT 120' 124.1'
white oak	NLT 115'
red oak	119.4' 122.5' 124.2'
chestnut oak	NLT 104'
red maple	110.7'
silverbell	78.1' 85.6'
persimmon	85.9'
beech	118.5'
hemlock	120.0'
sourwood	91.6'
green ash?	106.1' 123.3'
Fraser magnolia	NLT 94'
white pine	131.4' 138.2'
tuliptree	123.0' 133.8' 134.1' 142.9'

I didn't spend quite enough time there for a Rucker. NLT means 'not less than'. It's usually from shooting straight up into the crown.

Brian Beduhn

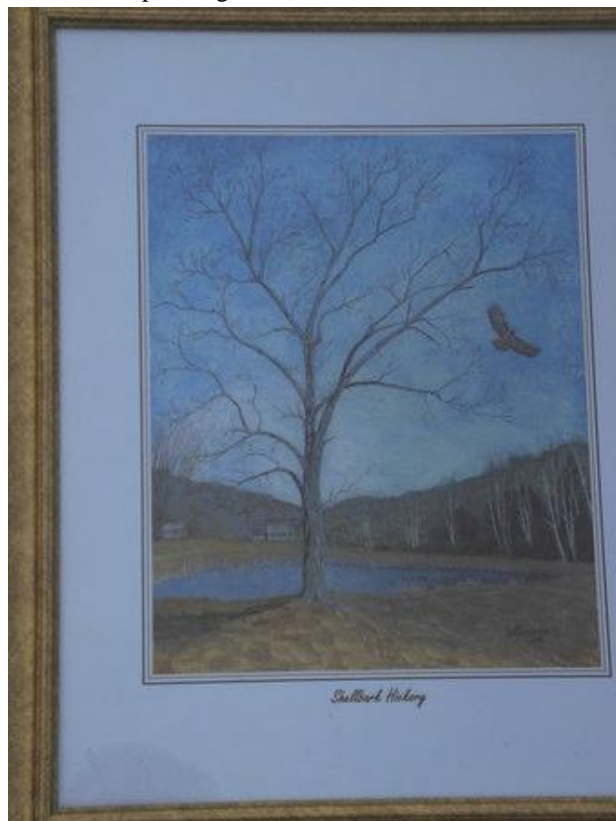
Shellbark hickory

by tsharp » Mon Jan 21, 2013 8:48 pm

NTS:

Good friend John Fichnter, among his many talents, can paint. He painted a picture of the largest known Shellbark Hickory in West Virginia. It happens to be near his home in Jackson County, WV. By largest i mean according to the AF Big Tree Point system.

Below is his painting which was done in 2008:



Here is a picture of the tree taken in November of 2012.



Carya lacinosa, 11/20/2012, near Wiseburg, Jackson County, WV. Photo by Turner Sharp

The November measurements were 12.2' x 90.4' x 86.5'. The Circumference measurement was taken at 4' and the crown spread is maximum.

Large Pond and Slash Pine, MS

by **Larry Tucei** » Mon Jan 21, 2013 8:49 pm

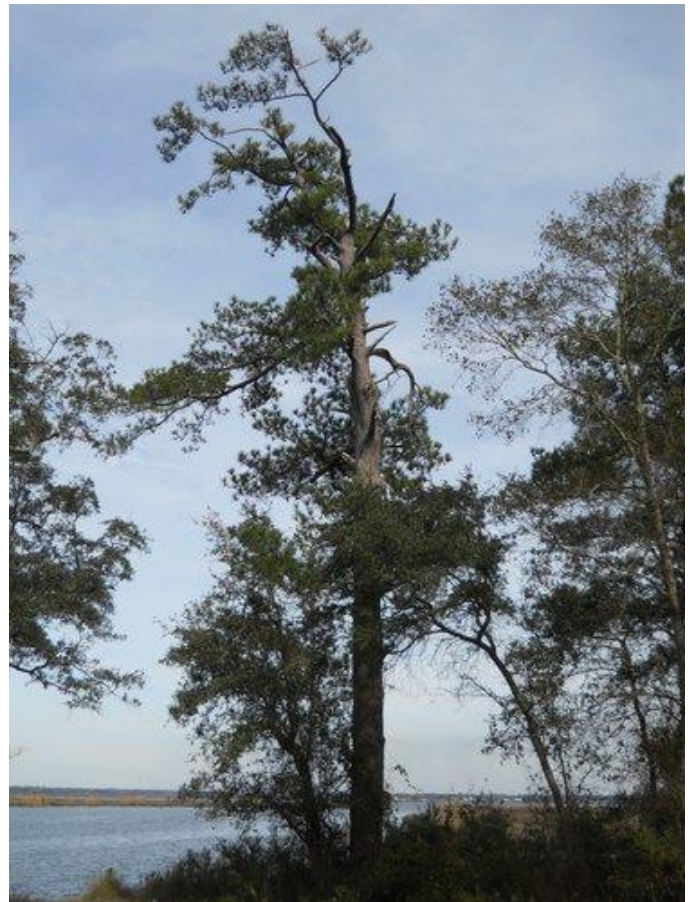
NTS, I took out my boat today and launched in Bernard Bayou in Gulfport. I traveled east about 2 miles to a point just at the edge of Big Lake which is on the western side of Biloxi Bay near where several Rivers and Bayous converge in this area. The Forest at the point consists of about 100 acres of mixed species and some are starting to get that older growth look to them. On the very northern most point grows the largest Pond Pine that I believe exists in all of south Ms. It is the largest of its kind that I have ever measured with a CBH of 9', Height-72' and Crown Spread- 55.5' x 39'. The top had been blown off probably from Hurricane Katrina but still was an impressive specimen. I spied a nice Live Oak just south and a little west of the Pond Pine and measured it even though I knew it wasn't a 20' CBH. It was a beautiful tree with resurrection fern throughout its limbs which is common. The Live Oak measured 18' 1" just about what I had guessed. I went south and west looking at the many Loblollies, Sweet gum, Slash Pine, Magnolia, Loblolly Bay and Live Oaks just to name a few species. The Loblolly Pines were mostly in the 70-80' range with a few larger ones. I did find a triple of Live Oaks that were tall, one had a CBH of 11' 7" and two had heights to 72' which is very tall for such a narrow trunk, most likely because of being Forest grown. Last but not least I found a Slash Pine that is the largest one that I have ever seen in south Ms. and I've only measured larger ones in Central Ms at Bienville NF. The tree had the top blown out also and had some large Wisteria vines on it. I'm going back and cut them so they stop choking it. I could see damage from the vines so I decided back I'm going back and help it out. The tree measured CBH- 7' 6", Height-81' and Crown Spread- 60' x 45'. I then found another Live Oak that was around 70' tall and a CBH of about 17-18'. Some photos of the largest Pines of their Species in south Ms. and one of the nice Live Oak.

<http://maps.google.com/maps?hl=en&tab=wl>

Larry



Pond Pine



Pond Pine



Brickyard Bayou Live Oak



Slash Pine



Slash Pine

Trees as Environmental Historians talk - Greenwich, CT

by Neil » Mon Jan 21, 2013 9:15 pm

Dear NTS,

Apologies for the long absence. We have a 1-yr old sapling and, well, that takes some time out of one's day [good use of time, mind you].

For those near Greenwich, CT, I wanted to alert you to a talk I am giving at the Greenwich Historical Society on Thursday night that you might be interested in attending. Details are here and below: <http://bit.ly/S8cNOZ> - it is being hosted by four groups: Greenwich Historical Society, the Greenwich Tree Conservancy, the Bruce Museum, and the Greenwich Reform Synagogue. Besides the theme in the title, another theme is the celebration of the Jewish New Year for Trees. Here is but one example

-

<http://www.hillel.org/jewish/holidays/tubshevat/default> - I will give my best to make it a good time.

neil

The Science of History: Tree Rings and the History They Reveal
Held at Greenwich Historical Society

Neil Pederson, PhD, Lamont Research Assistant
Professor, Tree Ring Laboratory, Lamont-Doherty
Earth Observatory, Columbia University

In celebration of the Jewish New Year for Trees, Tu B'Shevat, Dr. Pederson will lecture on how ancient trees and timbers from human structures are used to broaden our understanding of history. From the rise and fall of the Mongol Empire to the construction of buildings and boats locally and globally, trees are the environmental historians, which reveal events long faded from human memory and historical documents;

including how the tree ring cores taken from the Bush-Holley house reveal its construction history.

Sponsored by the Greenwich Historical Society, the Greenwich Tree Conservancy, the Bruce Museum, and the Greenwich Reform Synagogue.

Held at the Greenwich Historical Society
Vanderbilt Education Center, 39 Strickland Road,
Cos Cob, CT

Doors open at 6:30 pm; lecture begins at 7:00 pm.
Admission is free but reservations are suggested.
Please call 203-869-6899, ext. 10.

