Tree Maximums - Tree of the Week: Black Walnut

by **Matt Markworth** » Fri Apr 19, 2013 11:39 pm

Tree of the Week: Juglans nigra, Black Walnut

http://plants.usda.gov/java/profile?symbol=juni

Hi All,

It's really hard not to love this tree, unless you're against a bounty of delicious Walnuts falling from the sky!

Please reply with these measurement details if you think you may have measured the Maximum Height, Girth, or Spread for this species:

Country:
State or Province:
Property Owner:
Site Name:
Species (Scientific):
Species (Common):
Tree Name:
NTS Measurer(s):
Date of Measurement:
Height (ft):
Method of Height Measurement:
CBH (ft):
Average Spread (ft):
Maximum Spread (ft):
Habitat:
Notes:

Tree of the Week Spreadsheet and Guidelines: http://www.ents-bbs.org/viewtopic.php?f=393&t=5221

Tree of the Week Forum: http://www.ents-bbs.org/viewforum.php?f=393

This skinny 133.7 footer (CBH:6.5') that I measured in Germantown MetroPark (OH) is nowhere near the Max Height, but a nice tree nonetheless. Check out the sandy soil that it's living on . . .

- Matt

Re: Tree Maximums - Tree of the Week: Black Walnut

by **Will Blozan** » Sat Apr 20, 2013 9:22 am

Matt,

For what it is worth...

Country: USA
State or Province: Virginia
Property Owner: The Montpelier Foundation
Site Name: Montpelier Estate
Species (Scientific): Juglans
Species (Common): nigra
Tree Name:
NTS Measurer(s): Will Blozan, Jess Riddle
Date of Measurement: 10/17/2005
Height (ft): 100.5' (30.6 m)
Method of Height Measurement: NTS SINE with handheld Bushnell 500 and Suunto clinometer
CBH (ft): 17.42' (5.3 m)
Average Spread (ft): 108.5' (33.1 m)
Maximum Spread (ft): 121.7' (37.1')
Habitat: Planted tree on main grounds
Notes: Has heavy lean but very full and healthy.

Will Blozan

Re: Tree Maximums - Tree of the Week: Black Walnut

by **George Fieo** » Sat Apr 20, 2013 11:29 pm

Matt, Here is my nomination.

Country: USA
State or Province: Chester Co., Pennsylvania
Property owner: Pennsylvania Department of Conservation and Natural Resources
Site Name: White Clay Creek Preserve
Species (Scientific): Juglans nigra
Species (Common): Black Walnut
Tree Name:
NTS Measurer(s): George Fieo
Date of Measurement: 11/27/2012
Height (ft): 134.2
Method of Height Measurement: Sine Top-Sine Bottom with handheld Nikon 440 laser rangefinder, Brunton clinometer
CBH (ft): 6.3
Average Spread (ft):
Maximum Spread (ft):
Habitat: Small stream at bottom of steep ravine ~100 yards above confluence with White Clay Creek
Notes:

George

Re: Tree Maximums - Tree of the Week: Black Walnut

by **Will Blozan** » Sun Apr 21, 2013 9:23 am

Matt, I think Jess Riddle is on the road so I will submit this tree from an earlier report. I doubt there will be any further nominations except for girth...

Country: USA
State or Province: Cocke Co., TN
Property owner: National Park Service
Site Name: Hen Wallow Creek
Species (Scientific): Juglans nigra
Species (Common): Black Walnut
Tree Name:
NTS Measurer(s): Jess Riddle
Date of Measurement: 1/29/2006
Height (ft): 144.3' (44.0 m)
Method of Height Measurement: Sine Top-Sine Bottom with handheld Bushnell 500 laser rangefinder, Suunto clinometer
CBH (ft): 13.75' (4.19 m)
Average Spread (ft): 96.3' (29.35 m)
Maximum Spread (ft): 127.6' (38.9 m)
Habitat: The tree grows a short distance up a 38-degree side slope, and arches over a 150' tall tuliptree growing in the middle of the cove.
Notes: The great range in the spreads resulted from an approximately three foot dbh tuliptree that used to grow just upslope from the tree. Consequently, the crown was only half of a hemisphere. Two huge branches that do not grow fully opposite each other form the long spread.

Full report here:
http://www.nativetreesociety.org/fieldtrips/gsmnp/hen_wallow_creek.htm

Will on behalf of Jess Riddle

Re: Tree Maximums - Tree of the Week: Black Walnut

by **Matt Markworth** » Sun Apr 21, 2013 5:43 pm

George, thanks for the details on that impressive Black Walnut. It looks like the one that you found and the one that I found have some things in common. The Black Walnut in Germantown MetroPark is also located at the bottom of a steep ravine near an intermittent stream and it's a little ways above Twin Creek. It's in competition with Tuliptrees and should keep shooting up.

Will, thanks for the details on that magnificent Black Walnut at the Montpelier Estate and also for the details on that monster that Jess Riddle measured. Jess's post is very descriptive and insightful as usual.

- Matt

Re: Tree Maximums - Tree of the Week: Black Walnut

by **Matt Markworth** » Sat Apr 27, 2013 1:45 pm

Hi All, I entered the Hen Wallow Creek Black Walnut into the Tree of the Week Maximums List for Max Height and for Max Spread. The Montpelier Estate Black Walnut was entered for the biggest Average Spread.

For Max Girth, it looks it could be the Maxwell Black Walnut in Valley Forge Park . . . http://www.nativetreesociety.org/fieldtrips/penna/valley_forge/valley_forge_park.htm

or the GA State Champion . . . http://www.nativetreesociety.org/fieldtrips/georgia/georgia_peaches.htm

I'd be interested if anyone has updated girth measurements or photos of these trees.

Tree of the Week Maximums List: http://www.ents-bbs.org/viewtopic.php?f=393&t=5221

Thanks,
Matt

Boogerman Loop and "new" 180' white pine

by **Will Blozan** » Fri Apr 26, 2013 6:21 pm

NTS, Today I took a group from Ontario Canada into the Smokies for their first foray into the Cataloochee Valley. We did the Boogerman Loop Trail with the goals of seeing the Boogerman Pine and the Sag Branch Tuliptree. Even though foot bridges were out and the morning was cold we had a successful trip. As I predicted the hemlock carnage upstream is now flowing down and taking out bridges. I call these "Tsugnamis".

Icy crossing.jpg (266.44 KiB) Viewed 165 times

Tsugnami.jpg (274.54 KiB) Viewed 165 times

I am please to report that the Boog suffered no noticeable crown damage this past windy winter. I measured the girth for Matt's list which was 111.5 cm (43.9") diameter. This tree has not perceptively

changed in diameter since it's discovery in 1993. I did not measure the height as the regrowth from the death of the hemlocks was so thick and I doubt it has changed since last measurement- at least not within the resolution of the handheld instruments.

The Boog 1.jpg (324.86 KiB)

We next saw the HUGE chestnut oak on the west prong of Sag Branch which is a whopping 123.0 cm (48.4") diameter and ~140' (42.7 m) tall. This tree has a lot of wood and may be among the largest specimens known.

Sag Branch chestnut oak.jpg (327.26 KiB)

After the oak we went to the Sag Branch Tuliptree which is doing splendidly. NO new crown damage and lots of live tops and new leaves.

Sag Branch Tulip 1.jpg (337.3 KiB)

Sag Branch Tulip 2.jpg (298.62 KiB) Viewed 165 times

The find of the day was not a new find but a remeasure of the "Palmer Pole". This large white pine has been a bugger to measure but now that the hemlocks have all died visibility is great. Michael Davie and I have tried several times to measure this great tree but were thwarted by thick brush and dense hemlocks. No good sightings could be made. As we approached the tree from the west I could clearly see the crown and the high point. All previous measurements were to side branches due to the steep angle and poor visibility. Well, this large 115.7 cm (45.6") tree is an outstanding 183' (55.8 m) tall! This make tree #9 over 180' for the species and the 5th tree in the Smokies. Sweet!!!!!

Palmer Pole 1.jpg (258.82 KiB) Viewed 165 times

Palmer Pole 2.jpg (247.15 KiB) Viewed 165 times

Will Blozan

Re: Boogerman Loop and "new" 180' white pine

by **edfrank** » Fri Apr 26, 2013 6:33 pm

Will, Congratulations on getting a measurement on the "Palmer Pole." I am glad the Boogerman Pine and Sag Branch tulip survived the winter without top damage. Cool big chestnut oak, they are among the oldest oaks as well. I see the big debris from the downed hemlocks clogging the stream and crashing bridges. I am wondering if you have noticed any adverse problems associated with all the hemlock needles that fell? Did it affect the stream quality or

biodiversity in the streams? I was wondering about any episodes of anoxia from the volume of needles being flushed into the system? There was talk about the potential to change some of the streams or sections of them from cold water to warm water streams due to the loss of shade.

Edward Forrest Frank

Re: Boogerman Loop and "new" 180' white pine

by **Will Blozan** » Fri Apr 26, 2013 6:45 pm

Ed, I can't speak for changes in scientific terms but I have seen the creeks run red from tannic acid after heavy rains. I know there is substantiated increases in water flow in drainages due to loss of hemlock and I wouldn't doubt for a minute that Caldwell Fork- with square miles of dead hemlock forest upstream- is flowing higher and more voluminous than ever. This will likely change as the new saplings of birch, silverbell, and others start to absorb more water. However, the vast sponge of the deep, dark hemlock forest duff layers will probably degrade and flood events could become more intense.

Cataloochee is a serious downer these days.

Will Blozan

Re: Boogerman Loop and "new" 180' white pine

by **mdavie** » Sat Apr 27, 2013 7:14 pm

Will Blozan wrote: Cataloochee is a serious downer these days.
It sure is, isn't it? Unbelievable how devastated it is compared to the past. Even though we knew it was coming and I know I tried to ready myself, it's worse than I could have imagined. Especially there; it's simply a disaster.

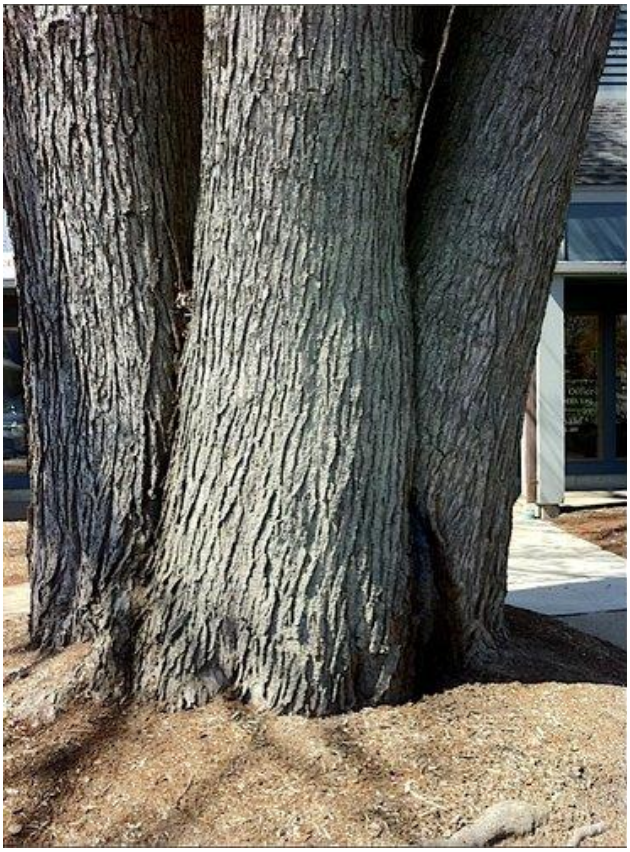
Michael Davie

A look at a multi-stem silver maple

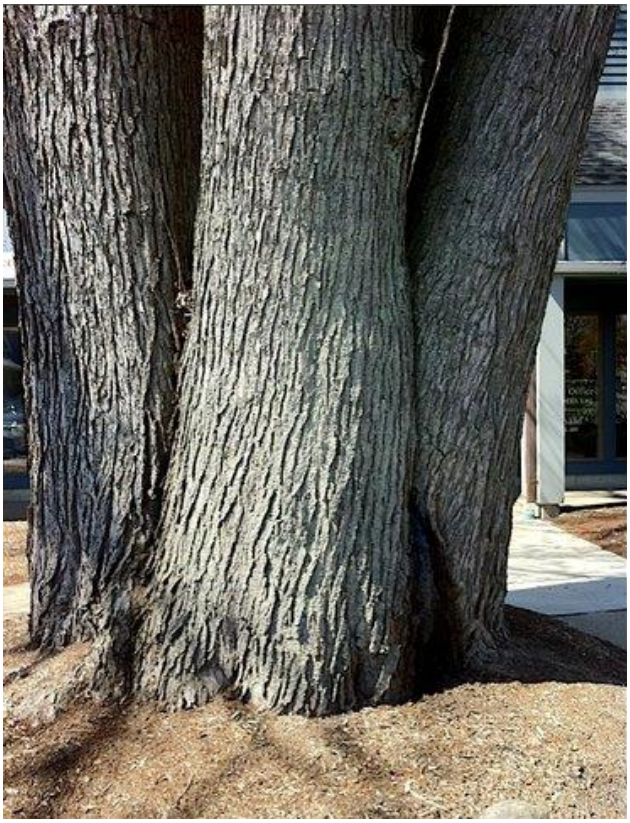
by **dbhguru** » Sat Apr 27, 2013 4:48 pm

Ed, Brian, Don, et. al.,

Here is a planted silver maple outside of an office building. First some images.



Ed, Brian, Don, et. al., Here is a planted silver maple outside of an office building in Northampton, MA. First some images.



This is a good example of a multi-trunk, coppiced tree. It is not possible to run a tape around any of the separate trunks. We can run a tape around the tree and find the smallest girth between 4.5 feet and ground level. By remote methods, I can measure each of the separate trunks fairly accurately.The location would be around 5 feet above the ground.

Robert T. Leverett

Re: A look at a multi-stem silver maple

by **edfrank** » Sat Apr 27, 2013 5:00 pm

Bob, Either method would be OK with me. It could be treated as a coppice of several single trunks, or as a multitrunk specimen.

Edward Forrest Frank

Re: A look at a multi-stem silver maple

by **Joe** » Sun Apr 28, 2013 6:51 am

I wonder if that tree has always been surrounded by asphault and cement? Probably- which is all the more amazing- and with the way that mound is built around it. Many species wouldn't appreciate that mound but this is a species that's used to being flooded, so I suppose that's why it's doing OK.

Joe Zorzin

Moses Cone Memorial park, BRPW

by **dbhguru** » Sun Apr 14, 2013 10:20 am

NTS, On this past Tuesday, Monica and I traveled down the Virginia portion of the Blue Ridge Parkway reacquainting ourselves with the fauna and flora of that thin gray ribbon in the sky. Traveling in early April, there were very few car - a real blessing. Parkway travelers for the most part are clueless these days and zip along as though the sole purpose of the Parkway is to provide a shortcut to somewhere. Drives me nuts. There is absolutely no traffic enforcement any more.

