

Besser Natural Area (MI)

by **Matt Markworth** » Sat Jul 13, 2013
1:23 am

Hi All,

The forecast was calling for rain during the holiday weekend and the South and the East had gloomy predictions as well. I can think of no better way to celebrate the 4th of July than exercising the freedom of choosing a direction and hitting the open road. North it was and seven hours later I pulled into Ossineke campground with breezy blue skies.

Heading north from Ossineke, I crossed over the 45th parallel and was reminded that I'd be seeing species unknown to my southwestern Ohio stomping grounds. As it turned out, I also encountered a species that I thought I knew well, yet one that presented itself with very different characteristics.

The mix of species at Besser Natural Area proved to be very different than my usual haunts and the mature pines and cedars made quite an impression as I walked down the trail. Here's a brief description of Besser: http://www.michigan.gov/dnr/0,4570,7-153-31154_31260-54000--,00.html



Besser Natural Area

The White Pine is clearly the monarch of this forest exhibiting approximate heights up to 107 ft (shooting the laser straight up) and a maximum girth of 9.35 ft.



Eastern White Pine, CBH: 9.35ft



Eastern White Pine, CBH: 9.35ft



Fallen Eastern White Pine showing the sandy soil

I documented the Red Pine up to 93.5 ft shooting straight up with girths up to 6 ft. A cut Red Pine with a girth of 4.5ft at 5ft high had approximately 120 rings.



Red Pine Bark

Northern White-Cedar had the most character by far. A cut Northern White-Cedar with a girth of 3.3ft at 8ft high had approximately 125 rings.



The trail continues on and reaches the shore of Lake Huron. The stunted trees (<http://www.ents-bbs.org/viewtopic.php?f=90&t=5551>) and the "Tree Without Roots" (<http://www.ents-bbs.org/viewtopic.php?f=90&t=5549>) kept my attention for quite awhile.

And now to the tree exhibiting characteristics I hadn't seen before. The extremely blocky bark and the trunk without "ski tracks" threw me off the scent of Northern Red Oak. Here's the original post: <http://www.ents-bbs.org/viewtopic.php?f=38&t=5562>



I was able to do the Sine Method on a Striped Maple and got 44ft.



Striped Maple Bark

Balsam Fir, Paper Birch, and Red Maple are also prevalent at the site. Many other species were present, but to a lesser extent.

On the way home I visited Lower Huron Metropark near Detroit. (<http://www.ents-bbs.org/viewtopic.php?f=90&t=3822&start=30#p24402>) As I crossed the Ohio line the rains came down and I appreciated my northerly excursion that much more.

My Master File: <http://www.ents-bbs.org/viewtopic.php?f=111&t=4836>

- Matt

Species (Scientific)	Species (Common)	Girth (ft)	Comments
<i>Pinus strobus</i>	Eastern White Pine	9.35	Shot laser straight up for an approximate height of 90.5 ft
<i>Pinus strobus</i>	Eastern White Pine	7.67	Shot laser straight up for an approximate height of 93.5 ft
<i>Pinus strobus</i>	Eastern White Pine	7.34	
<i>Pinus strobus</i>	Eastern White Pine	7.21	Shot laser straight up for an approximate height of 83 ft
<i>Pinus strobus</i>	Eastern White Pine	7.18	Shot laser straight up for an approximate height of 107 ft
<i>Pinus strobus</i>	Eastern White Pine	7.15	Shot laser straight up for an approximate height of 107 ft
<i>Pinus strobus</i>	Eastern White Pine	7.08	Shot laser straight up for an approximate height of 101 ft
<i>Pinus strobus</i>	Eastern White Pine	6.6	Shot laser straight up for an approximate height of 93.5 ft
<i>Pinus resinosa</i>	Red Pine	6	Shot laser straight up for an approximate height of 81.5 ft
<i>Pinus strobus</i>	Eastern White Pine	6	Shot laser straight up for an approximate height of 101 ft
<i>Pinus strobus</i>	Eastern White Pine	5.97	Shot laser straight up for an approximate height of 92 ft
<i>Thuja occidentalis</i>	Northern White-Cedar	5.41	
<i>Thuja occidentalis</i>	Northern White-Cedar	5.41	
<i>Pinus resinosa</i>	Red Pine	5.15	Shot laser straight up for an approximate height of 93.5 ft
<i>Betula papyrifera</i>	Paper Birch	4.75	Shot laser straight up for an approximate height of 63.5 ft
<i>Thuja occidentalis</i>	Northern White-Cedar	4.16	Shot laser straight up for an approximate height of 63.5 ft
<i>Thuja occidentalis</i>	Northern White-Cedar	4.16	Shot laser straight up for an approximate height of 74 ft
<i>Betula papyrifera</i>	Paper Birch	3.6	Shot laser straight up for an approximate height of 68 ft
<i>Betula papyrifera</i>	Paper Birch	3.41	
<i>Abies balsamea</i>	Balsam Fir	1.83	Shot laser straight up for an approximate height of 57.5 ft
<i>Acer pensylvanicum</i>	Striped Maple	1.24	

[Re: Besser Natural Area \(MI\)](#)

by **Matt Markworth** » Mon Jul 15, 2013
7:49 pm

bbeduhn wrote: Nice burl on the whitecedar!

Brian,

These old cedars were pretty interesting. Here's a different angle, along with two other cedars . . .



- Matt

[Re: Besser Natural Area \(MI\)](#)

by **dbhguru** » Wed Jul 17, 2013 12:04 am

Matt

I am very impressed by the measuring output of you and Brian. Both of you have amassed quite a lot of measurements. Do either of you have thoughts about the treatment of single versus multi-stemmed trees in the big tree contests?

Bob

[Re: Besser Natural Area \(MI\)](#)

by **bbeduhn** » Wed Jul 17, 2013 3:01 pm

Bob,

I am fully in support of having two listings. I much prefer single stemmed as I feel true trees are single stemmed in most circumstances. However, I have nothing against multi-stemmed trees. They are simply another kind of beast. I get very annoyed

when there is a true single that has no chance of competing with a multi; case in point, the Ohio sycamore. It's up to the individual states to confirm single vs. multi and fortunately, NTS has made headway in that regard. Hopefully, in five years' time we'll see all states separating trees into categories and have all trees accompanied with a photo, and have someone who knows how to measure properly to confirm the findings.

I just found a potential National champion hickory but there's a bigger one in Florida without as much as a photo, so there's no way of telling that it's a multi, which I presume but do not know for certain.
Brian

Virginia Pine Sites with 110 Footers

by **bbeduhn** » Wed Jul 17, 2013 12:02 pm

I'm keeping track of sites with Virginia pine topping 110'. If anyone has additional sites or additional trees at these sites, please add them.

Greensboro, NC
Guilford Courthouse
along paved road 111.0'
115.9'
along paved trail potential 120'

Asheville, NC
Mountains-to-Sea Trail
between BRP HQ and Swannanoa River 112.1'

Gorges State Park, NC
near Frozen Creek access 114.0'
Rock Creek/Foothills Trail 110.3'
120.6'(Blozan)
Toxaway River/Foothills Trail 110.2'
111.9' 112.1' 118.6' 119.2' 120.5'

Chattooga River, SC
picnic area, ~2 mi from river 110' 114'

Jocassee Gorges, SC
Laurel Fork Heritage and just west of 110.9'
113.6' 113.7' 113.9' 124.6'

Whitewater River, SC
just south of NC border 110.4'
118.1'

Clayton, GA
Warwoman Road 122.3'
(Blozan, Riddle)

Unicoi Turnpike, GA
Spoilcane Creek tributary 111.2'
(Riddle)

The Warwoman VA pine still holds the official record. Looking back at my notes, I'm confident that the Laurel Fork was measured accurately but haven't been back to make certain and get photos.
Brian

Re: Virginia Pine Sites with 110 Footers

by **Will Blozan** » Wed Jul 17, 2013 2:52 pm

Brian,

There is a 114+ at the WNC Nature Center and 111+ at the NC Arboretum. I measured four over 114' in GA this past weekend but am not sure of the creek name. I'll look it up and let you know.

There was a 114' tree near Sylva but it was cut down...

Will

Re: Virginia Pine Sites with 110 Footers

by **bbeduhn** » Wed Jul 17, 2013 3:12 pm

Will,

I remember you pointing out the Sylva location. I got a lower figure at the Arboretum...I think about 107', and remeasured a little lower so it may no longer top 110'. We'll check out the Nature Center at leaf off.

You also found a few at the Kellogg Center which I missed due to the dazzling effects of the superlative pitch pines there. Georgia likely has quite a few more superlative VA sites (4 over 114', excellent!).

110' is becoming more common (or at least more noticed) for the species.

Brian

Re: Big MN Cottonwood

by **AAnsorge** » Thu Jul 18, 2013 10:20 am

Thanks...

I also measured a very nice cottonwood at Decorah on the Luther campus. It was only 78 feet tall but 24 foot circumference at BH. A true single stem beauty.

Tree Maximums - Genus of the Week: Catalpa

by **Matt Markworth** » Sun Jul 14, 2013 8:08 pm

Hi all,

Genus of the Week: Catalpa

I always enjoy seeing a mature Northern Catalpa and I think it would be really cool seeing one in it's native

range. Has anyone ever measured a monster Catalpa? Some of the State Lists have CBH's of 20ft+.

Please reply with these measurement details if you think you've measured a specimen displaying the growth potential (Height, Girth, Spread, or Volume) of the species. Please include photos when possible.

Tree Maximums List 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>

USDA Plants Database:

<http://plants.usda.gov/java/profile?symbol=CATAL>

Don Leopold video:

<http://www.youtube.com/watch?v=EPZR5etxokA>

- Matt Markworth

Re: Tree Maximums - Genus of the Week: Catalpa

by **tsharp** » Thu Jul 18, 2013 10:11 am

Matt: Sorry - no picture

Scientific name: Catalpa speciosa

Common name: Northern Catalpa

Height: 80.6'

CBH: 173.4' taken at 3'

Crown Spread: Max. = 67.5', Average = 60.25'

Volume:

Site name: Huttonsville

Subsite:

Country: USA

State: West Virginia

County: Randolph

Property owner: Private property

Date of measurement: 4/10/2010 by Turner Sharp

Method of measurement: Sine method using

handheld Nikon 440 laser rangefinder and Suunto clinometer

Tree name:

Habitat: Yard tree

Notes:

Turner Sharp

Re: Tree Maximums - Genus of the Week: Catalpa

by **Will Blozan** » Thu Jul 18, 2013 8:56 pm

<http://www.ents-bbs.org/viewtopic.php?f=124&t=2576>

Not sure if this post with *Catalpa* made it on any max lists yet- if it even qualifies...

Will

Re: Aerial Drones

by **M.W.Taylor** » Mon Jul 01, 2013 7:29 pm

Ed, The rules are a bit confusing. You can fly over 400 feet with a UAV license. But you can't use for comerial purposes. For RC planes flying strictly under 400 feet above Earth's surface you may be able to sell the videos depending on who you ask at the FAA. There were people last year flying UAVs over the Grand Canyon to sell aerial videos of the place. The rangers there confiscated their media.

But for research such as finding tall trees.....There are few restrictions. The most import thing is to keep the drone below 400 feet of surface features. With the new GPS systems on the autopilot this is easy to do.

The UAV is an excellent tool for locating and

measuring remote trees. But there is no substitute for a ground based search.

Michael Taylor

Re: Aerial Drones

by **M.W.Taylor** » Mon Jul 01, 2013 10:18 pm

edfrank wrote: Michael, I saw this article and was wondering on your take on the issue.

Right now laws and ordinances are being enacted in many states to prohibit UAVs. There is a brief window to fly these for tree finding without breaking laws. As long as you stay under 400 feet, keep in eye sight if in NAS (national air space--above 500ft) and your UAV weighs under 66 lbs. I believe the article is misleading. It's when you fly in commercial airspace 500 feet and above with a UAV you need a COA license. ALso in this domain you are not allowed to fly UAVs for commercial purposes.

A lot of private enterprises appear to mislead the public. Perhaps so that others don't attempt to make their own UAV companies. They want to promote their own products yet discourage others from trying.. too many regs. etc.. I heard this one before.. There are 1000's upon 1000's of RC plane and helicopter videos for sale. These are low altitude fly-overs. They are not illegal to produce. To put a video camera in an RC plane and sell it is not illegal if being used as a model airplane...i.e. flown under 400 feet, under 66 lbs. >5 miles from airport or military base etc... When going into civilian airspace then I think it is illegal to use video for commercial purposes.

This is how I interpret the FAA website. I have seen a few articles on the newspapers that says it is illegal to fly UAVs in the form of RC planes with an autopilot system. They are mistaken. Clearly they want to hinder others from duplicating.

The attached FAA document actually does say using model UAV for commercial purposes to be illegal without a COA license. So yes, it is not legal to use these commercially without a COA license. See attached. You can fly out of sight if under 400 feet if I interpret the document correctly. For recreational purposes I would consider tree hunting applicable.

Michael T.

 [fnotice_uas.pdf](#)

Re: Aerial Drones

by **M.W.Taylor** » Thu Jul 04, 2013 3:30 am

*Joe wrote: Aside from spying on us from the air- my biggest concern is that they could crash- into our properties! Under 400'? I don't want any *&^%\$ plane, however small, flying just a few hundred feet up over my house- it's enough to make me go out and buy a &^%\$\$# gun and shoot it down- for one thing, they'll be noisy.*

Joe, They sound like giant mosquitos. And they get louder and louder. They could also cause property damage, injury or even death to people if they crashed in a populated area. That is why I don't fly over private property or populated areas. If I flew one over your house and you shot it down I guess I could say I would not blame you. I am using these out in the wilderness to search areas too remote to reach by foot. If they were accessible, I would be there on foot most likely.

Michael

Re: Aerial Drones

by **edfrank** » Thu Jul 18, 2013 3:16 pm

NTS, This isn't a tree video, but it was so cool I wanted to share it:



Man Captures Video Of Niagara Falls with a Phantom Quadcopter (VIDEO)

By Irina Dvalidze

Posted: 07/17/2013 5:32 pm EDT | Updated: 07/17/2013 8:26 pm EDT

http://www.huffingtonpost.com/2013/07/17/aerial-video-of-niagara-falls_n_3612086.html

Youtube user questpact recently shared a stunning video of the falls, which was shot using a GoPro camera and DJI Innovations Phantom quadcopter. A small radio-controlled aircraft. DJI Innovations has been promoting the copter's compatibility with GoPro HERO Action Cams.

B&H

<http://www.bhphotovideo.com/c/search?ci=1&N=4047623981+4042754142>

A review: <http://techcrunch.com/2013/04/01/the-gps-enabled-dji-phantom-quadcopter-makes-the-drone-look-like-a-toy/>

Videomaker review:

<http://www.videomaker.com/article/16035-dji-innovations-phantom-quadcopter-review>

GoPro: <http://gopro.com/>

Re: Aerial Drones

by **Don** » Thu Jul 18, 2013 9:02 pm

Mike/Ed/Joe-

In the years 1998 through 2003, I was a GIS Technician at Grand Canyon NP. My boss, and later my nearest co-worker did the GIS work for the Park in the extensive collaboration with FAA folks. I can tell you there was considerable high-level interest in Congress, and the airspace issues over Grand Canyon were hotly debated then, and I suspect still.

I wish I could grab one of the 3D 'maps' that Tracey put together to display the 3D nature of the airspace over Grand Canyon, to demonstrate the effects of various decisions. These discussions controlled what rather large commercial entities could, and couldn't do (and they had 'influence' in spades). I'm not surprised that folks flying their UAV's were stopped. For the reasons above. But at a more personal level, for the visitors, the wildlife, and the silence that Grand Canyon NP fights really, really hard for, I would want them stopped too.

Or, if I were mean, at least force them to go through the same environmental assessment processes I had to as an employee trying to accomplish assigned tasks (like hazard tree treatments down in Phantom Ranch, or wildfire hazard reduction research).

-Don Bertollette

Re: Mountains-to-Sea Trail

by **bbeduhn** » Mon Jul 15, 2013 9:10 am

The rain just doesn't want to stop. I ventured out despite the endless downpours and checked out some shortleaf I'd been itching to measure. These are associated with some previous measurements.

new

pinus echinata shortleaf pine 99.1' 103.4'

103.6' 103.7' 110.8' 111.1'

previously measured

pinus echinata shortleaf pine 106.5' 117.5'
118.1' 122.3' 124.6' now dead

I did some recon further up the trail as well. I noticed tulips and hickories and took a few measurements this time. The fog limited me as well as a steady downpour. This area looks promising as it is a steep slope dominated by tulip with a strong presence of hickory.

Liriodendron tulipifera tuliptree 128.9' 135.4'
141.0'

Carya cordiformis bitternut hickory 117.6' 129.3'

Brian

Re: Mountains-to-Sea Trail

by **bbeduhn** » Wed Jul 17, 2013 9:59 am

Bob,

The current Rucker index for the Mountains-to-Sea Trail:

R10= 133.13'

R20= 124.83'

pinus strobus 154.7'

lirio tulip 142.1'

pinus taeda 134.0'

quercus montana 133.5'

quercus alba 130.9'

carya glabra 129.4'

carya cordiformis 129.3'

quercus rubra 127.2'

quercus coccinea 125.4'

pinus rigida 124.8'

carya ovalis 122.6'

pinus echinata 122.3'

fraxinus Americana 121.6'

quercus velotina	121.3'
metaseq glypto	119.7'
prunus serotina	114.7'
acer rubrum	113.8'
pinus virginiana	112.1'
robinia pseudo	110.2'
carya alba	107.0'

The dawn redwood sounds funny. I included trees within 100 yards so loblolly and redwood at the entrance to the WNC Arboretum are included. Tulip should go higher and hickory may as well. Sycamore should make the list and red spruce has a chance. I hope to get some spruce this weekend but the Parkway closure will make that difficult.
Brian

[Re: Mountains-to-Sea Trail](#)

by **dbhguru** » Wed Jul 17, 2013 11:38 pm

Brian,

Totally cool! I really like the idea of profiling big/tall trees along an important hiking trail. It really is a new way to focus the attention of others on the features offered by a trail. Lots to do along those lines. Featuring trees along a trail is what we are doing with the Hermosa Creek Trail in the La Platas. The Mountains-to-Sea Trail sounds like it offers endless possibilities.

Robert T. Leverett

[Re: Mountains-to-Sea Trail](#)

by **Josh Kelly** » Thu Jul 18, 2013 10:57 am

Brian, It's worth noting that the Mountains-to-Sea Trail goes through some great big/tall tree territory in the Smokies including Pole Road Creek, Chasteen

Creek, Enloe Creek and Hyatt Creek. All of those areas would add notable species maxima to your list.