Rain/snow date: Tuesday, January 29, 2013

Winding Stairs Trail, Cherry Hill Campground, SC

by **bbeduhn** » Mon Jan 21, 2013 5:05 pm

1/19/2013

Jess Riddle posted about this trail in 2003. I did a trail run on it a couple of years ago and wanted to do some measuring on it. Shortleaf pine are very common and along a north facing cove, hardwoods soar. The trail winds by the rich hardwood area just a couple of times. If I go back, I'll just focus on this cove. I didn't make it all the way down the trail so I won't do a Rucker for this site. There is one ridiculously tall persimmon with photos to come. I didn't find any 120' shortleafs or the 140' mockernut that Jess found but they may have been toward the bottom of the mountain.

shortleaf pine	96.8'	97.7'	99.5'	102.7'	102.8'
	102.8'	105.6'			
pitch pine	90.9'	92.1'	96.4'	96.7'	
Va pine	84.4'				
white pine	120.6'	122.9'	128.7'		
hemlock	106.3'				
black locust	98'				
sourwood	72.6'				

chestnut oak	100.7'			
white oak	NLT 108'			
black oak	NLT 118'			
red oak	NLT 114'	NLT 122'	114.7'	
	119.6'	NLT 137.5'	narrow	
mockernut hick	123.0'	123.1'	127.6'	
tuliptree	all NLTs	126'	132'	133.5' 139'
	139.5'	141.5'		
persimmon Biltmore ash	124.3'			

Brian Beduhn

Re: Winding Stairs Trail, Cherry Hill Campground

by **Will Blozan** » Mon Jan 21, 2013 6:26 pm

Brian, That persimmon is insane! I look forward to some photos- one of my all-time favorite trees. Apparently they may not last too much longer as persimmon wilt may take them out. One site in Alabama that Jess Riddle and I surveyed has now experienced near 100% kill of persimmon on the property and the region.

Cephalosporium diospyri causes persimmon wilt, a fungus disease that kills many trees in central Tennessee and the Southeastern States (1). The disease is characterized by a sudden wilting of the leaves, followed by defoliation and death of the branches from the top down. An infected tree often lives 1 or 2 years after this symptom appears. Diseased trees should be burned, and cuts and bruises on other trees should be painted to prevent entry by wind-borne spores. No disease-resistant trees have been found. A wound is necessary for primary infection. The hickory twig girdler and powderpost beetle cause the majority of wounds in healthy trees. As soon as the tree dies, the fungus produces spores in large quantities between the bark and the wood near the base of the tree.

Will Blozan

Re: Winding Stairs Trail, Cherry Hill Campground, SC

by **bbeduhn** » Wed Jan 23, 2013 10:29 am

I double checked the figures for the ~~persimmon~~ Biltmore ash and they check out. It was surrounded by the tall red oak and about a dozen tulips from 130' to the low 140's.



~~Persimmon~~ or Biltmore ash 124.3'



~~persimmon~~ or Biltmore ash/tulip crowns



red oak nlt 137.5'

[Re: Winding Stairs Trail, Cherry Hill Campground, SC](#)

by **Jess Riddle** » Wed Jan 23, 2013 1:23 pm

Brian, Hmm... That "persimmon" looks suspiciously like biltmore ash. It has more horizontal breaks in the bark than most biltmore ash, which adds to the persimmon like appearance. However, the bark is the wrong color for persimmon, much too light, and each block of bark is too rounded.

Biltmore ash is very similar to white ash, and some people consider it only a form of white ash. Bark on Biltmore ash tends to have more rounded ridges and horizontal breaks than white ash, your tree being a rather extreme example. Still, they can be difficult to distinguish without twigs, but Biltmore ash does have a distinct habitat. In the mountains, I typically see them in low elevation rich coves while white ash tends to be at higher elevation, or at least cooler rich coves (like Baxter Creek). Biltmore ash is common along the Blue Ridge Escarpment in South Carolina, and I have never seen white ash in those coves.

I can't zoom in enough on your crown photo to see the opposite twigs, but you can see an ash sampling on the right in your crown photo.

Jess Riddle

[Re: Winding Stairs Trail, Cherry Hill Campground, SC](#)

by **bbeduhn** » Wed Jan 23, 2013 4:51 pm

Jess,

Thanks for the info. This is near the top of the escarpment, maybe 100' elevation from the top, at about 1900-2000'. The immediate area is flat, northeast facing with a tiny stream running right in front of the ash.

I believe there were Biltmore ash at Whitewater Falls as well. They looked like green ash but were up a little too far from the river.

Do you have any good photos of Biltmore ash that you could post? Thanks,

Brian Beduhn

[State Champ Green Ash, SC](#)

by **Tyler** » Tue Jan 22, 2013 11:15 am

I made a visit a couple of months ago to measure the state champion green ash. Located in Congaree National Park, the tree is a short distance from the Congaree River. One reason I wanted to photograph and measure this tree is because of the threat of emerald ash borer. Emerald ash borer is confirmed only a few hundred miles away in the Smokies and it seems inevitable that it will make its way down here. I am hoping something can be done to save the ashes of Congaree as they form an important component of the forest along the river.



This tree is the most impressive ash I have ever seen and also the largest.

15' 7" X 125.1' X 97.5' ACS

Tyler

20th Century and then some inspired by Trees

by **michael gatonska** » Tue Jan 22, 2013 8:04 pm

Since we are in the middle of winter (at least here in New England), I thought it may be a good time to post some recordings of compositional works by 20th and 21st century composers that have been inspired by trees. On these really cold evenings when there is nothing left to do but keep warm in the house, there may be some free time to listen to some music that just may 'stretch the ears' a little bit... and nothing wrong with that.

All of the composers that I have included here are ones that I like to listen to - but that does not mean everyone will enjoy each piece...



Bartók - Dance of the Trees (The Wooden Prince)

<http://www.youtube.com/watch?v=Abg16gtqgis>

First, I have included Bela Bartok's *Dance of the Trees*, from his ballet *The Wooden Prince*, which he composed in 1914-16. The story? In brief- A prince falls in love with a princess, but is stopped from reaching her by a fairy who makes a forest and a stream rise against him. To attract the princess' attention, the prince hangs his cloak on a staff and fixes a crown and locks of his hair to it. The princess catches sight of this "wooden prince" and comes to dance with it. The fairy brings the wooden prince to life and the princess goes away with that instead of the real prince, who falls into despair. The fairy takes pity on him as he sleeps, dresses him in finery and reduces the wooden prince to lifelessness again. The princess returns and is finally united with the human

prince.

This is one of the better recordings I could find: The Wooden Prince (with Cantata Profana) Chicago Symphony Orchestra, conducted by Pierre Boulez (Deutsche Grammophon, 1992)

Of course, we should include another great work, composed by Sibelius in 1926. The music portrays Tapio, the animating forest spirit mentioned throughout the Kalevala, lurking behind the stark Finnish pine-forests that enveloped Sibelius's isolated home Ainola. Neemi Jarvi, being one of my favorite conductors, I just had to include this recording:



http://www.youtube.com/watch?v=Yy0_zqEOp4A

Here is an electronic work by David Tudor, who was primarily recognized as a pianist - and one who premiered many of John Cage's piano works including *Music of Changes* and *4'33"*. Still, he composed some early electronic works, including this one which was commissioned by the choreographer Merce Cunningham...

http://www.youtube.com/watch?v=V1NJBaP_Dh8

The next work is a composition by the French composer Henri Dutilleux (born 1916), and his violin concerto *L'arbre des songes* was composed in 1985.

<http://www.youtube.com/watch?v=gRmIV8efTyQ>

Moving toward one of my favorite composers from the East, Toru Takemitsu is a Japanese composer who has been strongly influenced by nature, and

specifically trees. Here is his work for chamber orchestra, titled *Tree Line*:

http://www.sound-library.net/shop/en_UK/products/show,156288.html

My own humble efforts includes my composition *Sugar Maple Cosmica*, for flute and percussion. This is the 1st movement, taken from a work that I wrote to both celebrate and bring to attention one of our most beautiful native trees. The Sugar Maple has been the subject of writers, poets, and journalists throughout the history of New England, and as a composer who hails from the same region I wanted to make a contribution to that tradition. In a general sort of way, the music flows through a series of movements that have descriptive titles. All sections are creative explorations of some singular aspect inspired by Sugar Maples; whether physical (Palisade Cells Absorbing Sunlight) or metaphorical (The Memory of Sugar Maples), and each movement focuses on a distinct set of expressive and sonic explorations that are bound together by a general thread of melodic lines and motives.

<http://www.youtube.com/watch?v=-XN1qYlQd3o>

Lastly, I wanted to add this short work Diego Stocco - I am not sure the music can stand on its own, but I thoroughly enjoyed his approach to creating the thing:

<http://www.youtube.com/watch?v=fY-ZoVMwGKM>

Michael Gatonska

Re: 20th Century and then some inspired by Trees

 by **bbeduhn** » Mon Jan 28, 2013 4:21 pm


These are from the rock genre but certainly cover aspects of trees:

Rush "The Trees"

Toad the Wet Sprocket "Rings"
the Beach Boys "A Day in the Life of a Tree"

Brian Beduhn

Re: 20th Century and then some inspired by Trees

 by **pattyjenkins1** » Tue Jan 29, 2013 11:21 am

The person who does our Facebook page started it with a "Musical Tuesdays" series in which she featured tree-related songs. Here's a partial list:

The Tree (featuring Alela Diane) but Blitzen Trapper
Lime Tree by Bright Eyes
Holly Tree by Dar Williams
Willow Tree by Ida
Tree By The River by Iron & Wine
Under the Trees by La Sera
Apples in the Trees by Mirah
Through The Trees by Mount Eerie
Treehouse by Nada Surf
Treepeople by Rocky Votolato
Trees Are A Swayin' by Say Hi

they're all available in iTunes. Happy listening!

Patty Jenkins

Re: 20th Century and then some inspired by Trees

 by **pitsandmounds** » Wed Jan 30, 2013 7:06 pm

Gram Parsons and Emmylou Harris are two of my favorites, here is their duet singing "Hickory Wind" .
..

<http://www.youtube.com/watch?v=S11HnNXcjbk>

- Matt

Re: Bigness Measures

by Don » Wed Jan 23, 2013 12:47 am

Bob/Ed-

I think that a couple of years ago I suggested that there should be different levels of equipment/user competence appropriate to different levels of accuracy needs.