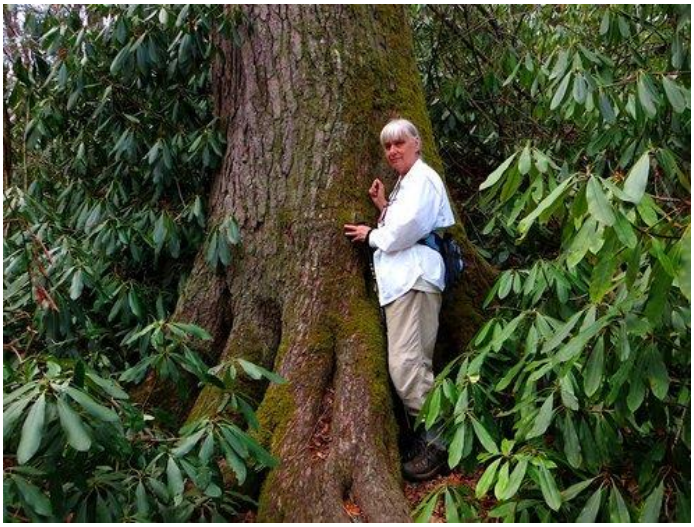
When we arrived at the Peaks of Otter Lodge,where we often stay, we found it closed. So, we motored on until we got to Tuggle Gap at milepost 165 where we exited the Parkway for 6 miles to a B&B named Dutches View. It is a find. Very bucolic. Here are two scenes from the front of the B&B.

The surrounding countryside is quintessential southwestern VA. The views are pleasant, but the forests are nothing special. The land has been worked and reworked and now there is starting to be more clearcutting on private lands as landowners struggle to make ends meet.A local source of entertainment can be found at nearby Floyd. They have country music festivals that attract thousands.

Continuing along the Parkway, we looked for white pines that would catch the eye of a tree-aware traveler. Most are scrawny. But at the border between North Carolina and Virginia, we did manage to break 130 feet on two pines. That is it. Most of the white pines show damage from recent snows as do hardwoods. Here is a view of the pines at the state border.

I didn't find any exceptionally old pines. Most appear between 100 and 140 years. A few may be a little older. Here is a close up of the pines near the border.

We stopped at Moses Cone Memorial Park at mile post 296 and took a 2.1 mile hike on the Simms Pond trail. A narrow corridor along Simms Creek harbors old growth - once an inspiring sight. I once thought there was more, but I don't think the old growth corridor supports more that 15 or maybe 20 acres. Here is a view of Monica next to a dead hemlock. It looks great so long as you don't look up. Same for others.



I have photos from the past of this hemlock. It was a favorite. With the dense rhododendron around, the spot looks primeval. And it is a convenient location to introduce visitors to the wetter North Carolina forests after the dry Virginia zone.

There are just a few good looking hemlocks left at Moses Cone. I presume the Park Service treated them. I hope they did. Maximum sizes in the old growth area are girths to 14 feet, though more commonly 9 to 11. Heights make it to 130 feet, with most hemlocks in the low 120s. No record sizes for any species in the area, but very lovely.

On gets distant views of Grandfather Mountain from the Simms Creek trail. Grandfather is the highest point in the eastern Blue Ridge at 5,964 feet. Just misses being a 6000-footer. It makes up for the lesser altitude by species diversity through.

Robert T. Leverett

Johnson Nature Preserve (OH) - 14 years after Tornado

by **Matt Markworth** » Sun Apr 28, 2013 4:44 pm

Hi All,

After the tornado of 1999, the City of Montgomery decided to leave the downed trees alone and let the forest regenerate naturally. It makes for some interesting growth patterns, especially the Tuliptree.

http://enquirer.com/editions/1999/04/13/loc_forest_teaches.html

Here is a view of the growth 14 years after the tornado . . .

Tuliptree

Tuliptree

Tuliptree

Tuliptree

Black Cherry

Black Cherry

Boxelder

- Matt

Re: Johnson Nature Preserve (OH) - 14 years after Tornado

by **edfrank** » Sun Apr 28, 2013 5:03 pm

Matt, I am curious if any of these examples are setting their own roots or are they all growing through attachments to the old root system? I see new roots in black willows frequently. I saw fallen sycamores and some grow new roots growing into the ground from the base of the upturned limb/trunks separate from the original root system. This is not true in every case. I am just curios what tree species will do this.

Here is a link to another state park here in Pennsylvania - Parker Dam State Park - that has a "Windstorm Preserve"
http://www.nativetreesociety.org/fieldt ... e_park.htm
and a small bit here:
http://www.nativetreesociety.org/fieldt ... eserve.htm

Edward Forrest Frank

Re: Johnson Nature Preserve (OH) - 14 years after Tornado

by **Matt Markworth** » Sun Apr 28, 2013 5:36 pm

Ed, Cool, thanks for the links.

I didn't see any evidence that any of the offshoots had established their own root system. Without self-supporting roots, I think that many of them may eventually fall off of the original trunk under their own weight. I think the survivors will be the ones that sprouted near the ground surface of the original trunk and they may be growing new root systems. Here's an example:

Tuliptree

It was also interesting to see this small offshoot from a tree that fell 14 years ago . . .

Tuliptree

- Matt

Trip Summary - GSMNP

by **dbhguru** » Tue Apr 23, 2013 9:45 pm

Folks,

I'm looking back on the trip to VA,NC, and TN that Monica and I returned from this past Sunday. In most ways it seemed pretty tame tree-wise, but in review, there were sufficient successes to have made the trip memorable. The first highlight was the huge white oak on the Charlottesville, VA airport property. Its 291-inch girth was the largest tree in circumference that I measured. To be asked to do the measurement was a plus for NTS.

For height, as expected, the Smokies ruled. Baxter Creek produced wild flowers and super tall trees. A 173.6-foot tuliptree was my best height measurement. Altogether, I measured 5 tulips to over 170 feet in Baxter Creek. Will and Michael Davie have measured considerably more, including the ones I measured. I was pleased at getting 172 feet out of a tuliptree that Will tape-drop measure in Sept 2011 to 171.5 feet. Allowing for just a little growth n 2012, the measurement could be as close as 0.25 feet. I believe that the 131.7-foot silver bell puts yours truly in competition for the top tree of that species - I think. Will, what's the best you know of? Oh yes, Monica and I identified 41 species of flowers on a 1.5 mile stretch of the trail. About 30 were in bloom. We identified the others by foliage.

A 152-foot tall, 11.2-foot girth tulip on an old homestead area on Porters Creek was sweet. Porters isn't a tall tree hotspot, at least not the lower portion, so that find was satisfying. I think Will has found other 150s in Lower Porters Creek.

Alum Cave Trail produced 4 yellow birches over 12 feet around, with the largest at 13.5 feet. There are a few others, but getting to them is not for me. A red spruce just off the trail exceeds 150 feet. Will measured it to 155, but I only confirmed 150. I couldn't locate the base in all the rhododendron.

The largest girth tulips measured were between 15 and 16 feet around for all Smoky Mtn sites. So, I flubbed on girths for the King of the Appalachians. However, I got a 16-foot girth tulip in Rock Castle Gorge, VA. It is 106.8 feet to a broken top. Tulips in the gorge make it to 130 feet and sycamores to 126.7. Other species are considerably less. It is not a tall tree hotspot, but has a wealth of wild flowers.

I got a 143-foot white pine along the BRPW, which is the best I've done for the species outside of Linville Gorge. Brian Beduhn has the record outside Linville Gorge for the great whites at 154 feet. Will and I once measured a 168-footer in the gorge. It has since toppled.

I was able to reconfirm a 146.8-foot tuliptree on Flat Top Mtn in VA. A second topped out at 143.7. These are the best I've done for tuliptrees along the Parkway. However, I'll bet Brian is going to smash that record. Brian, what is you best for Parkway tulips?

A 15.8-foot girth, 140-foot tall old growth tulip was a sweet find on Apple Orchard Mtn in a small cove. It is an old growth remnant. In other spots, I was able to confirm tulips to the low to mid-130s. A long term objective that fits with my research permit is to locate all sites along the Parkway with trees 130 feet tall or more. Headway was made on this trip.

Our return through the Catskills was most satisfying, but no important tree finds - just outstanding scenery. And finally, my return to the woods along Broad Brook behind our house. I actually was able to confirm two more 130-foot white pines yesterday. The count is up to 22.

Robert T. Leverett

Eastern Red Cedar-Handsboro Ms

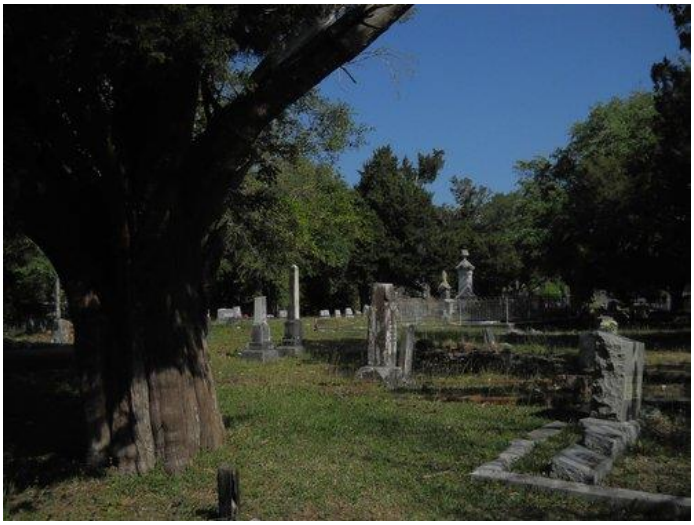
by **Larry Tucei** » Sun Apr 28, 2013 5:52 pm

NTS- On Saturday I visited the old Cemetery in Handsboro and measured the three largest Eastern Red Cedars there. The oldest grave stone that I found was 1861 and most are in the late 1800's to early 1900's. Handsboro was a smaller town located in what is now Gulfport back at the turn of the 20th century.

Throughout the small Cemetery there is a grove of Cedars that I would estimate are 100 years or more. I've know about these Cedars for several years I just thought I would share them with you. Ocean Springs Ms. has a similar Cemetery also with some larger Eastern Reds- I'll get over there and report on them in a future posting. #1 Cedar- CBH-11' 6", Height-47.7', Spread-57' x 45'. #2 Cedar- CBH-11' 11", Height-41.5' and Spread-36' x 30'. #3 Cedar- CBH-15' 4", Height-47.8' and Spread-72' x 64.5'. #1 is a fused trunk, #2 is a single trunk and #3 is a multi-trunk.

I have been quite on the BBS as of late due to the death of my father on the 11 of April. He got Pneumonia and it turned severe but he never was in any pain. I was with him till the end he was 82 and lived a great life. I hope I can be as good a man as he was. It shook me up a lot, tons of good memories but I'm well now and needed to get back into posting. You are my friends so I wanted you all to know!
Future tree of the Week Eastern Red Cedar.

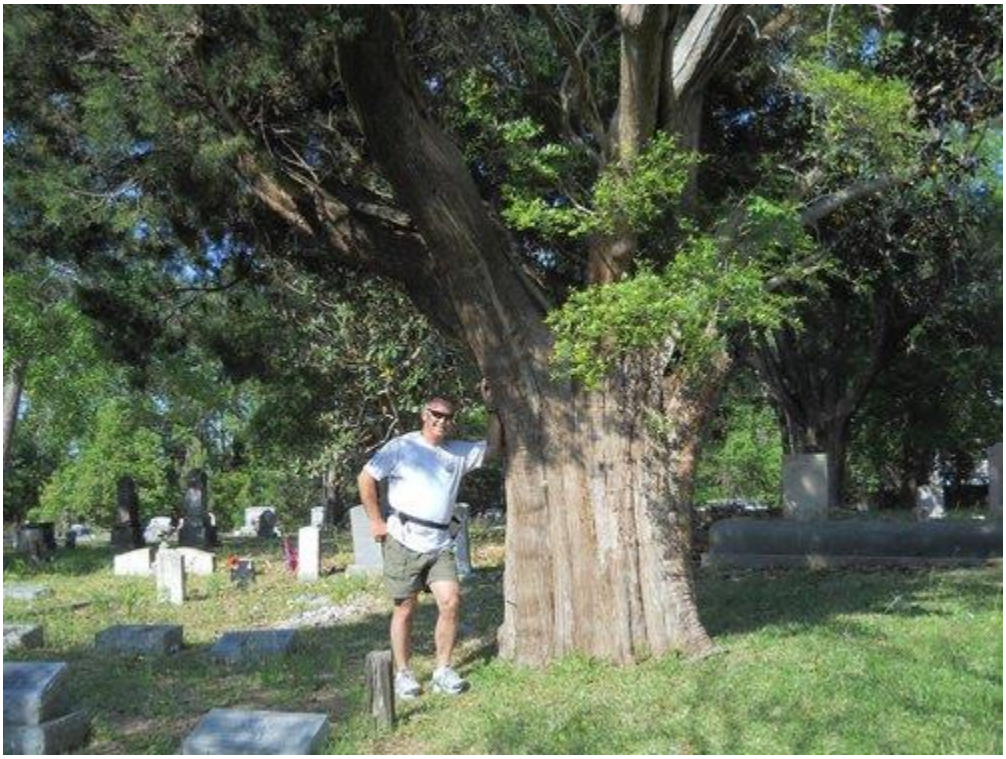
Larry



Handsboro Cemetery

Cedar 1

Cedar 1a



Cedar 2

Cedar 2a

Cedar 3

Cedar 3a

Re: Eastern Red Cedar-Handsboro Ms

by **Will Blozan** » Sun Apr 28, 2013 7:03 pm

Larry, Welcome back and my condolences go out to you and your family. Maybe you could name a tree in his honor?

I love Juniperus of all species which begs the question; are these perhaps *J. silicicola*? Just a thought as they do need to be differentiated for future tree listings.

Will Blozan

Re: Eastern Red Cedar-Handsboro Ms

by **Larry Tucei** » Sun Apr 28, 2013 8:15 pm

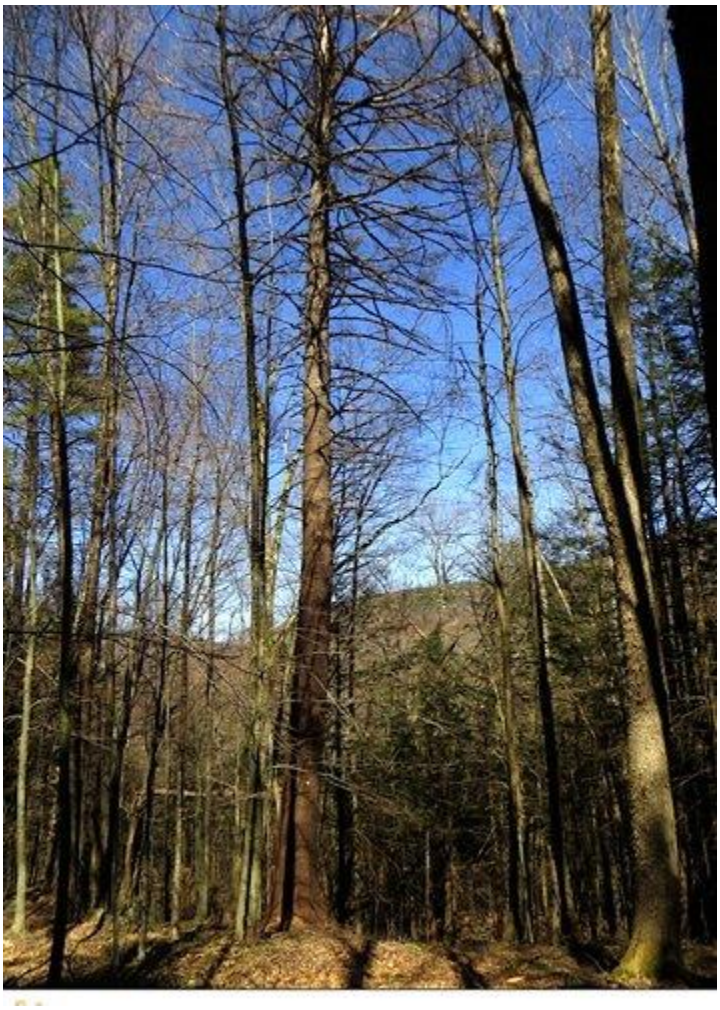
Thanks everyone. Will I looked it up before posting and I think it to be Juniperus virginiana L. I thought at first it may be Juniperus s but after looking in my tree books I believe it to be Juniperus virginiana L. The needle's, cones and bark matched the photos in NAS Field Guide to N A trees. But that was the only guide I had with some photos of the species and I have found books with errors before. I'll do some more reseach.

