



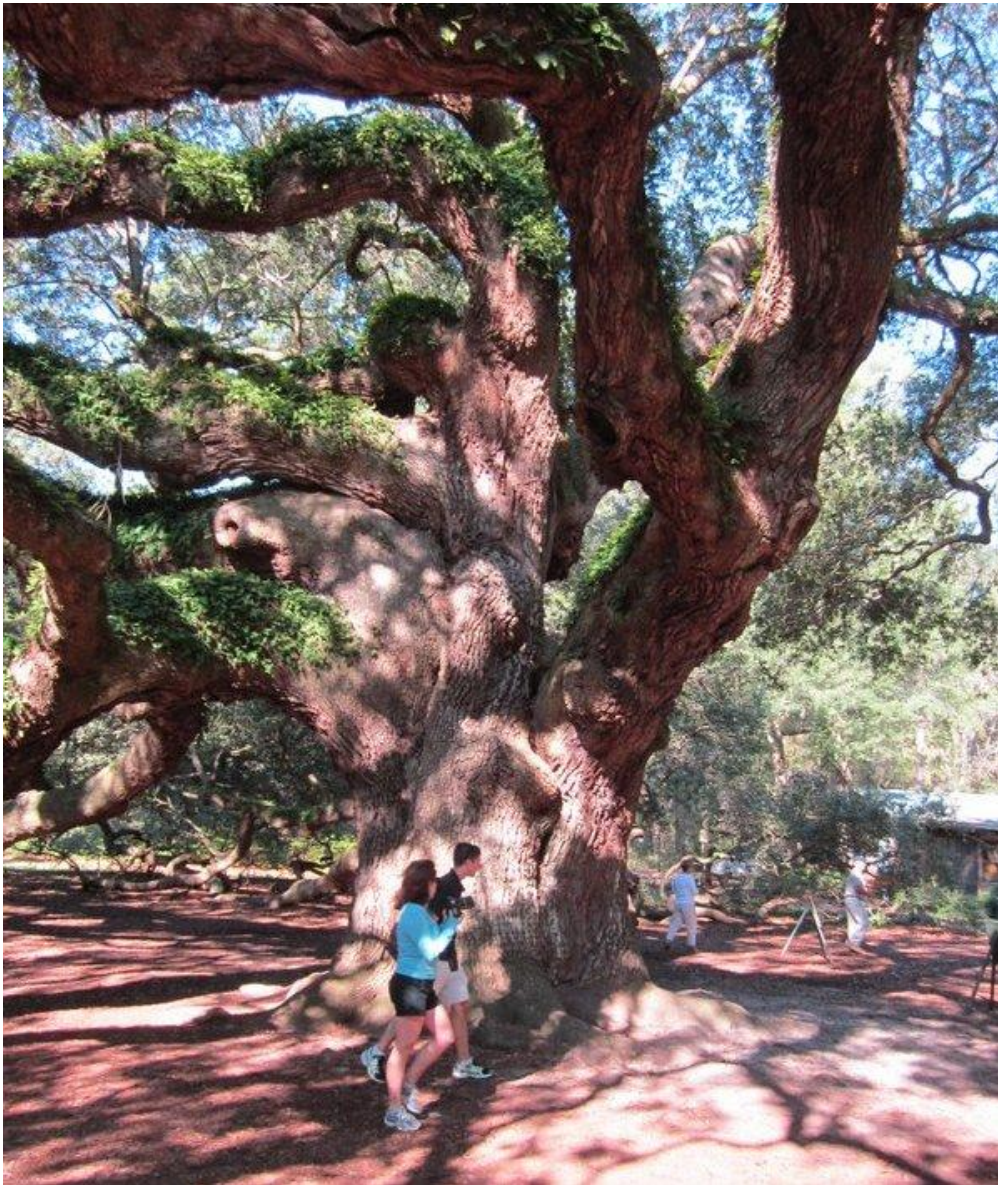
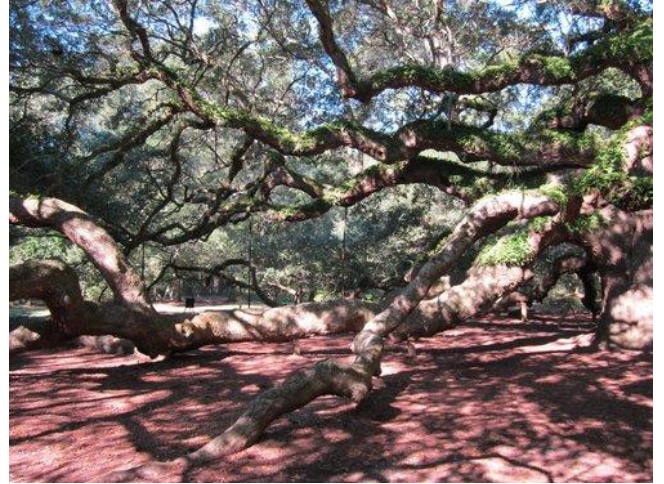
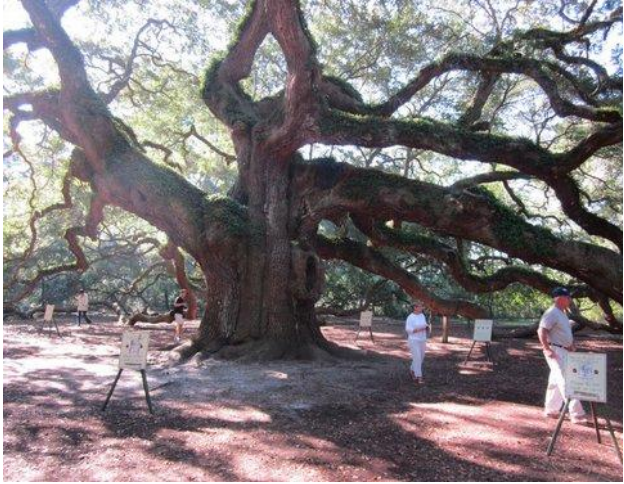


**Re: Angel Oak, SC**

by **bbeduhn** » Mon Oct 29, 2012 2:58 pm





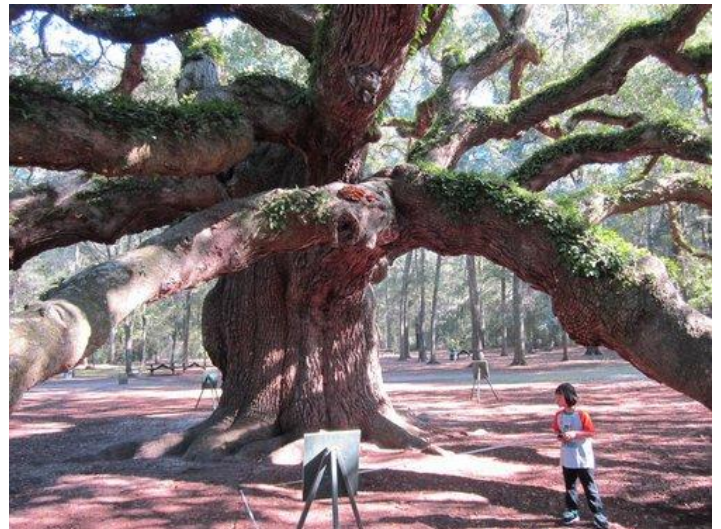
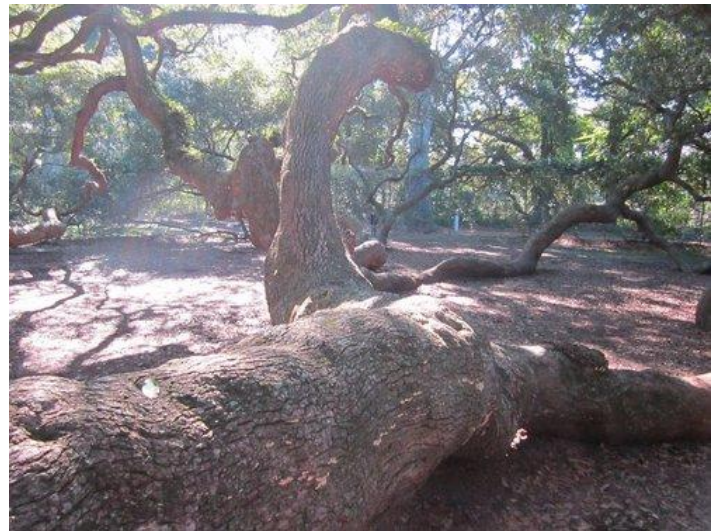








Budding tree measurers





## Criterion RD1000 testing

by dbhguru » Mon Oct 29, 2012 4:51 pm

NTS, After a long testing period of LTI's TruPulse line of hypsometers, and figuring out how to get the most out of those instruments, I'm turning my attention back to an old friend, the Criterion RD1000 Relascope-Dendrometer. The reason is that I need to be able to model trees with this instrument better than I've been able to do in the past. It is a more efficient instrument to use for trunk modeling than the reticle device, although the Macroscope will always have a role. I'm rusty on the RD1000, but am starting to re-familiarize myself with its strengths and weaknesses.



The renewed interest in modeling follows from recent conversations with Dr. David Foster, Director of the Harvard Forest, Harvard University's forest research center. It looks like I'll be measuring trees for Harvard Forest in support of several high profile research projects in which improved accuracy of tree measurements becomes important. I'll explain more about my participation as time goes on, but in a real sense, it is an affirmation of all we've been doing to

put truth into the tree numbers. Dr. David Orwig, a Harvard Forest researcher and friend vouched for the work that we do in NTS to improve measuring accuracy over conventional methods and how that would work to HF's benefit. Most gratifying.

Now to what I did this morning (as Monica and I wait the impact of Sandy), I set up an experiment, shooting the trunk of a black oak in our yard. I put an orange marker in the center of the trunk and reflectors on the edges of the trunk. With a set of calipers, I measured the thickness of the trunk as seen from the measuring spot and at other points around the trunk. I also used a D-Tape to get an average diameter. Here are the statistics:

1. The distance from instrument to orange marker was 27.7 feet
2. The D-tape gave 19.0 inches at the orange marker
3. The calipers gave 17.6 inches centered on the marker and 19.3 inches at 90 degrees rotation
4. The credible RD1000 readings were 17.4, 17.7, and 18.0. I chose the middle one, or 17.7 inches in the direction of the marker
5. The trunk leans in the direction of the instrument 0.5 feet from base to the 5.5-ft height of the marker.

So what is to be made of the above measurements? The trunk is elliptical in shape. Its cross-sectional area is approximately  $\pi \times (17.6/2) \times (19.3/2) = 267$  sq inches. Using the D-Tape result, which ignores the elliptical shape of the trunk, the cross-sectional area calculates to 284 sq inches. The dendrometer calculation of diameter centered on the marker yields 246 sq inches.