Josh

[Re: Mountains-to-Sea Trail](#)

by **bbeduhn** » Thu Jul 18, 2013 11:13 am

Josh & Bob,
I haven't made it to those areas yet. There's some old growth near 73/74 that might need some checking but it's remote. I imagine those areas could push the Rucker well beyond 140'. It also hits some nice areas in the Piedmont. I doubt I'll try to search the entire trail...938 miles at present and it will grow a bit over time.
Brian

[Re: Mountains-to-Sea Trail](#)

by **edfrank** » Sat Jul 27, 2013 7:25 pm

Brian, Guys, Girls,

For something like a trail or other linear feature I would think it would be important to only include trees within a certain distance of the path of the trail.

What do you think? If you disagree, why? If you agree, what is a good distance from the trail to include?

Ed

Larry Tucei's Pine and More

by **dbhguru** » Wed Jul 17, 2013 7:45 pm

Hi Folks,

With my sinus infection and allergies under control,

Monica and I went up the Hermosa Creek Trail in the La Platas to visit the Larry Tucei Pine and look for other fine trees. When we got to Larry's tree, I set up and shot it from several locations and found a higher top. I got 149.0 feet, which includes a half foot to mid-slope. At mid-slope, I got 13.9 feet in girth. Here is a look at the tree with Monica in for scale.



Here is a look at the crown with an arrow pointing to the highest sprig.

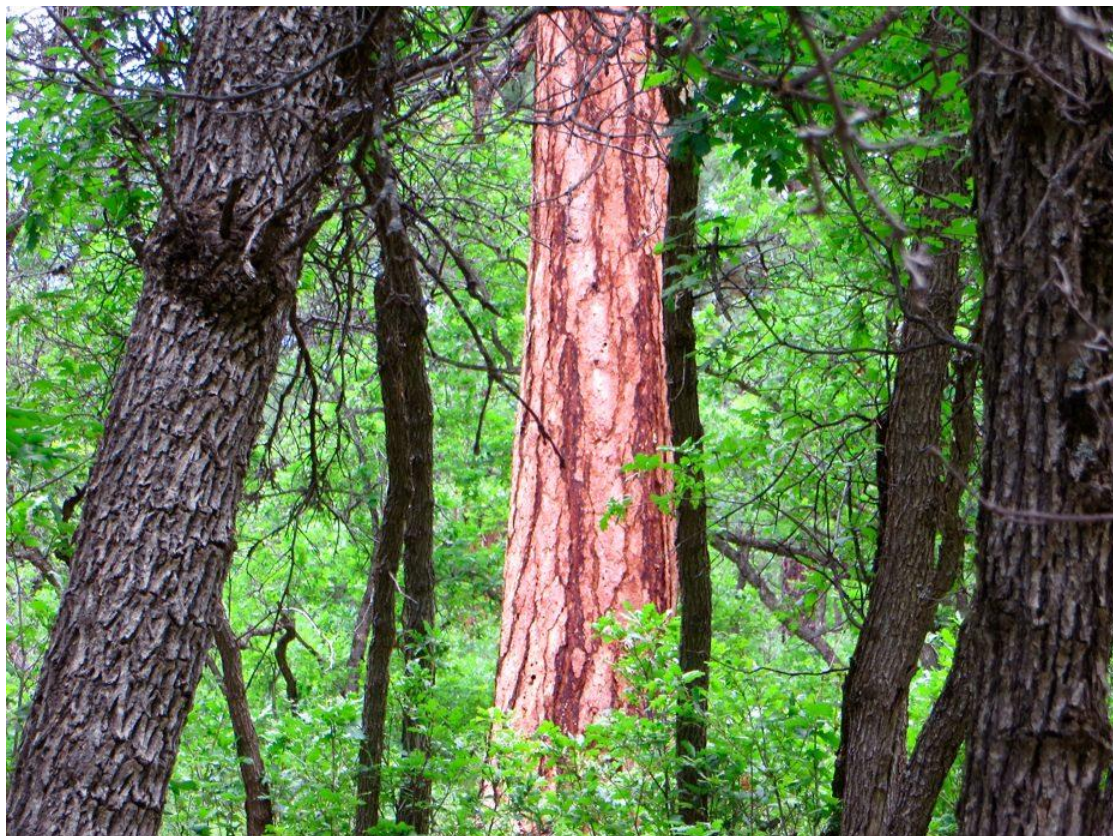


I estimate that this big pine has very close to 1,000 cubes in its trunk and with the limbs will certainly exceed 1,000. I may return with the monocular and model it for volume. My calculation is

$(13.9^2/(4*\pi))*0.44 = 1007$. The 0.44 figure is realistic for this tree - I think. Hopefully, I can model it with the monocular.

Everywhere one looks the ponderosas excel. Here is a taste of pindy power.





And now for a vista shot.



On this trek, I confirmed three new 150+ foot Colorado blues: (156.0, 152.0, and 151.5. This brings the total 150-foot Colorado blues along Hermosa Creek to 6. In addition, we have 7 ponderosas that reach 150, and 2 Doug fir. There are quite a few trees in the 140s. This is a very significant big tree site.

Robert T. Leverett

[Re: Larry Tucei's Pine and More](#)

by **dbhguru** » Thu Jul 18, 2013 9:41 am

Larry, We went about a quarter of a mile farther. No let up in the possibilities. Rains have helped with the fires, but the West Fork fire is still burning. Yes, next

year can be a banner one, but this year isn't over. Next week I'll continue the hunt with Mark Rouw, the Iowa Big Tree Guy. We'll keep you posted.

On next Tuesday, Laurie Swisher of the San Juan National Forest and I will model the Larry Tucei pine for volume. I'm guessing somewhere between 900 and 1,000 cubes for the trunk. I plan to use the Vortex Solo RT 8 x 36 monocular and the LTI TruPulse 360. I also plan to use some photographic analysis for limbs. I should have results by Wednesday or Thursday. I appreciate the Forest Service backing this effort. We really do have a partnership with the San Juan NF.

Bob

Structure From Motion to create high resolution point clouds

by **M.W.Taylor** » Fri Jul 05, 2013 6:34 pm

The attached is an example of a point cloud generated using "Structure From Motion" theory and software from University of Washington. The C++ code is open source. I've posted this example on ENTS before.

In this project a plane orbited around the Fetzer Giant, world's tallest and largest known valley oak. Inside plane was pilot Ben Fetzer and photographer Mike Hanuschik. Mike put his camera in photo burst mode so he created a 100+ panoramic series of images of the Fetzer Oak from 360 degrees in an "orbit" pattern around the big oak as the central focal point.

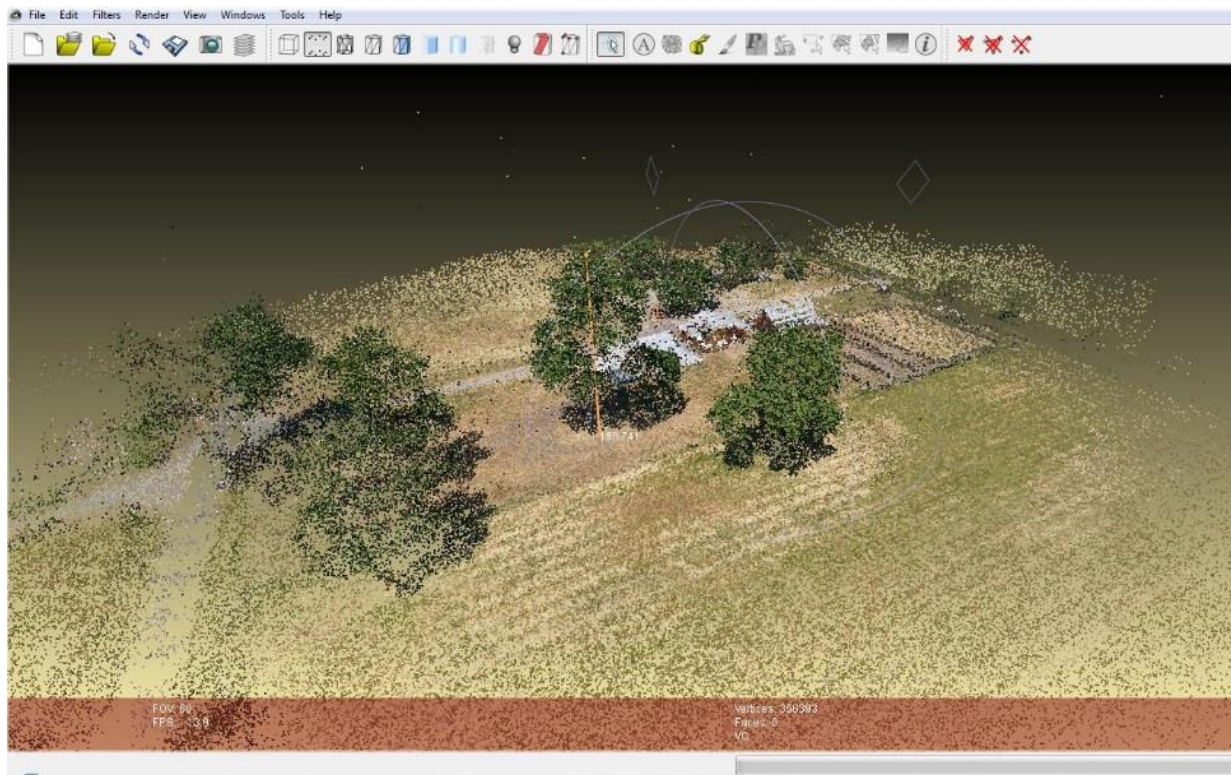
But this could be a UAV doing this. My auto pilot UAVs can be programmed to orbit around a 3D waypoint at point a camera at the waypoint in a locked position. Then do photo-bursting. I'll post results of this test soon.

The attached pictures show the orbit "photo burst" use to create the digital elevation model (also known as a point cloud). You can load the point cloud into AutoCad or a free program such as MeshLab and use the ruler tool to measure every tree, object and structure for size/height.

This is the future of tree measurement. This should be in the measurement group workshop in my opinion.

Michael Taylor

WNTS VP
California Big Trees Coordinator
<http://www.landmarktrees.net>



resultant point cloud of orbit pattern photo-burst for the giant Fetzer Oak. You can see the grand oak

being measured at 150'+ using the Meshlab ruler tool



orbit photo-burst of Fetzer Oak to create lawyered 3 dimensional point cloud

[Re: Structure From Motion to create high resolution point cl](#)

by **mdavie** » Sat Jul 06, 2013 7:35 pm

Absolutely. This is great stuff!

[Re: Structure From Motion to create high resolution point cl](#)

by **dbhguru** » Sat Jul 06, 2013 10:40 pm

Michael,

It will be exciting if American Forests makes room for advanced methods of tree measurement. I'll do my best to create some space for methods such as you are developing, but I think you know the inertia that I will encounter. Adopting such advanced methods would represent more than simply pushing the envelope. It would represent sending the envelope on a journey around the world. We have a good team though. One of the members of the group is an associate professor of forest biometrics, and he does know his stuff. There is stuff brewing with the group that I think you would approve of.

However, I'm not going to win on every issue. I will have to compromise at points along in some of the processes.

Bob

[Re: Structure From Motion to create high resolution point cl](#)

by **Jess Riddle** » Sun Jul 07, 2013 5:33 pm

Wow! I never thought techniques like this would be available so soon. I had assumed technology like this was at least a decade off.

[Re: Structure From Motion to create high resolution point cl](#)

by **Don** » Sun Jul 07, 2013 10:05 pm

Jess-

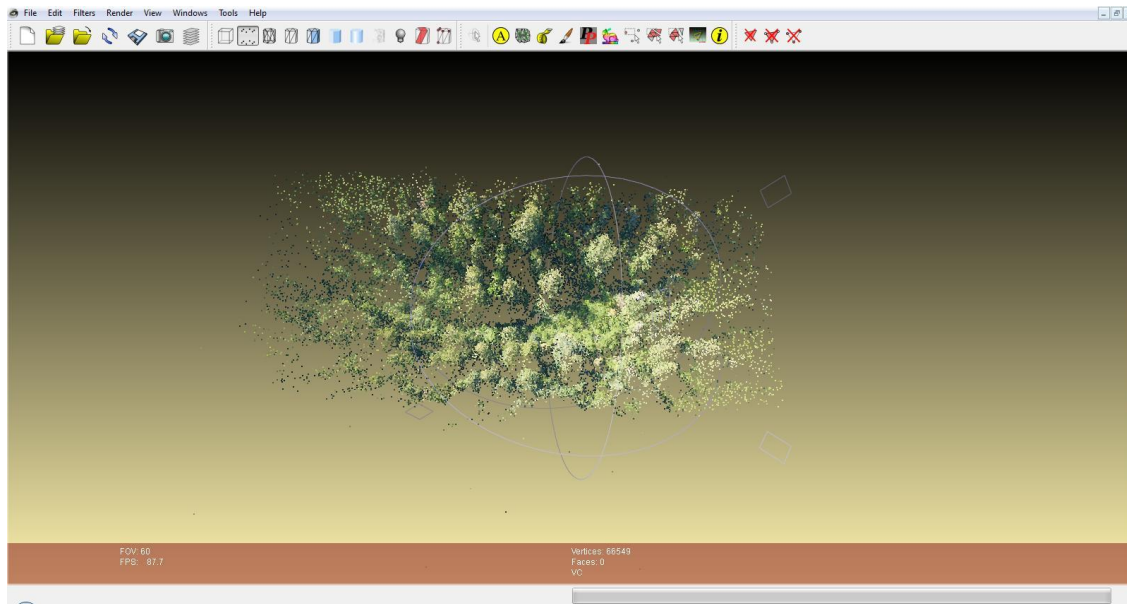
One of my fellow Alaskans, a friend, and a lurker (Ken Winterberger) on our forum here has been investigating use of SfM for future natural resource inventories in Alaska. He believes is has a lot of potential and could be a natural pairing with LiDAR. Much like LiDar and satellite imagery can be paired. And certainly Michael Taylor has gotten with the program!.

Don Bertollette

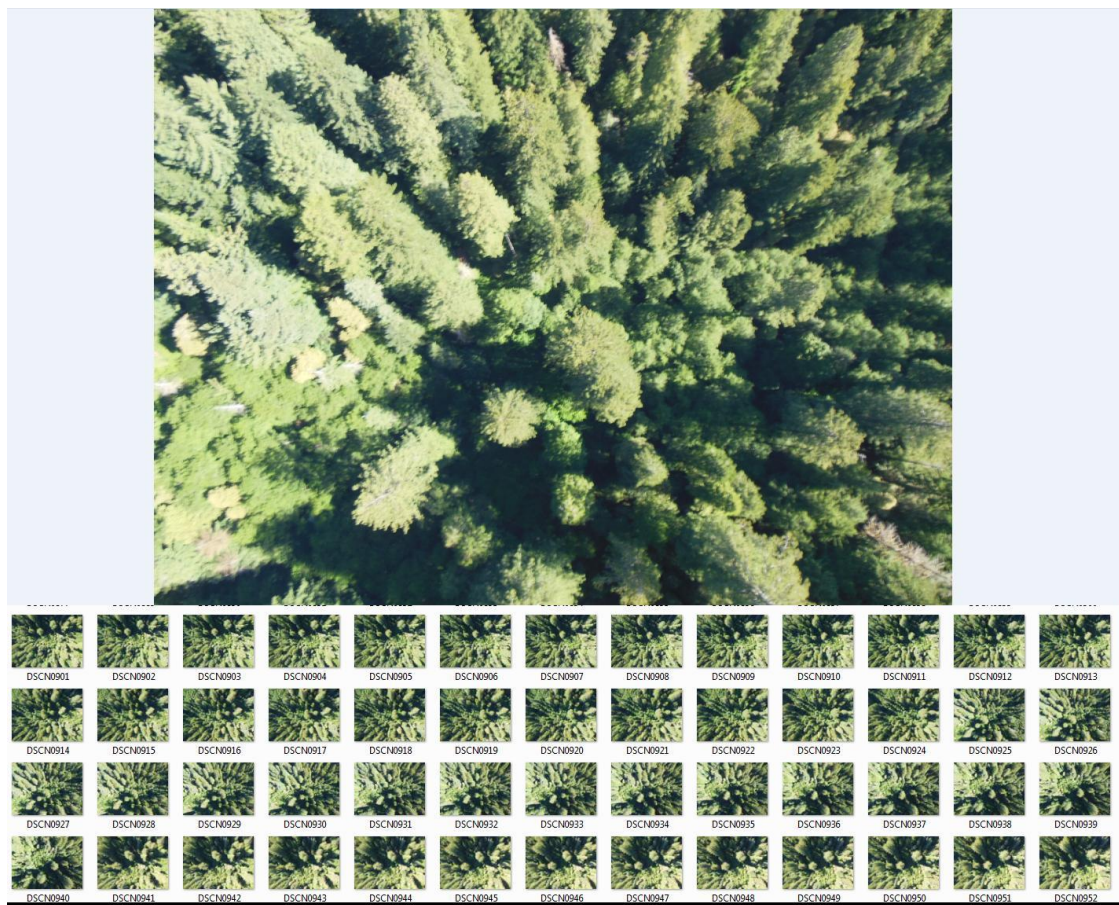
[Re: Structure From Motion to create high resolution point cl](#)

by **M.W.Taylor** » Fri Jul 19, 2013 12:30 pm

Here is another example of a point cloud taken of a forest generated by one of my UAVs using photo-bursting. This particular redwood forest is too remote for me to reach on foot (it would take 3 full days to get there and back). But with the UAV it only took 25 minutes to explore the remote basin. The photo-burst is programmed to activate at specific waypoints in the flight plath. The duration, number of pictures and coverage distance of the photo-burst is completely programmable. Once sccaled, every object in the point cloud can be measured. The attached is the raw point cloud, unprocessed. You can manipulate in Meshlab as a 3D graphic.



resultant point cloud of the photo-burst



overhead photo burst of remote redwood forest to
measure canopy height above ground

[Drone Explores & Measures Trees In A Very Remote Forest](#)

by **M.W.Taylor** » Fri Jul 19, 2013 1:21 pm

I recently explored the remote redwood forest of by UAV. No tree over 350' were found there but the area was completely unexplored so it was a new frontier and it needed to be surveyed. It would take 3 full days to just reach the upper part of this basin on foot. Now I can explore it in 30 minutes.

The attached represents the Mission Planner Software I use to program the drone to access a remote, unexplored redwood forest. The flight path in 3D overlay on Google Earth and Terrain maps + front

mounted GoPro pictures. The mission must be carefully planned otherwise the drone will crash.

This mission had the UAV flying 400 feet over the surface features. After locating all the tallest tops on HD video I later returned with a point cloud mapping drone/UAV for targeted height measurement. This UAV/drone uses a downward pointed digital camera in photo burst mode. The triggering is accomplished through the AutoPilot software at each waypoint arrival.