Larry

Bummer in Mohawk

by **dbhguru** » Sun Apr 28, 2013 8:28 am

NTS, On Thursday Ray Asselin and several others accompanied yours truly on a visit to check on the big pines in the Trout Brook Cove of MTSF. My specific objective was to check on the white ashes at the upper end of the cove and the Jefferson and Madison pines. Well, here is what I saw when we reached the Jefferson Pine.



Yikes! Stone cold dead. I visit this tree last autumn. How could it have died in degenerated in such a short time. This was one of the big pines. It measured 12.55 feet around and was 144.2 feet tall. Not any more. Oh well. I'm pretty philosophical about such things. I know that Mother Nature is indifferent to my personal feelings about particular trees. But, dang, why so sudden? The pine had a thinning crown last fall, but so did other pines. courtesy of the latest fungus to attack the species. So far, the trees a looking pretty good this spring. Hopefully, we want see a decline in the overall health in the Mohawk pines.

Robert T. Leverett

Re: Bummer in Mohawk

by **Larry Tucei** » Sun Apr 28, 2013 6:30 pm

Bob- To bad about the Jefferson Pine. I know exactly how you feel. Far too many trees or Forests that I became fond of have died, been cut, and I just had to except it. I have been touched by such loss almost angry but then I would come to realize that I was lucky enough to share the energy, joy and beauty of each tree or Forest I was fond of. I know them and they know me. Trees become our friends and when we lose them it can be difficult. I will always remember them and it reminds me of my own mortality.

Larry

Re: Bummer in Mohawk

by **dbhguru** » Sun Apr 28, 2013 6:51 pm

Larry,

Most eloquently expressed. Thanks. Yes, these trees are four friends. We visit them and marvel at their forms, sizes, and ages and we acknowledge the roles they play in generating oxygen, absorbing CO2, providing habitat, etc. but we are all mortal and must come to grips with loss. It probably seems odd to many of our human companions that some of us can develop great feeling for non-animal species. But, heck, what they don't understand is that trees are people too.

Robert T. Leverett

Re: Bummer in Mohawk

by **Joe** » Mon Apr 29, 2013 6:55 am

regarding life and death of trees- as a forester, I get to play God out there- I walk around with a paint gun and decide, "you, oh wonderfull tree, you shall be sacrified to the GNP and I'll say a prayer for you, but you over there, you're a beauty but you're not ripe enough, you may live for another 30 years before you are sacrificed, and you magnifence one over there, I like you so much, you'll never be sacrificed, but you ratty weeviled white pine- you'll be sent to the hell of a biomass plant to burn forever--- er... well for a few minutes"

as for that sudden death syndrome with the white pines- that's what happened on my street last year, severall large, healthy looking pines just up and died and they were next to each other- I have no clue what happened to them..."

Joe

Re: Mountains-to-Sea Trail

by **bbeduhn** » Mon Apr 08, 2013 10:30 am

I'd planned on doing some searching just below a productive white pine grove. I'd found some nice shortleafs and pitch pines and noticed more further down a trickle of a stream. With one exception, they were smaller than anticipated. While running along the trail recently, I noticed a tall chestnut oak, shortleaf and white pine nearby. I was pleasantly surprised by those trees and the small cove just below them. I'd passed along this stretch of trail dozens of times and hadn't noticed the secrets it held just a stone's throw away.

Quercus montana	chestnut oak	109.2'	112.8'	120.2'	123.4'	133.5'
Quercus velotina	black oak	116.8'	121.3'			
Quercus coccinea	scarlet oak	111.2'	117.7'	120.1'	125.4'	
Quercus rubra	red oak	118.9'	122.3'	125.8'		
Quercus alba	white oak	123.0'				
Liriodendron tulipfera	tuliptree	126.7'	130.9'	134.9'	136.3'	137.2' 140.9'
Carya glabra	pignut hickory	113.9'	116.0'			
Pinus rigida	pitch pine	110.2'				
Pinus echinata	shortleaf pine	100.9'	115.8'			

Pinus strobus white pine 154.7'
Oxydendrum arboreum sourwood 69.4' 69.6' 71.3' 72.1' 75.9'
76.9' 79.6' 80.5' 82.2' 98.0'

The sourwood was a shocker! I never expected that kind of height at this site. the white pine was unexpected as well, since it was not growing with other pines. All of the 120' oaks were in the same small cove covering roughly two acres.
Unfortunately, the land adjacent to the Blue Ridge Parkway land had been logged more recently and the heights dropped off considerably, so there was no need to trespass (not that I'd ever do such a thing).

small cove highlights repeated from numbers above:
chestnut oak 123.4' 120.2'
red oak 122.3' 125.8'
black oak 116.8' 121.3'
scarlet oak 120.1' 125.4'
white oak 123.0'
tulip 130.9' 134.9' 136.3' 137.2'
white pine 154.7'
pignut hickory 116.0' 113.9'

The tall chestnut and shortleaf were just upland on a low bench above the cove. the sourwoods were along the trail just beyond the tall grove of white pines from a previous post. That grove contains these trees:

prunus serotina blk cherry 109.2'
acer rubrum red maple 110.2'
quercus alba white oak 111.4'
quercus coccinea scarlet oak 105.4'
carya glabra pignut hickory 129.4'
pinus rigida pitch pine 99.4' 102.3' 110.2' (new)
pinus echinata shortleaf pine 98.8' 113.0' 100.9' (new)
pinus strobus white pine 128.3' 135.7' 136.3' 140.6' 147.3'
Oxydendrum arboreum sourwood (all new) 69.4' 69.6' 71.3' 72.1' 75.9'
76.9' 79.6' 80.5' 82.2' 98.0'

I'll have to check out more of these little coves along the trail. It's surprising what you may find in familiar territory right in your backyard.
Brian

Re: Mountains-to-Sea Trail

by **bbeduhn** » Thu Apr 18, 2013 10:19 am

I made a quick trip after work to a short section of trail near the Blue Ridge Parkway Headquarters. Time is running out around here this year with leaves showing on many trees. I recalled seeing one small cove with some tall tulips about a year and a half ago. I was hoping to go above 140'. The tulips weren't particularly impressive, but like on my last trip to the MST, other trees were fairly impressive. This section contained the greatest percentage of scarlet oaks I've seen anywhere. Many topped 100' and a couple were quite nice.The VA pine was located on a hill. This was a very well formed speciman, the likes of which I'd only seen on alluvial flats. I was kicking myself for not bringing a tape measure.

Liriodendron tulipfera tuliptree 129.4' 125.5'
Quercus rubra red oak 119' 114.1'
Quercus velotina black oak 115.2'
Quercus coccinea scarlet oak 121.9' 118.6'
Oxydendrum arboreum sourwood 88.3' ~6' cbh
Carya glabra pignut hick 103.5'
Pinus rigida pitch pine 106.4'
Pinus virginiana Virginia pine 112.1' ~5.5 cbh

Re: Mountains-to-Sea Trail

by **bbeduhn** » Mon Apr 22, 2013 12:39 pm

I continued to revisit the small coves along the MST. I did a reconnaissance run and identified some high potential spots. I spied a couple of groves of white pines that appeared to be quite tall. Unfortunately, the ridges were higher than they appeared and they turned out to be ordinary. Another lone white pine

appeared to approach its 154.7' counterpart but alas it didn't break 130'. The next two coves didn't do much more. Then I remembered small nice oaks in a different area. One was good but not outstanding but the pines made up for it a bit.

Area 1, midway between Sweeten Creek rd. and Route 74

Pinus echinata	shortleaf pine	110.8'
Pinus rigida	pitch pine	110.6'
Pinus strobus	white pine	125.8'
Quercus coccinea	scarlet oak	103.9' 107.5'

Area 51, near downed spacecraft, I mean area 2, midway between Hendersonville rd. & I-26

Pinus echinata	shortleaf pine	106.5' 117.5' 118.1' 122.3'
Pinus rigida	pitch pine	106.5'
Pinus strobus	white pine	127.9' 127.4' 124.1' 132.0' 10' cbh 137.6' 10'3" cbh
quercus rubra	red oak	109.5' 123.7'

Brian

Re: Mountains-to-Sea Trail

by **bbeduhn** » Fri Apr 26, 2013 9:01 am

Yesterday, I visited a small, rich cove that I suspected would harbor a few gems. The forest floor was covered in green and the canopies were rapidly closing up. I spied a couple of dwarf crested irises in full bloom. Approaching the cove from a bluff, a large red oak made its presence known, surrounded mostly by tulips and a few very nice sourwoods. After descending and crossing a small stream, I noticed a tree that kept going up and up. It was a white oak, only the second I've found above 130'. The sourwoods continue to impress me along this trail. They're close to Smokies proportions. leaves may obscure the very tops but I think the numbers are within a foot or two. The pin cherry is the first tall one I've come across. I can't imagine what else it could be. It's definitely not black cherry.

Quercus rubra	red oak	127.2'
Quercus alba	white oak	130.9'
Quercus montana	chestnut oak	122.9' 117.6'
Acer rubrum	red maple	113.8'
Nyssa sylvatica	black gum	99.6'
Oxydendrum arboreum	sourwood	93.1' 90.7' 83.1' 74.8'
Carya glabra	pignut hickory	111.0'
Liriodendron tulipfera	tuliptree	131.5' 137.9' 140.1' 142.1'
Prunus pensylvanica or prunus avium	pin cherry or sweet (bird) cherry	94.9'

Re: Mountains-to-Sea Trail

by **Will Blozan** » Fri Apr 26, 2013 6:55 pm

Brian, Great white oak!

I doubt the tree is a pin cherry. What about *P. avium*? And you know my next question- any photos? Sweet cherry is a very common invasive tree in the area and quite tall.

Will Blozan

Re: Mountains-to-Sea Trail

by **bbeduhn** » Mon Apr 29, 2013 8:43 am

Will,
I knew those would be the two trees you'd comment on. It was an impromptu visit after work so I didn't have my camera. I couldn't tell for sure fromthe avium photos I found on the internet...but you're likely correct as usual. Both pin and bird cherries are listed at 15-30'. The white oak just shot straight up and kept going with a narrow crown. The 122' chestnut oak was right next to it and then there was another white oak at about 105', with a typical white

oak crown. The cherry was just about 20 yards away. Fortunately, it's easy to get to so I will get a pic.

Brian

Measuring the Champ

by **guy mayor** » Mon Apr 29, 2013 1:09 am

Planning to get up the Cellon Oak Wednesday and do a tape drop while repairing a lightning system.
http://tlhfor013.doacs.state.fl.us/Cham ... Detail/199

What should I do when offering info on updating data on this thing? 2 major limbs lost since last measure.

Also plan on pruning and measuring the Fairchild Oak near Daytona Beach.

Re: Measuring the Champ

by **Larry Tucei** » Mon Apr 29, 2013 3:55 pm

Guy- Awesome! I've wanted to get over to that area in Florida and measure both those trees you mention. If you measure the Height, Circumference at Breast Height and Crown Spread of the two trees I will add them to the Live Oak Project Listing. Get those measurements and a couple of photos and post the data on the BBS. That will be great and I'm looking forward to your results. I have read about both of these Live Oaks and just haven't made the trip over to document them. Anything I can help you with please don't hesitate to ask.

Larry

Re: Measuring the Champ

by **Will Blozan** » Mon Apr 29, 2013 5:14 pm

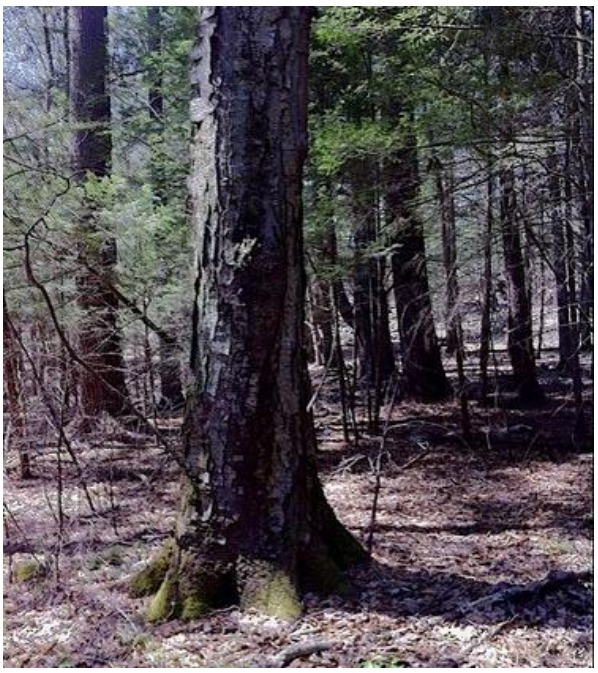
Guy, What a great opportunity! I bet the height is off a bit and am really curious about the spread- and if it is unsupported. If you could get diameters of the major branch systems and as accurate lengths as possible we could rough some volume numbers. Also, multiple tape wraps of the main trunk would be helpful and as Larry said- lots of photos. Of course, you could use Bob Leverett's photo measuring system...

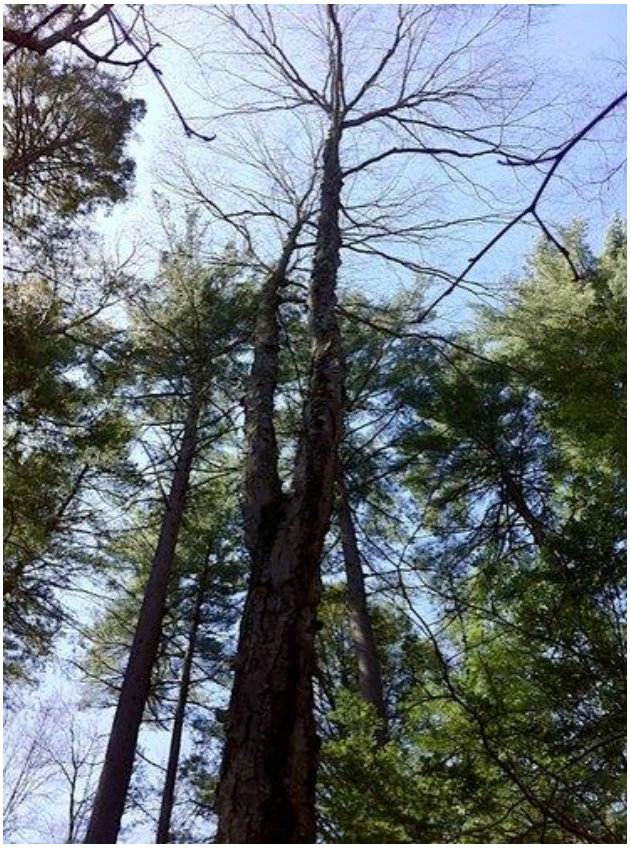
I look forward to the report!