The accuracy of the dendrometer for calculating trunk width centered on the marker is  $(17.7 - 17.6)/17.6 = .994$  or 99.4%. If the lower dendrometer measurement of 17.4 inches is used, we get 98.9% accuracy, and 97.7% if the 18.0 reading is used.

Having no other information, the 17.4, 17.7, and 18.0 readings can be treated as equally likely.

What does all this mean? Well, the dendrometer performed pretty well in this test, but using its determination of diameter, we underestimate the

cross-sectional area by 7.9%. Had we gone with the D-Tape measurement, we would have overestimated the area by 6.4%.

There is no easy path to Nirvana. The trade-offs that manufacturers of equipment often implement exact a price on accuracy. While there is no way to avoid having to make tradeoffs, unfortunately, the user seldom knows what the tradeoffs are or how to work around them even if they are known. And ignoring the actual geometry of a tree exacts its separate price.

In our efforts to eliminate sources of error, today a little present arrived from Michael Taylor. Michael sent me a remote trigger to use with my TruPulses. I can now eliminate any negative impact associated with pressing the fire button on the TruPulse. Thanks Michael.

Robert T. Leverett

### Re: Criterion RD1000 testing

by **Don** » Mon Oct 29, 2012 6:53 pm

Bob-

It's something I've wondered about before, and now that you're focusing on dbh/girth, it seems timely to pose my question.

Is there a distance where, say 95% of the error encountered by a dendrometer from not being able to see the actual points on the tree that for example, a set of calipers contacts the tree...let me try that again.

Standing 2 foot in front of a tree, a dendrometer (if it could focus that close) would drastically mis-measure the tree's diameter. At four foot in front of tree, less error would result. At 10 foot, even less error.

Is there a distance where the error is less than say 5%?

Is there a simple function that resolves to this level of error, for any tree's diameter?

And are these distances reasonable in the context of Harvard Forest's measurement objectives?

And for error less than 1%?

I realize that at some point, the tree's out-of-roundness introduces more error than the dendrometer's inability to resolve parallax issues?

Don Bertolette

### Missing part of diameter calculations for Don Bertolette

by **dbhguru** » Tue Oct 30, 2012 1:35 pm

Don,

The attached Excel workbook has the calculations needed to answer the questions you posed. You can use the green cells to test. For example, you might enter a distance to the middle of the trunk of 100 feet along with a radius of 6 feet (big tree) and see how much diameter that you'd miss. Then go to say 20 feet and test again.

 [MissingDiameterDetermination.xlsx](#)

Robert T. Leverett

### Re: Missing part of diameter calculations for Don Bertolette

by **dbhguru** » Tue Oct 30, 2012 8:29 pm

Don,

The spreadsheet table allows you to play what-if games. Put in a distance to the middle of the trunk and an assumed radius, and the result shows how much of the diameter or radius is not visible, both as an absolute amount and percentage of the diameter/radius. Just overwrite entries in the green

cells. The first formula is independent of the instruments used. It's just an exercise in the geometry.

### Derivation of percentage error formula

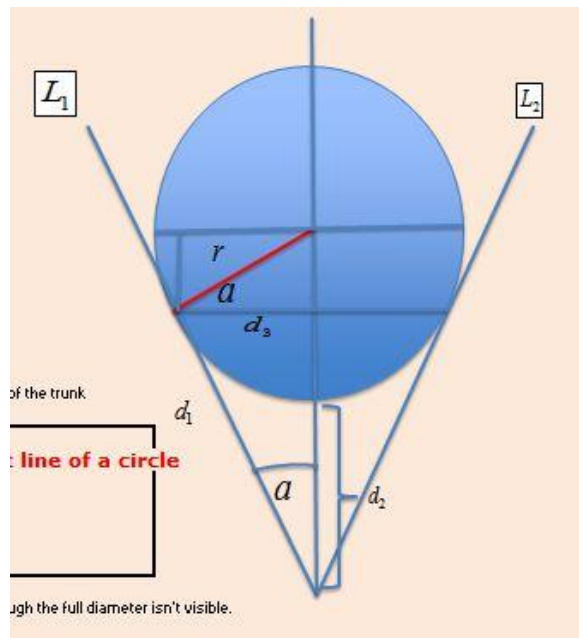
$$\alpha = \sin^{-1} \left( \frac{r}{d_2 + r} \right)$$

$$d_3 = r \cos(a)$$

$$E = r - d_3$$

$$E_p = \frac{E}{r} 100$$

In the second formula, two equipment items are assumed: a distance measurer (tape or laser) and an angle measurer (compass or ?). The second formula actually computes the radius from the specified distance and angle. So, there is no unseen part of the radius if the trunk is circular, i.e. nothing is missed regardless of the distance. This may sound illogical, but it is a function of the properties of a circle. If the angle and distance are known, as shown in the diagram, the radius can be calculated even though the whole diameter can't be seen.



$$r = \frac{d_2 \sin(a)}{1 - \sin(a)}$$

Of course we both recognize that getting an accurate horizontal angle is the challenge. My TruPulse 360 has a digital compass, but its accuracy isn't that great. In a test this afternoon, my target had a diameter of 10.5 inches. Using the TruPulse and the second formula, I got 10.1 inches. That's a 3.8% error. I'm going to run more tests tomorrow. My guess is that the TruPulse will average a 3 - 4 % error on diameter calculations. The RD1000 is definitely better when you can read the scale (definitely a problem in low light). I anticipate that the RD1000 error will average at least 2% for reasons I'll explain in a future posting.

Robert T. Leverett

**Re: Missing part of diameter calculations for Don Bertollette**

by dbhguru » Fri Nov 02, 2012 9:00 am

Don, Just to follow up on my last post. The formulas included in the original post to allow what-if scenarios follow.

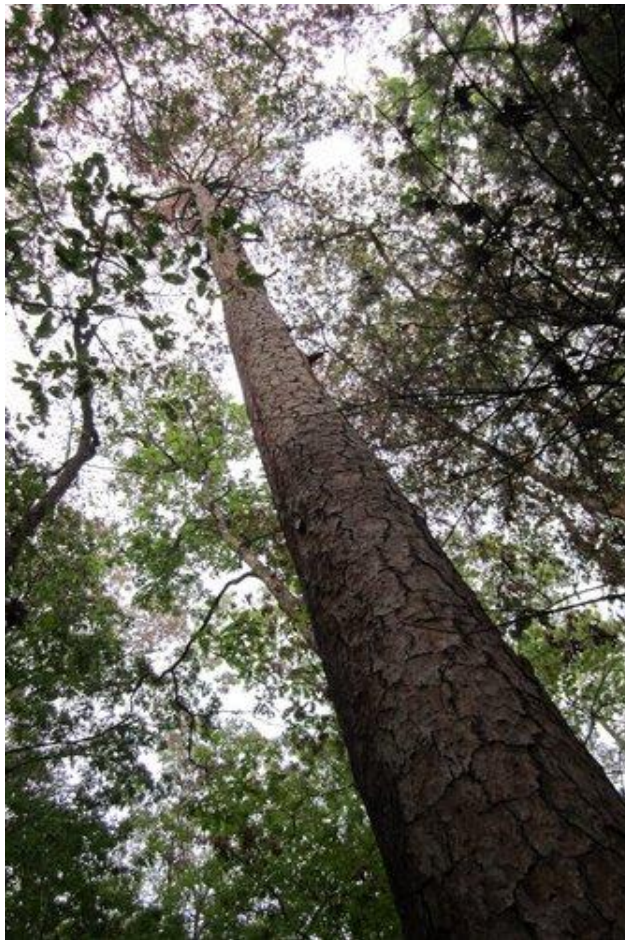
I re-emphasize that this sequence is to play what-if games. You assume a distance and a radius and see how much and what percentage of the radius can't be seen from that distance. It doesn't take long to see that you don't have to be very far away from a relatively large tree to see almost all of its diameter. For example, at 50 feet from the middle of the trunk, for a diameter of 8 feet, you only miss 0.022 feet or a quarter of an inch of diameter - hardly enough to worry about. Of course, the critical assumption is that the trunk is circular.

Robert T. Leverett

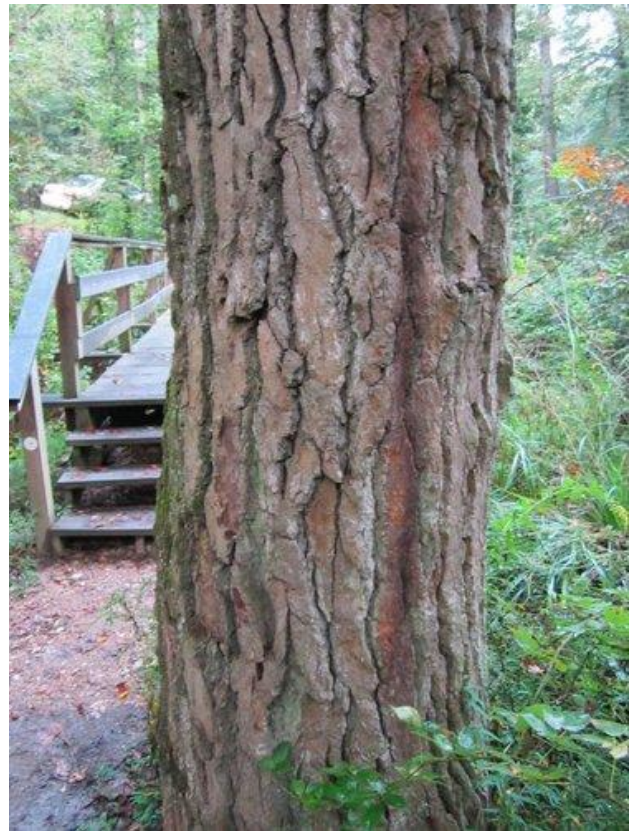


## Re: Asheville Trees

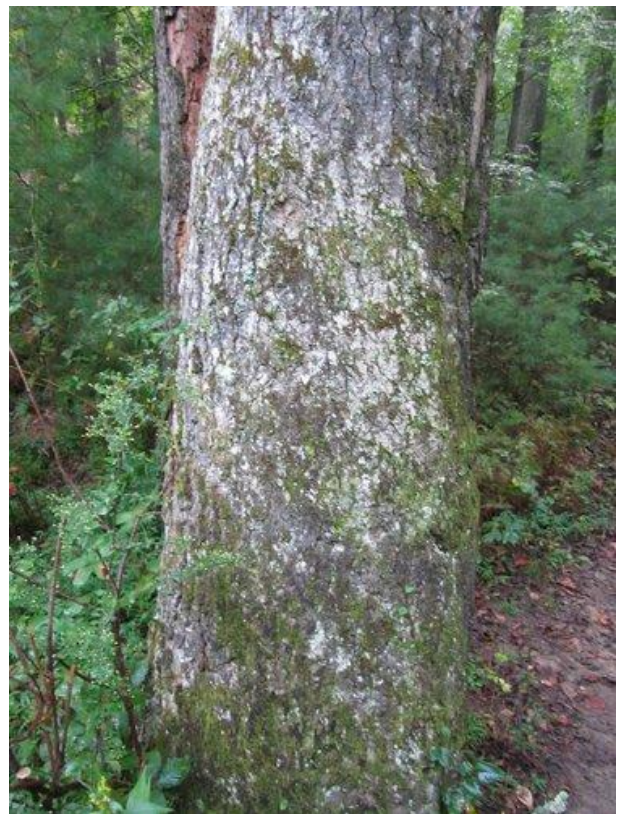
by **bbeduhn** » Mon Oct 29, 2012 1:59 pm



124.6' shortleaf pine. It appears to be dead, however.