Michael Taylor

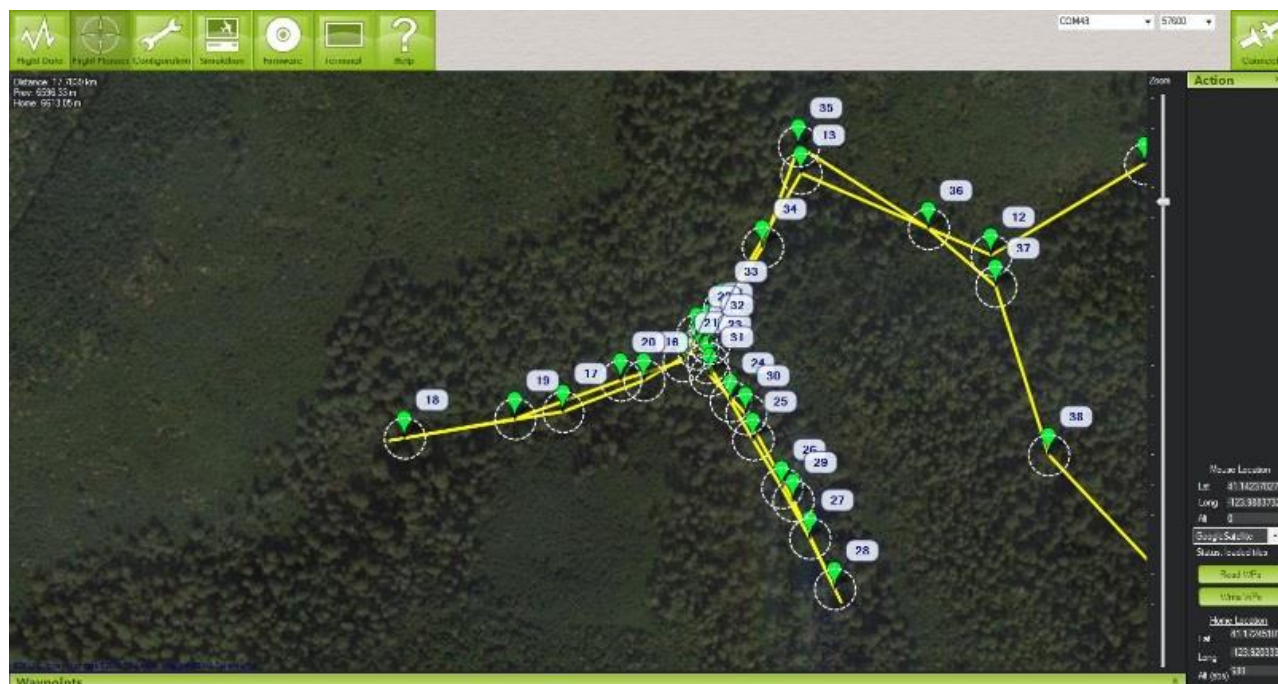
WNTS VP

<http://www.landmarktrees.net>

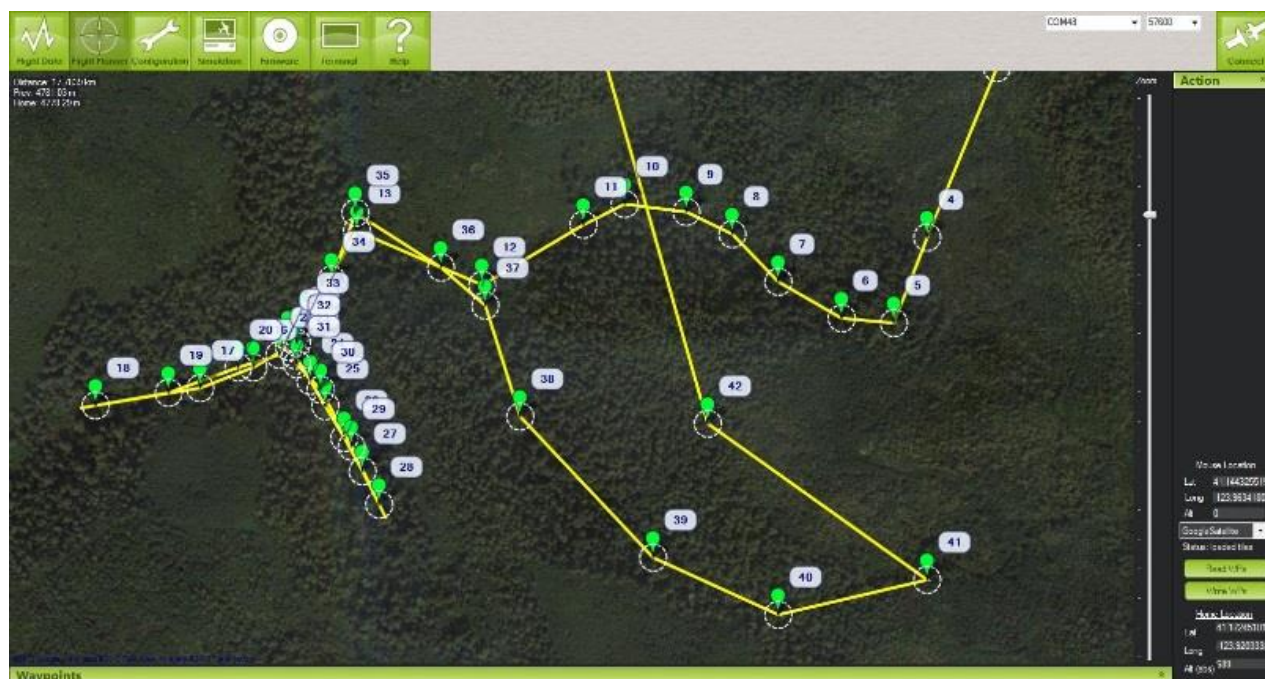
California Big Trees Coordinator



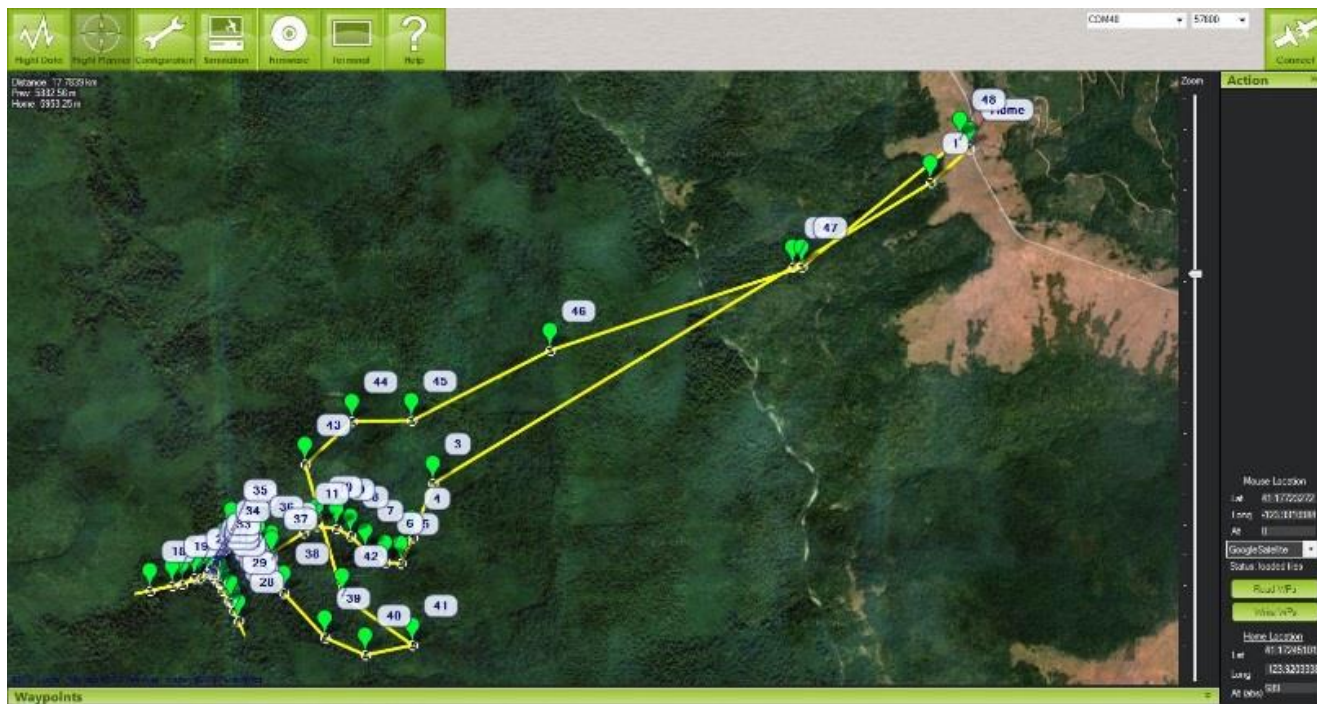
I intentionally place the flight path over the juciest looking crowns on Google Earth



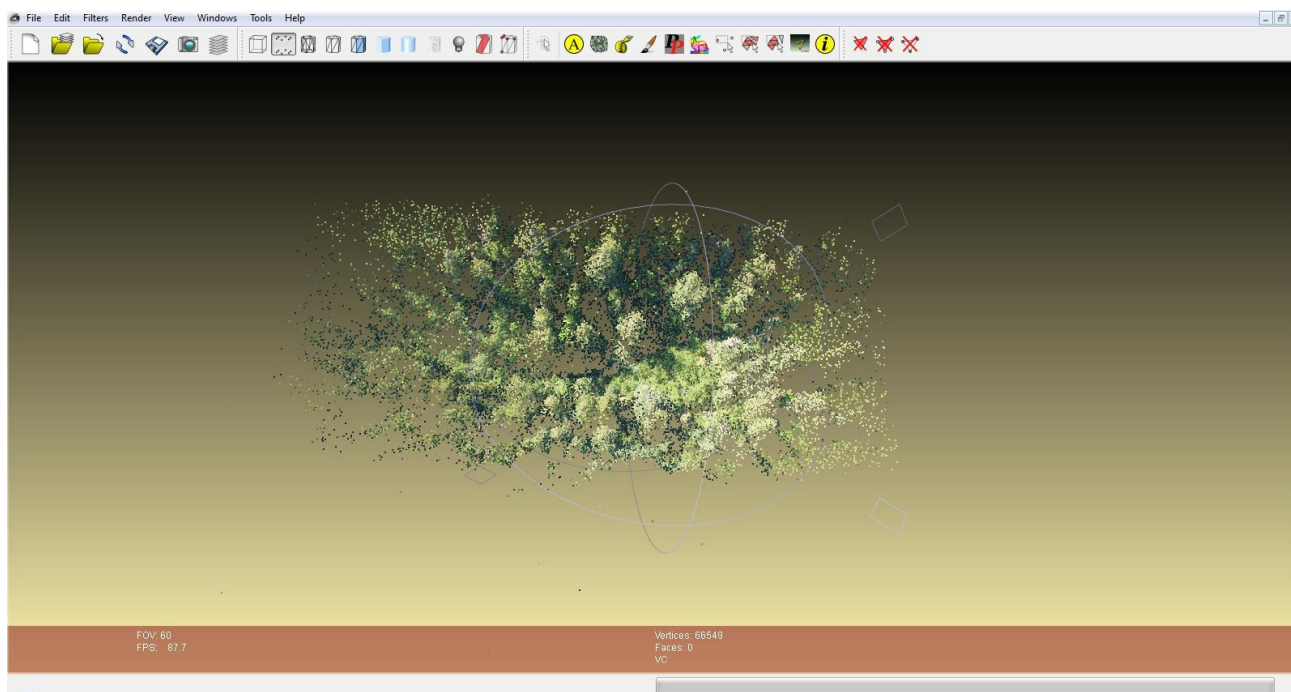
planning the mission close up view



planning the mission - this is free, open source software !



planning the mission



point cloud of tall crown area. This is unscaled at the moment. After re-orienting Z-axis to gravity and rescaling, I'll be able to measure every tree in the point cloud from Meshlab using the ruler tool. Tallest tree in this point cloud is about 330', way up on the side of the hill.



photoburst of well protected region with emergent crowns and deep shadows, suggestive of tallness



returning home after long journey



Crossing the Gorge



climbing over ridge-line and returning to launch point



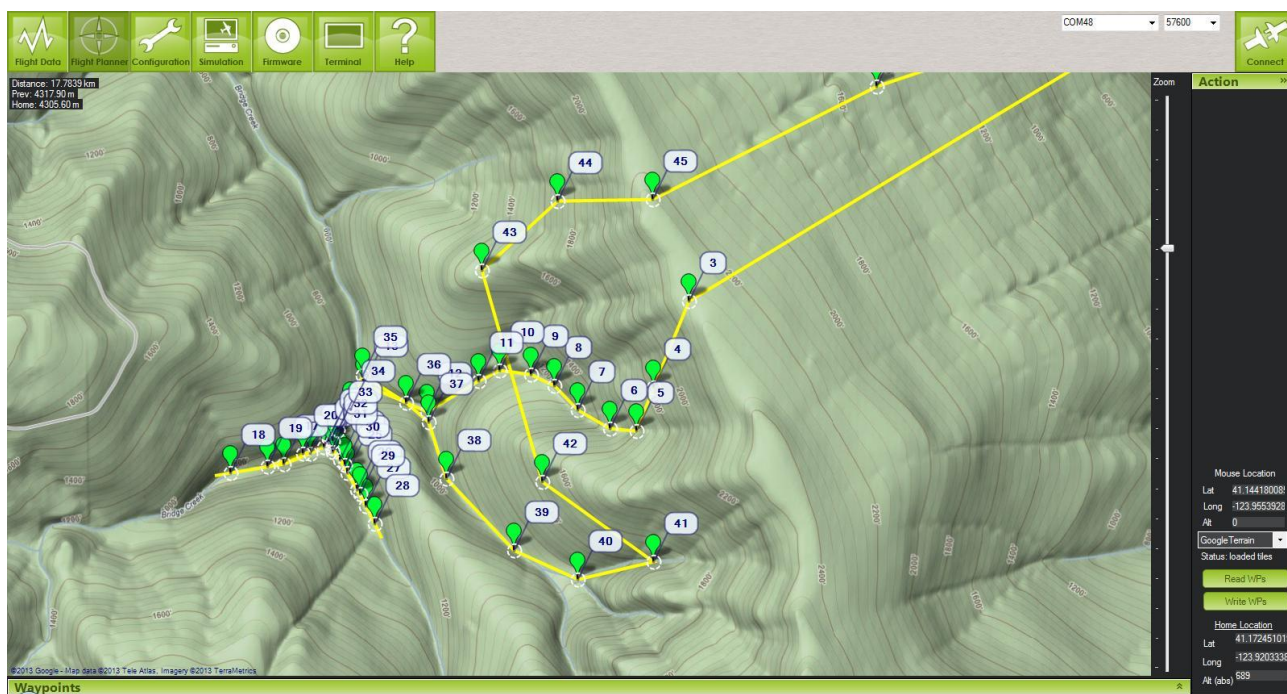
gopro forward mounted



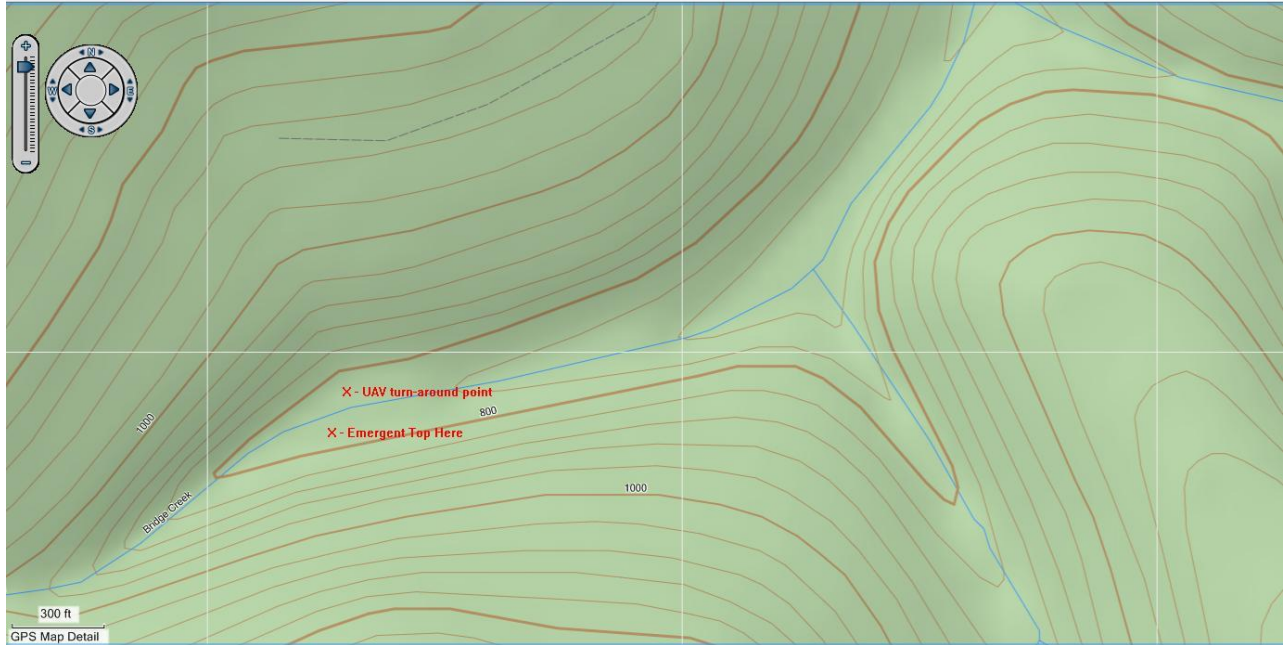
forward mounted GoPro - The footage is reviewed later from SD card, not in real time which would require extra heavy transmitter equipment. This saves weight on the UAV and dramatically increases its range



terrain view2



terrain view



USGS topo view

[Re: Mission to Bridge Creek](#)

by **dbhguru** » Fri Jul 19, 2013 1:28 pm

Michael,

Your accomplishments leave us speechless. You are so far ahead that companies that work in this area nuts not to grab you.

Robert T. Leverett

[Re: Mission to Bridge Creek](#)

by **M.W.Taylor** » Fri Jul 19, 2013 1:41 pm

Hey Bob, I greatly appreciate your comments. Thanks !

I have been getting some inquiries lately. But those companies just don't know me. To date I've been secretive about my gadget building.