Something to mull over on doubles

by **dbhguru** » Wed Apr 24, 2013 3:11 pm

NTS, I'm working on a report covering Broad Brook for the City of Northampton, and so out I went this morning to collect more data. I re-measured the fine black birch up the brook and finally settled on 108.6 feet. Here is a series of images of the tree. From the last, I think you can see the challenge of finding its absolute top.





Great tree, but the real issue is the big double white pine named the Grandmother (or Grandmothers) tree. Here is a look.

It is clearly a double. We all agree on that. So if it is a double, then it is not one tree, but two. Okay, for some purposes we may treat it as one tree or as a special category per Ed's musings. For visitors, they will often see it as one tree with a girth of 15.2 feet. For big tree competitions, the jury is out. But if it is two trees, for tallying tree heights, can I treat it as two trees. The northern trunk (re-measured this AM) is actually 140.6 feet and the southern trunk is 140.3 feet. For my tall tree lists, can I count it as two trees, or must I report only the 140.6-foot trunk. Obviously, I'd like to tally it as two, but wouldn't want to do that if my lady and fellow Ents would consider that cheating. I throw myself on the mercy of the court. It certainly makes one think about what counts as a single tree versus two trees. Okay, I'm going to hide behind my desk awaiting responses.

Robert T. Leverett

Re: Something to mull over on doubles

by **edfrank** » Wed Apr 24, 2013 3:24 pm

Bob, I think it should be considered one tree, but a multitrunk form for measurement purposes. The difference in concept is to consider a champion tree the one with the largest individual trunk. This avoids the problem of arguing whether they are genetically the same or not. A tree with more than one trunk is a multitrunk form and should be considered as a different growth form from those with just one trunk. http://en.wikipedia.org/wiki/Tree_girth_measurement

Edward Forrest Frank

Re: Something to mull over on doubles

by **bbeduhn** » Wed Apr 24, 2013 4:15 pm

I mostly agree with Ed, but what is the crossover point. If you have two trees growing side by side and then they begin to grow together, at what point would they be considered one tree? If the root systems are joined, I'd say definitely two trees but if they're joined just inches above the ground it becomes hazier. If they're conjoined below breat height, are they two separate trees? I don't have an answer, just more questions.

Brian

Re: Something to mull over on doubles

by **tsharp** » Wed Apr 24, 2013 4:46 pm

Bob NTS: I am with Ed on this. Such a tree should be labelled correctly as a fused mutlistem (2 in this case) tree. I think most such stems can be identified correctly in a quick visual inspection. The ones that can not will have to be settled at 20 paces. I believe the lack of identifying such trees in big tree lists causes the consternation many NTS feel about the subject.

TS

Re: Something to mull over on doubles

by **dbhguru** » Wed Apr 24, 2013 5:36 pm

Ed, Brian, Turner,

I bow to your collective counsel. Alas, I shall not report that there are two 140-foot trees up Broad Brook, but only one. Rats!

Robert T. Leverett

Re: Something to mull over on doubles

by **edfrank** » Wed Apr 24, 2013 9:04 pm

Brian, The big step here is that by defining a champion as a single trunk, rather than a single tree, the entire argument about whether something is a single tree or not based upon genetics or growing from a shared root mass is avoided. You have a clear break between a single trunk tree and a multitrunk tree, with single trunk tree measured by the standard measurement guidelines. That problem is replaced by a simpler one. If they are fused or grown together below 4.5 feet, but are separate at that height, I would consider them and measure them as separate trunks. If they are fused or grown together at 4.5 feet or a little higher then they should be considered a multitrunk tree for measurement purposes. The caveat here is if the tree has a separate trunks at just above 4.5 feet and that trunk would be extraordinarily large trunk by itself, that tree trunk could be measured at this alternative height and treated as a single trunk for champion purposes. The same definition of single versus multitrunk based upon pth still applies: A single trunk tree is defined as one that would only have a single pith if cut at ground level. A multi-trunk tree would have two or more piths at ground level.

Edward Forrest Frank

Re: Something to mull over on doubles

by **bbeduhn** » Thu Apr 25, 2013 8:57 am

Ed, That's exactly how I was thinking it should be, but I didn't know how others saw the issue. Like Bob, I was more concerned with overall height of the individual trunks and at which point do we count the multiple as having more than one height. As far as girth is concerned, I like to take measurements at either 4.5', or the smallest point if it is a bit below 4.5', for the multiple and state it as such, and then get a measurement of the individual trunk above the conjoined point, if possible, and then state at what height that measurement was taken.

I"m not concerned with genetics when defining a champion tree either. Otherwise, aspen groves would beat redwoods.

Brian

Re: Something to mull over on doubles

by **Don** » Thu Apr 25, 2013 4:09 pm

Brian-
Good "what if"!
Given your scenario "...If you have two trees growing side by side and then they begin to grow together, at what point...", my take on this gets back to the "pith test". If you were to "virtually" fell the tree at the base (even with assumed ground slope), and saw two concentric ring pairs (each with it's own pith), you have two trees that grew together as two trees.

Were you to "virtually" saw off 'cookies' at appropriate intervals, and you continued to have two concentric ring pairs, two piths, you still have two trees that grew together, but NOT as one.

Permutations? If you virtually felled it at the base and found one concentric ring and associated pith, but it forks before 4.5' in height above base, you measure the single tree's diameter/girth at the narrowest diameter/girth below the fork and label it as a single tree.

If it forked after 4.5' in height above base, you measure it at 4.5', and label it as a single tree.

If anybody has found a tree that's "virtually felled" at ground level, displaying two concentric ring pairs/piths, and a subsequent 'cookie' taken further up the tree shows the two concentric ring pairs growing into one concentric ring/pith, immediately take good GPS readings to identify the site, collect waypoints to nearest access point, digital images, and let us know...it would be an oddity worthy of observation and note!

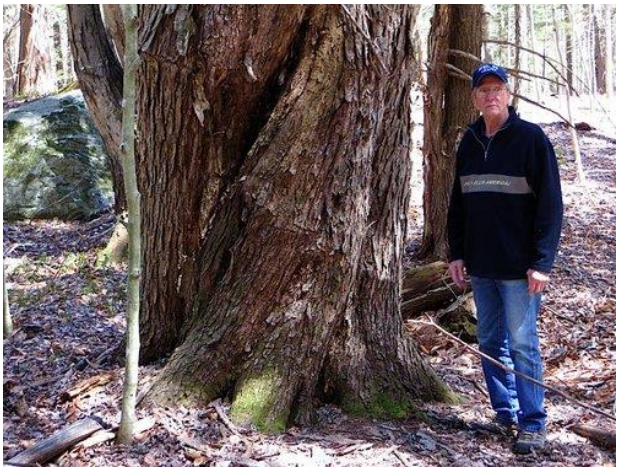
Don Bertolette

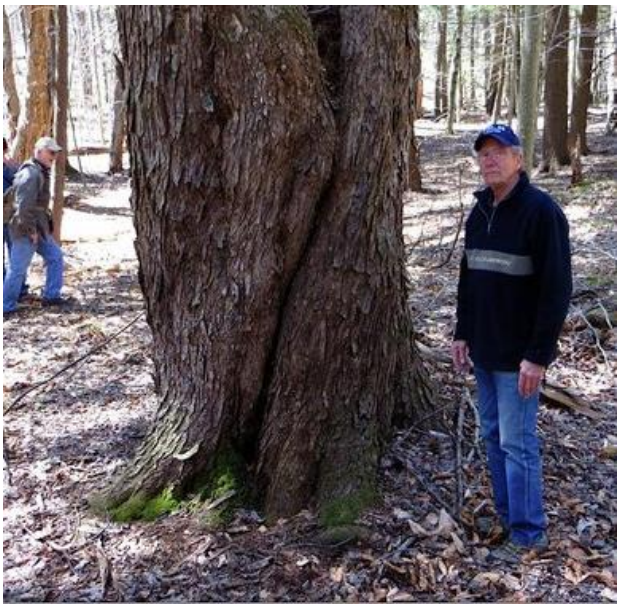
Re: Something to mull over on doubles

by **dbhguru** » Thu Apr 25, 2013 7:14 pm

Don, if I understand you, the double white pine up Broad Brook should be acknowledged as two trees, since the "structure" started out that way. This suggests that I have two 140-footers to tout. Basically, the point is that if we have two trees, we have two trees, their trunk fusion does not change their status. In the case of white pines, and most conifers, probably, the call is easy. For lots of hardwoods, it is more difficult, especially if they are the type that readily coppice.

I admit that I'm pretty wishy-washy on how to handle the double situation. Realizing that lots of tree lovers don't make a distinction between a single versus a double-trunk tree, it often boils down to have the structure looks. In the case of pines, it is usually very clear. Hardwoods present us with a challenge. Take a red maple that a group of us encountered today in MTSF. Here are 3 images.





This is two trees fused and the pith test supports that conclusions in addition to overall appearance if you are experienced in such matters, but to lots of folks, the tree pair one be seen as a single tree. Now look at this second pair. First a look at the base.

Looking up the pair.

This is two separate red maples that grew together. The fusion confusion has not yet progressed. Why would we want to treat the pair as a special structure as opposed to acknowledging that we have two trees? But if we follow the latter path, how would we measure the girths of two separate stems. Measuring their individual eights is a no brainer, but separate girths must be a calculation routine. More on this subject later.

At some point the fusion will progress so as to make the pair seem as thought they need to be treated as a special entity.

Robert T. Leverett

Re: Something to mull over on doubles

by **edfrank** » Thu Apr 25, 2013 7:58 pm

Don and Bob, You are drifting back to the one tree versus two tree debate again. It doesn't matter if you call it one tree or two trees, if you define a tree for measurement purposes as having a growth habit of one trunk or of multiple trunks. This object, whether you want to call it one tree because both trunks are likely sprouting from the same root system, or of you want to call it two trees because it has two trunks as determined by the pith test, clearly has two trunks and is therefore a multitrunk growth form. A multitrunk growth form should be measured as a different category than a single trunk growth form.

Edward Forrest Frank

Re: Something to mull over on doubles

by **dbhguru** » Thu Apr 25, 2013 9:07 pm

Ed, Actually, I've long progressed beyond thinking of these multi-trunk forms as falling under the rules of a single trunk form. I'm not hung up there. But should two trunks touching one another always be thought of as a multi-trunk form. Maybe, but I think there are some gray areas. I routinely see white pines growing in close proximity that will one day touch trunks, then later fuse to appear as a multi-trunk form because the boundary of the original trunks will be blurred. If I weren't conscious of all the intermediate forms, I wouldn't be inclined to worry about distinguishing between the forms we've been discussing.

Robert T. Leverett

Re: Something to mull over on doubles

by **edfrank** » Thu Apr 25, 2013 9:42 pm

Bob, I know many examples of different species growing adjacent to each other and touching, or perhaps in some cases fusing together. I can see the same thing happening with two different individual trees of the same species. Perhaps they both grew on the same nurse log for example. Distinguishing between trees that are separate entities and trees with two trunks growing from the same root mass would be difficult, if not impossible, to distinguish without genetic testing. One would be a multitrunk tree, the other would be a conjoined pair. I know this statement doesn't address your comment directly.

You are talking about how to distinguish between trees that are touching and whether they should be considered two trunks or if they should be considered a multitrunk form. I would say that if they were not impinging upon each other and distorting the shape of each other because of the growth of each trunk pushing against the other, or if they are not fused

together at breast height, I would consider them to be individual single trunks. Once they start growth-pushing and distorting each others shape they should be considered a multitrunk form. I don't see any conflict here. Two individual trunks can fuse together at some point in time and become a multitrunk form from that point onward. These intermediate forms would be part of the continuum between two or more individual trunks and the final multitrunk form. There is no natural existing step or break between the beginning situation and the eventual multitrunk form, so the question of where the break should be between the two forms is entirely arbitrary. So what I am proposing is, since the definition of the change between the two states is arbitrary, that we use the same height for separate trunks and multitrunk as is used with the basic girth measurement. If they are impinging on each other or have fused together at 4.5 feet, it should be considered a multitrunk form, rather than two or more separate trunks. The caveat regarding exceptionally large trunks incorporated into the multitrunk form as mentioned above would still apply. My thoughts on the issue.

Edward Forrest Frank

photo from Picture Ohio!

Another obscure form to consider is when two trees fuse well above the ground, kiss each other and then continue on their separate ways. Obviously, this would be a case of two separate trees for measuring purposes but does throw another small wrench into the equation.

Brian Beduhn

Re: Something to mull over on doubles

by **bbeduhn** » Fri Apr 26, 2013 9:26 am

I agree that the call on where to change over is arbitrary and we may not agree on that point. How the trees affect each other seems to be the primary consideration. The "Nat'l Champ Sycamore" is certainly fused but the individual trunks have not really affected each other.

Re: Something to mull over on doubles

by **edfrank** » Fri Apr 26, 2013 10:22 am

Brian, I would call those three individual trunks as they are not fused or pushing against each other at 4.5 feet (unless my sense of scale is wrong). So this would not in my thinking be considered a multitrunk for measurement purposes, but multiple single trunks. I guess my feeling is that there will always be some few trees that do not fit perfectly into a measurement protocol because of their unique form. What we need is a plan to measure the vast majority of trees that do fit the concept. The plan needs to be one that can be fairly and uniformly applied by basically anyone who would measure the tree. There will always be exceptions no matter how you define things, unless the definitions become so complex that they are not understandable to anyone but the author and not practical to apply.

What alternative description of the difference between a single trunk or a multitrunk would you suggest for measurement purposes? Especially with regard to impinging on each other and fusion of trunks? I am certainly open to suggestions and discussions. I presented my ideas, but I am not dismissing those of others, or demanding my ideas be the ones accepted. (Though I do tend to agree with my own opinion, at least until I change my mind, then I agree with my revised opinion.)

Edward Forrest Frank

Re: Something to mull over on doubles

by **bbeduhn** » Fri Apr 26, 2013 12:25 pm

Ed,
I've got to hand it to you, you certainly cover your bases on following your opinions! I don't know if there is a good standard. It may come down to something like the Supreme Court's stand on pornography, "I know it when I see it". That should clear things up. I would certainly treat that sycamore like separate trees as well as they are remotely conjoined but are each their own entity. Therefore, I'd get a height reading on each trunk. The champion cottonwood is a true multitrunk, where the trees have conjoined to form a more or less single entity.

cottonwood_eastern03_21.jpg (38.26 KiB)

The 4.5' point makes sense if there is going to be a standard but there will certainly be exceptions. I think we pretty much agree on everything. There are exceptions but there really is no standard for defining those exceptions. I call them as I see them...but 4.5' makes the most sense in 98% of situations.

Brian Beduhn

Re: Something to mull over on doubles

by **Don** » Mon Apr 29, 2013 11:38 pm

Bob/Ed/Brian-
There's a lot I can agree with in each of the scenarios you've all put forth. And yes, like Bob, I've gone back and forth over time, on all three AF measures of tree bigness. You'd think I'd 'light' somewhere and settle down!