Ancient gum furrowed side



Ancient gum smooth side



## [Buckland State Forest, MA](#)

by **RyanLeClair** » Mon Oct 29, 2012 2:16 pm

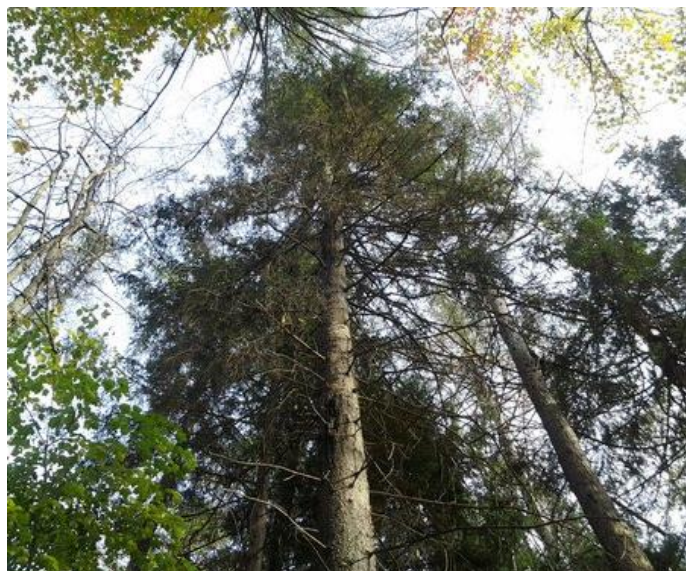
Hey all, here are some photos from Buckland State Forest in Buckland, MA.



A tall Picea abies off by itself



My dad next to a tall Picea abies



Tall Picea abies



Two Larix decidus

RyanLeClair



## [Can anyone ID this tree, please?](#)

by **volcanomike** » Sun Oct 28, 2012 9:46 pm

Hello,

I just got back from Colombia, Peru, Brazil, and Ecuador, and saw this very cool tree a few places, from the Amazon to the Andean highlands at around 5,000'. This photo was taken in Manizales, Colombia, in the Andean Highlands at around 5,000' in the "Coffee Triangle" region.

Thanks for any help!

Mike McGuire, New Jersey



Manizales, Colombia



## [Re: Can anyone ID this tree, please?](#)

by **Steve Galehouse** » Mon Oct 29, 2012 1:46 pm

Norfolk Island pine, *Araucaria excelsa*,

## [Re: Can anyone ID this tree, please?](#)

by **volcanomike** » Mon Oct 29, 2012 3:38 pm

Wow, that was fast! Thanks guys! Yes, the mountains in this area are more mild in temperature, it does get cool at night, but no where near freezing. This is near Nevado del Ruiz volcano (where it does get very cold) but lower in elevation. I too at first thought it might be a Monkey Puzzle tree but I wasn't sure.

I guess it's not surprising this one's not a native species. There is nothing else quite like it in that area and there was never really more than one at any location. I do have some close ups of the foliage from when I was photographing birds on the trees and it is a dead on match for the Norfolk Island Pine. Thanks again for the help!

Mike McGuire, New Jersey



## Re: Can anyone ID this tree, please?

by **fooman** » Mon Oct 29, 2012 5:06 pm

It's not a Norfolk Island Pine, the juvenile form has a much more triangular appearance, in both the overall form and distribution of foliage. Branching is horizontal, or slightly upward (see [http://en.wikipedia.org/wiki/Araucaria\\_heterophylla](http://en.wikipedia.org/wiki/Araucaria_heterophylla)). The tree shown just looks too "shaggy" to be a Norfolk Island pine.

It does look like a member of the *Araucaria* genus. Colombia is a bit too far north for natural range, so could be anything. Definitely not a monkey puzzle, or Parana pine (the two native South American *araucaria* species). I'm leaning towards Cook's pine (*A. columnaris* - [http://en.wikipedia.org/wiki/Araucaria\\_columnaris](http://en.wikipedia.org/wiki/Araucaria_columnaris)) or maybe *A. nemorosa* ([http://www.conifers.org/ar/Araucaria\\_nemorosa.php](http://www.conifers.org/ar/Araucaria_nemorosa.php)). Both from New Caledonia, although the former is often sold as Norfolk Island Pine.

Thanks to Google Street View and the Wellington City Council, I bring you the following visual comparison:



Juvenile Norfolk Island Pine

And a few metres away:



Juvenile Cook's pine

The little kink in the trunk is also a signature of the Cook's pine. The Cook's pine is generally narrower in form and has denser foliage than the Norfolk Island pine. Hope this helps,

Matt Smilie

## Re: Can anyone ID this tree, please?

by **fooman** » Tue Oct 30, 2012 4:13 pm

To follow myself up, if anyone is interested in a comparison between *A. heterophylla* and *A. columnaris*, there are a couple of good web pages out there:

<http://tree-species.blogspot.com/2007/12/norfolk-island-pine-vs-cook-pine.html>

and Prof. Wayne Armstrong's website has a comparison within a broader discussion of *Araucaria* at:

<http://waynesword.palomar.edu/ecoph27.htm>

At the bottom of the page of the last link is a striking comparison between the two species.

Cheers,  
Matt Smilie



## Reforming the Rocky Mountain Native Tree Society?

by **edfrank** » Tue Oct 23, 2012 10:06 am

Before the actual creation of the present day Western Native Tree Society

[http://www.nativetreesociety.org/wnts/wnts\\_origins.htm](http://www.nativetreesociety.org/wnts/wnts_origins.htm) as a chapter of the larger Native Tree Society,

many people had toyed for years with the idea of creating a parallel organization to ENTS for tree hunters in the western United States. Don Bertollette provides a more detailed overview of the history as a guest editorial in the July 2011 issue of eNTS Magazine. That discussion is also reprinted here:

<http://www.ents-bbs.org/viewtopic.php?f=159&t=2818> Some of the discussion before Don Bertollette took the helm of WNTS concerned the name for the western branch of the organization. One of the suggestions had been the Rocky Mountain Native Tree Society (RMNTS). I personally pushed for Western Native Tree Society as a better parallel for ENTS.

The western United States is a vast area representing thousands of square miles of rugged terrain. People like Michael Taylor, Zane Moore, and Mario Vaden are doing wonderful things in California with tree measurements. Western tree hunters like Chris Morris and many others have posted on the region. Don himself is coordinator of the Alaska Big Tree Program <http://www.akbigtreelist.org>. Others have visited the area and made their contributions. We have a growing membership in the region and are collecting data that includes measurements of the tallest trees in the world and the oldest trees in the world.

The membership is growing – but growing slowly. I wonder if we would be better off as an organization to try to create another chapter of the Native Tree Society centered on the locus of interest in the Rocky Mountains. We could capitalize on the interest created by Bob Leverett's western trips and the WNTS rendezvous held in Colorado over the past few years. We have a beginning with contacts within the US Forest Service, retired forest service members, and groups such as the Great Old Broads

for Wilderness.

I propose we create a third chapter of the Native Tree Society under the previously suggested name Rocky Mountain Native Tree Society. This is not meant as a reflection on the excellent work being done by the members and officers of the current WNTS, but just an attempt to take advantage of the opportunity we have in the Rocky Mountain region.

From an ecological standpoint the two areas are distinct. Many of the giant trees on the west coast – from giant redwoods, sugar pines, to western red cedars are found only in the western-most states along the coast. The temperate rainforests are restricted to the coasts of Oregon, Washington, and British Columbia.

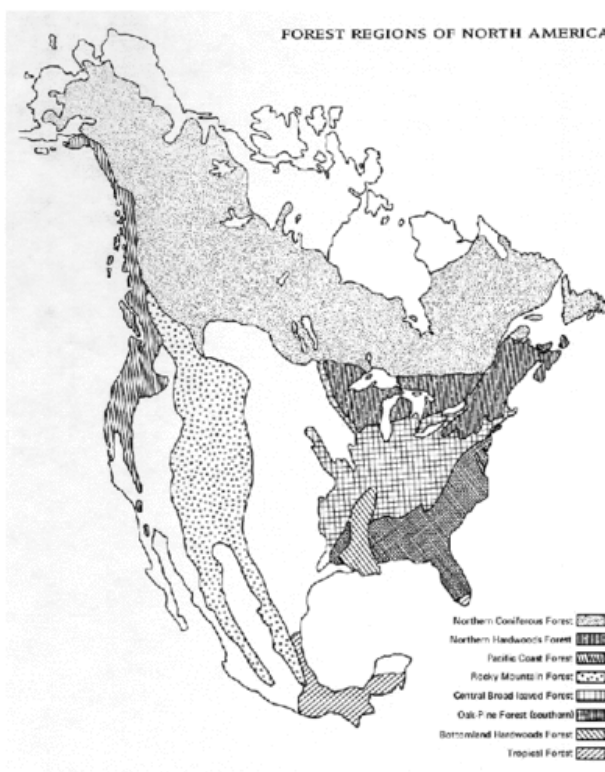


Sugar Pine ranges



Another listing

<http://www.encyclopediaofforestry.org/index.php?title=BioEco12> shows the forest types of the North America:



Forest Types of North America (Young and Giese 2003).

Young, R.A., and R.L. Giese (eds.). 2003. Introduction to Forest Ecosystem Science and Management. 3rd edition. John Wiley and Sons. 560 p.

We could nitpick about the classification schemes and boundaries, but the diagram makes it clear there is a distinction that can be made between the two regions. The article breaks the two regions under discussion into the Rocky Mountain Forest Complex and the Pacific Coast Forest Complex....

For or purposes we could fudge the boundary of the chapters. There is overlap of the ranges of some species, but that doesn't really create any problems.



#### Western Red Cedar

The RMNTS would include - the Rocky Mountains and eastward to the eastern edge of the Great Plains. The WNTS would include the Pacific Coast Forest Complex, the Great Basin and areas eastward to the base of the Rocky Mountains. It would also include the boreal forests of western Canada and Alaska.

This is my suggestion. I am trying to work on the organizational structure of the organization so that it both promotes our own goals, and presents a professional appearance to people outside of the organization. I think this idea would help on both of those fronts. So what does everyone else think? Let the hate mail begin.