Re: Testing TruPulse 200 X

by **Karlheinze** » Mon Jul 15, 2013 10:37 am

Bob, I have questions:

As you know, I want to buy an instrument with a sharply focusing laser beam. My main application will be: Mounted on tripod to point and measure precisely a small target at tree top. (Measurements in cluttered environments along the forest floor to the base of a trunk is not so significant for me because I already can do this very precisely with Leica DISTO D8 or by tape measure).

- The major technical modification to TP200X is the new laser with visible red light. You have tested it against the Bosch GLR825. You will have seen the footprints of the two laser beams when hitting the target and you will be able to compare. Did both footprints look the same? Were both beams equally narrowly focused?

- When you measured the tree top of champion Colorado blue spruce and others, was it in bright daylight or towards evening in fading light?

- In the TruPulse 200X Specifications < [http://www.lasertech.com/TruPulse-Laser ...inder.aspx](http://www.lasertech.com/TruPulse-Laser...inder.aspx)? I find no statement about the power of the new laser, but several dealers complement the specification as follows: "Eye safety: FDA Class 1 (CFR 21)". This means strongly restricted laser power, in any case no more than 1 mW. Other rangefinders with Red Laser already introduced on the market are Leica Disto D8 and Trimble LaserAce 1000. For reasons of eye protection they also are limited to Class 1 devices. With these devices it is almost impossible to capture returns from the tree top, especially in bright daylight. They can not be recommended for tree height measurements. Therefore I am skeptical: How wants the TP200X to solve the job so much better than the competing models with the same laser power? Is there a statement of LTI?

Announced release date was postponed by months.

Stakemill.com now says: Early 4th Quarter. I am unsure if it makes sense for me to continue waiting and trust the promises of LTI. They have published up to now only insufficient information about technical data and abilities. When the unit is on sale in Germany and at what price, remains open.

Karl

Re: Testing TruPulse 200 X

by **Will Blozan** » Mon Jul 15, 2013 5:18 pm

Karl,

Am I mistaken to think that the visible red laser is NOT the impulse used for the length measurement? I was under the impression that the red beam was for positioning/sighting, not measuring.

Will

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

by **edfrank** » Sat Jul 13, 2013 9:22 pm

October 9-14, 2013



tci.JPG (18.83 KiB) Viewed 229 times

Hosted by Tree Climbers
International

<http://www.treeclimbing.com/>

Simpsonwood Conference Center, Norcross, Georgia



5 folks in treeboat

Tree Climbers Rendezvous, 2008

How many people are piled up on this treeboat?
If you think six, look again!

See more pictures from the 2008 Tree Climbers
Rendezvous
at Simpsonwood in our Rendezvous Gallery.

TCI is very excited to invite you to the 2013 Tree
Climbers' Rendezvous. This five-day event is going
to be fantastic. We have BIG TREES to climb and
GREAT THINGS planned for when you're on the
ground.

The 2013 Rendezvous celebrates the **30th year of
recreational tree climbing**. There are plenty of stories
to be shared by some of the first members of TCI and
lots of others who have been climbing throughout the
years.

You don't have to be a tree climber to attend, though
you may have more fun if you are! This gathering is
for anyone who is interested in trees and/or the
research being done in and about them.

Come Climb With Us!

The trees at Simpsonwood are exceptional. There are
specimen trees of many types. There are also very
large trees of species common to the Southeast of the
United States: oaks, pines, poplars, and other
hardwoods. The grove of huge white oaks is perfect
for "villages" of people sleeping in treetop
hammocks. Opportunities abound for tree climbing
adventures with old friends and new friends.

Educational Program: "Citizen Science for Tree Climbers"

During any Tree Climbers' Rendezvous, there is
usually a variety of excellent programs taught by

climbers with special skills. The 2013 Rendezvous will be no different; and many of the classes which are always enjoyed by Rendezvous participants, including Basic Doubled- and Single-Rope Technique Climbing Classes (these held before the Rendezvous starts), will be offered this year, too. However, TCI has also put together an extraordinary educational program which goes well beyond the traditional Rendezvous format.

The 2013 Tree Climbers Rendezvous has been organized with a distinct focus: "**Citizen Science for Tree Climbers**". "Citizen Science" is what it's called when non-scientists contribute data to scientific research. For example, the Cornell Laboratory of Ornithology <http://www.allaboutbirds.org/Page.aspx?pid=1189> has an extensive data collection system to which amateur and professional bird watchers from all over the world can report their sightings. People in the Community Collaborative Rain, Hail and Snow Network <http://www.cocorahs.org/> measure local precipitation and report to a national database daily. We want tree climbers to be "citizen scientists." We're up there climbing around anyway, so why not? All it takes is inspiration, know-how, and a place where data can be stored.

Keynote Presentations

During the Rendezvous "featured presentations," participants will hear talks from professionals whose work centers around their love and fascination with trees and nature in a variety of ways. Check out our program and amazing line-up of speakers. This is a unique "first" for any Tree Climbing Rendezvous. TCI is honored and thrilled to be your host.

Measuring Big Trees and Forest Preservation

This year's Rendezvous has been combined with the annual Rendezvous held by members of the **Native Tree Society**. These are the "big tree hunters" who discover, measure, and document the tallest and biggest trees in the United States and many other

countries. These three NTS people (in alphabetical order) will be giving featured presentations at the Rendezvous:

Will Blozan: Co-founder and President of the Eastern Native Tree Society (forerunner of the NTS) and of Appalachian Arborists; author of "Tree Measuring Guidelines of the Eastern Native Tree Society". Will was the director of the Tsuga Search Project aimed at documenting the greatest of the eastern hemlocks before they succumbed to the hemlock wooly adelgid. He is currently part of the research team mapping the canopy structures of the giant sequoias, including the "President Tree" featured in the December 2012 National Geographic Magazine.

Robert ("Bob") Leverett: Co-founder and Executive Director of the Eastern Native Tree Society (forerunner of the NTS). Bob has been called an "Evangelist for Old Growth." He is the Co-founder and President of the Friends of Mohawk Trail State Forest, a non-profit environmental organization; principal architect of the Ancient Eastern Forest Conference Series; and co-founder of the Forest Summit Lecture Series at Holyoke College, MA. Bob is also co-author of The Sierra Club Guide to the Ancient Forests of the Northeast and Eastern Old-growth Forests - Prospects for Rediscovery and Recovery.

Joan Maloof: Founder and Director of the **Old Growth Forest Network** (OGFN); author of Among the Ancients: Adventures in the Eastern Old-Growth Forests and Teaching the Trees: Lessons from the Forest. Dr. Maloof is raising money for the OGFN with a special Rendezvous offer. See details.

Bob and Will and other NTS members will be teaching three graduated daytime workshops on tree measurement. See below and upcoming publicity for more information.

In addition, **Monica Jakuc Leverett**, a concert pianist, will be performing a new "nature" composition by NTS member and composer Michael Gatonska. TCI is honored by and looking forward to hearing Michael and Monica's contributions.

Canopy Research and Tree Biology

Most of the world's forest canopies have not yet been explored. Opportunities for study and collaboration are unlimited! The following people are all experts with long experience in tree climbing, canopy research and/or the study of tree biology.

Kim Coder: Professor of Tree Biology and Health Care at the Warnell School of Forestry and Natural Resources, University of Georgia. Dr. Coder was elected President of the International Society of Arboriculture (ISA) by fellow professionals, has served as an appointed member of the USDA Secretary's National Advisory Committee on Urban and Community Forestry, and was President of the international Arboriculture Research and Education Association. For his dedication to trees and tree health care providers, he was awarded the top world-wide, peer selected professional awards ("Shigo Award for Excellence in Arboricultural Education," "Harris Author Citation Award," and the "Award of Achievement,") by the ISA. Dr. Coder is author of over 500 technical publications and articles. He is an international lecturer and consultant on tree health and structure, community forests, and urban ecology.

Margaret ("Meg") Lowman: Director of the North Carolina Nature Research Center (NRC) <http://naturesearch.org/>; Executive Director of the Tree Foundation <http://www.treefoundation.org/>; author of Forest Canopy Methods. "CanopyMeg" pioneered the science of canopy ecology. For over 30 years, she has designed hot-air balloons and walkways for treetop exploration to solve mysteries in the world's forests, especially insect pests and ecosystem health. Recent activities have included documenting and working to preserve the unique church forest of Ethiopia.

Richard Preston: Author of The Wild Trees, The Hot Zone, and other books and New Yorker magazine articles too numerous to name. Was a member of the four-person climbing team which made first ascent into "Hyperion," the world's tallest

tree; also climbed with Steve Sillett and Marie Antoine into some of the tallest redwoods in the United States and eucalyptus trees in Australia.

Cameron Williams: Graduate student in Integrative Biology at the University of California, Berkeley. Cameron researches water use and transport in California redwoods. Since 1999 he has climbed trees in pursuit of a deeper understanding of how trees work, a quest that has carried him aloft into trees of all shapes and sizes. Cameron also teaches research climbing to scientists. He also installs rigging for film crews and photographers to capture images from "birds-eye points-of-view" in old-growth forests.

Tropical Tree Climbing

No discussion of measuring tall trees or canopy research would be complete without someone talking about the tropical rainforests of South America. The following two people will describe their experiences and work.

Bart Bouricius: Arborist and Adjunct Professor of Biology at Hampshire College, Massachusetts, cofounder of Canopy Construction Associates, established to provide access to the forest canopy for biologists and for eco-tourism. Bart has designed and participated in the construction of 23 forest canopy walkways in Belize, Indonesia, Ecuador, Peru, Gabon, Madagascar and many locations in the United States. Bart has published articles ranging from canopy access techniques to the life history of amblypygids (tailless whip scorpions). In the last few years, Bart has been focusing on the documentation and measurement of tropical emergent trees (giant trees whose umbrella-shaped canopies grow above the forest).

Katherine Holden: Katherine Holden's life's purpose arrived, surprising her, on a warm desert breeze in Joshua Tree, California. "Climbing Trees at Seventy: One Woman's Quest to Save Wild Trees," she is known as "Wild TreeWalker". Katherine learned tree climbing from Tim Kovar ("Tengu") and this July will climb old growth mahogany trees with indigenous seed collectors in a remote portion of the

Peruvian Amazon. She'll share her project and Peruvian experience at the Rendezvous.

"Treehab"

Our speaker has taken tree climbing to new "heights" with the use of tree climbing to help children with physical challenges.

John Gathright: Founder of **Tree Climbing Japan** and a founding member of the Japan Chapter of the International Society of Arboriculture. John's passion for helping physically-challenged children led him to write his own doctoral program in "Treehab" and then to become a Professor of "Treehab" at a local university. John has worked with thousands of children, written several peer-reviewed articles proving the therapeutic effects of recreational tree climbing, and now is beginning to show how tree climbing can help emotionally challenged children as well.

Now available! Pdf SCHEDULE OF FEATURED SPEAKERS (downloadable .pdf file)

Daytime Workshops

Daytime workshops on a variety of subjects will also be presented. Here are some that are on the Rendezvous schedule:

http://www.treeclimbing.com/images/stories/Rendezvous/Featured_Speakers_Schedule.pdf

Learn tree measuring techniques and gear in Beginner's, Intermediate and Advanced "Measuring Giant Trees" workshops, all taught by NTS experts Bob Leverett and Will Blozan. You'll also get to try out some very fancy equipment.

What do you know about tree biology -- how a tree grows, how it feeds itself, how it heals itself from wounds, and other questions? Learn the basics of tree biology, as well as what kinds of cutting-edge research tree scientists are conducting now, in a series of workshops by ISA-certified arborist **Dave Tukey**.

Have you heard of the "Rope Wrench"? Its inventor,

Kevin Bingham, an ISA-certified arborist, is coming to demonstrate this tool. He will also show another ascending/descending tool he's designed, the "Rope Runner".



"Water Bear"
whotaughtyouscience.com

Do you know what a tardigrade is? It's a "water bear," a very tiny organism that can survive more extreme living conditions than just about any other creature on the planet. Professor **William ("Randy") Miller** will talk about these amazing animals. Then he'll teach participants how to collect them in the treetops and examine them with microscopes. It's possible that hundreds of water bears could be collected during the Rendezvous — even some new species never seen before!

Do you know how to inspect a tree to see if it's safe for climbing? **Eric Folmer**, an ISA-certified arborist, will teach you how to inspect a tree for risks and hazards.

What about your gear? Have you selected the right equipment for your climb? Do you know how to inspect it properly? Tony Tresselt, another ISA-certified arborist, will review gear selection and inspection.

Tim Kovar will be your guide to "Tree Time" as you experience your love of trees and your connection with nature in a whole new way.

Rendezvous Location: Simpsonwood

Simpsonwood Conference and Retreat Center,
Simpsonwood <http://www.simpsonwood.org/>



This is the main lodge at Simpsonwood, where we'll eat and meet.

in Norcross, Georgia (just outside Atlanta), is a perfect place for a Rendezvous. The property is bordered on one side by the Chattahoochee River. Its trees are typical of a mature forest in the Southeast: big and tall red oaks, white oaks, poplars, hickories, loblolly pines ... all these and more are plentiful. It's only about 45 minutes from the Atlanta Airport and easy to get to from major freeways. But when you're there, you'll feel like you're far away from a big city.

Simpsonwood's dining room is huge, and the buffet-style meals offer choices for any type of diet. There is a big conference room for evening presentations; small meetings and indoor workshops can be held in break-out rooms. Participants can camp in or under trees, or stay in motel-style rooms onsite. We couldn't ask for a better venue.

Essential Information and Registration Details

We expect this Rendezvous to attract a very large number of participants. Register early to hold your place!

Dates

The Rendezvous starts on Wednesday, October 9 at noon with lunch, and ends on Monday, October 14 after breakfast.

Participants

The 2013 Rendezvous is open to anyone who wants to attend. We expect and look forward to hosting many international participants in addition to those from the States. We also hope to have a mix of recreational climbers, arborists, and research climbers. Non-climbers might be scientists and/or tree lovers of any sort.

If you are going to climb, you must be able to climb on your own safely and supply your own climbing gear. There are trees suitable for doubled- and single-rope technique climbing (DRT and SRT, respectively), so bring a 150- to 200-foot rope. (People who are taking a Basic DRT Tree Climbing Course immediately before the Rendezvous [see below] will be able to borrow gear from TCI during the Rendezvous.) All climbers will be required to wear a helmet and to use branch protection at all times. For safety purposes, climbers will be encouraged to use TCI's "Climber Above" banners on the tree that they are climbing. All participants will be required to sign a Waiver of Liability form.

Children are welcome if they are able to climb on their own. Children under the age of 13 must be accompanied by an adult at all times throughout the Rendezvous. There is special pricing for adults with children; please choose your registration options carefully.

Pets are not welcome! We'd love to meet your doggie or kittycat, but another time, please!

Food and Lodging

All meals are included in the cost of rooms and camping accommodations. There is a place on the Registration form for you to let us know if you are a

vegetarian or vegan. Since there will be a wide variety of food from which to choose at all meals, we ask that you manage food allergies on your own.

Camping: Participants at the 2008 Tree Climbing Rendezvous will remember the big campground with a firepit. This year we will also be using the large athletic field meadow for camping. If you want to camp in the treetops, the grove of white oaks behind the campground is perfect for numerous "tree villages" which can easily accommodate dozens of hammocks. Showers and restroom facilities for campers are available, but limited. Camping cost is \$55 per night per person, which includes all meals and taxes.

Rooms: For people who want to stay indoors, there are lovely rooms for one (\$150/night), two (\$110/night/person), or three people (\$95/night/person). Adults who are bringing children can stay in a room for \$155/night (one adult plus one child) or \$200/night (one adult plus two children). Again, room costs include all meals and taxes. Each room has its own bathroom. Wi-fi is available onsite, but rooms do not have a phone or TV. There is a place on the registration form for you to enter the name(s) of people you will be rooming or camping with. If you don't know anyone else who is coming, and want to stay in a double or triple room, we will assign you a roommate (of the same sex) in mid-September.

Transportation

Simpsonwood Conference and Retreat Center is located in Norcross, Georgia, northeast of Atlanta and outside the I-285 Atlanta Perimeter highway. If you're driving, pay close attention to the directions once you get off the freeway, as you'll pass through a residential neighborhood on your way into Simpsonwood. We suggest you print out GoogleMaps directions <https://maps.google.com/maps?oe=utf-8&client=firefox-a&ie=UTF-8&q=simpsonwood&fb=1&gl=us&hq=simpsonwood&hnear=0x88f5045d6993098d:0x66fede2f990b630b,Atlanta,+GA&cid=0,0,3678729877729910428&ei=iYbgULGjGarh0wGR0oHoDA&ved=0CIEBEPwSM>

[AA](#) to find it easily. Parking at Simpsonwood is limited, and we ask that you help minimize the number of vehicles onsite by traveling with others.

If you are flying in, your destination is the Atlanta Hartsfield-Jackson International Airport. TCI will be arranging shuttles from the airport. You can also use our Rendezvous Forums thread to arrange with others to rent a car or van.

Weather

Atlanta weather in October is usually ideal for tree climbing. Average temperatures are in the '70's during the day and in the '60's at night. But just to make sure you're prepared, we suggest that you check the weather before you come.

What to Bring

TCI will send out a suggested list of items to bring as we get closer to the event. However, be prepared to bring your musical instrument! Late evening jam sessions and sing-alongs around a campfire are common at Rendezvous events!

Pre-Rendezvous Classes

The following classes will be offered prior to the start of the Rendezvous:

Basic (Doubled-Rope Technique) Tree Climbing Course

<http://www.treeclimbing.com/index.php/climb-on-your-own/basic-tree-climbingonsite> for participants with no climbing experience. Two days, tuition \$450. Single-Rope Technique Climbing Course <http://www.treeclimbing.com/index.php/climb-on-your-own/412-srt-course> for people who can climb using doubled-rope technique. Two days, tuition \$450.

Both courses will start at 1 p.m. on Monday, October 7 and run through noon on Wednesday, October 9.

Multi-pitch Rescue

Course. <http://www.treeclimbing.com/index.php/climb-on-your-own/treetop-rescue> 1/2 day class starting

at 1 p.m. on Tuesday afternoon. Tuition \$100.
Prerequisite: single-pitch rescue training.

All three courses will be taught by TCI-trained instructors. If you want to take one, you will need to stay for one or two additional two nights (Monday and/or Tuesday). Please call us if you have questions or to register. We will send you course registration forms separately. Course tuition also includes membership in Tree Climbers International.

Pre-Rendezvous Course Cancellation Policy:
Registrants must cancel no later than September 8th in order to receive a refund on your tuition deposit. If you have to cancel after that, we will refund your deposit if we are able to fill your slot.

CPR/First Aid Class

A class in Adult/Child CPR and First Aid will be taught at Simpsonwood by a trainer from the American Heart Association (AHA) on Thursday, Oct. 10 from 8 a.m. - noon. The cost is \$50, which includes AHA certification good for two years. Sign-up is on page 2 of the Registration Form.

