eNTS

The Magazine of the Native Tree Society
Volume 3, Number 01,
January 2013
eNTS: The Magazine of the Native Tree Society

The Native Tree Society and the Eastern Native Tree Society
http://www.nativetreesociety.org
http://www.ents-bbs.org

Volume 3, Number 03, March 2013
ISSN 2166-4579

Mission Statement:

The Native Tree Society (NTS) is a cyberspace interest group devoted to the documentation and celebration of trees and forests of the eastern North America and around the world, through art, poetry, music, mythology, science, medicine, wood crafts, and collecting research data for a variety of purposes. This is a discussion forum for people who view trees and forests not just as a crop to be harvested, but also as something of value in their own right. Membership in the Native Tree Society and its regional chapters is free and open to anyone with an interest in trees living anywhere in the world.

Current Officers:

President—Will Blozan
Vice President—Lee Frelich
Executive Director—Robert T. Leverett
Webmaster—Edward Frank

Editorial Board, eNTS: The Magazine of the Native Tree Society:

Edward Frank, Editor-in-Chief
Robert T. Leverett, Associate Editor
Will Blozan, Associate Editor
Don C. Bragg, Associate Editor

Membership and Website Submissions:

Official membership in the NTS is FREE. Simply sign up for membership in our bulletin board at http://www.ents-bbs.org. Submissions to the website or magazine in terms of information, art, etc. should be made directly to Ed Frank at: edfrank@nativetreesociety.org. The eNTS: The Magazine of the Native Tree Society is provided as a free download in Adobe© PDF format through the NTS website and the NTS BBS. The editorial staff of eNTS: The Magazine of Native Tree Society are solely responsible for its content.

COVER: Triple stemmed coihue, Chile by Josh Kelly

© 2013 Native Tree Society
All rights reserved


### TABLE OF CONTENTS

I want to remind the readers of this magazine that the articles presented here are only a part, usually just the beginning, of the discussions being held on our BBS at [http://www.ents-bbs.org](http://www.ents-bbs.org). The full discussion can be read by clicking on the link embedded in the title of each individual article. - Edward Frank