Edward Frank



## [Re: Reforming the Rocky Mountain Native Tree Society](#)

by **dbhguru** » Tue Oct 23, 2012 7:52 pm

Ed, You've stolen my thunder. I had begun to think along those lines because of the support we've gotten from people in Durango, and my desire to capitalize on it. The West Coast is in the best of hands, and the tree confirmations there area on an unequaled scale. With Michael in California and Don in Alaska, the far West is covered. But my belief is that people in the Rockies aren't comfotable being lumped in with the West Coast, because the scale of the trees is so much diminished. It's apples and oranges.

Perhaps the biggest reason to think seriously about establishing a Rocky Mountain chapter is that there is a lot of energy and enthusiasm that can be generated locally. For example, I'm confident that the Great Old Broads for Wilderness would support the move and contribute time and energy. They move mountains. Most of them are retired, but you'd never know it. In addition, we have the Forest Service connection. It is a win-win situation.

I'll contact some of the people I know in Durango and see if my sense of their willingness to support the idea is on target. It's all exploratory at this point, but I really don't want the opportunity such as I think we have slip through our fingers.

Robert T. Leverett

## [Re: Reforming the Rocky Mountain Native Tree Society](#)

by **Don** » Wed Oct 24, 2012 12:50 am

Anybody interested in my take on this? Or Michaels? Or the other steadfast WNTS members?

Don Bertolette

## [Re: Reforming the Rocky Mountain Native Tree Society](#)

by **dbhguru** » Wed Oct 24, 2012 10:00 am

Don, Of course we're interested in your thoughts. The idea is conceptual. Ed, got ahead of me on this one, and my enthusiasm showed through. So, I jumped on the idea. I find merit in Ed's suggestion because Durango has developed into a center of activity that can grow.

The Rockies are isolated from the West Coast with its giant trees. With the rest of you taking care of the big trees, I have no worries about sustained activity for California, Oregon, and Washington> Michael Taylor is a tree-measuring machine, and will produce, no matter what for the region he covers, but the Rockies are another matter. Let's face it, Don, outside of my annual western trips, nothing happens for that vast region. But I believe that Durango can change that. There are local people in southwestern Colorado with an actual big tree interest that can be stimulated and activity can be sustained beyond my annual visits. That's what the chapters of the Native Tree Society should be about. Chit chat on the BBS is fine, but it doesn't go far enough. We need people to measure trees, organize events, draw in other people, etc. The Durango people just may be up to the task.

There are other avenues of development, e.g. partnering with the champion tree coordinators, but you'll recall Idaho. I also tried Colorado. Nothing there. Duds. So if we really want to develop the organization and increase the activity and outreach, don't we need to take advantages of the opportunities when they avail themselves? We can debate Ed's idea fully. It is still a concept. As I said, I jumped on the idea, but it is still just a developmental concept.

Robert T. Leverett



## [Re: Reforming the Rocky Mountain Native Tree Society](#)

by **Chris** » Fri Oct 26, 2012 3:06 am

*To be devil's advocate:*

Is something like the name "Western" as opposed to "Rocky Mountain" really reducing the willingness of people to join in/explore/whatever? Is that a major sticking point? It isn't like there is so much measuring and posting going on that someone that is only interested in forest of the southern Rockies is going to be overloaded with everything else going on. If there are a group of people in SW Colorado, why not be even more local? Why not the southern Rockies Native Tree Society?

I hope I don't step on anyone's toes, but there are more to trees than "heights and girths". Trees and forest attract people for a variety of reasons. To split off a group for the reason that some people feel "not comfortable" because someone else has "bigger trees" seems odd to me. People in the east managed to post from various places despite the fact no one measuring in Minnesota is going to come close to western NC in terms of height. I don't think people have problem with girth envy whenever Larry posts another fat Live Oak.

I think there is just as much unity between "Rocky Mountain" and "Pacific" forest as there are between various eastern forest types. Ponderosa Pine, Lodgepole Pine, Douglas Fir span both [although via different subspecies] as important parts. As you move north, the distinction increasingly dissolves. There are places in Idaho and western Montana that can be wetter and "Pacific" or drier and "Rocky Mountain" based on altitude, aspect, soil, etc.. . The Pine-Oak woodlands of the foothills of the Sierra Nevada have more (structurally) in common with the Pine-Oak woodlands of the Rockies of New Mexico than some temperate rain-forest of Washington.

Chris Morris

## [Re: Reforming the Rocky Mountain Native Tree Society](#)

by **dbhguru** » Fri Oct 26, 2012 12:07 pm

Chris, Not to worry. You are not offending anyone - certainly not me. Basically, this is about marketing - whatever works.

In terms of points of view, I'm sure we have people spanning the spectrum. Some will find the larger organization more attractive because they may see it as giving them the opportunity to brush shoulders with the elite of the elite. Others will take a local view. Still others will express no opinion at all. So, this is about going where the interest manifests itself, and in what form. It isn't about heights and girths any more than photography, music, or some other facet of tree awareness. It is about tree interest, however that interest manifests itself. Obviously, I push measuring, but value other contributions just as much.

Having spent a lot of time in the Rockies, I can say fairly confidently that NTS-style tree awareness lags. People in that province are understandably very much into mountains and canyons, and distant horizons, and conscious of them in all kinds of ways, but trees? Not very much. Durango may afford us an opportunity to develop a center of heightened awareness for native tree species, capitalizing on the superlatives of the region. But does a rise in local interest, ipso facto, suggest a local NTS chapter? Probably not, but if local people want one, why not? It is an idea worth testing.

We can always take the big, big picture view and focus only on NTS, forgetting, ENTS, WNTS, and any other potential chapters. If that works, then fine, but if it doesn't, it is back to drawing board, and that means marketing.

Ed has created us an extremely flexible cyberspace home. To newcomers it can seem endlessly deep, but it works and I wouldn't want to lose any of its features. We'd miss them. And if we decide to create more chapters, I'm sure Ed can make it happen. But I absolutely do not want to create work for Ed just to test a concept, so the idea of RMNTS will stay in the



conceptual realm for now. Additionally, if Don and Michael absolutely do not want a RMNTS, for whatever reason, then I'll honor their wishes.

Robert T. Leverett

## **Re: Reforming the Rocky Mountain Native Tree Society**

by **Don** » Mon Oct 29, 2012 7:49 pm

Bob/Ed/Chris/Michael/NTS-

I suppose the only thing I'm absolute about is not being absolute about anything...

That said, my brief response here will be more of a ramble than a rant, and not likely to attain the impressive professional offering from Ed (good work that!).

First, from a purely personal point of view, I was initially attracted to the acronym RMNTS for it's pure elegance in dealing simultaneously with:

- 1) the acronym Rocky Mountain Native Tree Society (RMNTS), and
- 2) the descriptive word remnants, for those few remaining species that draw upon DNA from another time and are only found where the environmental/climatic conditions remain sufficiently to sustain them, where others weren't able to prevail. Indeed synonymously, literally relicts from times passed.

But not being a resident of the Rocky Mountains, I was easily persuaded to go with WNTS...a wider geographic area, one I have had exposure to, through my career and of my own special interests.

I have often posed to Ed, are we not facing the dichotomy of whether we should organize on the basis of whether we want to 'lump' or 'split'. I have in the past been a willing splitter where obvious gains would be made by doing so. I see the current inquiry as bringing us to a dichotomy, but I am not sure where obvious gains are accomplished. I can see the

organizational neatness of having chapters ranging across the US, but in my humble opinion, I'm not even sure that ENTS has a large enough pool of active members to power a chapter based organization.

I see Bob's perspective, wanting to present our efforts in the most attractive (read productive, growing) package. Towards that end, I recognize that WNTS has not grown by leaps and bounds and I take responsibility for the lack of abundant growth. I AM pleased with the quality of recent western members and their champion bagging prowess, and will do better about providing recognition for them, although they are very much self-driven folks and seem to eat and sleep big hunking behemoths for breakfast. I will however go with the flow, as it has been my pleasure to have had an association with the bigger picture that NTS has so well displayed.

A quick comment for those paying attention to the Crystal Basin District near Lake Tahoe...Google has some WONDERFUL satellite imagery with resolution sufficient to identify individual trees, and BIGGER BRANCHES...if you have any kind of competent computer/graphics, download Google Earth (I have it on my iMac 27's harddrive, but am pleased with getting it online, with my MacBook Pro 15" laptop). It's a wonderful aid to tree hunters when high res imagery is available.

Don Bertollette

## **Re: Reforming the Rocky Mountain Native Tree Society**

by **dbhguru** » Mon Oct 29, 2012 9:03 pm

Don, Excellent response and much appreciated. Now here's the kicker. I sheepishly confess that the opposite side of the coin is now impressing itself into my aging brain. I really am not confident that splitting would serve the intended purpose. It could be no more than a flash in the pan. But at some point should we move forward (with your and Michael's concurrence, of course), a regional chapter under WNTS might be more realistic than a coequal entity.



I think we would all agree that the desire for a regional chapter of WNTS in Durango should flow from a truly local interest, as opposed to the unbridled enthusiasm from yours truly. And in rethinking the matter, I honestly don't know if what happened last summer in Durango reflects a genuinely local interest as opposed to their response to Robert T. Leverett, alias Professor Harold Hill, waltzing into town in high sales mode.

Robert T. Leverett

### **Re: Reforming the Rocky Mountain Native Tree Society**

by **edfrank** » Mon Oct 29, 2012 9:15 pm

Don and Bob, I would like to suggest perhaps a regional survey would be an appropriate way to go. On this page:

[http://www.nativetreesociety.org/project\\_objects.htm](http://www.nativetreesociety.org/project_objects.htm)

we have a listing for surveys, where surveys are:

*The Native Tree Society is involved in a variety of projects and surveys of various scales, scopes, and durations. A "project" involves an investigation of a particular topic, species, or activity, while a "survey" is an investigation of a particular site, area, or region. Some are long term ongoing investigations in which a particular site may be monitored for years. Others involve studies of a series of sites in a particular region, or studies of a particular species. Some may be completed in a handful of trips while others may require dozens. Some involve many people while others are driven by the efforts of a single individual. In all cases the goal is to complete the project using the highest scientific standards.*

Their purpose is to give recognition and structure to projects involving tree measurements in a particular area or region. They can be structured internally however the participants want to structure them.

Edward Frank

### **Re: A Few More Big Pines Along Hwy 50: Kokanee Salmon (Lake Tahoe, CA)**

by **Mark Collins** » Mon Oct 29, 2012 11:00 pm

James, there are surprisingly large and tall pines all around Tahoe's west side. It's been a year since I've been on the east side of the lake and I wasn't looking for trees at the time so I can't say for sure what the trees are like there. I remember it being drier on the east side.

Michael, the sugar pine had a cbh of 20 feet, 5 in. The red fir had a cbh of approximately 25 feet, 3.5 in. The red fir was not an especially tall tree, but it was still intact and had a live top. I don't know if the red firs are on your radar at the moment, but there appeared to be some really tall ones growing before and after the 50 descends towards Myers. Also the town of Tahoe Pines seemed to have some extremely tall firs growing there.