Continuing Education Units (CEUs)

TCI will be applying for **continuing education units (CEUs)** for members of the International Society of Arboriculture and the Society of American Foresters as soon as we have all the details of our educational program. Watch this page for more information.

Price

The price of this year's Rendezvous includes a fixed registration fee of \$100 plus a combined per day fee for meals and camping/lodging (pro-rated for local participants). The fees for accommodations also include the hefty 13% sales tax we are required to pay.

We are trying to keep the price of the Rendezvous as

reasonable as possible for everyone who attends. We will also be supporting some participants who cannot afford the cost on their own. For these reasons, we will not be able to offer an early-bird registration discount.

Deposit: We require each participant to pay at least half of their total Rendezvous fee by August 4 unless you make different arrangements with us. We prefer payment by check or money order (in U.S. dollars equivalent, please!) made payable to Tree Climbers International, Inc. and sent to PO Box 5588, Atlanta, GA 31107, USA). If you must pay by credit card, you can call us with a card number or pay via Paypal (an account is not required for use of Paypal.) The balance of your payment (again, preferably by check) will be due at Rendezvous check-in.

Room Cancellation Policy: Simpsonwood has a strict room guarantee policy. After August 7, we will be charged for any rooms that we reserved ahead of time. Therefore, if you must cancel, please let us know as far in advance as possible. The following applies:

If you cancel prior to August 4, we will refund your entire deposit minus a \$25 administrative fee. From August 5 to September 22, we will have to deduct an additional \$50 per night from your deposit. Cancellations received on or after September 23rd will forfeit your entire deposit. However, we will refund as much of your deposit as we can if we are able to fill your slot from a waiting list.

Camping Cancellation Policy: Campers who cancel as of September 22 will be refunded your entire deposit minus a \$25 administrative fee. Cancellations received on or after September 23rd will forfeit your entire deposit.

REGISTER NOW

<http://www.treeclimbing.com/index.php/component/rsform/form/8-2013-rendezvous-registration-form>

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

by **pattyjenkins1** » Sun Jul 14, 2013 9:02 am

Thanks for re-posting this updated information, Ed.

TO NTS:

We are already getting registrations from Japan, Britain, Malaysia, Canada, and lots from the USA. Among these are the Malaysian Minister of Youth Sports and Recreation. I'm told the top man of the new ISA-Japan Chapter is coming along with ten other very enthusiastic Japanese climbers as well. Comments show how excited our community is about the educational program. So much so that I've had complete unknowns to TCI but very experienced and knowledgeable arborists call up volunteering to teach workshops. I've taken up every offer I've gotten.

What an extraordinary opportunity to spread NTS methods internationally! Come on down! Some of you may be called on to help Bob and Will in the three workshops they're teaching. If you know you're coming, please register! If you think you're not, please reconsider. From when I began organizing the Rendezvous 'til now, it has grown in size and scope, and promises to be an extraordinary five days.

For those of you who are not tree climbers, we do have as many two-day basic tree climbing courses available before the event as there are students wanting to learn. Then you'll have several days to climb and advance your skills with some of the best climbers around (including Will!). I'll tell you about tree climbers ... there's nothing they like more than to share techniques, gear, and other information with "newbies". Generosity is their middle names.

Truly, we hope to see many of you in October.

All the best,
patty

Patty Jenkins
Executive Director
Tree Climbers International, Inc.
Get High / Climb Trees

Kudos to NTS

by **pattyjenkins1** » Wed Jul 17, 2013 3:29 pm

NTS:

Read this all the way through. Hopefully you'll get as excited about it as Bob was when he called to tell me about it.

Yesterday, Bob got an email out of the blue from a man named D'Arcy Trask, President and Founder of Gauge Point Calibration, Inc. (<http://www.gaugepoint.com>) The email said, "*Bob, Please call me when you have time. I have been HD scanning Redwood trees with Professor Steve Sillett and Bob Van Pelt at HSU and would like to participate in your research and organization.*" Of course Bob called him immediately, and learned that D'Arcy, who was instrumental in mapping the President Tree, now has permission from the National Park Service to map the General Sherman Tree [for newbies: the biggest tree in the world]. After some conversation, Bob suggested that D'Arcy consider coming to the Tree Climbers Rendezvous to talk about it; then he called me, and I called D'Arcy.

The bottom line here is that D'Arcy will be measuring the General Sherman tree in September and then will be coming to our October event with preliminary data. He will be speaking on Sunday morning. D'Arcy said he knows nothing about trees, but found himself standing in a forest one day wondering what he was doing there; he decided that among all the things he could use his equipment for, he wanted to use it on trees. So he then asked around and found his way to NTS. I encouraged D'Arcy to come to the entire Rendezvous so he can attend the tree biology lectures (among other things), but also so he can talk to the NTS members who will be there.

This is a BIG DEAL, for which I think all of you can be proud and take credit. Some of you have been working with NTS for years and years, and the much-deserved publicity will be a huge step forward for your organization. It's certainly a big deal for TCI, too. To have D'Arcy want to work with NTS, and bring this information to NTS and TCI, will give both organizations a huge boost in legitimacy, which can only benefit us big time in lots of ways.

So this is another GREAT REASON to attend the Rendezvous. How can you NOT come, when this is on the agenda?!

(Link to Registration Page at the bottom of the Rendezvous page:
<http://www.treeclimbing.com/Rendezvous>)

patty

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

by **dbhguru** » Fri Jul 19, 2013 8:51 pm

Ents

How can one resist the rendezvous? It is a guaranteed good time. Correction, a guaranteed great time! It will be a first for this type of event. We will break new ground. We hope more of our fellow and lady Ents will attend. As Patty has requested, please read completely through her last post. The big surprise comes near the end.

Robert T. Leverett

Oak Openings Metropark (OH)

by **Matt Markworth** » Sat Jul 20, 2013 9:21 pm

Hi All, There's nothing quite like an open grown Oak and this park doesn't disappoint. I'll have more words and photos when I can get on my laptop at home.

Black Oak
82.4' ht 13.7' CBH 110'x105' spread
75.1' ht 12.2' CBH 97'x88' spread
63.1' ht 10' CBH 82'x77' spread

White Oak
59.1' ht 11.3' CBH 87'x75' spread
12.8' CBH (A majestic white oak, just ran out of steam to get photos and full measurements)

Biggest Black Oak . . .



Bernie Krause: The voice of the natural world

by **edfrank** » Sat Jul 20, 2013 8:24 pm

Bernie Krause: The voice of the natural world

Bernie Krause has been recording wild soundscapes - the wind in the trees, the chirping of birds, the subtle sounds of insect larvae -- for 45 years. In that time, he has seen many environments radically altered by humans, sometimes even by practices thought to be environmentally safe. A surprising look at what we can learn through nature's symphonies, from the grunting of a sea anemone to the sad calls of a beaver in mourning.

http://www.ted.com/talks/bernie_krause_the_voice_of_the_natural_world.html

<https://www.youtube.com/watch?v=uTbA-mxo858>



Re: Bernie Krause: The voice of the natural world

by **michael gatonska** » Sun Jul 21, 2013 6:51 am

Ed - You beat me to posting this!

Why we should listen to him:
With a stellar electronic music resumé including

work with The Byrds, Stevie Wonder and many others, Bernie Krause is assured a place in the pop culture canon. But Krause continues to make history by capturing the fading voices of nature: studying sonic interplay between species as they attract mates, hunt prey, and sound out their roles in the ecosystem.

Krause's recordings are not merely travelogues or relaxation tools -- they are critical barometers of global environmental health. His documents of vanishing aural habitats are a chilling reminder of shrinking biodiversity. As he tells the Guardian: "The fragile weave of natural sound is being torn apart by our seemingly boundless need to conquer the environment rather than to find a way to abide in consonance with it."

Michael Gatonska

Re: Emerald Ash Borer

by **PAwildernessadvocate** » Wed Jul 10, 2013 11:34 pm

Emerald ash borer has recently been confirmed in the southern part of the Allegheny National Forest (to no one's surprise).

I took the attached photo of an ash with dead and dying branches in its crown the other day on a farm in Scandia, Warren County, just west of the northern part of the ANF. The tree is in a wooded area of the farm close to the edge of an open field. Anyone want to venture an educated guess as to whether or not this tree is infested with EAB? I've also sent this photo to one of the ANF's scientists.

(I found a similarly declining ash tree in another person's back yard in Scandia maybe two miles northeast from this one, no photo though.)



Kirk Johnson

Re: Emerald Ash Borer

by **PAwildernessadvocate** » Sun Jul 21, 2013 9:58 am

Here's the message I got back from the USFS about that ash photo:

Yes, that could be decline due to EAB. EAB was just confirmed in Warren County. I am trying to determine exactly where that specimen was found. I've been noticing a number of smaller diameter ash, 4-8" diameter in the Warren and Youngsville area that are dying off- looks like the EAB caused mortality that I observed along I-79 in the Cranberry area.

http://www.aphis.usda.gov/plant_health/plant_pest_info/emerald_ash_b/

http://www.aphis.usda.gov/publications/plant_health/content/printable_version/EAB-GreenMenace-reprint-June09.pdf

http://www.aphis.usda.gov/plant_health/plant_pest_info/emerald_ash_b/downloads/AshRangeMap.pdf

Re: Emerald Ash Borer

by **Rand** » Thu Jul 11, 2013 6:15 am

I would guess that it is. I think I see epicormic sprouting lower down on the limbs, which is highly diagnostic. The bugs' borings girdle the branches so the tree tries to sprout below the damage. Small trees will sprout at the ground level and may survive the death of the crown. I guess we'll see if the ash can survive American chestnut style.

Rand Brown

Fort Ontario, NY Cottonwoods July 2013

by **tomhoward** » Sun Jul 21, 2013 11:03 am

NTS,

On warm humid but breezy July 10, 2013 (especially by the Lake Ontario shore), Jack Howard and I returned to the grounds of Fort Ontario to measure the large Cottonwoods. We went to Fort Ontario Cemetery, which was an enchanted place with a steady breeze off the lake, rustling through the leaves of the huge Cottonwoods with a sound like the waves of the sea. I used the equipment Ed Frank of NTS loaned me (Nikon 440 Laser Rangefinder, clinometer) and my scientific calculator to get accurate heights using the Sine Method.

Cottonwood westernmost of group of 3 in southeast corner of Cemetery, measured from hill to south: 119.6 ft. (118 ft. in 2010) – this is the tallest tree at Fort Ontario, possibly tallest tree in Oswego County, possibly tallest tree on the Lake Ontario shore in USA and Canada. This tree may be even taller; I very likely did not measure the highest point of this tree's vast crown. Dbh 55.8 in. This great tree, like all other Cottonwoods in Fort Ontario Cemetery, was planted in 1904 when the Cemetery was moved to this location. Under the Cottonwoods are several much smaller Sugar Maples.

Cottonwood biggest tree northeast corner of Cemetery:
100.7 ft. possibly not highest point

Cottonwood across fence from northeast part of Cemetery, big tree:
105.64 ft.

The 2 impressive rows of Cottonwoods extending south from the stone walls of Fort Ontario, which were planted between about 1884 and 1915, have been thinned considerably since 2010, but at least 2 tall ones remain:

Cottonwood just south of fort and Lighthouse Keeper's house (built 1822, oldest documented house in Oswego):
105.85 ft.

Cottonwood south of above:
106.5 ft.

Tom Howard

[Cazenovia, NY July 2013](#)

by **tomhoward** » Sun Jul 21, 2013 11:07 am

NTS,

On sunny hot July 14, 2013 Jack Howard and I visited the idyllic community of Cazenovia in the western part of Madison County just east of the Onondaga County line. This is one of the nicest areas in central NY on beautiful Cazenovia Lake. There are many large trees there, especially large numbers of tall (seem to be about 100 ft.) Norway Spruces. Large White Pines are also common, and before windstorms blew down many trees in 1995-96, there were many big White Pines in the village of Cazenovia. Norway Spruce is now the dominant tree in the village.

We spent most of our tree exploration time at Lorenzo State Historic Site, a lovely spot on a low hill overlooking the south shore of Cazenovia Lake. The spacious tree-filled grounds are centered on the Lorenzo mansion built in 1807 by John Lincklaen, the land speculator who founded Cazenovia in 1793. Some of the trees on the grounds date back to his time. There are some large open-grown White Pines there, and, also, big Red Oaks, Basswoods, Black Locusts, at least one large double-trunked Yellowwood, and other trees. The greatest tree area at Lorenzo is in the back of the mansion, where rows of conifers tower behind a formal garden that was laid out in the 19th century. Before the 1995-96 windstorms the view of massed ranks of tall White Pines behind the garden was one of central NY's most impressive tree views. It still is impressive, but the remaining White Pines and smaller Norway Spruces (and Douglas-firs that I believe were planted about 1930) create a more broken aspect. The White Pines behind the garden were planted from 1854-1860 by Ledyard Lincklaen, the owner of the property at that time (and one of central NY's leading naturalists) and his associate Eliphalet Remington – a stone in the midst of the Pine grove says "PINES PLANTED 1854-60". These White Pines are magnificent trees, rough-barked, fragrant, their windswept crowns illuminated by golden sunlight,

which filters down to the lower soft green boughs. They are not as tall as I thought, no more than at most 110 ft. tall, but that takes nothing away from their beauty, from the special beauty that is particular to stands of large White Pines. These White Pines are about the same age as the much larger and taller (and more densely-ranked) White Pines of the Bryant Grove in Cummington, MA, but central NY does not seem to be prime habitat for really tall White Pines. I have looked all over this area, and have seen only 2 White Pines above 120 ft. tall (Green Lakes State Park 123.2 ft., Holland Patent Cemetery 120.7 ft.). Other trees seen among the White Pines at Lorenzo are Scots Pine (some fairly large), Hemlock, Norway Spruce, Douglas-fir, Sugar Maple, Red Maple, Norway Maple, Black Cherry, Pin Cherry, Hawthorn, Red Oak (biggest trunks but low open-grown trees), Ash. There are some large open-grown Tuliptrees on the mansion grounds. In the front lawn of the mansion is a large open-grown Norway Spruce that was planted in 1845 to commemorate the birth of a child – it is a very big tree but does not seem to be very tall. Just to the west of the Pine grove behind the garden is the Dark Aisle, a very impressive path between 2 closely-planted rows of Hemlocks planted by Ledyard Lincklaen in the 1850s – the Hemlocks are not very large, but the long vista down this aisle is an impressive sight. Among the Hemlocks are some much larger Norway Spruces planted about 1858. Heat and time constraints (and a focus on White Pines) made it impossible for us to measure any of the Norway Spruces this time, but there will be other visits.

Height measurements were done by the NTS method, using laser rangefinder, clinometer, scientific calculator with sine method.

Big White Pine by Carriage House – one of tallest trees on open lawn:
100.8

Black Locust planted 1819 at back of mansion to commemorate a family wedding (tree has trunk that seems to be over 3 ft. dbh, but we did not measure it as we did not want to trample a flower bed, tree is robust, healthy):

64

White Pine in grove behind garden, 31.2” dbh, by trail, typical of larger trees in group planted 1854-1860:
98.6

White Pine near edge of grove behind garden:
99.7 not seeing top

White Pine with 2 leaders in grove behind garden, left leader (from garden) measured:
101.6

White Pine southwestern part of grove behind garden:
108.7 tallest tree measured in Cazenovia
White Pine beginning of grove behind garden, at end of Dark Aisle:
101.54

The tallest White Pines here could be about 110 ft. tall, but should be not much more than that.

Other trees measured at Lorenzo (dbh not height):

White Pine in densest part of grove behind garden
28.7” dbh

Basswood in lawn to west of mansion, old-looking tree with balding bark, broken gnarled crown 36” dbh – seemed larger, one of bigger trees on property

After our visit to Lorenzo, Jack and I had excellent dinner at the Brae Loch Inn at the western edge of the village of Cazenovia, near Lakeland Park. Tall Norway Spruces are everywhere, and across US Rt. 20 (the main road there) from we sat was a large open-grown Black Walnut. In nearby Lakeland Park was a large Gingko among other trees. The Norway Spruces here seem to be about 100 ft. tall, and some may be taller. The Norway Spruce that looked tallest was a tree in a private backyard right next to the Brae Loch. I measured this tree to 107.61 ft.. This tree has a towering thin crown, but big healthy lower branches – it is a big tree.

Tom Howard

[MN Champion American Elm](#)

by **Jimmy McDonald** » Wed Mar 06, 2013 12:01 am

This past summer I took a visit to check out Minnesota's Champion American Elm.

Measurements listed on MN DNR Website: CBH 228" Height 80' Crown Spread 87'



Here are some additional photos.



[Re: MN Champion American Elm](#)

by **Will Blozan** » Wed Mar 06, 2013 6:16 pm

Nice but that is so not a single tree...

Re: MN Champion American Elm

by **AAnsorge** » Thu Jul 18, 2013 8:51 am

Jimmy,

How do you find an exact location for a champion tree in Minnesota? They list county and city, but that is it. Iowa does a much nicer job with there spreadsheet....<http://www.iowadnr.gov/Portals/idnr/uploads/forestry/Big%20Trees%20of%20Iowa%20Web-ready.pdf>

Re: MN Champion American Elm

by **Jimmy McDonald** » Sun Jul 21, 2013 9:32 pm

I found this one because it was in Minneapolis. The city of Minneapolis has a heritage tree program linked to google maps that is very nice. I wish the state had the same but you can email the state coordinator and they should be able to give you directions to most trees.

Minneapolis site

<http://www.minneapolisparcs.org/default.asp?PageID=1252>

Re: Ohio tree hunt July 20 or 21st?

by **dbhguru** » Sat Jul 20, 2013 10:19 am

Matt,

Your appreciation for understanding site potential is giant leap forward. I am constantly surprised at how many tree people fail to put the numbers into context. If tuliptrees on a site can't make it to over 125 or 130 feet, we're very unlikely to see a 150-foot pignut

hickory on the site, as an example. This idea can be expanded to urban environments. Are we likely to see a 150-foot tuliptree in someone's yard, and so on?

It is plain to see that you, Brian, Eli, George, Turner, Tom, etc. have joined the ranks of the superstars of NTS. Once you get bitten by the bug, the condition appears to be permanent. But what is really gratifying is to work to take the analysis to a higher level, which is what you are doing.

We look forward to what you, Steve, etc. along with old eagle-eye Will can pull out of that site you will be visiting.

Robert T. Leverett

Re: Ohio tree hunt July 20 or 21st?

by **Matt Markworth** » Sun Jul 21, 2013 8:09 pm

Will, Steve, Rand,

I enjoyed the site visit today and have many takeaways. Some of them will take a little while to sink in, but I can think of some that are immediate and tangible. I have insights from Will on how to measure in a cluttered environment. I have ideas from Steve that will allow me to tweak my equipment a bit and Rand gave me a couple techniques on getting good spread numbers.