Maybe in a year or so. As an AF Big Tree Coordinator (Alaska), I'm destined to a role in their measuring guide working group where we'll look at existing measurement techniques and practices, to see if there any needs for updating. And there will be. Too many of the 250 images associated with champion AF trees are questionable.
Even before focusing on girth, height, or crown spread, an often difficult decision must be made. Large trees often are of advanced ages, and how they started out, can be hard to tell a century later. Some challenging tree images have been attached to your posts above, and I suspect any ten NTS-ers could view those in person and we'd find ten different opinions on each, if not all, of them. Ed-
I agree with you "...that there will always be some few trees that do not fit perfectly into a measurement protocol because of their unique form". So it's important to make that decision based on as objective a basis as is possible.

I'm not sure when or who started the discussion initially using a "pith" vector to determine a tree's "single-ness", but I like the concept a lot. To the extent that an agreeable pith vector can be determined, "singleness" becomes an easier decision to make. Obstacles to make such an accurate determination are numerous by virtue of the "3-D-ness" of questionably single trees. Measurers can't see into the interior of the 'cluster, and that diminishes judgement accuracy. Any subsequent measure of such a tree's girth/dbh is an estimate, and likely to undergo speculation.

Because of the inability to accurately measure "non-single" candidates, my current thinking is to treat them separately. Single trees should get a clear unclouded 'title' to champion status. A candidate that has a 'clouded title' gets an asterisk. The lack of certainty gets a chance to be explained, if it fits exceptions that Bob, Ed, Brian, or others offer.

I can think of a few exceptions that would seem reasonable to consider, which Bob and I discussed independently...given: two 'trees', one a single and one a 'twin'. If the twin had one bole that was larger by AF formula than the single by itself, and an accurate determination of the twin's single bole girth were possible, it would seem reasonable grant it unclouded status.

While we can discuss appearances until the cows come home, if we can get a good feel for 'pith vectors', our task becomes simpler. At undisturbed ground level (in a "virtual felling"), if there is/are:
A) a single pith vector centered in one concentric ring set...it's a single tree
B) two or more pith vectors each in concentric ring sets, with adjacency...it's a multi-trunked tree
C) two or more pith vectors each in concentric ring sets, with NO adjacency...it's two or more trees
D) two or more pith vectors each in concentric ring sets, with adjacency that coalesces into one concentric ring set...it's a truly fused single tree if that "fusion" occurs before 4.5' up tree's bole from base.

If D is seen in the field, take photos, get good coordinates! It's an oddity and should be studied...; >)

That said, I'm a big fan of volume serving as the ultimate proxy in tie breakers. Which doesn't logically follow from above discussion. I haven't worked that out, but intuitively, a massive cottonwood gets my attention no matter how many pithy vectors it has...maybe they should get a red asterisk?

Don Bertolette

Cloning Ancient Trees

by **bbeduhn** » Tue Apr 23, 2013 10:02 am

http://www.huffingtonpost.com/2013/04/22/ancient-tree-clones-restore-forests_n_3130240.html?icid=maing-grid7%7Cmain5%7Cdl1%7Csec1_lnk2%26pLid%3D302540

Re: Cloning Ancient Trees

by **Will Blozan** » Tue Apr 23, 2013 11:55 am

Brian, I almost wholeheartedly disagree with this guy and his concept. It is flawed on so many levels and misses the point on many more. I am not saying it should not be done but the high-grading basis for his reforestation is misguided and myopic. Also, using the American Forest National Champion tree listing for the superlative specimens is a whole can of worms in itself. And how we know it!

The majority of the worlds forests past and present are/were not composed of superlative trees. Superlative trees are not the all exclusive best choice for all situations. It seems as though a naturally regenerating clear cut would do more carbon storage (at least in the short term?) and ecosystem benefit than off-site planted exotics. If carbon is the main issue trees are one answer but his route may not be the best. I'll add more as the discussion boils.

Will

Re: Cloning Ancient Trees

by **edfrank** » Tue Apr 23, 2013 1:22 pm

Will, Brian, The situation is much more complicated than this as to what would be the best genes in a particular environment, for example in a dry area, but a simplified conceptual diagram can be done as follows:

	Poor Site	Average Site	Good site
Poor Genes	Tiny Trees	Small Trees	Average Trees
Average Genes	Small Trees	Average Trees	Big Trees
Good Genes	Average Trees	Big Trees	Superlative Trees

In the diagram you have poor, average, and good sites and poor, average, and good genes. It can be seen from the diagram that the only size class exclusively occupied by the trees with the best genes are the superlative trees growing on good sites. What is defined by the best genes here are those for trees that have grown for the longest time, through various weather patterns, and have reached the largest size. They grew to that size because they lasted a long time growing on that site, so they are the best by process of elimination. The genes of younger trees or smaller trees may or may not also be the best, but you won't be able to tell this until they reach their maximum size. So by selecting the biggest trees you are selecting those trees with the best genetic mix that have allowed them to grow to be the best in spite of everything else. They likely would be the best genes for trees in the same climatic regime to grow on average and poor sites, and would because of the different size conditions produce a tree sized for the specific site or subsite from average to big to superlative in size.

The best opposing arguments to size representing the best genes, would be a classification of best genes based on age/longevity or one based upon the biggest or oldest tree growing on a site with a particular environmental condition. For example this is the biggest or oldest Pinyon Pine growing on this dry site, so this likely is better adapted for this particular condition than the biggest tree from elsewhere in the species range.

A final consideration is there isn't good information on what amount of genetic variation exists within a species or what amount of gene expression is available within any gene set. Gene expression that are just waiting to be expressed under the particular environmental situation that particular tree is facing. So there might not actually be that much difference between the genes in any average tree and those of the biggest or oldest tree.

Edward Forrest Frank

Re: Cloning Ancient Trees

by **Rand** » Tue Apr 23, 2013 11:31 pm

Seems like this quandary is really similar to the hybrid seed displacing indigenous seed debate you see in agriculture. Sure we can get great results for our particular purposes over the scale of a human lifetime, but every couple of decades we always have to go back and dip into nature's well of diversity when something unanticipated pops up.

Seems a pretty perilous task to take on with an organism whose lifespan is hundreds to thousands of times longer than our favorite annual crops, because it might take a hair-raisingly large fraction of that length of time to propagate the next tweaked cultivar. Take the herculean efforts of the American Chestnut Foundation for example.

Re: Cloning Ancient Trees

by **Chris Earle** » Mon Apr 29, 2013 8:29 pm

This is actually kind of a fun idea. The basic idea here is, of course, really dubious: take a tree that is genetically optimized to grow perfectly well on a perfect site, and then plant it out on all sorts of imperfect sites. These progeny may well not have any adaptive superiority at all. But maybe the glass is half full: this program is popularizing the idea that we should plant diverse trees all over the place, and look at their performance. It's a great technique for education and maybe good for ecosystems, too, if most of these plantings happen in biogeographical wastelands like the U.K. But as a scientist, I have to chuckle because this approach takes no heed of epigenetics. If you plant a diploid tree you have no idea what you will get because its gene expression is to a large degree a function of the environment it encounters at the planting site. If you plant a hexaploid like coast redwood, even more dramatic changes in site-specific adaptation can be expected. Personally I look forward to seeing what grows from these "super trees."

Re: Cloning Ancient Trees

by **Matt Markworth** » Mon Apr 29, 2013 11:41 pm

Chris, Welcome to the Native Tree Society!

Your Gymnosperm Database at Conifers.org is an amazing resource and I congratulate you on the accomplishment. It's been helpful to me recently as I've been doing research for the Tree of the Week Maximums List (http://www.ents-bbs.org/viewforum.php?f=393).

I look forward to your scientific observations on the many topics that are discussed and again, welcome aboard.

- Matt

Re: Cloning Ancient Trees

by **Chris Earle** » Tue Apr 30, 2013 12:05 am

Thanks, Matt, but beware of logrolling. Most of my big trees data comes from big trees websites like this one (full inventory on my Links page at http://www.conifers.org/zz/links.htm#5). I don't even own a ranging laser.

Re: Cloning Ancient Trees

by **edfrank** » Tue Apr 30, 2013 12:38 am

Here is a paper that looks at genetic variation in trees: Levels of Genetic Variation in Trees: Influence of life history characteristics1. J. L. Hamrick,2 J. B. Mitton,3 and Y.B. Linhart3.
http://gis.fs.fed.us/psw/publications/documents/psw_gtr048/psw_gtr048_hamrick.pdf

Abstract: In a previous study, levels of genetic variation, as measured by isozyme analyses, were compared for 113 taxa of vascular plants. Each species was classified for 12 life history and ecological traits and three measures of genetic variation were calculated. Plants with large ranges, high fecundities, an outcrossing mode of reproduction, wind pollination, a long generation time, and from habitats representing later stages of succession tended to have more isozyme variation than species with other combinations of characteristics. This paper discusses the results of the
previous study and examines the available isozyme data for similar trends in forest trees. Special consideration was given to differences in genetic variation among 20 conifer species that have many of their life history characteristics in common. Successional stage, habitat type, cone type and historical events were associated with differences in genetic variation among the conifer species. These results are discussed in terms of expectations from current population genetics theory.

Ecology. 2009 Jul;90(7):1762-72.
A geographic mosaic of genetic variation within a foundation tree species and its community-level consequences.

Barbour RC, O'Reilly-Wapstra JM, De Little DW, Jordan GJ, Steane DA, Humphreys JR, Bailey JK, Whitham TG, Potts BM.
School of Plant Science and Cooperative Research Centre for Forestry, University of Tasmania, Private Bag 55, Hobart, 7001, Tasmania, Australia.
Robert.Barbour@utas.edu.au
http://www.ncbi.nlm.nih.gov/pubmed/19694126

'Shadow Biosphere' theory gaining scientific support

by **edfrank** » Sun Apr 14, 2013 5:31 pm

'Shadow Biosphere' theory gaining scientific support
http://www.rawstory.com/rs/2013/04/13/shadow-biosphere-theory-gaining-scientific-support/

Re: 'Shadow Biosphere' theory gaining scientific support

by **EMorgan** » Wed Apr 17, 2013 11:49 pm

I wonder how the shadow biosphere jives with Bejan's Constructal Law: "For a finite-size system to persist in time (to live), it must evolve in such a way that it provides easier access to the imposed currents that flow through it."

Bejan has a book titled "Design in Nature" and it discusses, among other things, the design of trees. It also pertains to bacteria, widescreen televisions, animal size, the Olympics etc, etc. It makes a pretty big statement that might conflict with the shadow biosphere. Science will converge on the answer eventually.

eric

Re: 'Shadow Biosphere' theory gaining scientific support

by **Don** » Thu Apr 18, 2013 12:33 am

Not to be too skeptical, but at this juncture I'm thinking the 'shadow biosphere' may have a status similar to 'string theory'...

Re: 'Shadow Biosphere' theory gaining scientific support

by **Joe** » Thu Apr 18, 2013 7:00 am

I agree since I don't see ANY evidence of this shadow biosphere. As for string theory, there is little evidence of that too, but it's a brilliant theory- or I should say theories sincere there are several with one called M theory which tries to unify them- I think it's a constructive theory but it's ahead of its time.

Joe

Re: 'Shadow Biosphere' theory gaining scientific support

by **Chris Earle** » Mon Apr 29, 2013 8:19 pm

This article is more than a wee bit disingenuous. The leading quote, for instance, ignores the fact that we have known for over 30 years that desert varnish is a product of microbial activity (Dorn, R.I. and Oberlander, T.M. 1981. Microbial origin of desert varnish. Science 213:1245-1247). I learned that in geology class in the 1980's; it's hardly a new idea. It also skips over the fact that we already have life forms, widely recognized, and fundamentally distinct from what most people call "life" - the Archea and the prokaryotes in general; again, both have been widely recognized for decades. A related old idea is that clay surfaces form substrates for self-organizing molecules, including polar organic substances like amino acids, and thus are recognized as a sort of proto-life; since the 1960s people have been suggesting that life may have evolved on clay surfaces.

Cute picture of a test tube, though.

Re: 'Shadow Biosphere' theory gaining scientific support

by **edfrank** » Mon Apr 29, 2013 10:50 pm

I am not supporting the idea, but thought it provided a call to look at things in a different way to see what we might be missing because our focus has been defined by our current theories.

Re: 'Shadow Biosphere' theory gaining scientific support

by **Joe** » Tue Apr 30, 2013 7:13 am

edfrank wrote: I am not supporting the idea, but thought it provided a call to look at things in a different way to see what we might be missing because our focus has been defined by our current theories.

sometimes "crazy" ideas turn out to be true- such as plate tectonics

Robinson State Park, MA

by **sam goodwin** » Mon Apr 29, 2013 7:17 pm

Hi all, on Saturday 4/27/13, my wife and I along with Friends of Robinson, DCR crew and Matt Largess from RI, planted 5 trees in the park. With the small white pine, (that may not make it), that was all ready there, there is one for each New England state tree. The trees are planted on the small tear drop shaped island and on land next to the park headquarters. The trees are: starting with a sugar maple on the point of the island, with a "Princeton" American elm in the middle and for now the white pine on the side. Next to the building is a paper birch, a white oak and a red maple. Matt Largess donated the 5 trees plus the Saturday before he brought his stump grinder for the stumps that were there. On Saturday, June 15, there will be a dedication of the "Dawson" elm for Alexandra Dawson and dedications for the Boston bombing and Ct shooting victims. At the plantings, Richard Sullivan, State secretary of energy and environment affairs read the Joyce Kilmer poem "Trees". Sam Goodwin

Attachments

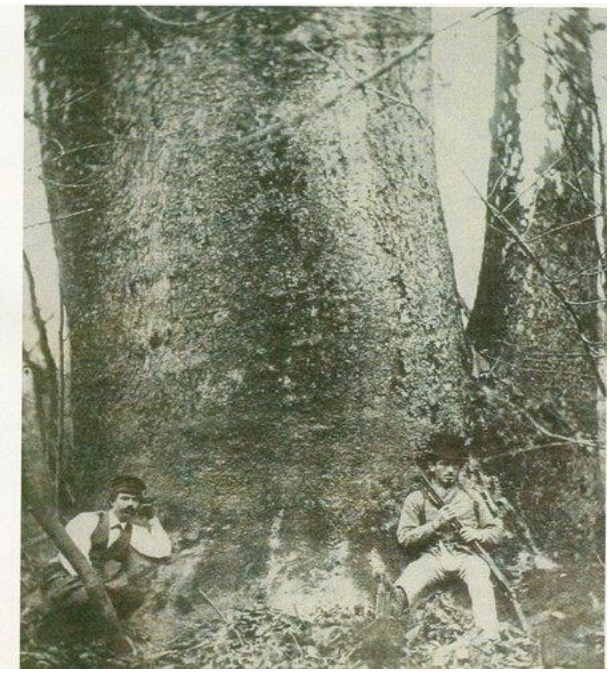
Re: Robert Ridgway article from 1882

by **edfrank** » Mon Apr 29, 2013 11:29 am

This photo appeared on Facebook today. I am unsure of the source.

From Roger Beadles: This is a copy of a historic picture taken in 1882 with Robert Ridgeway the ornithologist is on the left and his brother on right. The Sycamore at breast height tree is 15' 6" and height is 168 ft and crown spread is 134 ft. This tree was located along the Big Wabash River south of Mt Carmel about 5 miles. .It was cut down in 1897 by

landowner because of to much foot traffic across his field. There was also another giant sycamore across the river 2 miles north that equaled in size but it was also gone by the 1900's.From the Little Cypress Swamp to Beall woods area there were several trees measuring over 6 ft in diameter, now the cypress tree I had a picture by is probably the largest tree left.