It's fine for folks to use a Biltmore stick to alert an AF Big Tree Coordinator, but at the national level where you have several big tree hunters who have dedicated much time, energy, and money in nominating their champion candidate, it was my opinion then, and only strengthened now, that the level of equipment/technique should be up to the challenge.

Should such competition transpire...: >)

Don Bertollette

Re: Clinometer App for iPhone

by Don » Wed Jan 23, 2013 1:36 am

Bob, The iPhone case I referred to was for a third generation iPhone that I still have. It was made of Lexan in a substantial thickness, with an eye towards significant protection. All edge surfaces were rounded. This allowed some artful filing (using a small triangular-section file, to create a pair of gunsight-style notches for targeting tree top tips, etc. For the relatively mundane(j) task of measuring trees, the 3rd Generation iPhone was quite appropriate, for those who may still be using them...keep them connected, so that you can download updates, but otherwise they're fine.

As to cases for the newer generations (4, 4S, and now 5), there's a few things I'd suggest...with the new update that reprograms one of the volume buttons to act as the locking rotation control while the Clinometer app is in use, you'll want to keep access

to the volume buttons clean and clear. The chosen case should also provide protection, and for my clumsy fingers, grip (as in a soft rubber 'armor') so that if dropped in the woods, "it keeps on clicking". A soft rubber armor might well serve as a good medium for "notching" or mounting a sighting device, such as a reticled monocular or mini-telescope (as in pen-sized). After a peremptory search I found a 4x kid's science kit telescope about the size of an ink pen, oddly enough through the online website for Toys R Us. There has to be someone out there on the Internet that has the perfect pen-sized, reticled, easily attached sighting device! Mounting mine has proved to be a bit of a challenge, but shouldn't be insurmountable. Bottom line, a thin straw might suffice if attached right. My current thinking is that the sighting device, with right-handers, should be (with the volume control button under the index finger) should be on the back side of the iPhone (aligned exactly where an imaginary axis projects out the back side), so that one is effectively looking down both sides of the iPhone, the right eye looking through the sighting device, the left providing the 'stereo' viewing of the tree top target. The best part, for you I think, is that this Clinometer is calibratable in all three axis. In perhaps as little as a minute or two...; > }

Don Bertollette

State Champ American Elm Revisited

by Tyler » Wed Jan 23, 2013 11:07 am

Before visiting the champ green ash, I made a stop to check on the state champion American elm. I first measured this tree in early 2010 and at the time made

an error in determining the circumference. I mistakenly measured up and over a part of the trunk that resembles a large fin, instead of measuring around it. This inflated the circumference. This time I slowed down, took my time and got it right. The "fin" is on the right. 18' 9" X 121' X 105' ACS

Tyler Phillips



Re: Biogradska Gora – two new broadleaf tree height records

by **KoutaR** » Wed Jan 23, 2013 12:57 pm

This is a question to all dbh and volume gurus of NTS. It is about the biggest spruce of this park (pictured above). We estimated its volume as 40 cubic meters quickly in our head (actually in Michael's head) at the tree. Now we think the estimation may be too low. We made the estimation assuming conical form, but old trees often have more parabolical form. If we use the circumference above the buttresses at 2.6 m (480 cm) as the base of a 56.2m tall paraboloid, we get 52 m³. When we add a few cubes for the buttresses and the branches we end up in almost 60 m³. Probably the real volume is somewhere between the conical and the parabolic estimate.

My question: How would you estimate the volume from these numbers and assuming the top is intact and the tree has a form similar to the American conifers familiar to you?

Height: 56.2 m

Circumference at different heights:

At 1.3 m: 671 cm

At 1.5 m: 631 cm

At 2.2 m: 503 cm

At 2.6 m: 480 cm (above the buttresses)

We know that more measurements are needed for a good estimation, so this is rather a best guess than an estimate.

Kouta

Re: Biogradska Gora – two new broadleaf tree height records

by **edfrank** » Thu Jan 24, 2013 1:31 am

Kouta, I have mentioned before the idea of Percent Cylinder Occupation. The percent cylinder occupation listing is a measure of what percentage the measured volume of the tree represents compared to a cylinder equal to the circumference breast height (CBH) of the tree times the height of the tree. Trees with a fat base or a trunk that quickly tapers scores low on the list, trees that taper more slowly have higher values. Those trees with broken tops will have anomalously high values. The table is not complete as it only lists a few of the largest species of western tree. The Sugar Pine and Western Hemlock are smaller than a number of other species, but were included as they are comparable to Eastern White Pine and Eastern Hemlock.

Percent Cylinder Occupation

Eastern Hemlock		CBH	Height	Volume	Vol m ³	cross-sec	cylinder vol	% occupation
<i>Cheoah Hemlock</i>		16'0"	158.0'	1564 ft ³	44.3	20.372	3218.8	48.6
<i>Caldwell Colossus</i>		16'10"	159.7'	1385 ft ³	39.2	22.728	3627.4	38.2
<i>Yonagaska hemlock</i>		14'7"	168.9'	1367 ft ³	38.7	16.96	2862.4	47.8
<i>Long Branch hemlock</i>		16'0"	143.6'	1294 ft ³	36.6	20.372	2925.4	44.2
<i>Woolly Mammoth</i>		15'1"	153.2'	1262 ft ³	35.7	18.14	2779.7	45.4
<i>Rough Fork Hemlock</i>		14'1"	157.7'	1202 ft ³	34	15.82	2493.3	48.2
<i>Sequoyah Hemlock</i>		15'8"	144.0'	1188 ft ³	33.5	19.54	2813.8	42.2
<i>Gabes Mountain Hemlock</i>		16'3"	121'	1188 ft ³	33.6	21.01	2542.2	46.72
<i>Jim Branch Giant</i>		13'1"	166.7'	1188 ft ³	33.6	13.66	2276.4	52.19
<i>Winding Stairs Loner</i>		15'6"	158.8'	1180 ft ³	33.4	19.12	3033.5	38.9
Median tree dimensions		15'8"	158'	1262 ft³	35.7	19.54	3087.3	40.9
Giant Sequia	General Sherman			55040 ft ³	1,159			34.9
Coast redwood	Del Norte Titan			36890 ft ³	1,044			27.2
Western Red Cedar	Quinnault Cedar			17600 ft ³	498			33.8
Douglas Fir	Red Creek Tree			12320 ft ³	349			33.8
Sitka Spruce	Queets Spruce			11920 ft ³	338			27.5
Sugar Pine	Wheeler Tree			8990 ft ³	255			46.3
Western Hemlock	Enchanted Valley			4270 ft ³	121			39.6
Bald Cypress	Senator Cypress			5100 ft ³	144			29.6
Eastern White Pine	Compalinter Pine			1011 ft ³	28.6			44.8

Looking at your numbers, the cylinder would be 4.8 meters in girth x 56.2 meters tall
radius = 0.764 m
cross section area = 1.833 meters²
cylinder volume = 103.4 meters³

The average for the hemlocks, comparable in size is 40.9%, ignoring the anomalously low values for the other species for the other species, you have a percentage of 39.6% for 7 species.

So my best estimate, for volume would be 40% x 103.4 m³ = 41.36 m³

This is somewhere between the volume of a cone (33.3%) and a paraboloid at (50%).

So this would make the tree somewhat smaller in volume than your estimates. If you just look at the 5 largest volume hemlocks, their average is 44.84% which would be a volume of 46.36 m³.

None of these calculations are including the material in the basal buttress where it is wider than cylinder radius of 0.764 m nor from any of the branches.

Edward Frank

Re: Biogradska Gora – two new broadleaf tree height records

by **KoutaR** » Thu Jan 24, 2013 6:28 am

Thanks Ed! Our original estimate including buttresses and branches was 40 m³, so your estimates are about 5-10 m³ larger if we add a few cubes for buttresses and branches. But the percentages are for cylinders whose radii has been derived from CBH, not from girths at heights above the quickly tapering parts of the bases. I suppose the hemlocks also have basal buttresses or otherwise swollen or widened bases, though probably not so large as our spruce?

Should we use the CBH (6.71m) or some value between the CBH and 4.8m (like their mean) also for the Biogradska spruce? Above 2.6m (girth 4.8m) the spruce has almost no taper.

Kouta Räsänen

Re: Biogradska Gora – two new broadleaf tree height records

by **edfrank** » Thu Jan 24, 2013 10:58 am

Kouta, The basal buttresses extend up higher on some trees than others. It is my impression, perhaps Will or Jess will comment, that the data for the hemlocks is generally above this basal buttressing. So a similar value should be used for your tree. The 480 cm values seemed the best choice of your data points.

The numbers used for the western trees may be suspect because I am unsure where the measures were taken with respect to this basal buttressing.

They were simply pulled from Bob Van Pelts book of Forest Giants.

This is the data we have. It was not collected for the purpose of these calculations and is therefore not ideal. The numbers are for the most part pretty consistent and I would expect much more variation if some included much more of the basal buttressing than others. I know from around here that the basal buttresses do not extend very far up the hemlock trunks, so I think the numbers generated are reasonable. Will talks about the processes used for measuring these big hemlocks

<http://www.nativetreesociety.org/tsuga/...tocols.htm>

Edward Frank

Re: Biogradska Gora – two new broadleaf tree height records

by **Michael J Spraggon** » Thu Jan 24,

So my mental arithmetic wasn't too bad after all!

Those giant old growth trees at the bottom of the list would certainly have cylinder occupations far above 33% if you assume that they were approximately conical when they first reached full height. I would not be surprised if the CBH was taken at a height where the trunks were flared or buttressed.