Mark Collins

### **Re: A Few More Big Pines Along Hwy 50: Kokanee Salmon (Lake Tahoe, CA)**

by **M.W.Taylor** » Mon Oct 29, 2012 11:06 pm

Mark, Red Fir is high on my priority list. The tallest known is about 250'. Could there be an 80m+ (262.4') red fir out there somewhere? I think there is one. Currently the USA is tied with Australia for total # of tree species over 80m. An 80m+ red fir would put USA back in the lead.

Michael Taylor



## Re: Biltmore Estate Trees, NC

by **bbeduhn** » Tue Oct 30, 2012 9:33 am

Another update:

### Two Ponds Grove

*Tsuga canadensis* Eastern hemlock

123.5'	4034
128.6'	4029
127.3'	178
125.3'	177
125.9'	176
128.6'	4030
127.3'	4252
129.3'	4509
122.4'	no#
130.3'	no#
128.0'	no#
140.0'	no#

*Metasequoia glyptostroboides* Dawn redwood

28.4'  
26.4'  
28.7'  
30.3'  
38.0'

I'd guess they're 8-12 years old.

### Hill Grove

*Metasequoia glypt.* D redwood

77.9'  
76.3'  
76.0'  
77.8'  
79.4'  
79.0'  
80.6'

missed one

I spotted these up the hill from the gardens. They appear to be the Sheridan spire variety, very lanky and very young.

### Garden

*Metasequoia glypt.* D redwood

65.3'

*Cryptomeria japonica* Japanese cedar

63.1'

*Cunninghamia lanceolata* China-fir

81.8'

87.8'

*Abies homolepis* Nikko fir

98.4'

*Taxodium ascendens* pond cypress

89.9'

### Walnut Grove

I had better shots at the dawn redwoods and the walnut crowns with the leaves off. There are two large walnut trees which I'd had at NLT 123' and NLT 129'. I trekked up the hill to get a good shot at their crowns but couldn't site the bottoms so I shot the tops and bottoms separately and planned on adding them. When I got back down, I realized I'd confused my crown with another walnut. There were, in fact five walnuts in the grove. Since I wasn't certain exactly what I'd measured, it was back up the hill again.

*Metasequoia Glypt.* D redwood

108.8' 1874 formerly 95.1' open shot revealed true top.

110.4' no# formerly had 112.5'. May have hit walnut branch before.

*Juglans nigra* L to R in the grove

137.5'

NLT128' I got 123.3' so I didn't hit the top

109.6'

109.3'

110.5'

After the walnuts, I spied a few nice shortleaf pines.

They weren't easy to reach. I had to go through, of all things, a hemlock hell. This was a welcome sight as there just aren't many of these in existence.

They're regenerating profusely in this grove.

*Pinus echinata* shortleaf pine

~92.7'

~110.0'

~113.8'

I couldn't hit the bottoms and the tops at the same time and there's no good point of reference on the trunks. Still, these are the two tallest shortleafs I've

found at Biltmore so far.

Nikko fir update  
formerly 115.1' now 116.7' 4441

Brian Beduhn

## [Middleton Place, SC](#)

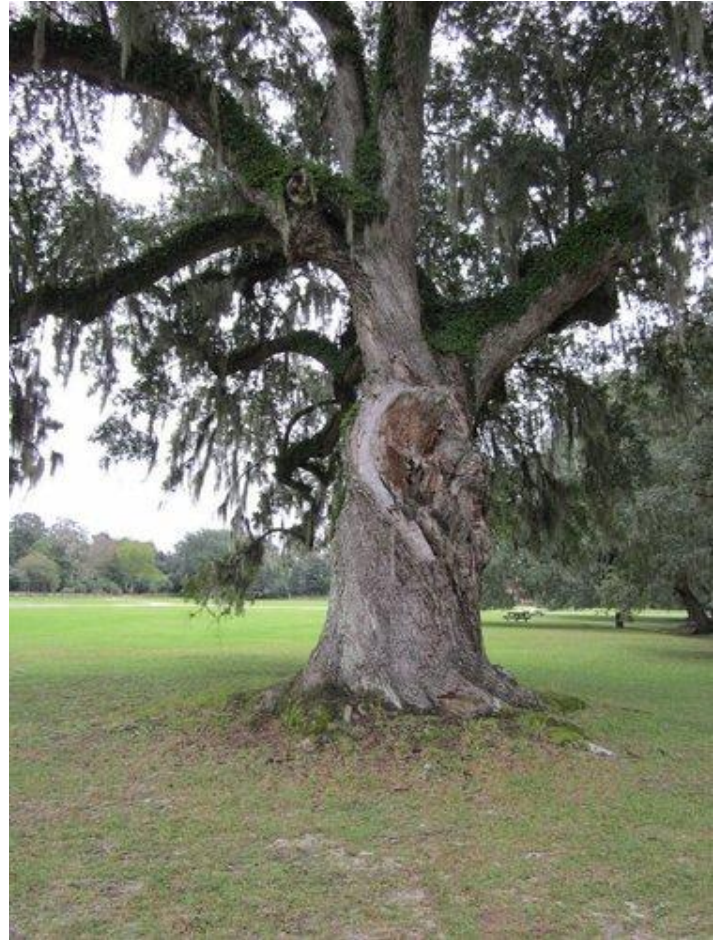
by **bbeduhn** » Tue Oct 30, 2012 10:24 am

The Middleton Oak is what drew me to this property, but there's much, much more to see. In the not too distant future it will not be the largest tree on the property. It has two challengers which are significantly younger. One appears to be a double but is adjoined at 6' above grade. I found 6 more 20 footers in addition to the great oak.

*Quercus Virginiana* Live oak



Girth 32'10"



Girth 22'1.5"



Girth 22'11"

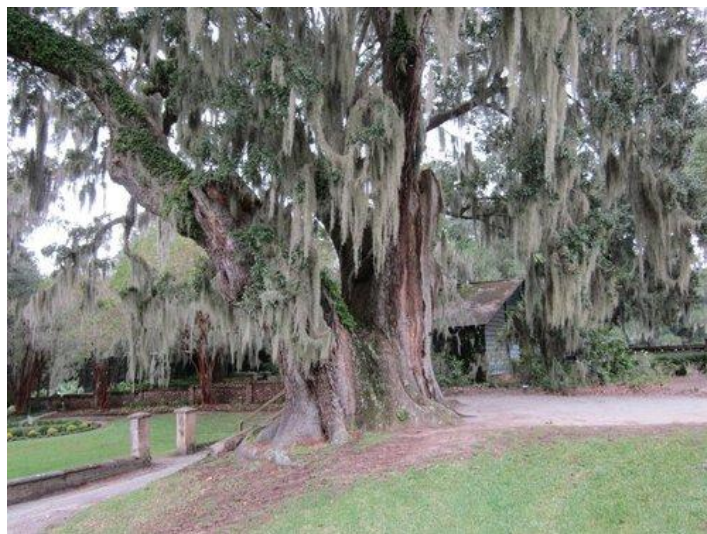




Girth 20'10"



Girth 25'6"



Girth 31'8.5" double

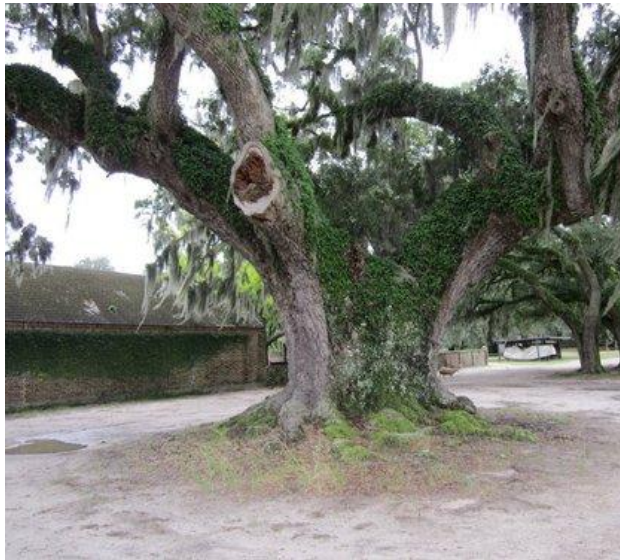


Girth same 31'8.5" includes 21'7" trunk





Girth 27'5" 105' spread



Girth same 27'5"

More to come.

<https://www.middletonplace.org/>

## Re: Middleton Place, SC

by **bbeduhn** » Tue Oct 30, 2012 10:54 am



160+ year old crape myrtle



live oak





live oak



view of the Ashley River



shortleaf 9'3" cbh 120.4'



redcedar 9'6" cbh 61.4'



redcedar 9'7" cbh 51.8' 65.25' spread

American holly *Ilex opaca*  
68.8'  
72.6'

Shortleaf pine *Pinus echinata*  
120.4'  
102.2'  
106.6'

Baldcypress *Taxodium distichum*  
101.1'  
107.6'  
113.8'

Pondcypress *Taxodium ascendens*  
93.9'  
101.6'

Pignut hickory *Carya glabra*  
95.6'

Tuliptree *Liriodendron tulipifera*  
106.6'  
105.5'  
115.5'

Sweetgum *Liquidambar styraciflua*  
106.8'

White oak *Quercus alba*  
86.5'

Am. Beech *Fagus grandifolia*  
78.1'

So. Magnolia *Magnolia grandiflora*  
78.5'  
72.2'  
75.5'  
72.4'

Live oak *Quercus virginiana*  
76.5'  
NLT 79.5'

Swamp chestnut oak *Quercus Michauxii*  
72.9'

Spruce pine *Pinus glabra*  
68.5'  
73.0'  
73.3'  
85.5'

Loblolly pine *Pinus taeda*  
79.1'  
88.8'  
94.2'

Not a true Rucker as I didn't get everywhere:  
RI 10= 99.94'  
RI 5= 111.62'

Brian Beduhn



## Re: Asheville, NC Trees

by **bbeduhn** » Tue Oct 30, 2012 11:59 am

Suwara Grove, Asheville Country Club and across street

*Chamaecyparis pisifera* Suwara false-cypress  
Private home  
93.0'  
88.4'  
many more shorter suwaras

Country Club  
91.5'  
89.7'

*Tsuga Caroliniana* Carolina hemlock  
private home  
88.6'

*Platanus occidentalis* Am. sycamore  
Country Club  
139.6' open grown. Has been measured multiple times. It was 134.3' in 2009, when Will Blozan measured it.