Re: Robert Ridgway article from 1882

by **edfrank** » Mon Apr 29, 2013 11:45 am

Update:

Roger Beadles replies: Back in the 1960's it was a poster size picture at Beull Woods nature preserve and they had post card size copies for the taking to compare what was there at that time.

Re: Robert Ridgway article from 1882

by **dbhguru** » Mon Apr 29, 2013 3:03 pm

Ed, Having visited Beall Woods three times, I have to say that I'd never have predicted trees of such size as once grew in that region, had I not seen these old photographs. They were what motivated me to visit the area initially, plus glowing descriptions from well-intentioned people who imagined that what they were seeing was far more impressive than in actuality.

We have accustomed ourselves to a landscape with small trees as the norm. Monica and I went to southern Connecticut on Sunday and returned today. Totally uninspiring. I have no idea of what once grew across the Connecticut countryside, but what grows there today leaves one in a state of want. Yes, there are exceptional spots, but they are few and far between. Come to think of it, this description equally applies to the rest of the Northeast.

Robert T. Leverett

Re: Robert Ridgway article from 1882

by Will Blozan » Mon Apr 29, 2013 5:19 pm

Ed, they obviously wrapped the minion trunk as well. And botched the height. The farmer could have killed the trespassers not the tree.

Bob, If wraps were done on multiple stems this is why we see what we see now. Just regular-old nice floodplain forest with a scattering of bigger trees. 6 foot sycamores are not real hard to find even now.

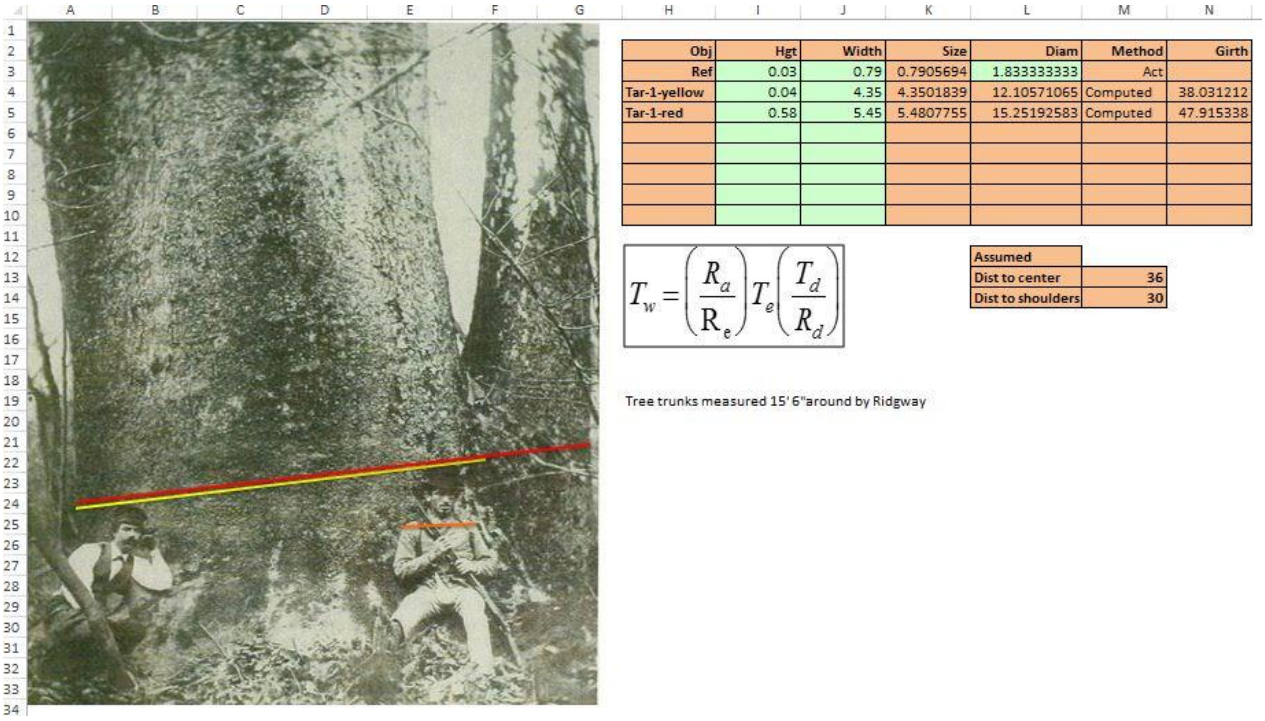
Will

Re: Robert Ridgway article from 1882

by **dbhguru** » Mon Apr 29, 2013 9:10 pm

Ed wrote: Do your magic diameter estimation/measurement on the sycamore. Eli and I think they are including the side trunk to get the 15 foot diameter.

Attached is the Photo-Excel analysis as good as I can do it. I made several assumptions, as you'll note, but they support your contention that the 15.5-foot diameter incorporates both stems. I got 15.25' versus their 15.5'. Probably some luck there.



Obj	Hgt	Width	Size	Diam	Method	Girth
Ref	0.03	0.79	0.7905694	1.833333333	Act	
Tar-1-yellow	0.04	4.35	4.3501839	12.10571065	Computed	38.031212
Tar-1-red	0.58	5.45	5.4807755	15.25192583	Computed	47.915338

$$T_w = \left(\frac{R_a}{R_e}\right) T_e \left(\frac{T_d}{R_d}\right)$$

Assumed	
Dist to center	36
Dist to shoulders	30

Tree trunks measured 15' 6"around by Ridgway

Sycamore-Wabash.xlsx

(560.2 KiB)

Robert T. Leverett

a. This is probably the largest tree of any kind which I have seen anywhere in the Wabash Valley, or any other part of the Eastern Province of North America. It is of very vigorous growth, and apparently perfectly sound. Circumference at the ground, 42 feet; round smallest part of the trunk, 30 feet; greatest diameter, 15 feet, least diameter, 10 feet, the average diameter being about 11 feet. Ambitus, 134 feet in one direction, the least spread of top being 112 feet. Total height, as determind by several measurements with "dendrometer," and by shadow, about 160 feet. The trunk first divides at about 7 feet from the ground, but above this division the main stem is still 8 feet in diameter; this extends upward, *gradually enlarging*, to about 15 feet from the ground, where the next division takes place, the next fork being nearly 30 feet up. No horizontal branches are thrown out until a height of 70 or 80 feet is reached (or about half the total height of the tree), the

Re: Robert Ridgway article from 1882

by **edfrank** » Mon Apr 29, 2013 10:03 pm

The notes indicate that the tree described below was photographed and may be the one shown above:
(download/file.php?id=3608 page 74)

Candidate for Picea pungens - Colorado Blue Spruce

by **dbhguru** » Sat Apr 27, 2013 4:42 pm

Matt,

Here is the data on the Colorado blue spruce.

Country: USA
State or Province: Colorado
Property Owner: USFS
Site Name: Hermosa Creek
Species (Scientific): Picea pungens
Species (Common):Colorado Blue Spruce
Tree Name: Will Blozan Spruce
NTS Measurer(s):Bob Leverett with Steve Colburn (LTI) and Laurie Swisher (USFS) assisting
Date of Measurement: July 2012
Height (ft):159.0
Method of Height Measurement: Sine Top-Sine Bottom
CBH (ft):6.3
Average Spread (ft): 36 feet
Maximum Spread (ft):
Habitat: Ravine on side of creek, altitude 7,600 feet
Notes: BVP measured a blue spruce to 153 feet in southwestern Colorado. It would be #2. I have measured 3 other Colorado blues to over 150 feet. So, at this point, we have 5 that have been measured to over 150.

Robert T. Leverett

Re: Candidate for Picea pungens - Colorado Blue Spruce

by **Chris Earle** » Tue Apr 30, 2013 12:57 am

Wonderful find. Quite the beanpole of a tree, only 61 cm dbh! Do you also hunt for these trees anywhere else, or is the San Juans the sweet spot for the species? Anyway I've updated my page at http://www.conifers.org/pi/Picea_pungens.php with this info.

Re: Candidate for Picea pungens - Colorado Blue Spruce

by **edfrank** » Tue Apr 30, 2013 8:09 am

Chris, The Eastern Native Tree Society as it was originally named started with much of our measurements focused on three major sites in the eastern US: at Mohawk Trail State Forest in MA, GSMNP in NC and TN, and Cook Forest SP in PA. From there we expanded outward, but with much of the focus still in the eastern US. In the last few years we have gained a cadre of people along the west coast, and a few in Europe. However our measurements in the wild, wild, west has been limited to the efforts of this small group living in California, Oregon, and California area, and short trips to the west by other eastern members. There are still vast areas of western United States we have not even explored fro tree measurements, let alone measured in detail. The San Juans are someplace Robert Leverett has spent some time on these trips, and therefore we have an island of measurements from that region. As we add more members from these regions, we hope to get a broader idea of the growth habits of many of these western species, but from now through large areas of the west, they are catch as catch can.

Edward Forrest Frank

Re: Candidate for Picea pungens - Colorado Blue Spruce

by **dbhguru** » Tue Apr 30, 2013 8:44 am

Ed, Chris, So far the San Juan's have proven the sweet spot. I measure Colorado Blues wherever I can find them. Our coverage of the Rocky Mountain west is admittedly very skimpy, however, there are tree hotspots that have received a fair amount of attention outside the Colorado San Juans. I've done a good bit of measuring in the Grand Tetons, Big Horns, and Medicine Bow in Wyoming and the Front Range and Sangre de Cristo in Colorado, and the Black Hills in South Dakota. I've also spent a good bit of time in

southeastern Idaho. While all this is still a drop on the ocean, one does develop a perspective on what grows to significant size, where, and why. For example, ponderosa pines will grow to 100 feet in height and 3 feet in diameter in the Black Hills. Above that, big ponderosas are very scarce. They simply do not reach great size in the Black Hills. You see this on the ridge-sides and the ravines. Once you reach the lower slopes, the region is too dry to grow big trees. There s a narrow elevation band where the trees reach maximum size.

I've been disappointed that more people haven't discovered us and come aboard representing the Rockies. All in good time, I guess. There is an area in western Montana and throughout northern Idaho that represents a different growing environment. This is an area that have not explored at all.

Robert T. Leverett

Persistence in finding the top

by **dbhguru** » Tue Apr 30, 2013 3:41 pm

NTS,

A northern red oak grows on Monica's lot in the back of our house. We have named it the Charlotte and Susan Oak for two dear friends. Its crown is difficult to see because of the intervening clutter. This and the fact that I can sit on our deck in comfort while working with it makes it a good specimen for perfecting methods. One objective is to develop search strategies for finding the top and considering the likelihood that one would choose that top if using a non-sine based height measurement method.

Let's have a look at the oak through successively closer images. Try to imagine yourself picking the actual top if you knew nothing about its location and were armed only with a tape and clinometer.

This top is 116.2 feet above mid-slope. In image #2, I initially thought the top was the double sprig to the left of the true top. In the third image, you can see the double sprig is on a forward curving branch. It is a closer target. The last image shows the target relative to its competitor.

Now if the true top is 116.2 feet above mid-slope, how tall might its closer competitor be? Well, try 104.9 feet. Although, its angle is higher, it is 17 feet closer horizontally, but I could not have determined that from visual inspection. Seventeen feet seemed like a lot, so I got Monica's 8 x 42 Bausch & Lomb birding binoculars. At the time, they were state of the art and the view through them is fantastically clear, which enabled me to determine that the double sprig is actually on a different tree. My aging eyes could not resolve this overlapping branching structure, and while the TruPulse optics gave me a hint, it was only a hint.

Now to a key point. I challenge anyone reading this post and still committed to the proposition that you can accurately measure spreading hardwoods in a forest environment with tape and clinometer to explain exactly how that can come about. Even if you succeed in identifying the true top, you have little chance of locating it in 3-dimensional space in all the clutter. In the case of this oak, the top is offset from the base in the direction of the measurer by 14.4 feet. That horizontal distance is in no way obvious. When I went down to the tree and shot straight up, hoping to hit a twig at the desired height, the intervening clutter stopped me in my tracks. From other directions, I completely lost sight of the target. We in NTS take it for granted that a lot of searching and crown resolution is necessary to ultimately locate the highest sprig of a challenging tree. In many cases, we never find the highest top, but we measure to an astonishingly high degree of accuracy what we identify as the top. This is our craft. Unfortunately, others come along oblivious to the challenge and measure "something" up in the crown by an error-prone method and then submit it to people for inclusion in a big tree list, who themselves, know little about the art of real tree measuring. Drives me nuts. WNTS President Don Bertolette is trying to change this. I'm behind him a thousand percent, but oh, does he ever have his work cut out for him.

David Stahle tells me that he routinely encounters stubborn attitudes as he strives to educate those in positions of authority within the agencies who he works through about the ages of the trees that he measures and what those ages provide as an invaluable data bank for analyzing climate. Dave has coined the term in describing them as arrogantly ignorant. We in the tree measuring world feel his pain.

Robert T. Leverett

External Links:

Jane Goodall Reveals Her Lifelong Fascination With…Plants?
http://www.smithsonianmag.com/science-nature/Jane-Goodall-Reveals-Her-Lifelong-Fascination-With-Plants-192136911.html

Old-Growth Forest
http://web.archive.org/web/20100923023605/http://ncmountaintreasures.org/info/old_growth.html

The Ankerwycke Yew
http://www.youtube.com/watch?v=tBmWym1vAnU
Uploaded by Boomadviseur on Apr 9, 2012
This 2.000 years old Yew (Taxus baccata) grows in the grounds of the ruined Priory of Ankerwycke. It is said to have witnessed the oathing and sealing of the Magna Carta by King John in June 1215 and to be the location where Henry VIII met Anne Boleyn in the 1530s. We visited this tree during the Ancient Tree Experience 2012, organized by the Nederlandse Boominfodag (http://www.boominfodag). Here's a video by Sarah Rees that came out earlier today. I subscribe to her on Youtube and her videos are very well made. Included are scenes of the roots being x-rayed for a potential boardwalk . . .
http://www.youtube.com/watch?v=I2xPNIshYkg

Old-growth black gums in New Jersey
http://www.nytimes.com/2002/09/26/nyregion/forest-primeval-trees-with-stories-solving-riddles-growth-rings-ancient-new.html

Church Forest Preview
This is a 5 minute preview for 'Church Forest'-- a feature documentary film currently in post-production. For more information please visit churchforest.com or email us at churchforestmovie@gmail.com
http://vimeo.com/41595169 Church Forest Preview from Greg Vander Veer on Vimeo. Church Forest reveals a mystical world where priests and scientists struggle to come together, despite vastly different beliefs, to save the last forests of Northern Ethiopia. Through stunning …

Secrets of the Forest Floor
Air Date: Week of April 12, 2013
http://www.loe.org/shows/segments.html?programID=13-P13-00015&segmentID=6
http://www.loe.org/content/2013-04-12/secrets-of-the-forest-floor.mp3

An introduction to tree photography The Tree Photographer A LENS OF THE SILVAN WORLD BY GABRIEL HEMERY
http://thetreephotographer.com/2012/12/21/an-introduction-to-tree-photography/

The tulip tree reveals mitochondrial genome of ancestral flowering plant
http://www.eurekalert.org/pub_releases/2013-04/bc-ttt041213.php

Trees Call for Help—And Now Scientists Can Understand. Team identifies the sounds made by drought-stressed trees.
http://news.nationalgeographic.com/news/2013/04/130415-trees-drought-water-science-global-warming-sounds/