Michael

[Re: Biogradska Gora – two new broadleaf tree height records](#)

by **edfrank** » Thu Jan 24, 2013 9:37 pm

Michael,

Definitely the lower values in these trees reflect a flaring base rather than the general shape of the tree.

The value is only useful if girth is taken above the inflated base, or the resulting cylinder will be too large, and the occupation percentage will be too low.

It is an idea I proposed several years ago when first looking at general shape of the trees based up the tsuga search data Will had collected. It was never pursued aside from a few calculations from miscellaneous data. I think it is a worthwhile idea as it can be used to roughly estimate the volume of a tree with limited data. There is still a range of possible volumes. I think the 40% or so of the cylinder volume is a good first approximation for old growth big trees. It is applicable to trees that essentially have a single trunk that extends from the base to the top. I don't think it will be useful for broad crowned deciduous trees whose trunks split into numerous side branches as they approach the top.

Edward Frank

[Re: Biogradska Gora – two new broadleaf tree height records](#)

by **Michael J Spraggon** » Fri Jan 25, 2013

Well, let's apply it to one broad-crowned deciduous tree: the largest Trsteno plane.

Circumference at 2.0m: 10.75m. There is still slight buttressing and tapering above 2.0m all the way up to the first limbs, which I will assume negates the flaring and buttressing below. Original height before pruning: 48.5m.

Cylinder volume: 446.0m³. Cone volume: 148.7m³. 40% of cylinder: 178.4m³, which is not far off our estimate.

Michael

[Re: Biogradska Gora – two new broadleaf tree height records](#)

by **edfrank** » Fri Jan 25, 2013 5:20 pm

Michael, I think the numbers for the hemlocks should be similar to those for your spruce. I only have a little data from a couple of trees that have been mapped for volume that are not conifers. These are exceptional trees and might not be applicable to others. I will check with Bob Leverett and see if he has modeled other trees. (I think he did a big white oak *Quercus alba*, but if he did I don't see the numbers on the website).

	Middleton Oak	Sag-Branch Tulip
Height	67.4	167.7
DBH	10.44	7.08
Crown Spread	118	101
Wood Volume	(cubic feet):	
Main Trunk	970	2,430
Branches	3,850	1,560
Total	4,820	3,990
Linear path length of wood over 1.5 inches (ft)		
	2,730	2,360

Bald Cypress	Senator Cypress	5,100	29.6
Live Oak	Middleton Oak	4,820	91.0
Tuliptree	Sag Branch Tulip	3,990	64.5
Sycamore	Webster Springs	2,214	n/a (broken top)

In these cases the branches are enormous and add significantly to the total wood volume. The volume for most conifers for branches is a much smaller percentage.

If you include branches on these trees you can get volumes between paraboloid and cylindrical. If you just look at the trunk volume the numbers are much different.

Sag Branch cylinder = 6602 ft³

Sag Branch Trunk = 2430 ft³

36.8%

Middleton Live Oak cylinder = 5770 ft³

Middleton Trunk = 970 ft³

16.8%

We need more data on the volumes of both broad leaf and conifers.

Edward Frank

[Re: Biogradska Gora – two new broadleaf tree height records](#)

by **KoutaR** » Fri Jan 25, 2013 5:23 pm

Ed & Michael,

The diameters in Van Pelt's book are DBHs (diameter at BREAST height), indeed. Thus, they cannot be used in our calculation. Van Pelt himself says DBH has a limited value for describing giant western trees.

I looked at some online photos of the biggest eastern hemlocks and they really have almost no buttressing, so using 4.8m should be the best choice. I repeat the calculation:

$40.9\% \times 103.4 \text{ m}^3 = 42.3 \text{ m}^3$

If we add three cubes for buttresses and branches we end up in 45 m³. As there were big uncertainties in the calculation I would state 40-50 m³. Do you agree?

Kouta Räsänen

[Re: Biogradska Gora – two new broadleaf tree height records](#)

by **edfrank** » Fri Jan 25, 2013 5:52 pm

Kouta, Yes I agree completely. The only trees I think are useful at this point are the hemlocks and the eastern white pine. The hemlocks average out to 40.9%. I know there is more white pine data, I just don't have it organized and would need to compile it.

There are many large eastern hemlocks and white pines in the old growth section of Cook Forest. I am very familiar with these trees and can say that breast height is typically above the basal flare.

The one consideration here is that if the top of the tree has been broken very much below where the original tapered top would have been, then the percentage of cylinder occupation will be increased.

The largest percentage in the hemlock listing - the Jim Branch Giant - has such a broken top. Some trees have the swelled base extending farther up the trunk, others have a top broken out and are shorter than an idealized form. This is how any set of trees will look. I am unsure how the overall shape changes as the tree matures.

As I said before, this is the data we have. The hemlocks to me seem to be the best representative of what might be expected from your spruce in terms of shape and volume. The best girth for the calculation should be taken above the swelled base - thus the 4.8 meter option. I could do better estimates and get a better idea of the ranges of volumes as the tree shapes varied in a mature conifer if we had more measurements. This is, as far as I can see, the best option for addressing your original question, and my feeling it is as good of an estimate as is possible at this time.

Edward Frank

[Re: Biogradska Gora – two new broadleaf tree height records](#)

by **Michael J Spraggon** » Fri Jan 25, 2013

I agree too. It could be anywhere in that range.

Michael

Re: Biogradska Gora – two new broadleaf tree height records

by **edfrank** » Thu Jan 31, 2013 6:00 am

Michael & Kouta,

I looked at my numbers and have found an embarrassing mistake. I should have simply averaged the percentage occupation, but instead I calculated it for the average of the average values.

Thus the correct % should have been 44.5%, excluding the Jim Branch Giant. The median value applied to your spruce would then be 46 m³, and adding 3 m³ for branches, etc. would bring it right to 49, almost exactly your original estimate. So that would bump your range figures up to 45- 55 m³. I seem to be messing up too often this past week or so...

Edward Frank

Percent Cylinder Occupation									
Eastern Hemlock		CBH	Height	Volume	Vol m3	cross-sect	cylinder vol	% occupation	
<i>Cheoah Hemlock</i>		16'0"	158.0'	1564 ft ³	44.3	20.372	3218.8	48.6	48.6
<i>Caldwell Colossus</i>		16'10"	159.7'	1385 ft ³	39.2	22.728	3627.4	38.2	38.2
<i>Yonagaska hemlock</i>		14'7"	168.9'	1367 ft ³	38.7	16.96	2862.4	47.8	47.8
<i>Long Branch hemlock</i>		16'0"	143.6'	1294 ft ³	36.6	20.372	2925.4	44.2	44.2
<i>Woolly Mammoth</i>		15'1"	153.2'	1262 ft ³	35.7	18.14	2779.7	45.4	45.4
<i>Rough Fork Hemlock</i>		14'1"	157.7'	1202 ft ³	34	15.82	2493.3	48.2	48.2
<i>Sequoiyah Hemlock</i>		15'8"	144.0'	1188 ft ³	33.5	19.54	2813.8	42.2	42.2
<i>Gabes Mountain Hemlock</i>		16'3"	121'	1188 ft ³	33.6	21.01	2542.2	46.72	46.7
<i>Jim Branch Giant</i>		13'1"	166.7'	1188 ft ³	33.6	13.66	2276.4	52.19	
<i>Winding Stairs Loner</i>		15'6"	158.8'	1180 ft ³	33.4	19.12	3033.5	38.9	38.9
Median tree dimensions		15'8"	158'	1262 ft³	35.7			45.241	44.5
Giant Sequia	General Sherman			55040 ft ³	1,159			34.9	
Coast redwood	Del Norte Titan			36890 ft ³	1,044			27.2	
Western Red Cedar	Quinnault Cedar			17600 ft ³	498			33.8	
Douglas Fir	Red Creek Tree			12320 ft ³	349			33.8	
Sitka Spruce	Queets Spruce			11920 ft ³	338			27.5	
Sugar Pine	Wheeler Tree			8990 ft ³	255			46.3	
Western Hemlock	Enchanted Valley			4270 ft ³	121			39.6	
Bald Cypress	Senator Cypress			5100 ft ³	144			29.6	
Easter White Pine	Compalinter Pine			1011 ft ³	28.6			44.8	

Re: Percent Cylinder Occupation

by **Will Blozan** » Thu Jan 31, 2013 8:06 pm

Ed, This is an interesting discussion and when I have more time I will gather some more white pine and hemlock data. For the record, the Jim Branch Giant did not have a broken top- the Gabes Mountain Hemlock did.

I would never expect Picea to have a similar form/occupation as eastern hemlock. It would be much smaller (for old trees mind you) and more similar if not smaller than e. white pine. As for the cylinder occupation idea Pinus taeda would surpass all for the species I am familiar with. Picea would be among the lowest.

Will Blozan

[Re: Percent Cylinder Occupation](#)

by **edfrank** » Thu Jan 31, 2013 8:37 pm

Will, I would welcome more data. I have been having some discussions with Bob Leverett concerning his older Form Factor measurements versus the % Cylinder occupation. Including the Jim Branch Giant, would push the numbers to 45.24 up 0.74 or about 3/4 of cubic meter more.

I pulled these numbers from an older post of Bob's

White Pines (what he called intermediate forms)
Jake Swamp = 39.36
Saheda = 38.3
Tecumsah = 42.8

which also compares to (on the above list)
Cornplanter white pine = 44.8 (at just 28.6 m³ it is the biggest I have data for, but is much smaller than the spruce being discussed)

The number represents how well it matches a particular form as opposed to any height to girth ratio, like skinny versus fat. More numbers would be great and would help to see if anything meaningful could come out of this. The girth used needs to be above the neoloid portion of the basal flare or the %CO will be depressed. Thanks for the correction on the Jim Branch top.