Brian Beduhn

118.7'  
118.3'

shortleaf pin. ech.  
91.9'  
93.8'  
108.7'  
119.6'

sycamore plat. occ.  
105.4'  
103.7'  
106.2'

pond cypress tax. asc.  
62.5'

oriental spruce pic. or.  
79.5'

norway spruce pic. abies  
90.3'  
88.2'

white pine pinus strob.  
103.7'

hemlock tsuga can.  
91.8'

doug-fir pseudo. menz.  
69.3'

so. red oak quercus falc.  
85.6'  
95.8'  
94.7'

## Riverview Cemetery, Asheville, NC

by **bbeduhn** » Tue Oct 30, 2012 12:13 pm

This is the final resting place of literary figures Thomas Wolfe and O. Henry (William Sidney Porter), and George Masa, whose photos helped establish GSMNP.

white oak quercus alba  
98.4' 14'4" cbh  
89.6'

tuliptree lirio. tulip.  
134.2' in forest next to cemetery  
121.0'

## **Re: Maple Height Record - Humboldt Honey - 157.8 ft.**

■ by **M.W.Taylor** » Tue Oct 30, 2012 1:40 pm

Mario, When I first attended Humboldt State in 1984, there was a very popular poster being sold by local retailers titled.. "Are you a Humboldt Honey"...featuring a Birkenstock clad woman with leggings & bandana. She had braided armpit hairs. Arrows pointed to the various features that might identify you as a "Humboldt Honey". I think that style died out a few decades ago but every now and then I see what appears to be a genuine "Humboldt Honey" in the Arcata area.

On that tall *Acer macrophyllum* I expect Zane to find another that stands at least 190'. Easier said than done though & that is why I am putting the challenge on Zane. Just going by past experience. So I expect 30'+ increments in height records from Zane..nothing less.

Looks like you got to the tree just in time before all

the leaves fell. It would be hard to hit that top twig (using a forestry laser) without a leaf.

Michael Taylor

## **Re: Big Pines Hwy 89 (Lake Tahoe)**

■ by **Mark Collins** » Wed Oct 31, 2012 2:24 pm

Larry,

Putting together a list of Tahoe's great trees would be extra incentive to move into the area, but for now, my little notebook will have to do. I wish I could get out there more often.

Michael, I sent an email with the GPS coordinates.

Here's a cool looking fungus that was growing inside the Red Fir. It's base was beginning to hollow out, and the fungus was in the cave.





## Networking, Outreach and Partnerships

by **edfrank** » Tue Oct 30, 2012 7:28 pm

For those of you who are involved with administrating a Facebook Page, Facebook has now decided to only show your pages to a small fraction of the people who "like" your page. We have close to 2000 fans of our Facebook page, but the most viewed post in the last few weeks has had only 383 views, most have less than 200. You can now opt to pay for them actually showing your page to more of your fans. I have heard that this does not even get them to show your page to all of your fans, unlike previously when the posts would be sent out to everyone who "liked" your page as part of the free service. This is clearly about trying to suck money out of the service and is making it all but useless to many small groups like ourselves. This may be the stupid decision that end Facebook's reign as an internet powerhouse, much like similar stupid decisions led to the downfall of Netscape, Worldcom, and MySpace.

There is a work around if people add your site to an interest list, they can, by clicking on the list, from their newsfeed page see all of the posts made to all of the groups on the list. I have created a TREES INTEREST LIST that includes our Facebook page and others I found worthwhile and have made available for subscription by fans of our site. I sent out the following message to other sites on the list proposing we share this interest list from each of our sites, or if they create one of their own, to include the NTS page on their list. I am still in the process of sending out messages to all of the groups on the list as I can only send out so many at a time before Facebook tells me I am abusing their messaging system.

Edward Frank

Networking, Outreach and Partnerships

My name is Edward Frank and I am the page administrator for the Native Tree Society Facebook

page [http://www.facebook.com/pages/Native-Tr ...768?ref=hl](http://www.facebook.com/pages/Native-Tr...768?ref=hl), our website <http://www.nativetreesociety.org>, and out BBS at <http://www.ents-bbs.org>. As most of Facebook Page Administrators are already aware, Facebook has changed how it shares posts made to your page with your membership. Now liking a page will not assure that these members will see the content you post, and what other members post to the page in their newsfeed. This problem for the moment can be resolved if those people who have liked your page create an interest list on their home newsfeed page that includes your page. Alternatively the page administrator can create an interest list that includes their page and post it so that people can subscribe to it.

This change is Facebook has created a big hole in our fan base and in our ability to interact with those who like our pages. I have created an interest list called "Trees." It already includes your Facebook page. I would like to ask that those who administrate various tree related or post frequently about trees work together to assure our posts are seen by those who like our pages. I propose that either you post a link to the above Trees Interest list to your Facebook page in the About Page or a Note, or that you create a Interest List of your own and include a link to our Facebook page in your list.

This is what I have posted in our About page (under the Mission Heading):

Be sure to get all of our posts by creating an interest list on your newsfeed page that includes this page, or subscribe to our Trees Interest List <http://www.facebook.com/lists/10151039626131958> of pages that are about trees or frequently post about trees.

The Native Tree Society (NTS) is a non-profit scientific organization dedicated to the study of trees and forests. We began as a regional tree interest group in eastern United States, but since that time our group has grown to encompass other areas of North America and has attracted scattered members elsewhere around the world. Our interests range from art and history, to dendrochronology and canopy mapping, to arboriculture and forestry, to photography and tree climbing. All of these are

subjects of discussion and featured on our BBS and website. The primary contribution of the NTS to the community of tree organizations is our emphasis on promoting accurate tree measurements, on developing new and better measurement techniques, and documenting examples of old or unusual forests.

We respect the diversity of interests represented by other tree and forest groups and feel that a working together would be of benefit to each of our groups.

Initially we can share links between our websites, Facebook pages, and broaden our internet presences.

I propose the following:

- 1) Facebook: As outlined above I want to encourage you to either share our Trees Interest List on your Facebook page or create an interest list of your own which includes our page as a member of the list.
- 2) Website: I would further propose, that if interested we could exchange links on our respective websites, if you have one. I will place a link on our website <http://www.nativetreesociety.org> and on our BBS at <http://www.ents-bbs.org> linking to your group's website or Facebook page. I would ask in return that an exchange link to our website and BBS be posted on your webpage. This invitation is also open to those individuals that have a personal website devoted to trees or forests, even if they are not part of a formal group. This link would optionally include, at their behest, the group's logo and a short paragraph summarizing the area of interest and goals of that partner group.
  - a. Contact Information: If you need to contact me about any details I can be reached at: Edward Frank; 8718 Route 322, Reynoldsville, PA, USA, 15851; (home) \*\*\*\*\*; (cell) \*\*\*\*\*; [edfrank@nativetreesociety.org](mailto:edfrank@nativetreesociety.org) or [ed\\_frank@hotmail.com](mailto:ed_frank@hotmail.com)
- 3) Joining NTS: I would encourage individuals interested in trees and forests to consider joining our BBS and participate in our ongoing discussions. People are also welcome to join the BBS as representatives of their organizations. Simply go to the BBS website <http://www.ents-bbs.org> and click

on the "Register" button at the bottom of the heading on the right side, and follow the instructions to create an account. There are instructions on how to use the BBS Board posted here:

[viewtopic.php?f=166&t=23](http://www.nativetreesociety.org/viewtopic.php?f=166&t=23) and instructions on how to subscribe to a daily digest of the posts made to the bulletin board posted here: [viewtopic.php?f=166&t=943](http://www.nativetreesociety.org/viewtopic.php?f=166&t=943)

In addition to these initial internet linkages, if interested we can talk and determine ways in which we can work together to better promote our mutual goals and to consider potential joint projects. We can talk about how we can share our resources and expertise. The Native Tree Society membership that includes people ranging from interested amateurs, to artists, to some of the top forest experts in the world.

We certainly can share that interest and expertise with other organizations. We have formal "Tree Measuring Guidelines of the Eastern Native Tree Society" that can be downloaded from our BBS and website: [download/file.php?id=5066](http://www.nativetreesociety.org/download/file.php?id=5066), as well as a wide range of discussions on this and other subjects on both our website and BBS. We have a quarterly scientific journal entitled: "The Bulletin of the Eastern Native Society" available here: [http://www.nativetreesociety.org/bulletin ... lletin.htm](http://www.nativetreesociety.org/bulletin/bulletin.htm), and a monthly magazine called "eNTS: The Magazine of the Native Tree Society" available here: [http://www.nativetreesociety.org/magazi ... gazine.htm](http://www.nativetreesociety.org/magazine/magazine.htm) and a series of special publications available here: [viewforum.php?f=297](http://www.nativetreesociety.org/viewforum.php?f=297).

I encourage people to forward this note to other tree and forest groups that might be interested in participating in this networking effort. The Native Tree Society reserves the right to decline forming a partnership with any group, organization, business, or individual at our own discretion. Please contact me at the above email address if you have any questions or comments. Thank you.

Edward Forrest Frank, October 29, 2012



## Videos - Falling trees in Hurricane Sandy

by **edfrank** » Tue Oct 30, 2012 11:01 pm

HURRICANE SANDY - Live Footage Captures Trees Falling!



<http://www.youtube.com/watch?v=YwFkyHAXC0g>L  
atest live footage of Hurricane Sandy in the United States (as seen on the BBC news 30 Oct 2012). Watch as the storm blows down THREE trees, causing fire and car damage! Captured on a digital camera 29 October 2012. PLEASE SHARE - this is amazing!!

Hurricane Sandy Tree Falling



<http://www.youtube.com/watch?v=Cy1PvvNEFo>  
Tree Falling in Front Yard - Hurricane Sandy, 2012 - Acton, MA



<http://www.youtube.com/watch?v=AQWbVSbnuWo>  
This is a short video of a tree that fell in our front yard due to Hurricane Sandy. Acton, MA. October 29, 2012

## Re: Video - Falling trees in Hurricane Sandy

by **jamesrobertsmith** » Wed Oct 31, 2012 1:35 pm

That was impressive. Scary stuff when they go. I always get nervous when I'm backpacking and a wind storm hits. Scariest one was in a Cohutta Wilderness backpacking trip. Two fronts collided. One second it would be sleeting, the next we'd get hit with rain and the temperatures would soar. The winds were hideous. During the night we could feel the ground thumping as root systems all around us were strained. There was nothing we could do but wait it out.

James Robert Smith

## Re: Video - Falling trees in Hurricane Sandy

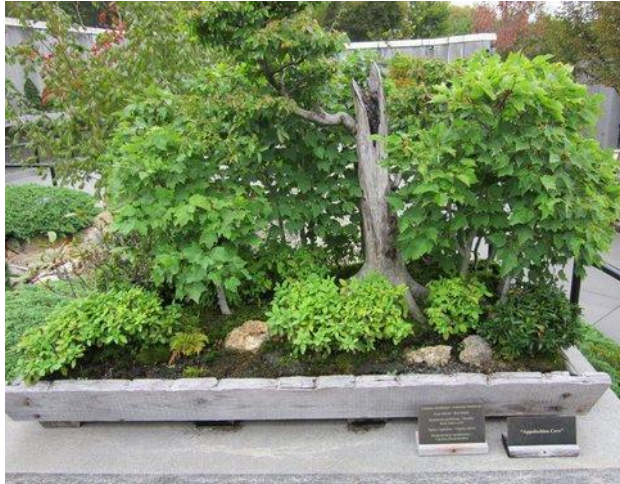
by **Rand** » Wed Oct 31, 2012 12:02 am

Wow. It's almost like they fall in slow motion or something.