Pinchot State Park turns to a natural weed killer: Goats
http://www.yorkdispatch.com/localnews/ci_23035361/pinchot-state-park-turns-natural-weed-killer-goats

How To Make A Stereoscopic GIF
http://www.youtube.com/watch?v=1CVWoelDsDM

How I Climb Trees to Save Forests: Meg Lowman at TEDxNCSSM
http://www.youtube.com/watch?v=zQ2CYq5RIFQ

'Shadow Biosphere' theory gaining scientific support
http://www.rawstory.com/rs/2013/04/13/shadow-biosphere-theory-gaining-scientific-support/

MIGRATORY DRAGONFLY SHORT COURSE
White River Junction, Vermont, June 8, 2013
10:00 AM to 4:30 PM
http://campaign.r20.constantcontact.com/render?llr=tnjebhdab&v=001UQ183hrEIiGnXMPfCWP1v-6T75vSZiU8IbvUPVb7o04z5CTqxcF_Clcq325iH4WHU-rgzeKeb9geoSOwhjUVz_OAuntLHspP2kDZyYdhfuzgwAdocIfqo6mQ0_Loguwp6dAw9lV7LeebmDP3KKvxXgB7v9FIQjgWbTDgWLXEIkotLY39yK4ceiMgpnksw9-QB8mhk2GyMc7-c1tVLIQRqST__A2NQlPpplIEcQddzHOptCa9lR_3_ZGs4zWT1pRDK

More Links from the Facebook Native Tree Society Page:

How trees 18 and 35 could enalbe fight back against ash dieback
http://www.telegraph.co.uk/earth/agriculture/forestry/9962602/How-trees-35-and-18-could-enable-fight-back-against-ash-dieback.html

Charme têtard de L'IFFCAM, Coutière (Deux-Sèvres)
http://lestetardsarboricoles.fr/wordpress/2013/03/31/charme-tetard-iffcam-coutiere-deux-sevres/

Identification Key to Some Common Ticks of Illinois
http://www.idph.state.il.us/envhealth/tickkey.htm

Man shoots tree, tree fires back
http://news.yahoo.com/blogs/sideshow/man-shoots-tree-tree-fires-back-002913032.html

Jim Brandenburg explains how he took this breathtaking shot of an arctic wolf on top of an iceberg
http://www.amateurphotographer.co.uk/how-to/icons-of-photography/539572/photo-insight-with-jim-brandenburg-arctic-wolf

i-Tree, a suite of urban analysis tools utilized by city foresters in the U.S. The U.S. Forest Service is releasing the latest i-Tree version 5.0 allows upgrading to rapidly assess urban trees and forests throughout Canada and Australia, two of the countries leading i-Tree's international expansion.
http://blogs.usda.gov/2013/03/21/innovative-i-tree-spreads-worldwide/

SOLITUDE LOST…or just DISCARDED? …by Jim Stiles | Canyon Country Zephyr
http://www.canyoncountryzephyr.com/2013/04/01/solitude-lost-or-just-discarded-by-jim-stiles/

BONAO Query Page
North American Vascular Flora
http://www.bonap.net/plantdb/genus.aspx

Bamboo Time Lapse Growth Rate Over 24hrs c/o BBC World Planet Earth.
http://www.youtube.com/watch?v=FfDOMwFX5Hg

Using tree food recipes to fight off malnutrition
http://www.bbc.co.uk/news/health-22043002

A Year in Trees
http://www.nytimes.com/2013/04/07/opinion/sunday/a-year-in-trees.html?hp&_r=1

Japan Specialist - 2000-year-old Cherry Tree
https://www.facebook.com/maru.japan
The Yamataka Jindai-zakura at the Jissoji Temple in Yamanashi Prefecture is one of the three great cherry trees in Japan. It is estimated to be 2000 years old and is the Japan's oldest cherry tree with a trunk that is 12 meters around.

Hemlock woolly adelgid discovered in Western Pa. state parks
http://blogs.mcall.com/outdoors/2013/04/hemlock-woolly-adelgid-discovered-in-western-pa-state-parks.html

Border Buffers - Protected areas help to conserve imperiled tropical forests, but many are struggling to sustain their resident species.
By William Laurance | April 1, 2013
http://www.the-scientist.com//?articles.view%2FarticleNo%2F34763%2Ftitle%2FBorder-Buffers%2F

JOSHUA TREES: 'Spectacular' Mojave Desert bloom underway http://www.pe.com/local-news/topics/topics-environment-headlines/20130408-joshua-trees-spectacular-mojave-desert-bloom-underway.ece

BioDivLibrary's photostream
http://www.flickr.com/photos/biodivlibrary/

See The Video That Got This Terrific Tree Hugger Fired http://www.upworthy.com/see-the-video-that-got-this-terrific-tree-hugger-fired?c=gp1

MacDougall, McCann, Gellner & Turkington (2013) **Diversity loss with persistent human disturbance increases vulnerability to ecosystem collapse.** Nature 494: 86-89. http://morganvegdynamics.blogspot.com.au/2013/04/the-best-paper-of-year.html

New book about ancient spruces in the Swedish Scandes: Ancient alpine spruces – life and history ISBN: ISBN 978-91-87309-06-9 145,00 SEK per enhet

Real-time map of all forests on Earth launches later this year By Carl Franzen on April 10, 2013 03:52 pm http://www.theverge.com/2013/4/10/4209914/global-forest-watch-2-deforestation-map-launches-in-may

400-year-old ring-dated log missing from Sedro-Woolley http://www.komonews.com/news/local/400-year-old-ring-dated-log-missing-from-Sedro-Woolley-202433071.html

Stewardship weekend set for Hickory Creek Wilderness,PA, USA http://www.timesobserver.com/page/content.detail/id/563804/Stewardship-weekend-set-for-Hickory-Creek-Wilderness.html

The Invisible Forest - The Arc of Appalachia Preserve System http://www.arcofappalachia.org/biome/invisible-forest.html

Laser beam uncovers giants of the forest by Annah Yard http://www.abc.net.au/news/2013-04-11/laser-beam-uncovers-giants-of-the-forest/4624106

Scientists create high resolution, 3D maps of forests in Madagascar, Rhett A. Butler, mongabay.com February 15, 2012 http://news.mongabay.com/2012/0214-lidar_madagascar.html#YSieuomyHmjw8CZo.99

Land snails and forest disturbance http://wamcradio.org/EarthWise/?p=2293

Two in three Scots prefer pines http://wtcampaigns.wordpress.com/2013/04/12/two-in-three-scots-prefer-pines/

CTV News - The Environmental Law Centre of the University of Victoria is proposing a science-based Old Growth Protection Act for British Columbia with timelines to immediately protect critically endangered old-growth forests and to quickly phase out old growth logging in highly endangered forests. http://youtu.be/wb09Z0-4rmE

Severe Thunderstorms And Tree Damage http://madweather.blogspot.com/2013/04/severe-thunderstorms-and-tree-damage.html

6 of America's Most Dangerous Hiking Trails http://sierraclub.typepad.com/explore/2013/04/8-of-americas-most-challenging-hiking-trails-.html

The tulip tree reveals mitochondrial genome of ancestral flowering plant http://www.eurekalert.org/pub_releases/2013-04/bc-ttt041213.php

Pinocchio's oak tree. http://www.italymag.co.uk/italy/capannori/oak-tree-pinocchio-becomes-national-monument

John Carlisle: A Romeo tree was saved by a roadside because people made some noise April 14, 2013. http://www.freep.com/article/20130414/COL46/304140105/John-Carlisle-A-Romeo-tree-was-saved-by-a-roadside-because-people-made-some-noise

Lichen in Wales could hold key to antibiotics resistance http://www.bbc.co.uk/news/uk-wales-mid-wales-22150618

Saving Old Growth on Vancouver Island http://treegirl.org/blog/saving-old-growth-on-vancouver-island

What Plants Talk About – Video http://video.pbs.org/video/2338524490

Big Tree Climbing Expedition Africa HD Climbing Africa's Biggest known Trees. http://www.liveleak.com/view?i=f04_1363595298#xZfSWfOOdGqH7gZp.99

The Great Pontfadog Oak in Wales in DEEP SNOW just weeks before it collapsed
http://www.youtube.com/watch?v=oI7aCjiNQfE&feature=youtu.be

Tim Kovar
http://americanprofile.com/articles/odd-job-master-tree-climber/

Forest Foundation: Here's Your Week in Trees
http://www.forestfoundation.org/blog-tree-news-from-around-the-world-04-19-13

Chalara Ash Die back life cycle, brilliantly explained by Dr Joan Webber BSc Phd, Principal Pathologist & Head of Tree Health Research Group at Forest Research.... in the shadow of the Old Man of Calke...
http://www.youtube.com/watch?v=7t3wAMcEz0U&feature=youtu.be

Call to Protect Ancient Trees from Storms
http://www.bbc.co.uk/news/uk-wales-22212721

32,000-Year-Old Plant Brought Back to Life—Oldest Yet Feat may help scientists preserve seeds for the future.
http://news.nationalgeographic.com/news/2012/02/120221-oldest-seeds-regenerated-plants-science/

Indian man who planted a 1,360-acre forest now plans to plant another
http://www.treehugger.com/natural-sciences/indian-man-who-planted-1360-acre-forest-now-plans-plant-another.html

Gallery: Historic oak in Mistley - thought to be oldest in the country - inspires book, By Amie Keeley. Tuesday, April 23, 2013.
http://www.eadt.co.uk/news/gallery_historic_oak_in_mistley_thought_to_be_oldest_in_the_country_inspires_book_1_2164092

Scientist Says Pollution From China Is Killing a Japanese Island's Trees
http://www.nytimes.com/2013/04/25/world/asia/japanese-scientist-blames-china-for-yakushimas-dying-trees.html

Wales's oldest oak tree blown down – big picture. The Pontfadog oak, which is 1,285 years old, has been knocked down by the wind.
http://www.guardian.co.uk/environment/picture/2013/apr/19/wales-oldest-oak-tree-big-picture

Tall tales:The stories of our trees, Apr. 25, 2013.
http://www.thedailyjournal.com/article/20130426/NEWS01/304260030/Tall-tales-The-stories-of-our-trees

How I Climb Trees to Save Forests: Meg Lowman at TEDxNCSSM
http://www.youtube.com/watch?feature=player_embedded&v=zQ2CYq5RIFQ

Beginning next week - th**e ObserverTree online art exhibition,** featuring Miranda Gibson's photography, and paintings & prints from some incredible artists! Funds raised go to the ongoing ObserverTree campaign. Please support and share this image.www.observertree.org

The Western Pennsylvania Conservancy will hold their annual canoe trip on Saturday, June 1, from the Buckaloons Recreational Area in Irvine to a boat access in Tidioute. Click below for more info!
http://www.timesobserver.com/page/content.detail/id/564115/Allegheny-sojourn-will-push-off-from-Buckaloons-June-1.html

A Photographer And His Friend, 'That Tree' by BECKY LETTENBERGER, April 26, 2013.
http://www.npr.org/blogs/pictureshow/2013/04/26/179265662/a-photographer-and-his-friend-that-tree

Fellowship of the Tree Rings, New Zealand researchers probe history and climate science by looking at wood.
http://news.nationalgeographic.com/news/2013/13/130422-new-zealand-tree-rings-dendrochronology-science/

Awesome Vintage Apple Art: 9 Fruits You Won't Find at Your Supermarket. The unusual history of a definitive guide to American apples. By Sarah Zhang on Fri. April 26, 2013 9:14 AM PDT.
http://m.motherjones.com/environment/2013/04/old-apples-of-new-york-book-vintage-illustrations

The Apples of New York : Beach, Spencer Ambrose, 1860-1922.
http://archive.org/details/applesofnewyork01beac

World's Oldest Fossilized Forest Unearthed in NY
http://www.youtube.com/watch?v=mBp3obZkX4o&feature=youtu.be

Burned rainforest vulnerable to grass invasion
http://news.mongabay.com/2013/0424-amazon-grass-invasion.html
http://rstb.royalsocietypublishing.org/content/368/1619/20120427

New Trees on the Block April 29th, 2013 by Tacy Lambiase. More than 40 new trees were declared the biggest of their species today with the release of American Forests' National Register of Big Trees, which contains a total of almost 780 national champion and co-champion trees. The register, which is updated twice per year, records the largest trees of each species in the United States based on height, circumference and average crown spread.
http://www.americanforests.org/blog/new-trees-on-the-block/

Bee-harming pesticides banned in Europe. EU member states vote ushers in continent-wide suspension of neonicotinoid pesticides.
http://www.guardian.co.uk/environment/2013/apr/29/bee-harming-pesticides-banned-europe

Tree Protection Toolkit
http://www.americanforests.org/bigtrees/tree-protection-toolkit/

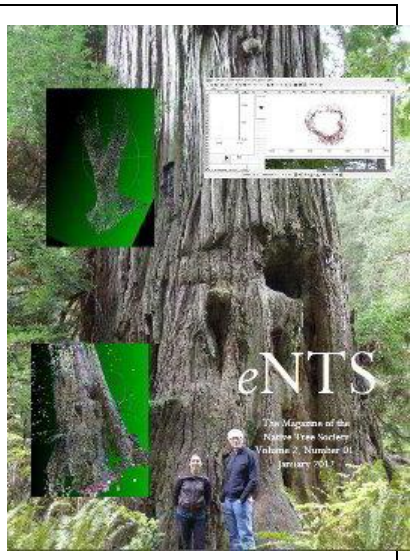
World's Largest Sycamore Stump, Kokomo, Indiana
http://www.roadsideamerica.com/story/3343

Residents say goodbye to century-old trees.
OTSUCHI, Japan, April 25 (UPI) -- Residents of Otsuchi, Japan, gathered to say goodbye to five cherry trees that survived the tsunami two years ago.
http://www.upi.com/Odd_News/2013/04/25/Residents-say-goodbye-to-century-old-trees/UPI-75691366924704/#ixzz2S0YmhQxK

Smoke Signals: How Burning Plants Tell Seeds to Rise from the Ashes
http://www.sciencedaily.com/releases/2013/04/130429175908.htm

Venham conhecer, na nossa companhia, algumas das maiores árvores do
Algarve:http://www.arvoresdeportugal.net/2013/04/celebrar-o-fascinio-pelas-arvores/

Back Issues of *e*NTS: The Magazine of the Native Tree Society



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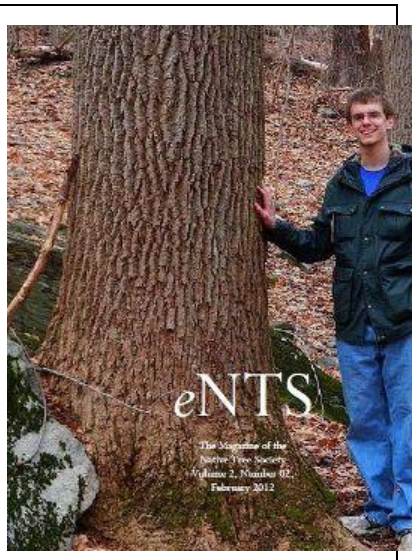