Ed

[Re: Percent Cylinder Occupation](#)

by **dbhguru** » Thu Jan 31, 2013 10:34 pm

Ed, The latest modeling of Jake Swamp gives a form factor of 0.41 or 41% occupation.

Robert T. Leverett

[Re: Percent Cylinder Occupation](#)

by **KoutaR** » Fri Feb 01, 2013 5:15 am

Will Blozan wrote: I would never expect Picea to have a similar form/occupation as eastern hemlock. It would be much smaller (for old trees mind you) and more similar if not smaller than e. white pine.

Will, Did you take into consideration that Ed applied the hemlock form to our spruce by using the girth at 2.6 m = 8.5 ft (above the fast tapering base), not the CBH? Or do Picea trunks taper faster higher up the trunk, too?

Kouta

[Re: Percent Cylinder Occupation](#)

by **Will Blozan** » Fri Feb 01, 2013 9:06 am

Kouta,

Yes, but what really needs to happen is recalculate for the hemlocks using lowest non-tapered portion. On most of the large trees this will be at or slightly above BH. The taller and thinner trees could be below BH.

My observations of spruce (*P. rubens*, *abies*, *orientalis*) is that they do taper much more rapidly than eastern hemlock. However, I have not seen really old specimens (aside from *rubens*) so I certainly could be way off. As an example of white pine and hemlock differences in old specimens, NTS has never found a pine with a bole diameter at 100' (31m) of more than 31" (78 cm). In contrast, the large and some tall hemlocks maintain a considerably larger diameter well up the trunk, with diameters of 40" (101 cm) recorded at 100'. I do realize I am speaking for a population of trees 170' (52 m) or less but the proportions should remain the same.

Still pondering this one. We need some real numbers from *Picea* boles to work with.

Will Blozan

[Re: Percent Cylinder Occupation](#)

by **KoutaR** » Fri Feb 01, 2013 10:54 am

Will, Michael could have taken some measurements when climbing the Sgerm Spruce if we had anticipated there is a need for such data.

If we average the values for those 4 white pines, we end up in 41.7% and 43.1 m³ (the stem only), about one cube more that Ed's first (erraneous) calculation. I would keep 40-50 cubes if Will doesn't show spruces taper markedly faster than white pines.

Kouta

[Green Tree Doctor](#)

by **Green Tree Doctor** » Tue Jan 29, 2013 12:41 pm

Greetings fellow tree stewards! Sorry it took so long, Ed. I finally logged on for the first time, not only on this blog, but also on facebook (after years of nudges from friends). I also have a new website up (it's a work in progress, Will): www.greentreedoctor.com
Thanks,

Randy Cyr, Arborist, Greenville, SC

[331 point open grown white oak in Hillsborough, NC](#)

by **pdbrandt** » Thu Jan 24, 2013 6:40 pm

ENTS, Here's a picture of a beautiful white oak located in the front yard of a modest home on Calvin St in Hillsborough, NC. The house is actually for sale, and I think some of us might argue that the tree is of greater worth than the house!



331 point white oak

Here are the stats:

18 feet, 4 inch CBH

90'x105' crown spread gives an average of 97'.

Would be more if the street side of the tree had not been pruned back from power lines. 87.9 feet tall

Patrick Brandt

LIDAR ground truthing in Duke Forest

by **pdbrandt** » Wed Jan 23, 2013 1:52 pm

I identified a handful of 140+ ft groves in Orange and Durham counties from the NC LIDAR data.

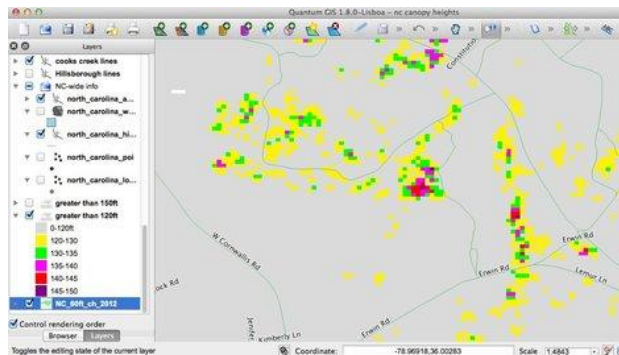
One site corresponds to a 141 foot tulip poplar along the Eno River in Hillsborough (<http://www.ents-bbs.org/viewtopic.php?f=106&t=3738>).

Another corresponds with a not quite 140 foot loblolly pine grove in someone's front yard in Durham (<http://www.ents-bbs.org/viewtopic.php?f=106&t=4902>)

A third was a bit of a dud near downtown Chapel Hill -- the deciduous trees there were only ~120ft tall -- but it did lead to discovery of a 104.9 foot tall American Beech (<http://www.ents-bbs.org/viewtopic.php?f=106&t=4899>)

This morning on the way in to work I stopped at a trail head of the Durham Division of the Duke University Research Forest and Nature Preserve (<http://www.dukeforest.duke.edu/location/index.htm>) . The Duke Forest comprises 7,020 acres of land in 3 counties split up into 6 main tracts of land. The land is open to limited recreational use.

Here's the LIDAR map showing a 145 LIDAR hit off a trail less than 1/2 mile from the trail head.



I walked through a dense pine forest less than 75 years old to reach the site and wondered as I walked if there could really be 140ft trees nearby. Well, the LIDAR data did not disappoint. I found an area of older loblolly pines near a small creek. The first pine I measured was 139.1 feet tall. A second pine measured 142.8. Nearby was a tulip poplar that seemed a bit out of place. It measured in at 131.5 feet tall.



142.8 foot tall Loblolly Pine



131.5 foot tall Tulip Poplar



Deer prints and frozen leaves in the sandy creek shore near the tall grove

I have just one more 140 ft LIDAR site in the area to visit, which happens to be in another division of Duke Forest. Hopefully it will not disappoint.

[Re: Pictures of Fungi in the Redwood Forest](#)

by **Mark Collins** » Thu Jan 24, 2013 1:20 am





Silver Maple (SC)?

by **Tyler** » Thu Jan 24, 2013 10:31 am

I came upon this tree about 1/2 mile from the Congaree River along a major gut. I think it may be silver maple, but I can't completely rule out a variety of red maple. I forgot to get a photo of the underside of the leaves but they were almost white.



Re: Silver Maple?

by **PAwildernessadvocate** » Thu Jan 24, 2013

Maybe what you found is something like this?

http://en.wikipedia.org/wiki/Acer_rubrum#Ecology

*Red maple frequently hybridizes with Silver Maple; the hybrid, known as Freeman's Maple *Acer x freemanii*, is intermediate between the parents.*

From your pictures I can't tell definitively either, though it does look a bit more like a silver maple than a red maple, but perhaps it's somewhere in between

Kirk

Re: Silver Maple?

by **Tyler** » Fri Jan 25, 2013 10:03 am

Will Blozan wrote: Could very well be a Freeman maple. How tall?

8' 9.5" cbh

94.5' tall

49.5' ACS

Would be new state champ if a silver maple.

Tyler Phillips

Re: Silver Maple?

by **Tyler** » Fri Jan 25, 2013 10:18 am

Here is a picture of the canopy.



Tyler



Re: Silver Maple?

by **Tyler** » Tue Jan 29, 2013 10:13 am

Thanks for the help guys. I'll nominate it as a Freeman maple.

Tyler

Re: Silver Maple?

by **Steve Galehouse** » Mon Jan 28, 2013 11:32 pm

Tyler- It sure looks like a Freeman maple to me--- why not nominate it as such? Attached is a Freeman maple photo from a location near me, at 130.7' x 7'6".

Standard Tree Care and Preservation

by **guymayor** » Thu Jan 24, 2013 7:42 pm

I'm an arborist committed to preservation of historic trees by applying the A300 Tree Care Standards. The more that people are aware of and follow these standards, the more trees can be kept around people, without the perception of excessive risk or expense. I try to promote this concept in Detective Dendro and other articles, and I'm wondering to what extent NTS members are involved and interested in seeing big trees preserved by standard treatments.

Guy Meilleur (may-er), www.historictreecare.com

Video of Bushwhack into Pisgah Old Growth

by **jamesrobertsmith** » Thu Jan 24, 2013 11:29 pm

Here's a video I cobbled together from a Pisgah National Forest bushwhack I did back in May, 2011:



<http://www.youtube.com/watch?v=rSpTzveU23U&feature=share&list=UUUVLgKfouSrUAECiQPxU46A>

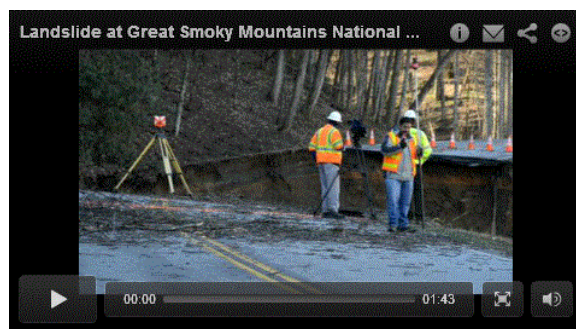
James Robert Smith

Landslide on 441, GSMNP

by **mdavie** » Fri Jan 25, 2013 10:15 am

I knew that the main highway through the park that goes between Cherokee NC and Gatlinburg TN had been closed due to a landslide from heavy rains last week. I just saw this video of it and thought I'd share it:

<http://www.citizen-times.com/videonetwork/2107739840001/Landslide-at-Great-Smoky-Mountains-National-Park>



Re: Landslide on 441

by **PAwildernessadvocate** » Fri Jan 25, 2013

Too bad about that slide. I was just there the first weekend of November and drove that road from Cherokee through the park to Gatlinburg. Hope they can get it fixed in time for the summer tourist season!