Rand Brown

## WNC Arboretum Bonsai Pics

by **bbeduhn** » Wed Oct 31, 2012 11:27 am



Appalachian Cove



Baldcypress Forest



Chase Grove with Hinoki Cypress



European Beech





Graveyard Fields, Blue Ridge parkway



Roan Mountain on AT with Chinese Junipers



Mount Mitchell with White Spruce



Yoshimura Island with American Hornbeam

<http://www.ncarboretum.org/exhibits/outdoors-2/bonsai/>

Brian Beduhn



**Re: Vine ID help, Georgia**

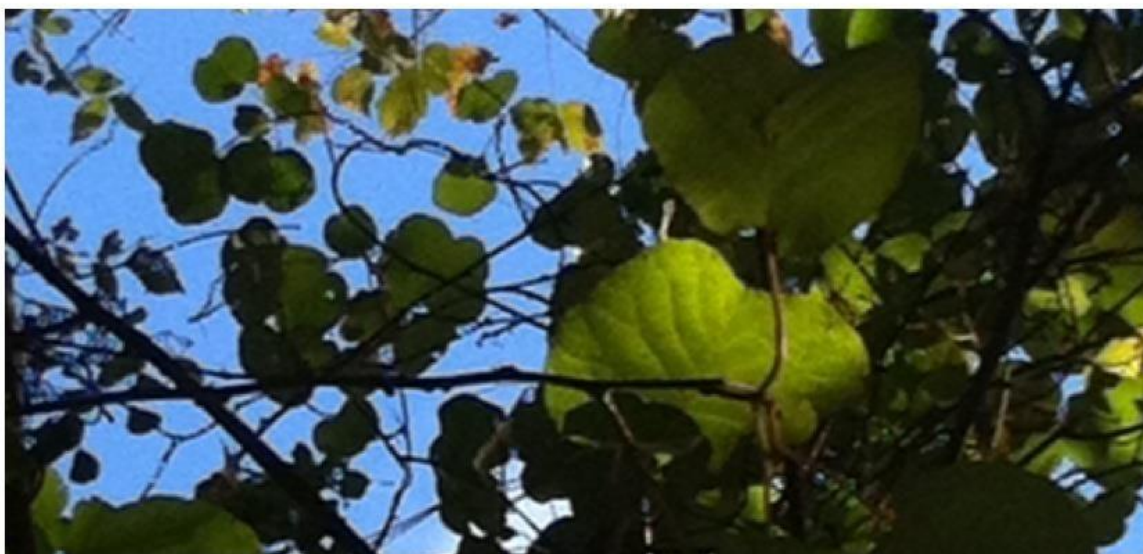
by **eliahd24** » Wed Oct 31, 2012 8:26 pm

I'll try to add a picture with a leaf and some other shots of the bark, etc....

The leaf was extremely fuzzy. the bottom was noticeably paler and fuzzier than the top too.

the bark splits with age/size

no sign of flowers or fruit





### Re: Vine ID help, Georgia

 by **Jess Riddle** » Wed Oct 31, 2012 11:38 pm

Eli, Looks like an Actinidia, probably A. chinensis, chinese gooseberry. The species is listed as rarely naturalizing in the southeast and is not listed from Georgia, so you may have a new state record.

Jess Riddle

*Actinidia chinensis* is a deciduous Climber growing to 7.5 m (24ft 7in). It is hardy to zone 7 and is not frost tender. It is in flower from May to June, and the seeds ripen from Oct to December. The flowers are dioecious (individual flowers are either male or female, but only one sex is to be...

### Re: Vine ID help, Georgia

 by **eliahd24** » Thu Nov 01, 2012 2:32 pm

Hot dang that looks like it Jess! We've got us a regular 'ole kiwi vine here in Atlanta!

<http://www.pfaf.org/user/Plant.aspx?LatinName=Actinidia+chinensis>

Actinidia chinensis PFAF Plant Database

## External Links:

**Climate Change Could Cripple Southwestern U.S. Forests: Trees Face Rising Drought Stress and Mortality as Climate Warms**

<http://www.sciencedaily.com/releases/2012/09/120930142106.htm>

**In 'Music Of Trees,' A Symphony In The Key Of Cedar**

<http://www.npr.org/2012/10/01/162110681/in-music-of-trees-a-symphony-in-the-key-of-cedar>

**6 of America's Coolest Trees**, Sierra Daily, 08/07/2012

<http://sierraclub.typepad.com/explore/2012/08/6-of-americas-coolest-trees-.html>

**Is Root Grafting a Positive, Cooperative Behavior in Trees?** ScienceDaily (June 8, 2011)

<http://www.sciencedaily.com/releases/2011/06/110608141529.htm>

**AmeriDendro 2013: Second American Dendrochronology Conference**

13-17 May 2013 (Tucson, Arizona)

<http://www.treeringsociety.org/ameridendro2013/>

**The mathematics of leaf decay**

A mathematical model reveals commonality within

the diversity of leaf decay.

Jennifer Chu, MIT News Office

<http://web.mit.edu/newsoffice/2012/leaf-decay-1004.html>

**Madagascar palm trees at risk of extinction, study finds** 17 October 2012

<http://www.bbc.co.uk/news/world-africa-19985536>

**The vanishing groves** A chronicle of climates past and a portent of climates to come – the telling rings of the bristlecone pine Ross Andersen 16 October 2012

<http://www.aeonmagazine.com/nature-and-cosmos/ross-andersen-bristlecone-pines-anthropocene/>

**Recognising indigenous “sacred areas” could double amount of protected land worldwide**

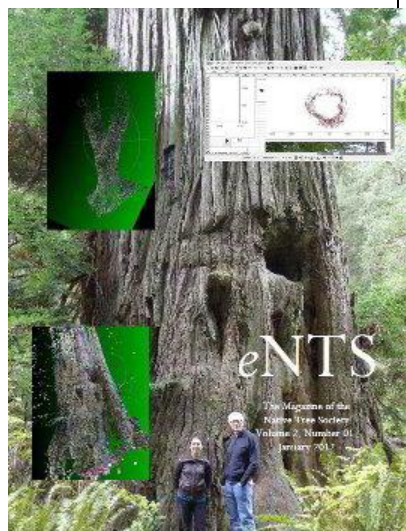
<http://blog.cifor.org/11200/recognising-indigenous-sacred-areas-could-double-the-amount-of-protected-land-worldwide/#.UIYfs668qSp>

**Wandering in Japan’s ‘Suicide Forest’** October 25, 2012, 5:00 am, by James Estrin

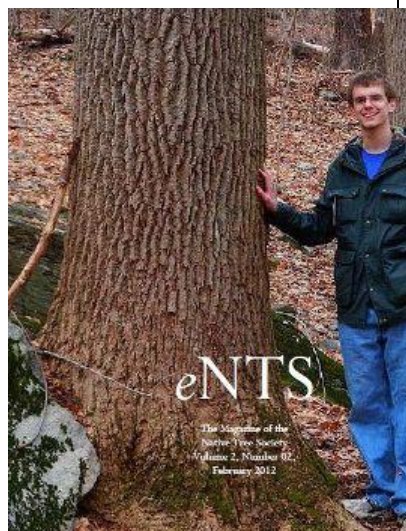
<http://lens.blogs.nytimes.com/2012/10/25/wandering-in-japans-suicide-forest/>



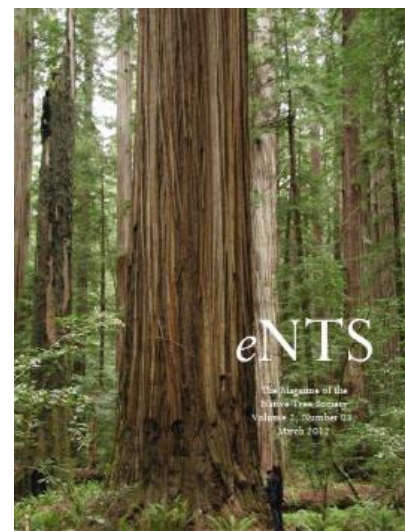
## Back Issues of eNTS: The Magazine of the Native Tree Society



[eNTS Magazine January 2012](#) 21 MB  
Broken into Three Parts: [A](#), [B](#), [C](#)



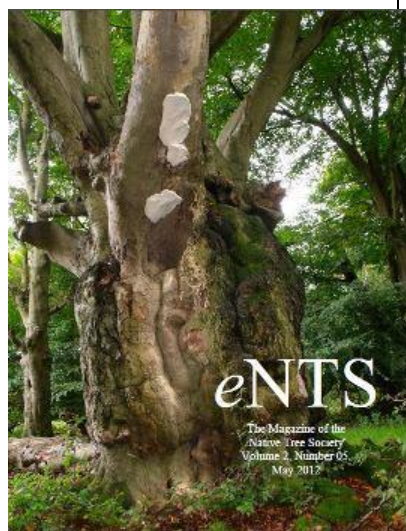
[eNTS Magazine February 2012](#) 20.5 MB  
Broken into Three Parts: [A](#), [B](#), [C](#)



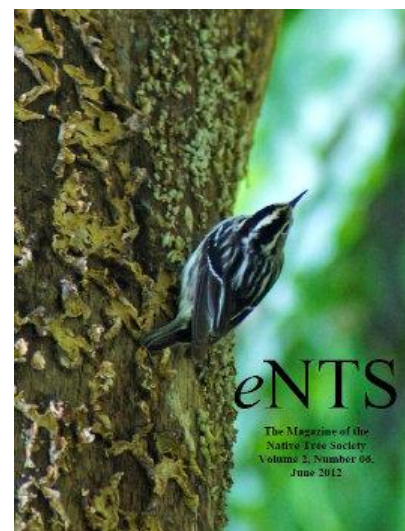
[eNTS Magazine March 2012](#) 21 MB  
Broken into Four Parts: [A](#), [B](#), [C](#), [D](#)



[eNTS Magazine April 2012](#) 17.6 MB  
Broken Into Three Parts: [A](#), [B](#), [C](#)

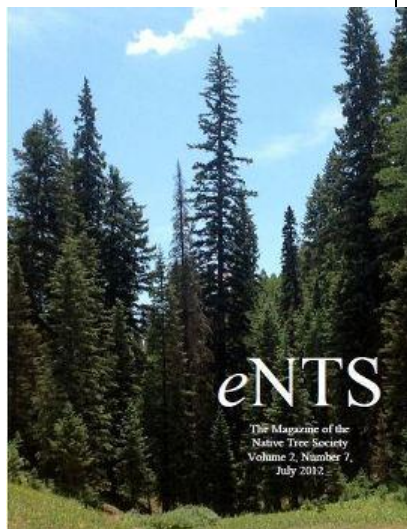


[eNTS Magazine May 2012](#) 16.6 MB  
Broken into Four Parts: [A](#), [B](#), [C](#), [D](#)