Thanks guys, we'll have to do it again!

- Matt

Tree Maximums - Genus of the Week: Celtis (Hackberry)

by **Matt Markworth** » Sun Jul 21, 2013
10:50 pm

Hi all,

Genus of the Week: Celtis

"And they have cut down two or three of the very rare celtis trees, not found anywhere else in town. The Lord deliver us from these vandalic proprietors!"
- Henry David Thoreau, 9/28/1857

Excerpt from Jess's MaxList:

Species (Latin)	Species (common)	Record	Ch	Height (max)	Height (avg)	Form	Site	Area
Celtis laevigata	Sugarberry	Circumference	156	130.5	68	58	Forest	Congaree River
Celtis laevigata	Sugarberry	Circumference	160				Forest	West of Weston Loop
Celtis laevigata	Sugarberry	Height	133	133.6			Forest	Congaree River
Celtis laevigata	Sugarberry	Spread (max)	160				Forest	West of Weston Loop
Celtis occidentalis	Hackberry, Common	Circumference	150				Forest	Warren Woods State Park
Celtis occidentalis	Hackberry, Common	Circumference	155	74.4			Open	National Historic Park
Celtis occidentalis	Hackberry, Common	Height	97	105.5			Forest	Lower Huron Metro Park
Celtis occidentalis	Hackberry, Common	Height	88	105.8			Forest	Dawson Woods Nature Preserve
Celtis tenuifolia	Hackberry, Georgia	Circumference	13		16.5	15.1	Interna	Private residence
Celtis tenuifolia	Hackberry, Georgia	Spread (max)	13		16.5	15.1	Interna	Private Residence

Former Tree of the Week - Common Hackberry:

<http://www.ents-bbs.org/viewtopic.php?f=393&t=5315>

Please reply with these measurement details if you think you've measured a specimen displaying the growth potential (Height, Girth, Spread, or Volume) of the species. Please include photos when possible.

Tree Maximums List 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>

USDA Plants Database:

<http://plants.usda.gov/core/profile?symbol=CELT>

Don Leopold video:

<http://www.youtube.com/watch?v=940CAG3DQpc>

EAB plot study

by **Devin Bily** » Sat Jul 20, 2013 10:21 am

GSMNP in cooperation with Arborjet has started a plot study of 40 ash trees in the roaring fork area of the park to determine the most effective systemic chemical towards managing EAB.

Three chemicals being tested:

Tree-age- active ingredient

Emamectin Benzoate

Azasol- active ingredient

Azadirachtin (water soluble neem-oil)

TreeAzin-active ingredient-

Azadirachtin A + Azadirachtin B

The application of TreeAzin was only approved through the use of the Eco-jet system, and application rates proved to be impracticable, taking about 5 hours to treat 4 trees. Transpiration rates and formula viscosity may have something to do with the very slow up-take. The other two chemicals were used with the Arborjet injection system and application was successful. Untreated control trees were implemented as well and holes were drilled into the bole without applying chemical.

It looks like EAB has been in the park for quite some time; many trees around the greenbrier area, roaring fork area (behind Bales cabin), and along route 321 have been infested for many years. Beetles have been collected from trees in the roaring fork area.

Many of these trees have dwarfed chlorotic leaves, major dieback, and epicormic sprouts; some are already dead. Unfortunately the cost to treat these trees via these chemicals is extremely expensive, about 500 dollars a liter! Back country ash trees and notable specimens may be soil drenched with imidacloprid as a more practical measure. The park cannot afford to lose another tree species, hopefully

we can get these beautiful specimens treated before their demise!



This baby is gonna be just fine...



TreeAzin treatment

[Re: EAB plot study](#)

by **Will Blozan** » Sat Jul 20, 2013 10:50 am

Devin,

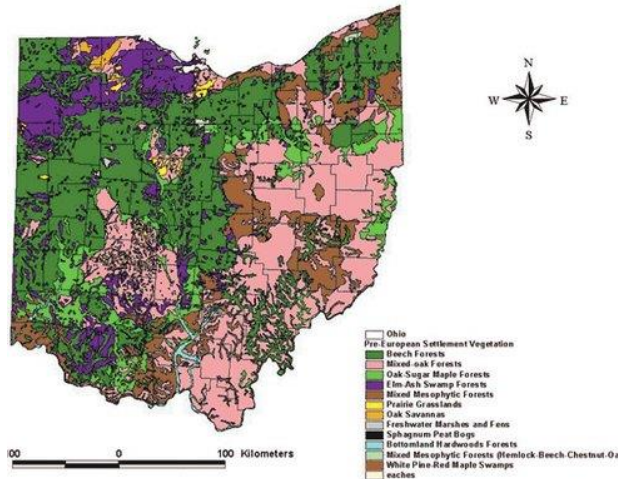
Thanks for the update. I am in northern Ohio now and the ash are obliterated. There are some seriously significant specimens in the Big Creek and Cataloochee area that we alerted Jesse, Tom, and Kris to. Do you have any idea what the plans are for the superlative specimens? Also, the 160'+ Biltmore ash in Tremont comes to mind.

Will

[Re: EAB plot study](#)

by **Rand** » Sat Jul 20, 2013 1:20 pm

You know you have ecological carnage on your hands when your 'Elm-Ash Swamp Forests' contain neither...



[Re: EAB plot study](#)

by **DougBidlack** » Mon Jul 22, 2013 9:05 am

Rand,

exactly! Michigan has the very same problem, particularly in the Lake Erie (like Ohio) and Lake Huron lake plains. Also in most river floodplain areas where green ash is the main victim...at least in the southern part of the state. I'm much less familiar with black ash in the northern part of the state but I understand that they are killed very quickly by EAB.

Doug

[Bitternut Hickories, Fletcher Park](#)

by **bbeduhn** » Mon Jul 22, 2013 9:26 am

I hadn't been to this park in some time. It's mostly open with few trees but I recalled some bitternut hickories along Cane Creek, which borders the park.

Carya cordiformis bitternut hickory
87.4' 9'1" cbh
87.4' 13'10" cbh triple trunked

I'm a novice with the iPhone so I accidentally took a video instead of a picture.



[BHhick.MOV](#)

[Amazing Old Growth photos of the Eastern US \(Video\)](#)

by **JohnnyDJersey** » Mon Jul 22, 2013 9:10 pm

I came cross this video someone suggested. It documents, in photos, past old growth trees of the Eastern US. I still cant get over the SIZE of the Eastern Red Cedar here. WOW! Not to mention the Hemlock and Chestnut. Enjoy. The second link is my "Worlds 40 Greatest Trees" video, in case you haven't seen it.

<https://www.youtube.com/watch?v=IZYmN76QBf8>

<http://www.youtube.com/watch?v=BhFXkjM0bXM>

John D Harvey

[Good day with Iowa Big Tree Guy](#)

by **dbhguru** » Tue Jul 23, 2013 11:26 pm

Hi Ents,

Today two Forest Service representatives, Mark Rouw (Iowa Big Tree Guy), Monica, and I went up Hermosa Creek drainage in Colorado's La Platas to model the Larry Tucei Pine. By the end of the day, our tall tree tally for the drainage stood as follows.

Species.	Height.	Girth.	Status
Ponderosa pine.	160.3	9.3	
Tallest we know of for the subspecies			
Douglas fir	160.3	10.8	
Tallest known in Colorado			
Colorado blue spruce	160.2		
Tallest known in Rocky Mtn region			
White fir	136.0	8+	
Tallest we've measured in Colorado- Mark discovered it			
Southwestern white pine	127.0	6+.	
Tallest we know of in Colorado			
Narrowleaf cottonwood.	111.0		

Quaking aspen. 99.0

Rucker 7 = 136.2

This is a remarkable Rucker. It includes all the species that reach significant heights. Gambel oak and juniper are not included.

So far we have measured 50 ponderosas over 12 feet in girth and quite a few over 10.

Tomorrow Mark is going even farther up the watershed in search of a huge Doug fir.

The data we are collecting will be used to support the move to designate part of the area as wilderness.

Robert T. Leverett

[Northernmost Redwoods Discovered](#)

by **yofoghorn** » Wed Jul 24, 2013 12:45 am

The northernmost known naturally occurring redwoods (*Sequoia sempervirens*) have been discovered increasing the range more than 2 miles north than previously thought. They occur on a tributary of the Chetco River in Curry County. This grove of redwoods has a lot of young seedlings and is spreading fairly rapidly to the north as well as other directions. The health of the young redwoods is good, however the old growth redwoods were cut likely over 50 years ago. The northernmost old growth redwood stump is 10.69 miles north of the Oregon border and the northernmost redwood (a young tree) in the grove is 10.84 miles north of the Oregon border. If anyone knows of any redwoods north of here that we might have missed, please let me know. Otherwise, this is it!

Zane J. Moore
Undergraduate Student
Colorado State University

Re: Chattooga River, SC

by **bbeduhn** » Mon Jul 22, 2013 10:01 am

I finally got back to the Chattooga. This river is so serene and plenty wild. I got to witness an enormous great blue heron take off on three occasions. It looked like a pterydactal flying low over the river.

It was tougher than I'd expected to hit the pines on the South Carolina side but was able to get a fair number on the Georgia side. The tallest are right by Burrells Ford and I didn't fight the vegetation to get all of them and a storm was brewing at that point.

Chattooga River, SC

Pinus strobus white pine NLT 135.5' NLT 136'
134.2' 162.4' 166.1'
Pinus rigida pitch pine 103.6' 110.2'
Oxydendrum arboreum sourwood 87.4'

It's amazing how the pitch pines drop off just south of Burrells Ford. 120's and 130's are present north but drop to just a handful of 100's and then become uncommon. The natural range extends just a few miles south of Burrells Ford but some of the tallest examples grow there.

The 166.1' is one of several very tall crowns that I spotted but couldn't see the bottoms. I'll need to wade in the river or approach from the Georgia side to get the rest. I believe there are a few 170's that Will measured there in about 2006 or 2007.

Chattoga River, GA

Pinus strobus white pine 130.8' 131.0' 131.1'
136.3' 139.5'
145.4' 147.8' 148.1'
151.8' 156.2'
Juniperus Virginiana VA pine 92.4'

This is the only VA pine I saw on the river. It's scarce away from the river but nearly nonexistent on the river.

Kings Creek Falls Trail, SC

Pinus strobus white pine 132.4' 136.1' 136.1'
139.8' 140.8'

145.6' 154.3' 155.1'

156.1'

Tilia heterophylla white basswood 107.1'

Carya cordiformis bitternut hickory ~100'

Lirio tulip tuliptree ~110'

The pines up by the falls were taller. They looked to be very young, 60-80 years. The hardwoods couldn't compete heightwise. This area was obviously clearcut as no older hardwoods were present. The heights on the hardwoods are likely a bit low. I hit the highest point I could see. Side coves appeared to be productive as well. The Falls were impressive but I didn't get a pic.

Brian Beduhn

Re: Chattooga River, SC

by **dbhguru** » Mon Jul 22, 2013 2:46 pm

Brian,

The degree to which the Chattooga is a tall tree haven was not appreciated by anyone I am aware of until Will and Jess got in there. Now you are adding handsomely to the numbers. Do we know the Rucker of the area? Ot must be over 140.

Robert T. Leverett

Re: Chattooga River, SC

by **bbeduhn** » Wed Jul 24, 2013 11:41 am

Tyler,
Thanks. My bad, I didn't check the SCMax list...silly me.

Chattooga River & East Fork

Pinus strobus	174.2'
Tsuga canadensis	168.9' (135.3')
Fraxinus Americana	148.6'
Fagus grandifolia	136.1'
Liriodendron tulipifera	134.5'
Pinus rigida	131.8'
Quercus rubra	127.2'
Carya cordiformis	121.0'
Quercus alba	116.0'
Pinus virginiana	114.0'

R10 = 137.23' R10 with live hemlock = 133.87'

Chattooga Watershed

Pinus strobus	184.8'
Tsuga canadensis	168.9' (135.3')
Carya glabra	149.3'
Fraxinus americana	148.6'
Pinus rigida	142.3'
Pinus echinata	141.2'
Liriodendron tulipifera	141.7'
Quercus rubra	136.4'
Fagus grandifolia	136.1'
Carya cordiformis	131.5'

R10 = 148.08' R10 with live hemlock = 144.72'

That changes the Rucker indices dramatically. 150' is likely for the watershed and is unlikely, but not out of the question, for the river.

Who out there is pithed off?

by **dbhguru** » Wed Jul 24, 2013 4:05 pm

NTS,

May I humbly request a vote with explanatory comments included as you would care to provide?

Question on the ballot.

Can the pith method be simply and reasonably consistently applied to distinguish single trees from multi-trees?

Note that the single tree can be multi-stemmed, but not what we would consider to be one tree. I would like to package your votes and explanatory comments and provide them to members of the MGWG. So please, be at your most eloquent. Thanks in advance for your participation.

Robert T. Leverett

Re: Who out there is pithed off?

by **bbeduhn** » Wed Jul 24, 2013 4:14 pm

The pith method may not be infallible but it is extremely consistent. Inclusions can be used to solidify results from the pith test. Simply put, it works and is an easy test to perform. Pardon me for being pithy.

Brian

Re: Who out there is pithed off?

by **Matt Markworth** » Wed Jul 24, 2013 6:03 pm

Yes. Speaking from the standpoint of someone who has been measuring trees for less than 8 months, I easily understood the pith test after reading a one paragraph description and seeing a simple diagram. I

have used it in the field and have notated when a tree has multiple piths at ground level.

- Matt

[Re: Who out there is pithed off?](#)

by **Joe** » Wed Jul 24, 2013 6:11 pm

I should think that to be technically correct, any multi-stemmed tree is a single tree- unless it can be shown that it was actually 2 separate trees grown together. When you say ENTS "would not consider it to be one tree"- I would think that a better wording is the obvious, that for purposes of measuring trees, ENTs is interested in the size of the stems- and that gets you out of the debate over multi stemmed trees. But, this debate is not one I want to be voting on as I don't measure trees the way ENTs people do, for comparison and to find the biggest or tallest. It's just that I consider calling a multi stemmed tree to not be a single tree just ain't right, in my opinion- which now may be ignored.

Joe

[Re: Who out there is pithed off?](#)

by **Will Blozan** » Wed Jul 24, 2013 6:50 pm

Bob,

With photographs a decision can often be made easily. Perhaps several photos of submitted trees should be provided as they can look different from different angles. So should have never even been accepted in the first place; paw-paw, sycamore, silver maple in MD, etc... Tree-age should have weeded them out as the envelope came in.

As Matt so appropriately said- it is easy to understand and implement. This also gets around the super-silly rule (maybe in years past) of a fusion above 4.5 feet.

This has allowed numerous multi-trees to make it onto lists. I have often joked that I could plant some trees in a tight circle and when they fused above 4.5 feet- call it a champ. At the time it would have been legit. How can a multiple tree suddenly become one as the stems enlarge? They can't. Period.

There is a video on the internet about the largest girthed "some kind of tree" in Europe (I think). I watched with anticipation of a massive tree and was totally disappointed to see someone wrap a tape around a coppice forest (mostly air) from an older stump. It was ridiculous and the narrator called it the largest, most massive tree he had ever seen. I'm sorry if this person is on the NTS list but... really! Where's the wood?

Will Blozan

[Re: Who out there is pithed off?](#)

by **dbhguru** » Wed Jul 24, 2013 7:47 pm

Will,

Thanks. Succinctly stated. I like your example of planting several trees in a circle and waiting for them to grow together and submitting them as a champ.

Joe,

We're not saying that all multi-stemmed trees are not single trees. I'm asking if the pith test can distinguish a single tree coppice from two or more single trees that have grown together?

We are seeking to accomplish two things here:

1. Discourage multi-stem single trees from being compared to single-stem trees for purposes of crowning champions. Maybe we can have a champion in each category. At the least, we identify multi-stem champions as such, i.e. asterisk them. Two separate lists is the ideal.

2. Eliminate those trees that have fused as contenders for championship status. Should two separate trees that eventually fill in the space between them to present a fused mass of trunks at some arbitrarily specified height be eligible to the the champion of a species. At the least, that seems strange to me, at the worst, ridiculous.

With respect to the last point, imagine that we've spawned a contest for the purpose with the greatest girth as measured at navel height. Some one enters a pair of hefties by tying them together at waist height. I don't think that entry would get very far. No competent judge is going to be fooled. In fact, no halfway intelligent bystander is going to be fooled. And if the fraud succeeds, there would be an outcry. Even conjoined twins would not be accepted as a valid entry. Well, the analogy to trees might not be perfect, but it is something to think about.

One argument that has been put forth to allow doubles to be accepted as legitimate contenders is the difficulty of separating the pair and measuring each trunk separately. We can do it geometrically - to a degree, but the process is not perfect. Wanting to keep things simple, the solution proposed by these advocates is to just go ahead and measure the pair as a single. Initially, they may feel sheepish about the process of parading a double as a single, but then they get accustomed to doing it and eventually accept it without feeling any guilt.

Robert T. Leverett

Re: Who out there is pithed off?

by **edfrank** » Sat Jul 27, 2013 9:28 pm

Joe wrote: I should think that to be technically correct, any multi-stemmed tree is a single tree- unless it can be shown that it was actually 2 separate trees grown together. When you say ENTS "would not consider it to be one tree"- I would think that a

better wording is the obvious, that for purposes of measuring trees, ENTs is interested in the size of the stems- and that gets you out of the debate over multi stemmed trees. But, this debate is not one I want to be voting on as I don't measure trees the way ENTs people do, for comparison and to find the biggest or tallest. It's just that I consider calling a multi stemmed tree to not be a single tree just ain't right, in my opinion- which now may be ignored. - Joe

There are arguments each way about whether or not a multitrun tree is a single tree or not that have to do with function as well as genetics. But as you say, NTS is interested in largest single trunks. I would like to see the issue of whether it is a single tree or not ignored by the AF process and simply define the champion tree as the one having the largest trunk and save that can of worms for another forum. I keep going back and forth about whether I agree with you or not Joe. Sometimes I do, sometimes I don't. But your opinion isn't being ignored.

Edward Forrest Frank

Re: Who out there is pithed off?

by **dbhguru** » Sun Jul 28, 2013 11:13 am

Joe, Ed,

The purpose of the my questions isn't directed toward how we in NTS will measure trees, but how AF should and also what that organization should accept as a legitimate candidate. So long as utterly ridiculous submissions are made (as judged by many) and accepted by AF, the controversy will continue. At the extreme we have shrub-like forms branching from ground level competing with more conventional tree forms that exhibit discernable trunks. However, The trees turned shrubs are not necessarily illegitimate. They may result from repeated damage such as from deer or moose browse. To further complicate the picture, separate seeds may fall near the base and of a coppice and sprout. The new separate seedling grows and eventually coalesces

with the already coppiced form creating a tree structure. Can we ever know for sure how the structure developed? And if we can't, do we give the structure the benefit of the doubt? Well, if we do, we stay right where we are now.