Here's a picture I took near the top of Clingmans Dome showing all of the dead fir trees from the balsam wooly adelgid.



Re: Landslide on 441

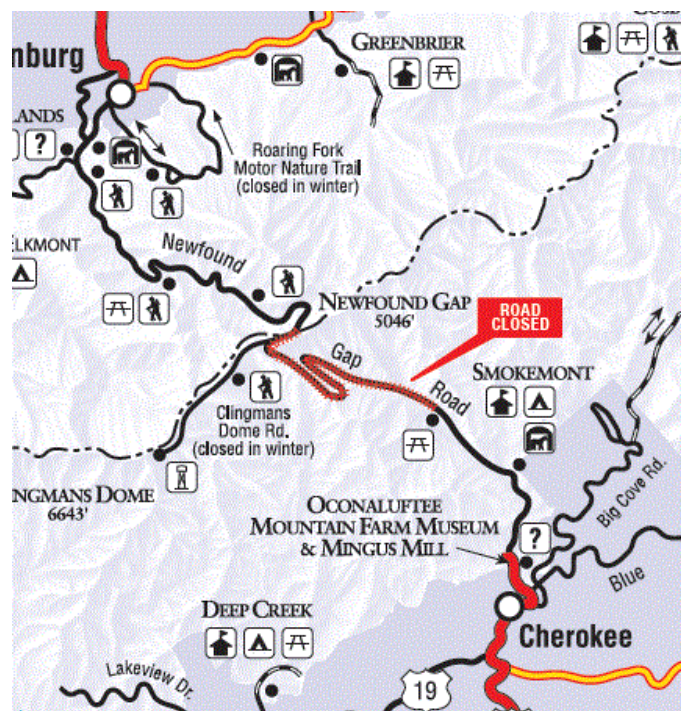
by **pdbrandt** » Fri Jan 25, 2013 9:05 pm

Thanks for the information Michael. Here is another source of news on the landslide.

<http://www.nps.gov/grsm/parknews/nfg-landslide-update.htm>

...and a map showing the closed portion of the road

<http://www.nps.gov/grsm/planyourvisit/u...d-2013.pdf>



Arizona - southern

by tsharp » Sat Jan 26, 2013 1:04 am

Southern Arizona – Next stop was to pick up a brother and sister-in-law at the Phoenix airport. Then after a couple of days visiting relatives in the Phoenix area it was onto the Tucson area where we made camp at the Gilbert Ray Campground at the Tucson Mountain Park. It is a nice campground albeit a little too large for my taste but the size did not seem scare away the coyotes who serenaded everyone all night and every night. This park is a county park and contains more than 16,000 acres and shares a common border with a unit of the Saguaro National Park. Actually the western portion of the national park was carved out of this Pima County run park. We camped here for several days and made visits to the nearby Arizona-Sonora Desert Museum, Saguaro National Park –West (Tucson Mountain District), and the Arizona State Museum on the campus of the University of Arizona in Tucson.

The Desert Museum is an absolute delight to visit and concentrates and anything Sonoran. It is the best regional natural history facility I have ever visited. For more information see:

<http://www.desertmuseum.org/>

The next stop was the Saguaro National Park to see the best examples of a Saguaro Forest. I was last here in 2004 and was somewhat perplexed at the poor condition of this iconic cactus. Last visit they were green and plump and now many were brown and emaciated looking. I was told that and extended cold snap(20 hours of subfreezing temperatures with a low of 17 degrees) a couple of years previously was the cause.

Saguaro forest near the visitor center



The biggest examples of species measured are listed below:

Saguaro (*Carnegiea gigantea*) 5.8' x 42.3'

Octillo (*Fourquieria splendens*) # x 19.9'

Desert Ironwood (*Olneya tesota*) 3.0' x 20.9'

Yellow Paloverde (*Parkinsonia microphylla*) 1.7' x 20.1', 2.0' x 18.2'



From left: Octillo 19.9', Saguaro 22.9', Octillo 18.7'

The Yellow Paloverde pictured below is also known as Foothills Paloverde. The Blue Paloverde (*Parkinsonia florida*) is the state tree of Arizona. I saw several impressive ones in landscaping contexts but did not see any to measure in the wild.



Yellow Paloverde (*Parkinsonia microphylla*) 2.0' x 18.2'. It should be noted that the green bark photosynthesizes.

For more information on the National Park see:

<http://www.nps.gov/sagu/index.htm>

The next stop was at the Arizona State Museum on the campus of the University of Arizona. Their collections of native American pottery and textiles are quite extensive. We spent almost the whole day inside and I was chagrined to find out upon leaving that the campus is actually an arboretum. At least 500 species, both native and non native, are tagged and mapped so you can easily find them.

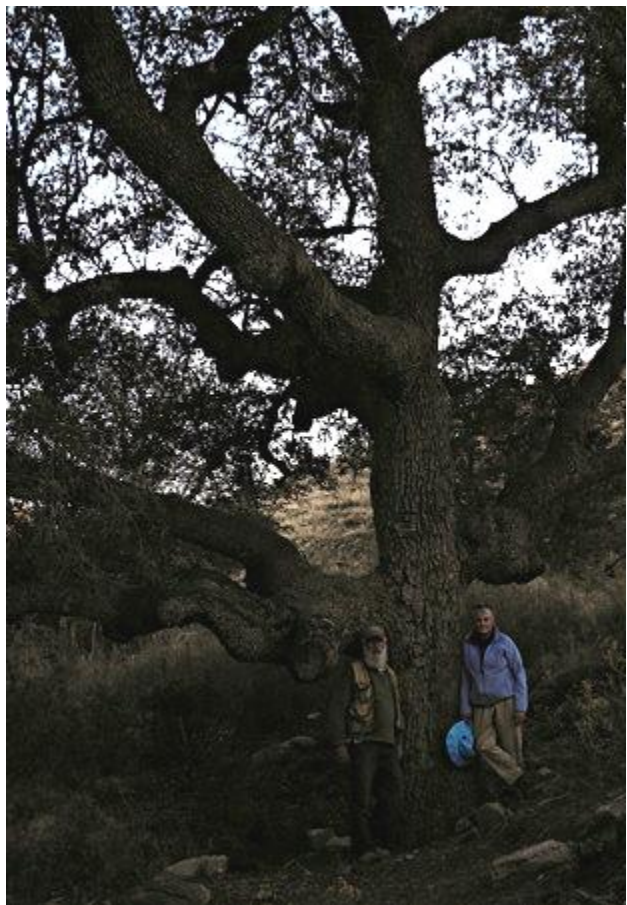
See the below link for more information:

<http://arboretum.arizona.edu/>

We then moved to the northeast side of Tucson with the intentions of visiting the Sabino Canyon area of the Coronado National Forest. This area proved way overcrowded so we went on to the Molino Basin Campground which is right on Catalina Highway. This road leads to the village of Summerhaven, a ski area, and access to Mt. Lemmon, the highest peak in the Santa Catalina Mountains at 9,157 feet. The Aspen Fire of 2003 really changed the scenery by burning 85,000 acres in the area. Our campground was at 4,400 feet elevation set next to a dry wash in an oak/grassland setting. It is about a twenty mile drive to the ski area at 8200 elevation feet with plenty of vistas and trail heads along the road. It was easy to spot Arizona Cypress from the highway. Less easy was getting close enough to get some measurements. I finally settled for a small stand next to the road and still had to have some help to navigate over the boulders.

The biggest examples of each species measured are listed below:

White Fir (*Abies concolor*) # X 88.8'
Velvet Ash (*Fraxinus velutina*) 5.4' x 64.0'
Arizona Cypress (*Hesperocyparis arizonica*) 9.3' x 77.8'
Alligator Juniper (*Juniperus deppeneae*) 6.3 x 43.4', 6.8' x 39.3'
Ponderosa Pine (*Pinus ponderosa* var. *brachyptera*) 12.0' x 92.0'
Fremont Cottonwood (*Populus fremontii* spp. *fremontii*) 11.8' x 51.2'
Quaking Aspen (*Populus tremuloides*) # x 48.8'
Rocky Mountain Douglas-fir (*Pseudotsuga menziesii* var. *glauca*) 5.4' x 100.7'
Arizona White Oak (*Quercus arizonica*) 4.9' x 26.8'
Canyon Live Oak (*Quercus chrysolepsis* var. *chrysolepsis*) 8.5' x 35.6' x 62'(acs)
Emory Oak (*Quercus emoryi*) 5.8' x 40.0', 6.2' x 35.4'



Brother Chuck and sister-in-law Denise standing next to the Canyon Live Oak from the list above.

For our next stop we camped at Roper Lake State Park near Safford, AZ. Pleasant enough campground filled up with birders from throughout the world. It features a hot spring with public bathing access. We were again serenaded by coyotes and two species of owls during the night. While there we visited Kartchner Cave State Park, a recently discovered cave (1974), acquired (1988) and opened to the public (1999). It appears to me they did a good job. See the following link for more information:

<http://azstateparks.com/Parks/KACA/index.html>

We spent most of the time in the Pinaleno Mountains nearby. This is one of the “Sky Islands” and is also in the Coronado National Forest. Southern Arizona has a number of mountain ranges called sky islands similar to oceanic islands that have examples of endemic flora and fauna except these are isolated by

the surrounding deserts. The highest point is Mount Graham at 10,720 feet and some of the higher elevation access roads were still close by snow. One afternoon while I was relaxing along the trail enjoying the pine scent with warmer air rising from the desert a tree downhill from me lit up like a silver jewel. It was a Silverleaf Oak (*Quercus* and I immediately understood why it is used as an ornamental in the southwest.