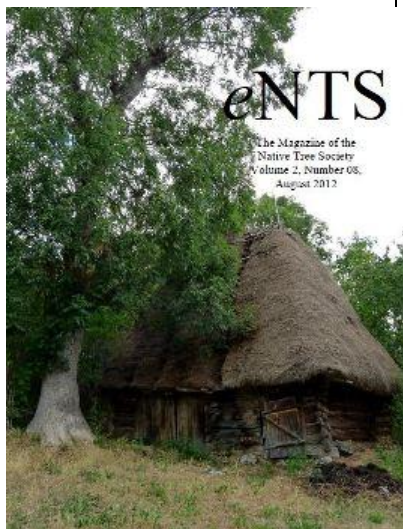


[eNTS Magazine June 2012](#) 8.7 MB

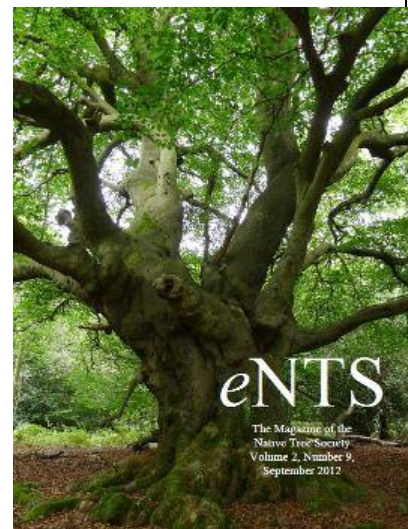




[eNTS Magazine July 2012](#) 10 MB  
Broken Into Two Parts: [A](#) [B](#)



[eNTS Magazine August 2012](#) 13.3 MB  
Broken into Three Parts: [A](#) [B](#) [C](#)

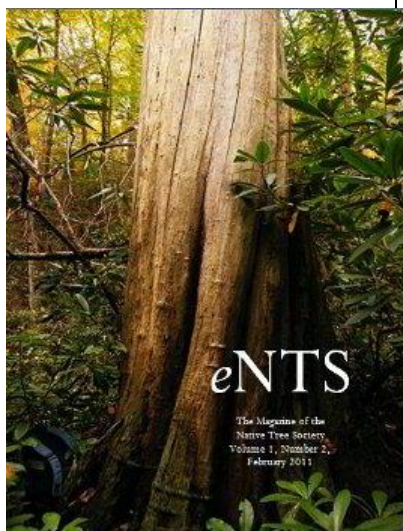


[eNTS Magazine September 2012](#) 13 MB  
Broken into Three Parts: [A](#) [B](#) [C](#)

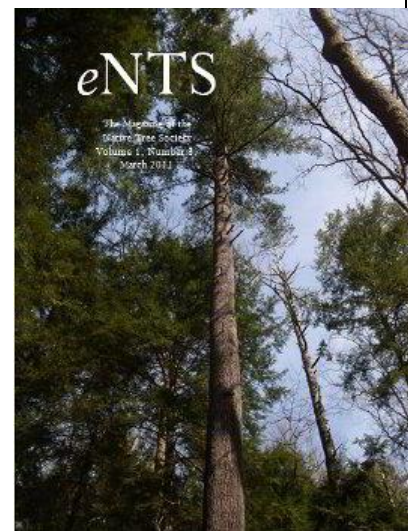
2011



[eNTS Magazine January 2011](#) 12 MB

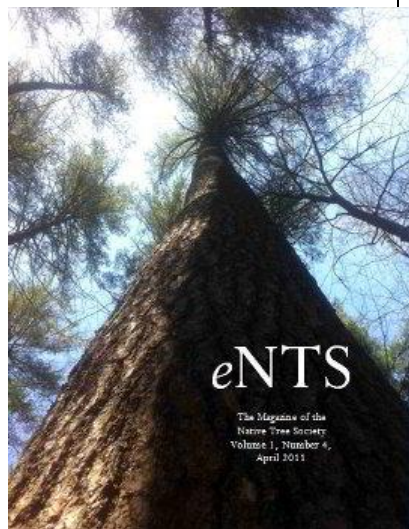


[eNTS Magazine February 2011](#) 8.5 MB

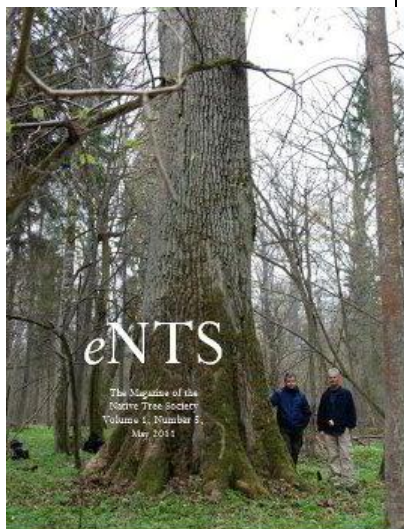


[eNTS Magazine March 2011](#) 4.2 MB

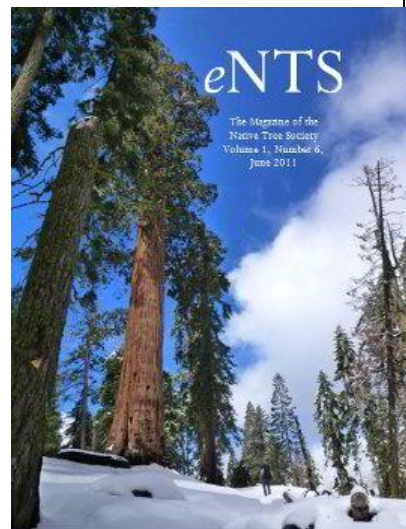




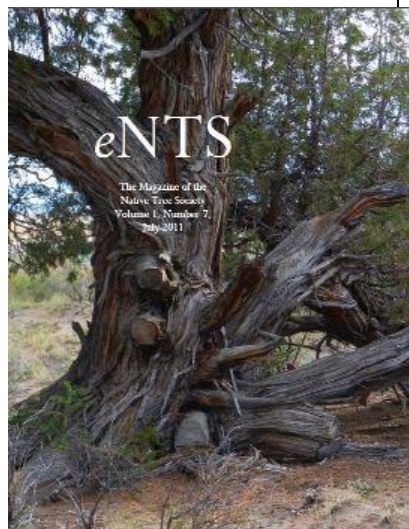
[eNTS Magazine April2011](#) 6 MB



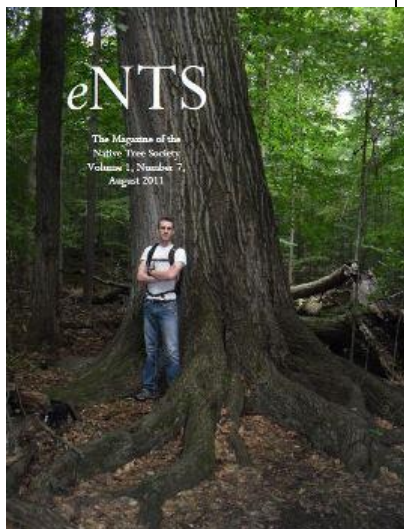
[eNTS Magazine May2011](#) 9.5 MB



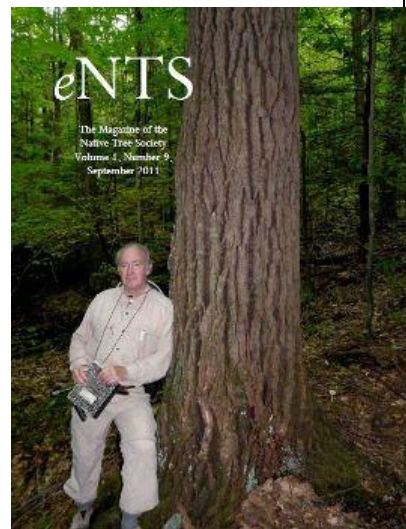
[eNTS Magazine June2011](#) 8.9 MB



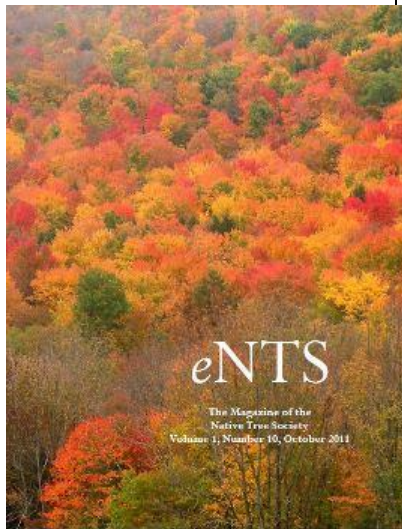
[eNTS Magazine July2011.pdf](#) 28 MB  
Broken into Four parts: [A](#), [B](#), [C](#), [D](#)



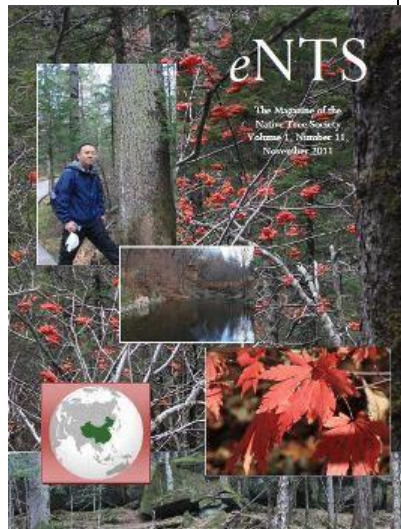
[eNTS Magazine August 2011](#) 21 MB  
Broken into two parts [A](#), [B](#)



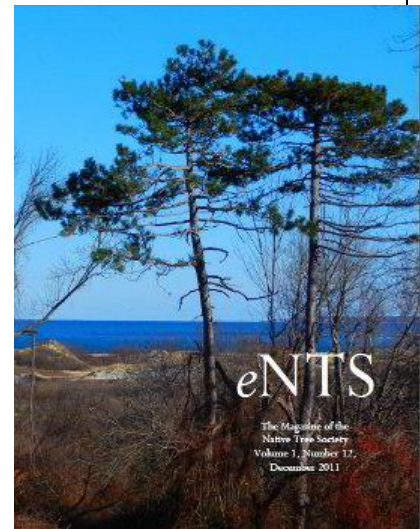
[eNTS Magazine September 2011](#) 13 MB



[eNTS Magazine October 2011](#) 25 MB  
Broken into Four Parts [A](#), [B](#), [C](#), [D](#)



[eNTS Magazine November 2011](#) 18 MB  
Broken into Four Parts [A](#), [B](#), [C](#), [D](#)



[eNTS Magazine December 2011](#) 13.7 MB  
Broken into Two Parts [A](#), [B](#)

## About: eNTS: The Magazine of the Native Tree Society

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

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

Edward Frank – Editor-in-Chief