My hope is to present AF with a sufficient number of examples with images that they will seriously entertain two lists, one for singles and one for multiples. Even then, we will have to agree on what is a multiple, which gets us back to the pith test. It may not be perfect, but it seems to be the best tool we have. Arborists and foresters deal with these structures all the time, but I don't yet have a sense of how much agreement or disagreement there is among members of those professions on what should constitute a legitimate candidate. So, the discussion continues.

I get the growing impression that most people (not just members of NTS) think the champion baldcypress is two trees and should never have been accepted as a legitimate candidate. The acceptance of the baldcypress seems to result from the application of measuring rules that didn't envision bizarre forms. I imagine that the original idea was of a tree form that clearly exhibits a single trunk at ground level. The split into limbs might be low, but the base develops from a single root structure that supports a single trunk. I doubt that there was an attempt to assemble descriptions of all the variant forms trees/tree structures might take and ask the fundamental question, will our simple compromise formula handle all these forms fairly and adequately? As a consequence of not distinguishing between single and multi-trunk forms early on, AF allowed a colossal mess to develop. They know that and are trying to do something about it. The MGWG is a direct consequence of their efforts. However, AF officials do not hear everyone in the field speaking with a single voice. They can read our debates as to what is a legitimate champion tree candidate and what clearly isn't, but there are intermediate forms where reasonable people can disagree.

In terms of current progress, I believe at least that we have a consensus in NTS that two lists are needed: one for single stems and one for multiple

stems. I think most are content with the pith test to determine what is single versus multi-stem. If that is not the case, Don and I would much appreciate hearing from dissenters.

Robert T. Leverett

[Fallen national champion shortleaf pine](#)

by **DonCBragg** » Thu Jul 18, 2013 7:49 am

It is with some sadness that I must report the national champion shortleaf pine from Ashley County, Arkansas, has been broken off in a recent windstorm at about 40 feet in a recent windstorm. It has one very small live branch remaining green, but I do not expect this tree to survive long in this condition. I have attached a few pictures of this fallen giant--it is clear from the final photo that the combination of redheart (a fungal disease of the heartwood) and a strong wind were too much for this champion. The same windstorm felled a number of other large loblolly and shortleaf pine in the Levi Wilcoxon Demonstration Forest, a small remnant old-growth pine stand.



Though the sign says only state champ, this was the national champion from 2006 on, and had a sine height of 136 feet and circumference of 113 inches.



You can see the one small green branch still remaining...



The ultimate cause: redheart plus wind

I believe the landowner is looking to salvage the wood from this and the other trees that fell over, but seems willing to work with my research unit to get the scientific value we can from these trees. So, I'll try to get a number of wood samples and make sure to get ring counts. If they cannot find some mill to buy these very large logs (a distinct possibility), I'm going to encourage them to make them into a display or donate them as a display for a local museum (or just see if they won't leave them on site as coarse woody debris).

I will probably start searching this stand later this fall to see if I can't find a new champion shortleaf!

Don C. Bragg

Group progress of AF measuring group

by dbhguru » Fri Jul 19, 2013 10:31 pm

NTS,

We had our third meeting today and spent most of the session on two topics: how we are going to handle multi-stemmed trees and where do we measure height from: mid-slope or the upper side of the tree. I think the majority favors the uphill side. I still prefer mid-slope, but will be flexible. The thinking is that the rules should foster repeatability. People can agree on where the highest point of the ground is around the trunk better than where mid-slope is. Still, I favor capturing a tree's full height. Nonetheless, I won't be a barrier to consensus on this one.

Agreeing on what is to be treated as a single tree versus multiple trees is going to be a real challenge. Then establishing how to measure multi-stemmed trees is going to be an equal challenge.

One area that bothers me is that I'm getting the impression that some (at least one) member may be reluctant to rock the boat. The position of that member is that if we force too much change on participants, we'll lose support. There could be a backlash. I don't have a grip on the magnitude of this as a potential problem, but don't trivialize it. On the other hand, what are we trying to accomplish?

I could see us developing strong guidelines for how to measure, but have little in the way of apparatus to enforce measuring discipline. If we can at least spell out how to measure correctly, that would be a big step in the right direction. One point I will stand firm on is that if the tangent method is used to measure tree height, the baseline must be from the eye to a point vertically below the top of the tree at eye level. No more shooting directly to the trunk and treating that as a legitimate baseline. Clear guidelines on how to best cross-triangulate the top becomes the operative challenge.

By far the best approach on how to lay out the

goals and the problems comes from Don Bertollette who began conceiving of a matrix that lays out equipment, methods, and type of champion (local, state, national) and if the measurement is by a nominator or a certifier. I think Don is spot on. His matrix would allow for nominators to use the stick method, for example, but not certifiers. I think Don goes even further. He imagines three levels of measurers: nominators, state-level certifiers, and AF certifiers - the ultimate arbiters. Members of NTS fully trained on all techniques could volunteer as AF certifiers. Don, would you care to elaborate?

Ed, Will, Michael, me thinks all of you might become frustrated with the challenges that Don and I have taken on in our assignments. It is going to take the patience of Job. Will, I know how much you favor single-stemmed trees as the legitimate heirs to championship status. What would be your thought if possibly some members of your group were okay with the vast majority of the champions being multi-stemmed? I'm not saying that is the case, nor am I saying that it isn't. But, the idea does take us ever closer to the idea of tree structures and their acceptability as champions. I don't think that is really what AF has ever intended, but it has largely come to pass with many tree species.

The Groups next step is to immerse ourselves in the multi-stem debate in all its facets. Don and I would love to hear members of the tree-measuring corps of NTS weigh in and give us your opinions. What do you think of the pith rule? What does it really establish? How easy is it to apply? How else would we go about establishing whether a multi-stem structure is one tree or more than one? Should all species be treated by the same rules? For example, I don't observe white pines coppicing. When two trunks emerge from what many people would think of as a single trunk, we know that we really have two trees that just appear to be one. With other species such as silver maples, we really have a challenge. We can get shoots coming up from the root collar, which in time grow against the main stem and create a mass of trunks that have no space between them at breast height. We can also have some stems that are separated from the main trunk at below 4.5 feet. And we can have a coppice that fuses with a second tree,

creating a tree structure.

One school of thought is to treat single trees as one class and multi-stemmed structures as a different class and not mix them. AF is not receptive to that approach. We're stuck with one list. No wiggle room there. So, we have lots of challenges. What initially seemed manageable has suddenly turned into a multi-stemmed, twisted mess. Ed, you wouldn't have survived it

Bob

Re: Group progress of AF measuring group

by **edfrank** » Sat Jul 20, 2013 1:24 am

Bob,

I would have rocked the boat concerning the mid-point versus highest side, but there are arguments in favor of highest side. It is shortchanging the trees total height to use the upper side, but I can live with it.

As for multitrunk trees being accepted as champions. This is what bothers me far more with the AF listing than the height problems. Tree can be defined as single trunk for champion purposes, or a better approach would be to have separate listings for each if a multitrunk tree out-points a single trunk tree.

This is where I would have put my foot down. This is the take no prisoners never surrender line for me. Don't massage these people. Don't accept the crumbs that are thrown your way. The multitrunk problem is one that is easy to fix and doesn't require any high powered or expensive instruments from anybody. If you don't establish a distinction between the two, then the entire effort is wasted. How much work would it require to have separate listings, Not much at all. Don't give in on this point. This is the biggest flaw in the listings and one they can fix. If they want to have standards, then they need to mean something.

I would have survived, or maybe I would have been kicked out of the group. There are three things to fix

in the measurement guidelines:

- 1) Measured from mid-point on a slope,
- 2) Multitrunk versus single trunk **THE MOST IMPORTANT FIX IN MY MIND**. Separate listings for each form. At a minimum they need to at least note if the tree is multitrunk or single trunk.
- 3) Height measurement protocols: sine/ENTS method/climbing/pole measurements for all champion trees. At the very minimum they need to list the height measurement method.

You have conceded on the #1, you apparently want to abandon #2 because AF isn't receptive to that approach, and I seriously doubt if you will get any of #3.

So if you don't get #3, and have given up on #2, then nothing has been accomplished by this exercise. If they want to improve their standards, they need to do something to improve them. If they are not going to listen to NTS people, then why go through the farce of inviting participation? If they are not going to accept the input from outside the core of AF and do what they already have decided to do anyway, what is the point? You have tried and tried to make slow incremental changes. You have been doing that for years and the newer measurement standards appear to be worse than what they had on their website a few years ago. The AF committee people do not need to be massaged any more, it doesn't work. They need to be hit upside of the head with a cast iron skillet.

Either they are serious about the standards and want to do the right thing or they are not. If they are not, abandon the effort. If they cannot accept the minimum concept that multitrunk trees need to be listed separately from single trunk trees, then I would not want to see NTS name appear in any way connected with their new "guidelines."

Edward Forrest Frank

[Re: Group progress of AF measuring group](#)

by **Will Blozan** » Sat Jul 20, 2013 10:38 am

Bob,

Of all the metrics associated with the AF formula, the position of the base of the trunk should not- and can not change. EVERY subsequent and future measurement of girth and height will be referenced to this stable point. Thus, it HAS to be midslope- as the upslope side of the tree will change as the tree grows. Why on earth would anyone choose a non-stable point of reference?!? Ask BVP or Sillett about that one!

I agree with Ed on all his points. If the boat was not to be rocked there would not be committee at all. Loss of support? Do champion trees give donations? If anything, tightening the rules should enhance the competition. If those folks who nominate bogus and multiple stemmed trees just to get on the list object-screw 'em. It's about time they get in the game in a useful way or stop muddying the waters.

If you are the voice of NTS as you have so clearly stated, then let our voice be heard. Be the stick in the mud. The squeaky wheel. The Lorax.

Will

[Re: Group progress of AF measuring group](#)

by **edfrank** » Sat Jul 20, 2013 11:19 am

Bob and Don, and other ENTS involved

I was having trouble sleeping after my post last night. It wasn't because of regret about comments about multitrunks and height, but because of the mid-slope question. If you measure on the upper side that

means the base position of the tree is changing over time. It is walking up hill. The argument made was for consistency sake it would be better. How would it be better to have measurements that can be consistently taken that are wrong versus measurements that are correct with some possible minor variations in terms of inches between different measurers. As time passes the tree using the upper side is "walking up the hill." I don't think so. A branch in its youth at 50 feet up the trunk is now at 48 because the base of the tree has changed? Using two different reference points for the base of the tree for height and girth? That is certainly not better. How do you measure the girth on a tilted tree? from the upper side? The answer is clear when you are using the mid-point rule. Will is right above in his comments. I was going to post essentially the same comments concerning mid-slope when I logged on even before I read his note.

It is odd that American Forest wants to abandon the mid-slope center point concept when other big tree groups are moving toward it after my article in the Wikipedia. I will forward comments made by Brett Mifsud in an email. Measurements need to be made from the same point on all trees for every measurements and that point is where the pith intersects the supporting ground below as approximated by the midslope rule. If that would cause problems because the girth would be below ground level on the upper side, or be too low on the trunk, a girth can be taken at a different height with the height above that point noted.

You can't make them accept the NTS procedures.

They are going to do what they want to do. What you can do is champion our measurement methods without compromise on all points, even if you are out voted in the final decision.

Edward Frank

Re: Group progress of AF measuring group

by **tsharp** » Sat Jul 20, 2013 12:36 pm

Bob, NTS:

To answer or comment on some of your questions.

"What do I think of the pith rule... what does it establish...how easy is it to apply?"

I think the "pith rule" is a logical way to establish whether a tree has a single stem or fused multistem trunk. It is easy to apply and for about 90% of such trees under consideration it only takes a cursory glance and/or a walk around the base of the tree to make that determination. The other 10% will take a little longer period of consideration and probably prior experience with the species under consideration will be important.

"How would we go about establishing whether a multistem structure is one tree or more than one?"

As Ed has pointed out many times It is not necessary to determine whether it is one tree or more than one.

It is only necessary to apply the "pith rule" in a consistent manner to determine if the trunk is one stem or a fused mult1-stem.

"Should all species be treated by the same rules?"

Yes

Should girth be taken on uphill side. No! mid-slope is the only way to go as Will pointed out. It also discriminates against nominations from hill country. My dearest wife, Susan, weighed in with an opinion. To her it was a no brainer. Two lists = equals double the interest and potential participation. I agree. but if two lists are a no- go and if multistem trees are allowed they should be identified as such.

The present AF big tree listing is a mess. I believe it was mostly caused by AF not enforcing their own rules and letting 50 state coordinators submit trees with inadequate information.

Turner Sharp

Re: Group progress of AF measuring group

by **dbhguru** » Sat Jul 20, 2013 1:02 pm

Ed, Will, Turner,

Thanks so much for your inputs. Ed and Will, fear not, I have no intention of rolling over and abandoning our philosophy and methodology. I am presently trying to get inside the heads of the other members to fully understand where they are coming from and why - Don Bertollette excepted because he and I are in constant communication, and we are usually in close agreement. As the discussions continue, maybe we can assemble the different inputs of NTS members and I can present them as part of the proceedings. One challenge I have is to not appear (or be) so dogmatic and unsympathetic to the concerns and positions of the non-NTS members that they simply rule out anything I say because they sense no team spirit on my part. However, I need to think these issues through with the rest of you, leaving no stone unturned. Innovative thinking is needed.

I do sense that there is a fear in the Group of rocking the boat too much, but I also recognize a real difference of opinion on what constitutes the best methods. Repeatability is an issue that arose yesterday, and I acknowledged its importance. I think one group member has considerable experience with the mid-slope rule and find that a lot of judgement is brought to bear, often leading to what that member believes are compromised measurements. I don't know if this is one of those strain at a gnat and swallow a camel situations or not. Fret over inches on one part of the measuring process and accept errors in the tens of feet on another. I just don't know.

More thoughts tonight. On my birthday, I get to choose the trail to hike today. Pictures later today.

Bob

Re: Group progress of AF measuring group

by **edfrank** » Sat Jul 20, 2013 1:30 pm

If they don't want to rock the boat, and are adamant about not changing anything, at least get them to follow their old guidelines and enforce them rather than weakening them further,

Ed

Re: Group progress of AF measuring group

by **Jess Riddle** » Sat Jul 20, 2013 2:16 pm

Bob,

I believe if multi-stem plants are mixed with single stem trees, the list will be worthless. American Forests wants participation. I stopped participating because the list was a joke, and multi-stem champions are what made it a joke.

Sincerely,
Some guy who nominated over a dozen champions and would have nominated dozens more

Re: Group progress of AF measuring group

by **dbhguru** » Sat Jul 20, 2013 11:20 pm

Jess,

From a scientific perspective, I totally agree. From a sporting, recreational perspective, the list can be as mixed as AF wants to make it, or allows it to degenerate into. They have not come to grips with

issues like serious purposes to be served by the register. It is not going to be an easy sell to get AF to accept higher purposes for the list, but I'll do my best to get them pointed in that direction.

All,

I've been thinking how to address the concern to get standardization in measuring height from mid-slope. What about running a tape round the base at ground level, then starting at the uphill point, go a quarter of the way around the tape and measure the vertical distance from the tape to the point of contact with the ground. Then do the same at three-quarters of the distance around (or one quarter from the other direction from the uphill point). The next step would be to average the two off-sets. This would be the vertical distance to mid-slope from the uphill side of the tree. Full height would be to measure the height above the uphill side plus the offset to mid-slope. This process would be for trees for which a tape could be stretched around the trunk at base level.

My thinking here is that I need to propose a measuring protocol to the Group to counter any arguments that might be put forward to focus on the judgement factor for identifying mid-slope. Thoughts?

Bob

Re: Group progress of AF measuring group

by **edfrank** » Sun Jul 21, 2013 12:04 am

Bob,

You can hold the measurement protocol in reserve if someone asks for it. I am thinking that it is better to just say to use the measurer's judgement about where the midslope point might be. Anytime you add another measurement protocol, it is just another complication that can be make people less receptive

to your overall idea, especially if they are looking to simplify the process. You could say that determining the midslope point could be numerically determined as you specified, if needed, but the measurers judgement should be adequate. Adding another measurement or throwing more equations into the mix does not brighten the day of anyone who does not have a passion for math. So my opinion is NO, don't go down this path at all if you can possibly help it.

Perhaps a more down to Earth assessment of the problem with mixing multitruk and single trunk trees would be more appropriate. Tell them that people who are serious about measurement and many of those are just casually interested who have found a large tree don't participate in the process or submit data because the mixing of single trunk trees and multitruk trees indiscriminately on the list. This make the list a joke rather than a worthwhile effort. Even recreational tree measurers want their contributions to be worthwhile and feel their submissions are being treated fairly. They most certainly are not being treated fairly when two trees barely touching are measured as one tree for girth, while a more massive single trunk tree is left out because it was measured correctly. Mixing the two distinctly different growth forms together is fundamentally unfair and people feel cheated when their submissions are not being treated fairly. You can counter this perception by pointing out the value of the list if they were not intermixed, and the height data was better. Developing a better quality list with stricter rules will increase participation in the effort as well as providing all that higher calling stuff.

Ed

[Re: Group progress of AF measuring group](#)

by dbhguru » Sun Jul 21, 2013 10:45 am

Ed, There are two groups to consider, the nominators and the certifiers. In proposing a methodology for determining mid-slope, I'm referring

only to the certifiers. With them, I don't think the process is too labor intensive and definitely needs to be done on really large trees on steep slopes. Misplaced mid-points can be substantial for trees that are say 10 feet or more in diameter.

However, with nominators, I'm in complete agreement with you. We need to keep the process simple. But even here, there is room for discussion. There is one class of nominators that I'm less sympathetic to and that is the group that makes lots of submissions - the ones whose names appear multiple times in the Registry and who are known as big tree hunters. Some of these folks are a big part of the problem. At this point, I'm not sure how to handle the repeat nominator as opposed to the casual one, but I can make a pretty good argument for distinguishing between the two.

Now to the point on who is or is not turned off by the current inclusion of many multi-stemmed trees. I have heard forestry academics dismiss the registry for largely this reason. Most forest measurement-savvy folks are likely to be disinclined to see much value in the registry, if they pay attention to the submissions. As for the public as a whole, I'm not so sure. My guess is that lots of novices are content with the multi-stemmed structures because trees that landowners, proud of a tree, often bring to my attention are of this form. I've never seen any data on what the "public" prefers. I don't even know what state certifiers, as a group, think about the tree forms that commonly make it into the registry. I'm sure there is a diversity of opinion, but don't know the percentages. I wonder what arborists, as a group, think. Of course, I know what the vocal ones on our BBS think, but in general, not a clue.