Another time doing the same thing I got into needle counting in the fascicles on limbs that had been brought down during the winter. I got counts of 3, 3/4, 4, 4/5, and 5. I soon located the source of the five needle tree(s) in a small grove nearby. It was Arizona Pine (*P. arizonica*) a five needle hard pine. I apparently had stumbled into an area where the Ponderosa Pines and the Arizona Pines are hybridizing. If I had not made the needle count I would not have picked out the Arizona Pines. Earlier in the Santa Catalina Mountains I also found one branch containing 5 needle fascicles but could not pick out which tree it came from.

The largest of the various species measure are listed below.

Arizona Alder (*Alnus oblongifolia*) 9.8' x 105.9' (top out)

Arizona Pine (*Pinus arizonica* var. *arizonica*) 7.9' x 81.4'

Ponderosa Pine (*Pinus ponderosa* var. *brachyptera*) 7.2' x 87.0'

Rocky Mountain Douglas-fir (*Pseudotsuga menziesii* var. *menziesii*) # x 145.0', 10.7' x 88.0'

Silverleaf Oak (*Quercus hypoleucoides*) 5.4' x 36.4'

A notable tree in this list is the Arizona Alder. If the main leader had been present it would have approached 125 feet.

After leaving the Pinalenos we drove down to the Dragoon Mountains also in the Coronado National Forest. Mount Glenn is highest peak at 7,520 feet. At the entrance to the campground (called Cochise Stronghold) we noticed prominent signs asking people to use designated camp areas and no firing of guns. It was immediately apparent that no one followed the rules and were camped willy-nilly wherever they thought was good shade plus there was

plenty of gunfire from campers target shooting. Before leaving I did measure a few trees and then left for the Phoenix area to get near the airport.

Below is a list of vegetation measured:

Golden Flower Century Plant (*Agave chrysanta*) # x 13.8'

Emory Oak (*Quercus emoryi*) 5.3' x 41.5', 6.3' x 35.0' (acs)

There are a number of species in Arizona belonging to the Agave family. This was a very important plant family to the original inhabitants. There is a good possibility that they had a substantial affect on their distribution and may have been selectively chosen for desirable properties.

Picture of the spike of a Century Plant.



13.8'

I came up with a tentative ID of Golden Flower Century Plant for the one pictured. After they flower they die. The flowering is a long time after the plants establishment but usually much quicker then 100 years. Several species are farmed in Mexico and one, the *Tequila agave* is the source of several popular drinks and a distilled spirit called Tequila.

After getting rid of my traveling companions I needed to work my way west toward Pearce's Ferry on the Colorado River. I found myself once again on US 89A and passing through the former Copper mining town of Jerome and lately a tourist spot. The town is perched on the east side of Mingus Mountain in the Black Hills Range. The town is a National Historical District and also contains Jerome State Historical Park.

See the following link:

<http://azstateparks.com/Parks/JERO/index.html>

On the west slope of the mountain I spied some impressive Alligator Junipers and stopped and did some measuring. This site is on the Prescott National Forest Lands.

The largest measured are listed below.

Arizona Walnut (*Juglans major*) 2.9' x 28.9'

Alligator Juniper (*Juniperus deppeana*) 10.2' x 49.9', 14.6' x 50.0' (multi-stem tree)

Ponderosa Pine (*Pinus ponderosa* var. *brachyptera*) 7.1' x 81.4'

Arizona White Oak (*Quercus arizonica*) 3.6' x 29.1'

Gambel Oak (*Quercus gambellii* var. *gambellii*) 3.2' x 26.0'

After crossing Mingus Mountain I continued heading west with a few side trips and eventually found myself on US 93 near Wikieup. A section of this highway is called the Joshua Tree Scenic Road. Somewhere on this highway I encountered Saguaro Cactus and Joshua trees growing in close proximity. This would be the boundary between the Sonora and Mohave Deserts. Continuing north with a destination Of Pearce' Ferry on the Colorado River I passed another extensive Joshua Tree Forest at Grapevine Mesa on BLM land.

Below are listed the biggest Joshua trees (*Yucca*

brevifolia) measured at the two sites.

Joshua Tree Forest Highway 3.8' x 22.5'

Grapevine Mesa 5.6' x 26.7'

The Joshua Trees in these two areas did not match the size or vigor of ones I have seen in Joshua Tree National Park in California.

Joshua tree forest at Grapevine Mesa.

Soon I arrived at a campground within a mile or two of Pearce's Ferry and spent a quiet nite but wondering how the river trip went. I knew if the trip kept their schedule they were camped about two miles upriver. My wife was on a five boat private trip as a boatwoman. Many of the others were canyoneers and could care less about the river except how quickly it could get them to the next side canyon so

they could get up before daybreak, eat breakfast while hiking, gain elevation as appropriate and then rappel back down.

The group pulled in to the takeout ramp on schedule the next morning and looked appropriately bedraggled after 26 days on the river. My wife soon informed me that she led through some of the big rapids including Lava Falls and had a pristine lines. I was soon shown pictures of some of the a group rappelling down next to Deer Creek Falls (150'). The only misfortune was a broken ankle incurred while jumping into the Little Colorado River into water that looked deeper. The victim was a ER doctor so he splinted/immobilized his ankle and made the entire trip although there was no more canyoneering for him.

So ends my Arizona sojourn.



[Miami Whitewater Forest \(OH\)](#)

by [pitsandmounds](#) » Sat Jan 26, 2013 2:32 pm

Hi All,

I had two goals on this day, measure ten species and spend more time measuring than looking. Next time, I'll spend more time looking for tall trees.

Growth in the East: A Survey, contains 80 - 90 acres of old growth. It mentions that Sugar Maple is by far the dominant species, however it appears that Beech dominates the canopy of the East-facing slope and Oaks dominate the canopy of the West-facing slope. Note that the pine is located in a disturbed area that includes Boxelder, Honeylocust and Eastern Red Cedar.

The park itself is 4,345 acres and according to Old

E	I	J	M	O
Site Name	Species (Scientific)	Species (Common)	Height (ft)	Girth (ft)
Miami Whitewater Forest	Liriodendron tulipifera	Tuliptree	130.3	9
Miami Whitewater Forest	Quercus rubra	Northern Red Oak	116.6	
Miami Whitewater Forest	Quercus alba	White Oak	103.3	9.8
Miami Whitewater Forest	Fraxinus americana	White Ash	127.9	7.2
Miami Whitewater Forest	Carya ovata	Shagbark Hickory	119	6.3
Miami Whitewater Forest	Acer saccharum	Sugar Maple	107.3	5.6
Miami Whitewater Forest	Juglans nigra	Black Walnut	122.1	7
Miami Whitewater Forest	Fagus grandifolia	American Beech	113	8.3
Miami Whitewater Forest	Pinus strobus	Eastern White Pine	76.5	3.9
Miami Whitewater Forest	Platanus occidentalis	American Sycamore	105	7.8



[Miami-Whitewater Forest.xls](#)



<http://www.youtube.com/watch?v=IRJInh-Lsh4>



American Beech



White Oak <http://greatparks.org/parks/miami-whitewater-forest.html>

- Matt

ProBino3209ic LASER/CLINO/AZIMUTH in one

by **Will Blozan** » Sat Jan 26, 2013 5:11 pm

NTS, Just saw this thing today- could have great potential for scouting depending on laser width. If I had the funds I would definitely check it out! Could be the "poor man's" all-in-one setup.

http://www.apresys.net/product/detail.php/type_id-10-id-104.html

Will Blozan



The only example of a weeping sequoia living in the forest?!

by **F.Jakobsson** » Sat Jan 26, 2013 6:19 pm

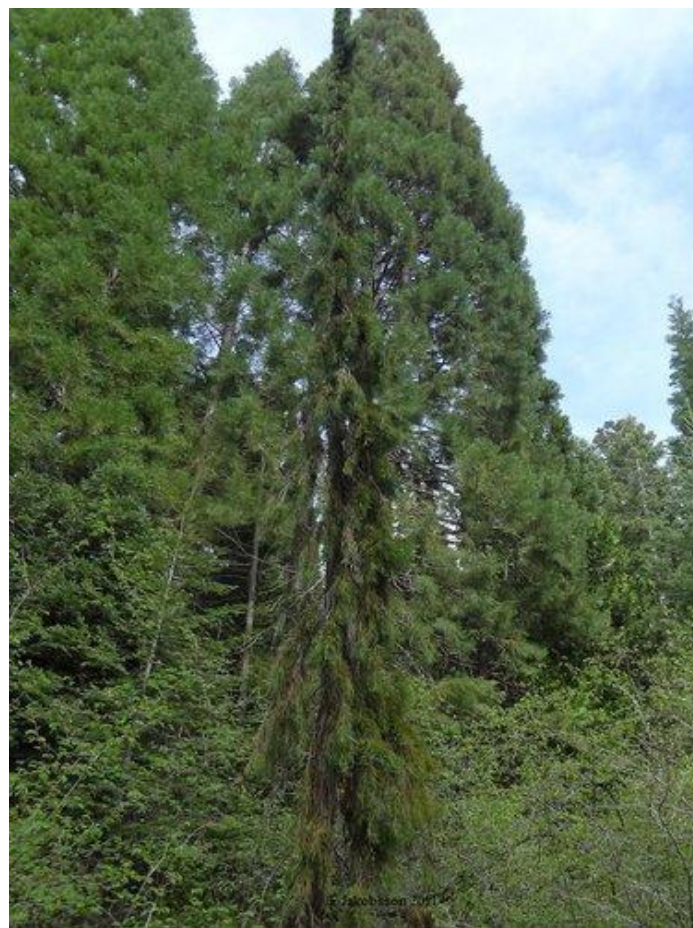
In contrast to the Tunnel Tree, the record wide giant sequoia in my previous post, follow photos of a slender weeping sequoia growing in Alder Creek Grove, according to Wendell Flint: "the only living example of a weeping sequoia living in the forest. Other weeping sequoias are cultivated in nurseries. The branches of this tree fall directly downward, so that the tree is a skinny column. It is a juvenile tree, and since it is so rare and so easily harmed, I'm not saying where it is." (To Find the Biggest Tree, 2002, Alder Creek Grove chapter, page 79). Wendell Flint