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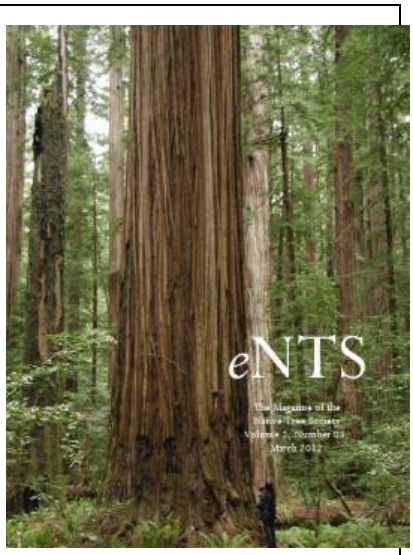

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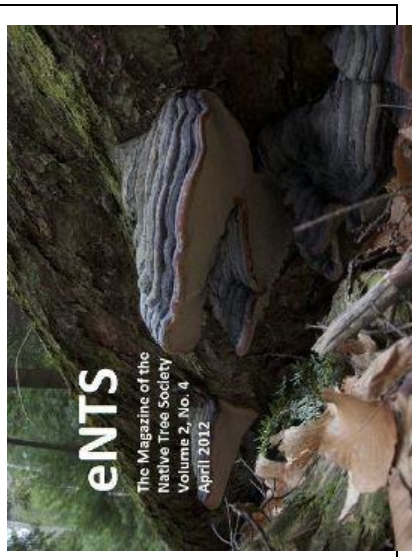

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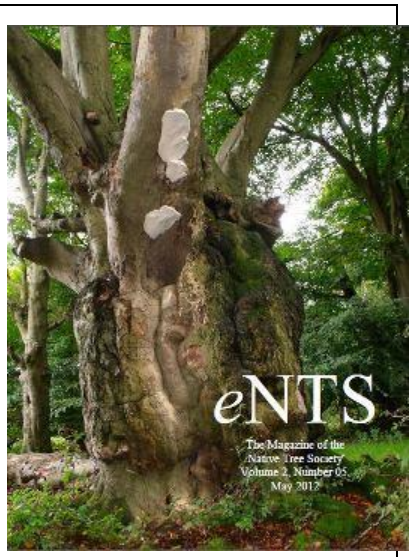

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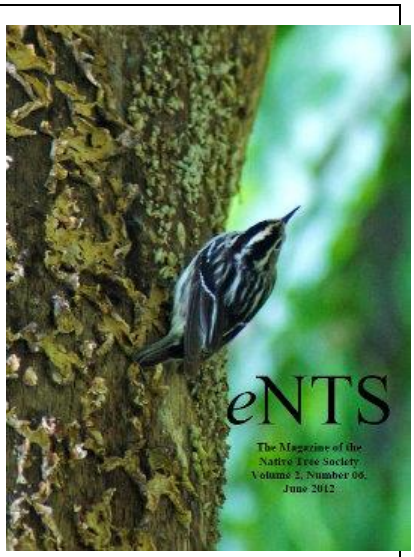

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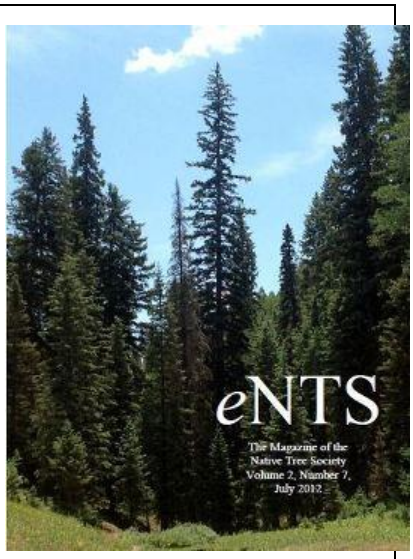

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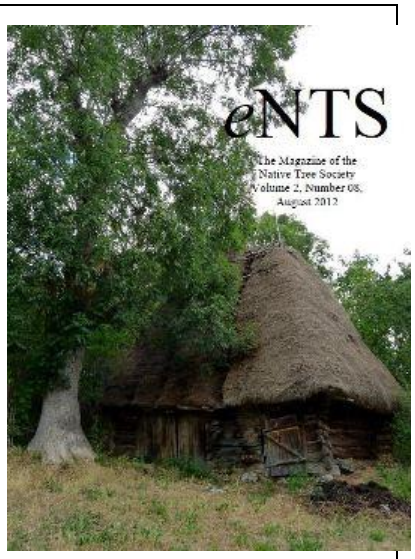

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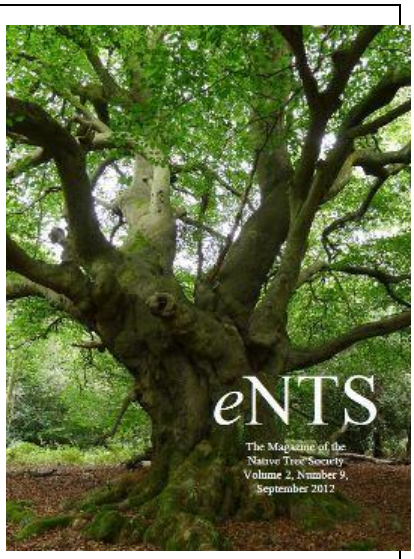

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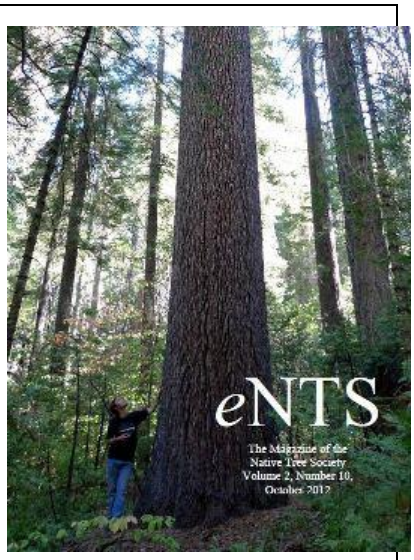

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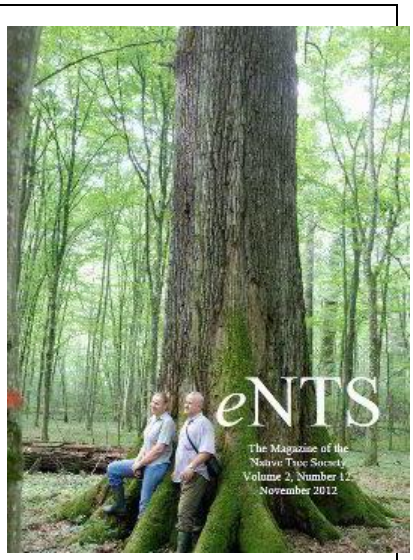

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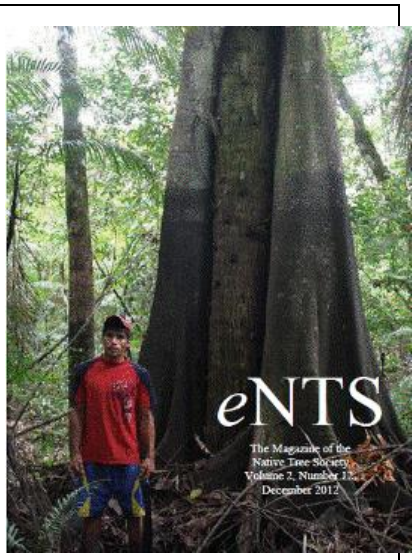

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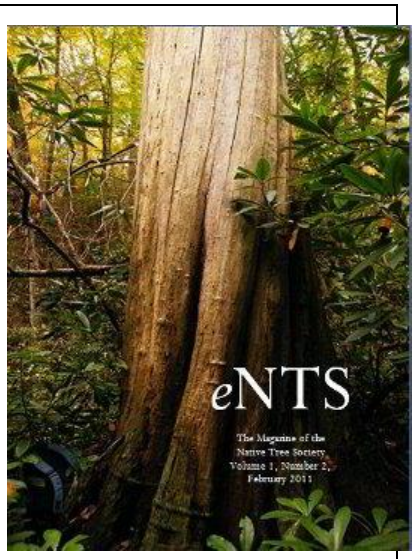

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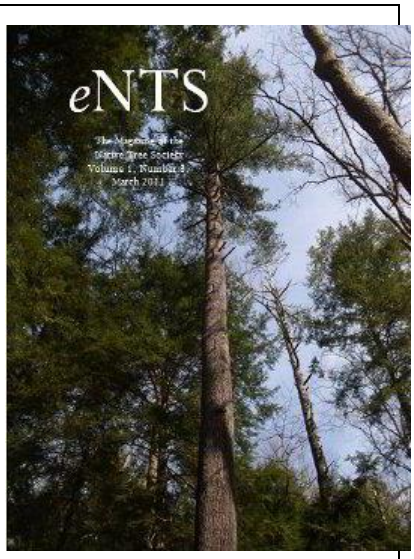

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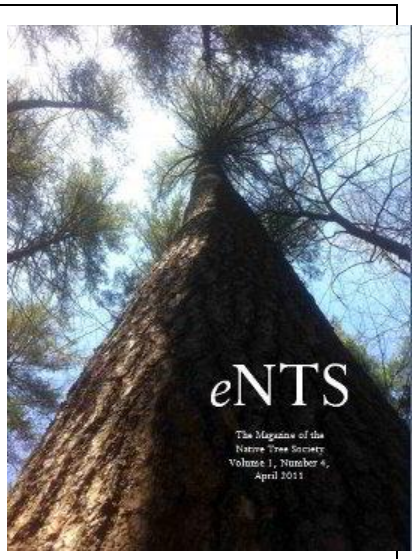

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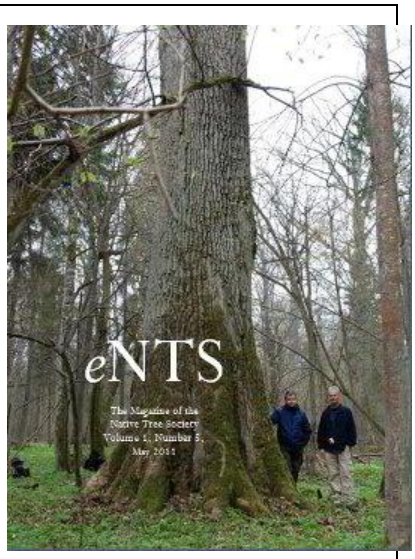

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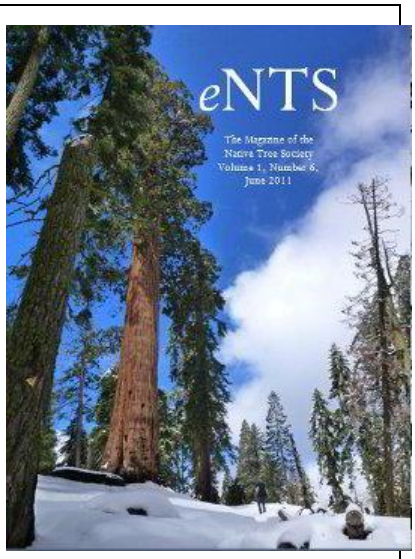

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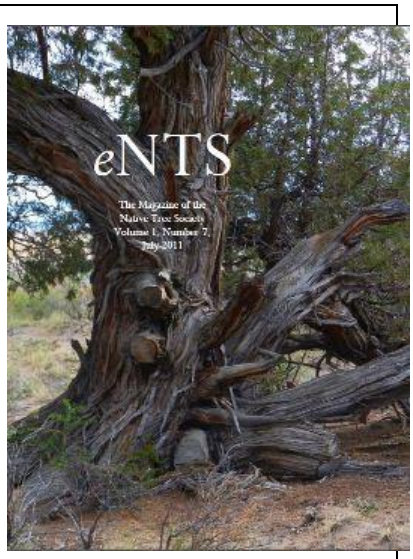

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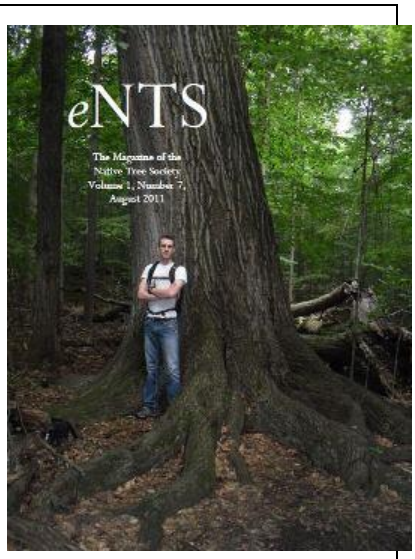

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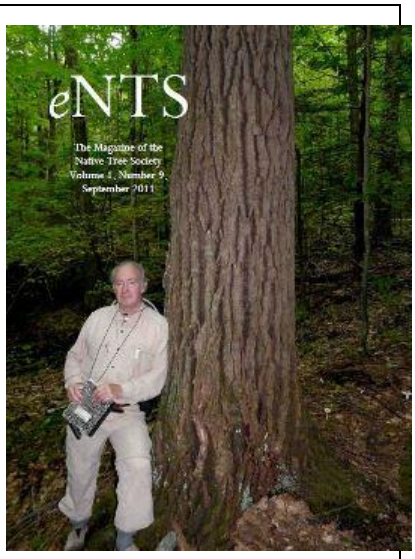

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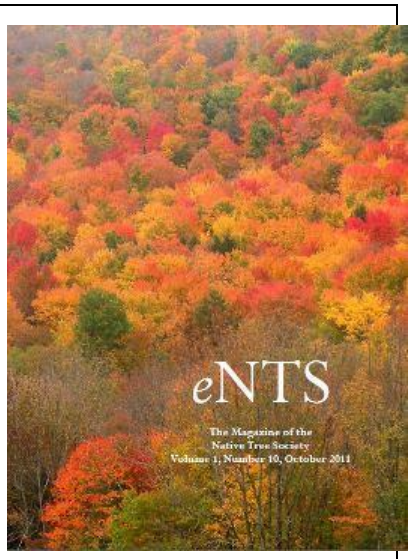

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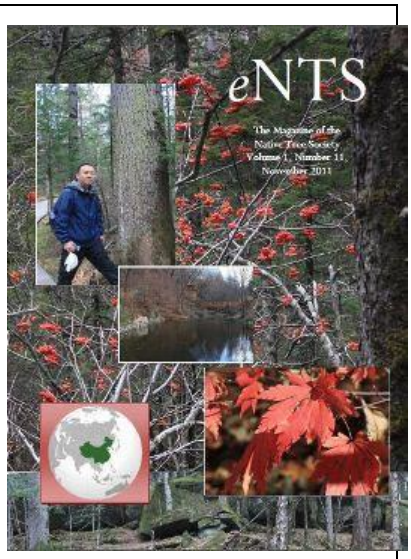

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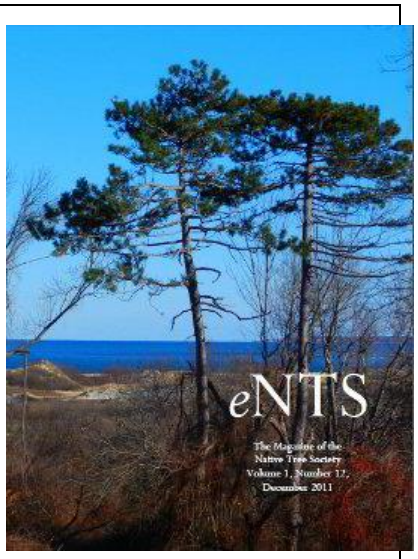

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About: *e*NTS: The Magazine of the Native Tree Society

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