My opinion over the years has been that the National Registry has been far too loosely managed and that the managers at AF were stuck with certifiers at state level who were little better than the nominators. I don't have a take on how seriously certifiers took their assignments, but can make some good guesses there. Some probably don't have the time to take the certification process seriously. Some of them are reluctant to say so or turn the responsibility over to third parties. Others consider

themselves tree-measuring experts because of a timber background. A few I have known in the past took their responsibilities very seriously and tried to clean up their state registers. Will Fell from Georgia is an example of this group. Of course, state coordinators who are also in NTS are other examples.

I've been a behind-the-scenes certifier for a long time here in Massachusetts. In addition, the Coordinator for New York State's program has requested that I submit any trees for that state directly. They trust my measurements and consider them certified. Don Bertollette is doing a lot of research on the state programs and I think is developing a good mental profile of what is out there on the playing field.

When considering the trees that are receiving the attention, i.e. multi-stemmed monstrosities, I do recognize that if we don't get this problem under control, the National Register will continue to be irrelevant. Lots of work, lots of persuading needed.

Robert T. Leverett

[Re: Group progress of AF measuring group](#)

by **Will Blozan** » Sun Jul 21, 2013 3:42 pm

Bob, Presumably, the person measuring the tree would have a clinometer on hand or a laser capable of measuring vertical offsets, as well as a tape. The method I use is super-quick and simple and could be suggested as a method if such care was warranted.

- 1) Find high side of ground and get in position that you are level with it based on a "0" clinometer reading.
- 2) Transfer this elevation to an area of the trunk above low side of ground. Mark this point with a thumbtack or simply remember where it is.
- 3) Go back to the trunk and measure the distance

between the low side at ground and the mark on the tree (it need not be vertical BTW).

4) Split the distance in half and mark the midslope position.

5) Measure the girth 4.5 feet above the mark perpendicular to the stem.

Quick, accurate and does not involve any more gear or math.

Will

[Re: Group progress of AF measuring group](#)

by **Don** » Sun Jul 21, 2013 3:54 pm

Bob/Ed/Will/Jess/Turner/NTS-

I've read and reread your posts. Each of you have strong opinions, with varying degrees of flexibility (little to none :-)) and I'm not surprised. I wasn't always in agreement with all of you in the beginning, mostly because we came from different backgrounds/experiential bases. I was used to measuring hundreds of trees in a day, and the accuracy was appropriate for the task. And controlled, and replicable, and statistically valid. But the Champion Tree Registry is not about statistical validity, and that's okay. We're dealing species-wise with a WAY-out-in-the-tails, very small sample of trees that I'll refer to as National Registry candidates.

Those candidates are going to be hard to 'corner' with a one-size-fits-all set of rules. Somewhere, some trees are going to be unfairly excluded (of course I agree that there are some, probably too many, that aren't getting left out, and should be).

All that said, I've come a long way since then. My current strategy is go back to the basics...what is a tree? It may sound Clintonian, but it's turned out to be a fairly slippery slope.

First, a convention...when I say 'at the ground line' what I am really envisioning is the cross-section of the tree base that would appear **IF** the tree were severed by a **VIRTUAL** chainsaw. At a minimum,

the definition should include **at least** these two physiological characteristics...has to have a pith, and at one set of concentric annual ring(s) at the ground line. (This is consistent with NTS precept that a tree starts at the seed, with roots going down and shoot going up). If that pith line and it's single set of concentric continues up to 4.5' from it's 'ground line/seed source/base' without forking, it gets it's girth measured there. If the pith line/concentric ringset forks before it gets to 4.5' then it is a single stem that forked and it gets it's girth taken at its narrowest dimension below the forking. I'm willing to concede to estimates of these points being determined by beginning and ending of 'fork swelling'...

If by proximity or reproductive strategy a fusion between two same species trees occurs (defined as a pair or more of pithline/concentric ringsets), it gets measured as two trees. If the fusion disperses below breast height, each tree gets its girth measured separately and if each or any of them INDIVIDUALLY are of sufficient dimension to merit candidacy, then each or any of them are INDIVIDUALLY eligible as candidates. If the fusion disperses above breast height and continues beyond reach, it remains two trees and it is incumbent on the nominator to define and use the strategy to measure their separate volumes. If each or any of them...etc.

I recognize and share wonder with those that are gobsmacked by multi-stemmed giants (more than one pithline/concentric ring set), and recognize that they should be measured differently than single-stemmed giants. How fair is it to get to measure air, the large voids included by a tape when measuring multiple stems at once? As to how they get recorded (same list with asterisks?, separate but equal otherwise list?) is probably not an easy issue to resolve, and probably should get resolved administratively. But defining *A tree is*.

Refining my definitions is necessary. I am initially guided along the lines of a physiological tree definition and hope to keep it that way. Some will ask about exceptions. Palms come to mind, are they an exception? My current, off the top of my head thought is that a palm is a tree with one large pith that

is described by one concentric ring. I could go either way, depending on input.

There is a whole world out there, of trees with strange, wonderful, unusual and unique forms. Typically they are tropical. My suggestion is that if their form is such that they can't be measured by AF rules, then they need to find a place on another list.

I hope I have achieved my goal to speak to these issues specifically, but not stridently. These are at some level with each of us, passionate issues, and I mean to not inflame passions, but to find consensus.

While it's usually smart to avoid hot button issues when striving for consensus, I think I've tried to find a 'fabric' that is inclusive and organic (in the sense it's natural, physiologically based).

How about where we measure height from? For forty years I have measured diameter at breast height. I was reluctant to change, as for somebody who measured hundreds of trees a day, and many thousands over my career, it is so natural and intuitive to measure trees from the uphill side. For the level of accuracy that I was expected to achieve, measuring height and girth from there was fine. Quick, easy, clean...a motto I stuck with for years.

I see reasons for both sides of this issue. I see AF and NTS trying to use the mid-slope concept (the sprouting seed model) for cbh and height. **I agree with height starting at the seed/mid-slope point.**

When the Registry of the Future arrives intact with high technology, VOLUME will be the measure of a tree's bigness, and the the 2D dimension of height definition will need to change.

But there is a logic issue involved when we accept that a tree's girth is measured 4.5' from the base, long a traditional solution to two problems: 1) ease of measurement when using arms which outstretched define breast height; and 2) for trees prone buttressing or on a slope (or both), a large percentage of most trees complete their buttressing before that height when measured at the traditional dbh from top of tree's base on a slope.

To lower that "breast height" to a point at mid-slope

diminishes the number of trees whose buttressing gets completed before girth gets taken. Functionally, the girth should be taken after buttressing quits and it's 'columnar' shape begins.

This begs a larger issue, that of how to measure *giants*. I'm not ready to suggest solutions, but am happy to listen to everyone's ideas here...I don't think there's any better brainstorming that can go on, than here at NTS and hope to have as many weigh in as want to.

Thanks for your ear, please do comment further!
-Don

[Re: Group progress of AF measuring group](#)

by **edfrank** » Sun Jul 21, 2013 4:55 pm

Don,

The questions you pose are fair. I think it is important conceptually as well as practically to have the height of the tree and the girth of the tree to be measured in relation to the same reference point. I think this reference point should be the same location over time and over the life of the tree. The only point that meets both of these goals is where the pith of the tree intersects the ground, the place where the tree first sprouted. To me this enables all of the measurements to be tied together in a meaningful way. This is simply not the case for measuring on the upslope side of the tree. It is important to me that things make sense, that I understand how pieces are related to each other. Maybe it is an obsessive compulsion, but that also is to large part of why I am interested in science and consider myself a scientist. I want to understand how the pieces fit together. This is how the measurements fit together.

You commented about using the mid-slope point would result in the inclusion of more of the basal buttress in the measure and perhaps inflate the girths. True. But on the lower side less of the buttress will

be included as it is more than 4.5 feet above the base of the tree. These will not directly offset the other, but the sum of the two does mitigate the problem to some degree. The exact parallel argument might be made that measuring the girth from the upper side would give a low value when compared to a tree of a similar diameter growing on level ground. I do not think that measuring at one point or the other is intrinsically more fair or more pejorative than another. Therefore with all else being equal the question boils down to the ease of measurement versus the conceptual underpinnings of the measurement process. I think the latter is far more important.

For the really giant trees measuring at breast height is going to be well within the basal flare of the trunk no matter what method is chosen. Measurements based upon mid-slope point may even have the upper edge of the projected girth loop be below the surface. In this case the girth could be measured at the upper side of the tree and the height above the mid-slope point noted to keep everything tied together in the same way.

As for what are trees and how they should be defined, I am leaning toward inclusionism for the NTS measurements. If it is a plant that sticks well up into the air we should measure it. For the American Forests Champion Tree listings, I would favor as broadly inclusive definition as possible and as I suggested above, one just based upon height.

Some of the tropical tree forms are too exotic to be incorporated into AF formula and should be listed separately or listed as a special subsection based upon different criteria suitable for that form. The big banyans for example would appear to be best defined by height and area of occupation.

Edward Forrest Frank

[Re: Group progress of AF measuring group](#)

by **dbhguru** » Sun Jul 21, 2013 6:00 pm

Ed, Will, Jess, Turner, et. Al.,

Thanks. These are the discussions that Don and I need to here.

Will, Of course, I had a brain misfire. I have understood the method you have been using to sight mid-slope. Simple and quick.

All, How strong is each if you on the pith test? Any exceptions?

Robert T. Leverett

[Re: Group progress of AF measuring group](#)

by **Larry Tucei** » Mon Jul 22, 2013 8:24 am

All- I read all your postings and many great points have been noted. I agree with many of you on the Mid-Slope reference point. AF can do what they will with the Single Multi-Trunk listing. I however will always call a tree a Single Trunk or a Multi-Trunk. The Live Oak listing notes Single or Multi. It's not rocket science. Live Oaks are Single, Multi or Coppice. Several other tree species do the same some do not. The trees that do should have different categories. I feel as many others do on this subject it is not fair for a huge single trunk tree to be out pointed by a tree that has two, three or seven trunks.

For State Champion trees there must be a difference or what is the point of even having a listing?

Larry

[Re: Group progress of AF measuring group](#)

by **Matt Markworth** » Mon Jul 22, 2013 8:12 pm

Hi Bob,

Your recent post got me thinking. After reviewing the AF website, here are the goals of the program that I was able to find:

- For more than 70 years, the goal of the National Big Tree Program has remained: to preserve and promote the iconic stature of these living monarchs and to educate people about the key role that these remarkable trees and forests play in sustaining a healthy environment.

- Recognize the biggest trees in the US in an effort to locate and protect them.

- Bring awareness to the biggest trees in the country.

- Advocate for these species.

I'm curious if other goals have been expressed. I have full faith and confidence that if clear goals have been expressed, you are fully prepared to provide them with solutions to meet their goals. On the other hand, if they are unsure why they are seeking change, then you are in the very unenviable position of trying to provide a solution without any knowledge that it will meet the needs of what they are trying to accomplish with this list.

Here are some questions/requests that may help them contemplate/decide what they want to accomplish with the future direction of the list:

- Tell me more about what precipitated this recent effort to upgrade the Big Tree Program.

- What issues have you encountered with how this list has been managed thus far?

- Going forward, will the primary purpose of the

list be recreational, scientific, or a combination of both? For what purposes do you envision these various groups utilizing the list?

- What level of accuracy do you feel is required to serve the interests of the groups that will be utilizing the list?

- Is there a willingness to accept significant changes to the list, as long as those changes will result in the long-term success of the list and lead to participation by everyday citizens and serious tree measurers?

If some direction can be uncovered on these major underlying issues, then the other members of the group will be willing to accept change. This opportunity may not present itself again for years to come and I hope that the current decision makers have the foresight to ensure that the list can serve both educational and scientific purposes that will benefit all involved.

- Matt

[Re: Group progress of AF measuring group](#)

by Don » Tue Jul 23, 2013 12:00 am

Matt-

Great questions! If it's alright with you, I'll respond in the body of your text, *IN CAPS*

Matt Markworth wrote:

*dbhguru wrote:*Jess,

From a scientific perspective, I totally agree. From a sporting, recreational perspective, the list can be as mixed as AF wants to make it, or allows it to degenerate into. They have not come to grips with issues like serious purposes to be served by the register. It is not going to be an easy sell to get AF to accept higher purposes for the list, but I'll do my best to get them pointed in that direction.

Hi Bob,

Your recent post got me thinking. After reviewing the AF website, here are the goals of the program that I was able to find:

- For more than 70 years, the goal of the National Big Tree Program has remained: to preserve and promote the iconic stature of these living monarchs and to educate people about the key role that these remarkable trees and forests play in sustaining a healthy environment.

NO CHANGE HERE, THESE ARE LAUDABLE GOALS AND I THINK NTS FULLY SUPPORTS THEM

- Recognize the biggest trees in the US in an effort to locate and protect them.

YOU'VE IDENTIFIED ONE OF THE CRUX ISSUES, NOT YET DEALT WITH ANY DEPTH. HOW DO WE DEFINE BIG? IS IT A 2D HEIGHT/WIDTH PERCEPTION OF A BIG TREE FROM A DISTANCE? IS IT THE 3D WORLD WHERE IT TAKES 27 KIDS TO ENCIRCLE THE BIG TREE'S UNQUESTIONABLY BIG CIRCUMFERENCE?

- Bring awareness to the biggest trees in the country.

I THINK WE ALL SUPPORT THIS GOAL, ONCE "BIG" IS DEFINED IN A FAIR, WELL-DEFINED, REPLICABLE WAY.

- Advocate for these species.

AGAIN A FULLY SUPPORTED LAUDABLE GOAL

I'm curious if other goals have been expressed. I have full faith and confidence that if clear goals have been expressed, you are fully prepared to provide them with solutions to meet their goals. On the other hand, if they are unsure why they are seeking change, then you are in the very unenviable position of trying to provide a solution without any knowledge that it will meet the needs of what they are trying to accomplish with this list.

I PERSONALLY THINK YOU ARE CLOSER TO THE MARK HERE THAN YOU MIGHT REALIZE, BUT WE SEE THIS AS A CHALLENGE AND AN OPPORTUNITY, AND ARE TRYING TO "DO THE

RIGHT THING".

Here are some questions/requests that may help them contemplate/decide what they want to accomplish with the future direction of the list:

- Tell me more about what precipitated this recent effort to upgrade the Big Tree Program.

IT'S ALL NTS's FAULT! JOKE, SORT OF...AF REALIZES THAT MANY OF THE REGISTRY CHAMPIONS HAVE BEEN MEASURED BY WHAT NTS REFERS TO AS THE 'TANGENT' METHOD, WHICH IN THE CASE OF MOST DECIDUOUS TREES AND SOME CONIFERS, MISMEASURES TREE HEIGHTS SIGNIFICANTLY. AF RECOGNIZES THAT THE SINE/SINE METHOD CAN ACHIEVE SUPERIOR ACCURACY. AF WOULD LIKE TO RESOLVE THE CONTINUING CONFLICT OVER HOW TO FAIRLY SCORE AF FORMULA POINTS FOR BOTH SINGLE- AND MULTIPLE-STEMMED REGISTRY CANDIDATES.

- What issues have you encountered with how this list has been managed thus far?

I THINK AF IS WANTING TO RESOLVE ABOVE ISSUES AND ARE CAREFULLY RECEPTIVE TO CONSIDERING IMPLICATIONS OF TECHNOLOGIES THAT WEREN'T AVAILABLE TO EARLIER AF GENERATIONS, AND HOW THEY MIGHT IMPROVE ACCURACY.

- Going forward, will the primary purpose of the list be recreational, scientific, or a combination of both? For what purposes do you envision these various groups utilizing the list?

I'M GOING TO AVOID THE PHRASING 'PRIMARY' AND SUGGEST THAT ALL THE PURPOSES THAT AF PURSUES ARE ACHIEVED WITH MORE ACCURATE MEASUREMENTS OF WHATEVER DEFINITION OF BIG GETS SELECTED AND SUPPORTED.

- What level of accuracy do you feel is required to serve the interests of the groups that will be utilizing the list?

A QUESTION THAT I HAVE GRAPPLED WITH FOR MORE THAN A YEAR, IN MY OWN ROLE AS

THE AF BIG TREE COORDINATOR FOR ALASKA.

WHILE MY STATE IS MUCH MORE REMOTE AND UNDERSERVED BY ALL TRANSPORTATION SYSTEMS, I BELIEVE A SYSTEM THAT THE MEDICAL FIELD EMPLOYS, TRIAGE, WOULD SERVE THE INTERESTS OF THESE GROUPS.

MORE SPECIFICALLY, I SEE A TRIAGE (PRONOUNCED "TREE AJ"...: >) IN A MATRIX WHERE THE COLUMNS ARE:

CERT. LEVEL ----SKILL LEVEL----EQUIP. USED--

-METHOD----

LOCAL/REG. LAY PERSON AVAILABLE

SIM. TRIANGLES

*STATE COORD TECHNICIAN CLINO, TAPE+
TANGENT*

*NAT'L CADRE EXPERT HYPSONETER+
SINE/SINE*

- Is there a willingness to accept significant changes to the list, as long as those changes will result in the long-term success of the list and lead to participation by everyday citizens and serious tree measurers?

THE USE OF THE ABOVE TRIAGE MATRIX HELPS ACHIEVE THAT IN THIS WAY...THE GENERAL PUBLIC (LAY) ARE ABLE TO USE AVAILABLE EQUIPMENT TO ALERT THE STATE COORDINATOR TO A POSSIBLE NOMINATION. STATE COORDINATOR USES THE TECHNOLOGY HE(SHE) HAS AVAILABLE PERSONALLY OR BY EMPLOYER TO MORE ACCURATELY JUDGE THE TREE FOR STATE LEVEL REGISTRY, AND IF REASONABLY CLOSE, SUBMIT THE CANDIDATE FURTHER TO THE NATIONAL REGISTRY LEVEL WHERE THE NATIONAL CHAMPION CANDIDATES ARE MORE CAREFULLY/ACCURATELY MEASURED. THIS ACHIEVES ALL AF GOALS LISTED EARLIER, USES APPROPRIATE TECHNOLOGY AND SKILL LEVELS TO OBTAIN ACCURACY APPROPRIATE TO THE CERTIFICATION LEVEL.

If some direction can be uncovered on these major underlying issues, then the other members of the group will be willing to accept change. This opportunity may not present itself again for years to come and I hope that the current decision makers have the foresight to ensure that the list can serve both educational and scientific purposes that will