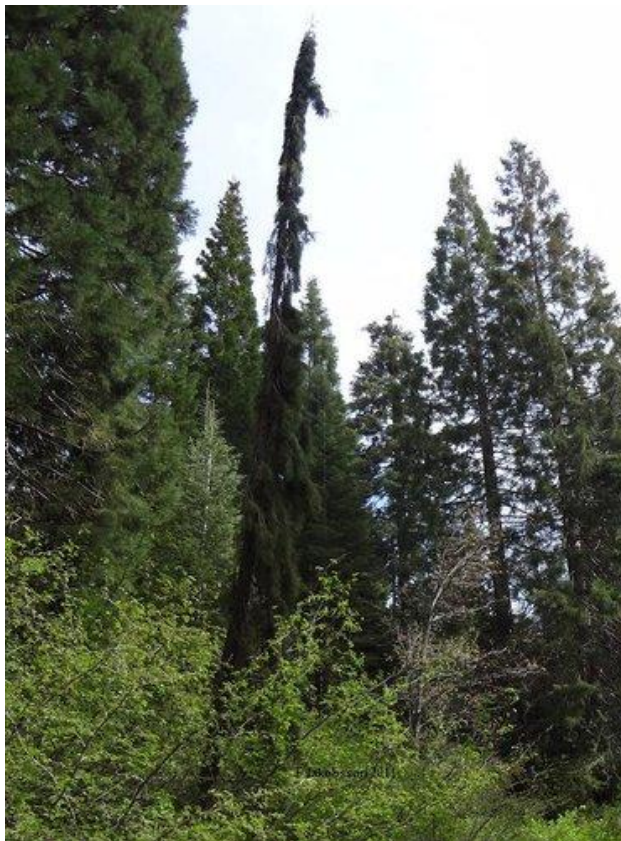
credits his cousin and hiking companion Robert Bergen for spotting the weeping sequoia.

As with the Tunnel Tree I haven't seen photos of this one before. Hope you find them interesting. Giant sequoia adjectives such as majestic seem out of place when looking at the weeping sequoia. I read in The Giant Sequoia of the Sierra Nevada (1975) that a specimen in Roath Park in Cardiff, Wales was labeled "the ugliest tree in Britain" :)

Have you seen or heard of a weeping sequoia growing wild someplace else?
Or could this be the singular one?

Fredrik Jakobsson





Re: The only example of a weeping sequoia living in the fore

by **edfrank** » Sat Jan 26, 2013 9:56 pm

Fredrik, Thanks for posting. I have not been to the area and so I can't add any other sightings. Many of these commercial nursery varieties tend to be unusual genetic variations of a normal tree. Many of the dwarf conifers were grown from witches brooms. I wonder if these weeping varieties have a similar origin? I could be the only mature weeping sequoia in the wild.

http://arboretum.harvard.edu/plants/featured-plants/shrub-and-vine-garden/dwarf-conifers/?wpmp_switcher=mobile Arnold Arboretum -

Dwarf conifers originate in a number of ways. They may be seedlings with genetic mutations that reduce their growth, or they may arise as branch sports (mutated growth on otherwise normal plants) that are then propagated. A fascinating and fairly common origin of dwarf conifers is from witches'-brooms <http://arnoldia.arboretum.harvard.edu/pdf/articles/1642.pdf>—dense, twiggy eruptions of growth on branches of otherwise normal trees...

There is a very nice article on weeping hemlocks found in New York State:
<http://arnoldia.arboretum.harvard.edu/pdf/articles/1107.pdf>

Tsuga canadensis f. pendula is a mutant form of Tsuga canadensis. ...Tsuga canadensis f. pendula differs from the normal hemlock tree in one overwhelmingly important respect - it lacks the ability to erect a leader after the initial horizontal stage of growth is completed.

The article describes in detail why these specimens weep rather than stand erect.

Edward Frank

Re: State Champ American Elm Revisited

by **Tyler** » Mon Jan 28, 2013 10:13 am

Joe, Here's a couple from 2010.





The longest limb measured 73.5'.

Tyler

[Oak Alley Vacherie Louisiana Re-Visit](#)

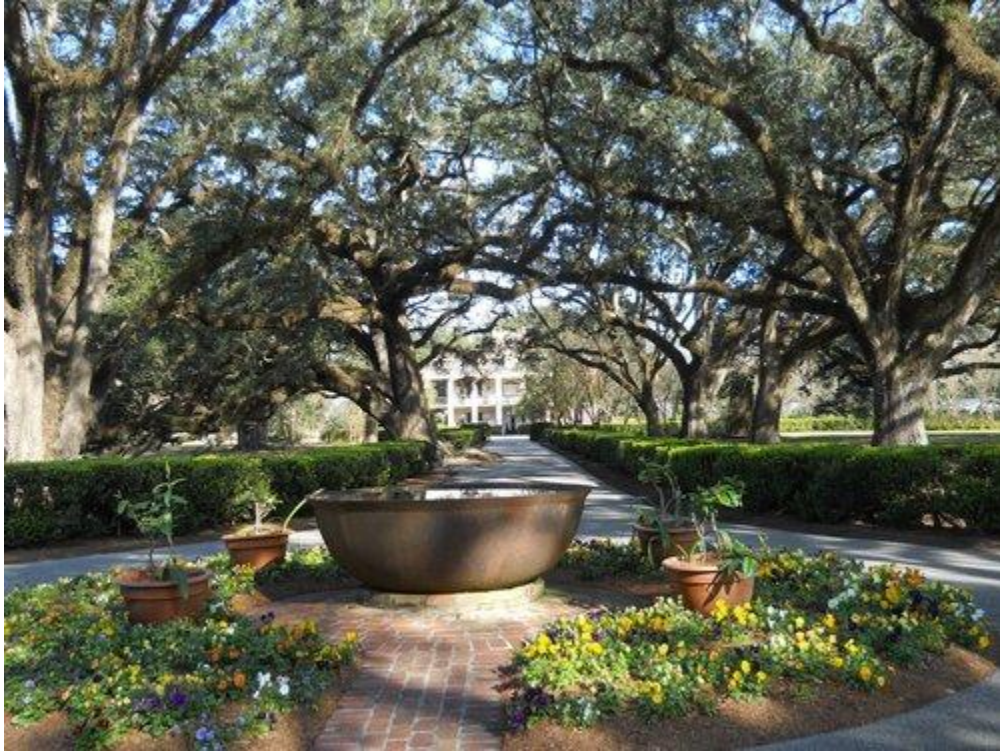
by **Larry Tucei** » Sun Jan 27, 2013 10:14 pm

NTS, I have been in contact with owners of Oak Alley and they asked me to come back down to

measure the Live Oaks in the back of the Mansion. I decided to take advantage of our 70 degree weather and went this past Saturday. There have been some questions as to the ages of some of these trees and I'm to help them with this project. I measured 23 Live Oaks on the property and have concluded that 8-9 trees south of the house where most likely planted at or around the time of construction of the Mansion 1837-39. Although this is a let me make this clear an ESTIMATION I believe it to be close. The remainder of the trees planted from the Mansion south to the back of the property were most likely planted by the Stewarts in the late 1920's. You can see the size differences of the Oak in the photos. I also measured two of three Live Oaks east of the Mansion at the Overseer's Cottage and they to would have planted at or just after construction 1837-39. This would make all of the largest trees in the photos around 170 years old. The Live Oaks in the front of the Mansion forming the great Alley are much larger than these trees in the back. Now as for measurements I'll start with the largest. CBH- 19' 4", S- 105' x 78', H-70' CBH- 19' 3.5", S- 112.5' x H-97.5' CBH- 19' 3", S- 154.5' x 84', H-79.5' CBH- 19' 2", S-108' x 99', H-66' CBH- 17' 6", S-118.5' x 88', H-80' C-17' 6", 102' x 99', 69' C-17' 1", 123' x 83', 63' C-16' 1", 131.5' x 117', 64.5', C-14' 6", 142.5' x 69', 75' All of these Live Oaks have older growth characteristics, thick bark, larger limb mass, root mass, etc. The two larger Live Oaks at the Overseer's Cottage measured CBH- 17' 10", SP- 111.5' x 96', H-57', CBH-15' 1", S-99' x 84', H-60'. The remainder of the trees were much younger and although some are getting CBH to 16' they just don't have the older characteristics. CBH- 16'7", C-15' 7", C-15' 2", C-15', C-14' 11", C-14' 5", C-14' 4", C-12' 8", C-12' 1", C-11' 7", C- 9' 11", C- 9' 11". Some photos with the different trees. Oh and an added surprise a huge Water Oak that was at least 16-18' CBH. I'll measure it the next time I go back and some flowers were in bloom.

<http://www.oakalleyplantation.com/welcome.html>

Larry



Live Oaks large and small in the back of the Mansion



One of several larger Live Oaks in the back of the Mansion