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land snail diversity /anthropogenic disturbance</td>
<td>11</td>
</tr>
<tr>
<td>Re: Land snail diversity /anthropogenic disturbance</td>
<td>11</td>
</tr>
<tr>
<td>Big Oaks in New York</td>
<td>11</td>
</tr>
<tr>
<td>Kaesa's Pine, Broad Brook, MA</td>
<td>12</td>
</tr>
<tr>
<td>Re: Kaesa's Pine</td>
<td>13</td>
</tr>
<tr>
<td>Leita Thompson Memorial Park, Roswell, GA</td>
<td>14</td>
</tr>
<tr>
<td>Re: Leita Thompson Memorial Park, Roswell, GA</td>
<td>15</td>
</tr>
<tr>
<td>La Pine ponderosa likely top of class</td>
<td>16</td>
</tr>
<tr>
<td>Re: La Pine ponderosa likely top of class, OR</td>
<td>16</td>
</tr>
<tr>
<td>Re: La Pine ponderosa likely top of class, OR</td>
<td>16</td>
</tr>
<tr>
<td>#1) West Coast Rucker Index</td>
<td>17</td>
</tr>
<tr>
<td>Re: West Coast Rucker Index</td>
<td>17</td>
</tr>
<tr>
<td>Re: West Coast Rucker Index</td>
<td>18</td>
</tr>
<tr>
<td>Swift River Reservation</td>
<td>19</td>
</tr>
<tr>
<td>Re: Photo Measuring for Trunk Modeling</td>
<td>23</td>
</tr>
<tr>
<td>Re: Photo Measuring for Trunk Modeling</td>
<td>23</td>
</tr>
<tr>
<td>NY Champion Red Maple?</td>
<td>24</td>
</tr>
<tr>
<td>Re: NY Champion Red Maple?</td>
<td>25</td>
</tr>
<tr>
<td>Re: NY Champion Red Maple?</td>
<td>25</td>
</tr>
<tr>
<td>Re: Large Oaks in Pre-settlement New England/Waverly oaks</td>
<td>27</td>
</tr>
<tr>
<td>Re: Large Oaks in Pre-settlement New England/Waverly oaks</td>
<td>27</td>
</tr>
<tr>
<td>Hemlock Bluff Nature Preserve (IN)</td>
<td>28</td>
</tr>
<tr>
<td>20+ CBH Oaks in Southern New Jersey</td>
<td>29</td>
</tr>
<tr>
<td>Re: 20+ CBH Oaks in Southern New Jersey</td>
<td>31</td>
</tr>
<tr>
<td>Re: 20+ CBH Oaks in Southern New Jersey</td>
<td>31</td>
</tr>
<tr>
<td>Re: 20+ CBH Oaks in Southern New Jersey</td>
<td>31</td>
</tr>
<tr>
<td>Cypress Trees Pascagoula Wildlife Management Area</td>
<td>32</td>
</tr>
<tr>
<td>Re: Cypress Trees Pascagoula Wildlife Management Area</td>
<td>37</td>
</tr>
<tr>
<td>Re: Cypress Trees Pascagoula Wildlife Management Area</td>
<td>38</td>
</tr>
</tbody>
</table>
Re: Carolina hemlock genetics study ................................................................. 133
White Pine Crowns, Cook Forest SP, PA ............................................................. 133
Re: White Pine Crowns, Cook Forest SP, PA ....................................................... 134
Using a monocular to determine limb length ....................................................... 135
Re: Using a monocular to determine limb length ............................................... 135
Re: Using a monocular to determine limb length ............................................... 136
Re: Using a monocular to determine limb length ............................................... 136
Moosewood Bill Harlow ....................................................................................... 137
Chile Trip Part 3: Parque Nacional Alerce Andino .............................................. 138
Re: Chile Trip Part 3: Parque Nacional Alerce Andino ......................................... 148
Re: Chile Trip Part 3: Parque Nacional Alerce Andino ......................................... 148
Re: Chile Trip Part 3: Parque Nacional Alerce Andino ......................................... 149
Re: Chile Trip Part 3: Parque Nacional Alerce Andino ......................................... 149
Link Between Japanese Barberry and Lyme Disease .......................................... 149
Re: Link Between Japanese Barberry and Lyme Disease ..................................... 150
Re: Measuring Odd Tree Forms ......................................................................... 150
Re: Measuring Odd Tree Forms ......................................................................... 150
Re: Measuring Odd Tree Forms ......................................................................... 150
Re: Measuring Odd Tree Forms ......................................................................... 150
Re: Measuring Odd Tree Forms ......................................................................... 150
Re: Measuring Odd Tree Forms ......................................................................... 150
Re: Measuring Odd Tree Forms ......................................................................... 150
Re: Measuring Odd Tree Forms ......................................................................... 150
Site Index ........................................................................................................... 158
Re: Site Index ...................................................................................................... 158
Re: Site Index ...................................................................................................... 158
Evidence of very large Eastern White Cedars .................................................... 159
Re: evidence of very large Eastern White Cedars ................................................. 160
Re: evidence of very large Eastern White Cedars ................................................. 160
Re: evidence of very large Eastern White Cedars ................................................. 160
Re: evidence of very large Eastern White Cedars ................................................. 160
Cedar photo- Stone Mountain, GA ...................................................................... 161
Re: Cedar photo- Stone Mountain, GA ............................................................... 161
New Member Introduction .................................................................................................................. 161
Late Winter CONG Trip .................................................................................................................. 162
Introducing myself - Kentucky ........................................................................................................ 164
Re: Introducing myself - Kentucky .................................................................................................. 164
Re: Introducing myself - Kentucky .................................................................................................. 164
Re: Introducing myself - Kentucky .................................................................................................. 164
Re: Introducing myself - Kentucky .................................................................................................. 165
Re: Introducing myself - Kentucky .................................................................................................. 165
Re: Introducing myself - Kentucky .................................................................................................. 165
Nemophilist ....................................................................................................................................... 165
Town Creek, GA .............................................................................................................................. 166
Hapgood Wright white pine remeasured 3/22/13 ........................................................................ 171
Re: Concord Mass. 130' white pine 4/11/10 .................................................................................. 176
Re: Concord Mass. 130' white pine 4/11/10 .................................................................................. 177
More Troubling News about Neonicotinoid Insecticides ............................................................... 177
Re: More Troubling News about Neonicotinoid Insecticides ........................................................ 178
Re: More Troubling News about Neonicotinoid Insecticides ........................................................ 178
Re: More Troubling News about Neonicotinoid Insecticides ........................................................ 178
Giant Sequoias Face Looming Threat from Shifting Climate ......................................................... 178
Re: Giant Sequoias Face Looming Threat from Shifting Climate ................................................ 178
Ancient Giant Trees Found Petrified in Thailand ............................................................................ 179
Re: Ancient Giant Trees Found Petrified in Thailand .................................................................... 180
Re: Ancient Giant Trees Found Petrified in Thailand .................................................................... 180
Re: Ancient Giant Trees Found Petrified in Thailand .................................................................... 180
Re: Ancient Giant Trees Found Petrified in Thailand .................................................................... 181
Re: Ancient Giant Trees Found Petrified in Thailand .................................................................... 182
Re: Ancient Giant Trees Found Petrified in Thailand .................................................................... 182
Cloud Mapping of the LaPine Ponderosa Pine, OR ....................................................................... 182
Re: Cloud Mapping of the LaPine Ponderosa Pine, OR ................................................................. 184
Re: Ramsey Cascades, GSMNP ....................................................................................................... 184
Wood Species Identification and Microphotography ...................................................................... 186
Re: Wood Species Identification and Microphotography ............................................................... 186
St. Joseph Plantation Live Oaks Vachiere Louisiana .......................................................... 187
Re: St. Joseph Plantation Live Oaks Vachiere Louisiana .............................................................. 194
Re: St. Joseph Plantation Live Oaks Vachiere Louisiana .............................................................. 194
Those interested in reproducing materials (articles or photographs) from the eNTS: the Magazine of the Native Tree Society should contact the Editor-in-Chief and/or the associated author/photographer directly for permission.
Land snail diversity
/anthropogenic disturbance

by edfrank » Fri Mar 01, 2013 10:35 am

“Are you using this idea for your thesis research?”
02-28-2013

By Daniel D. Douglas

“Are you using this idea for your thesis research?” I heard this as I stood in front of a classroom full of old-growth forest ecology students. The question had come from Neil Pederson, who was sitting directly in front of me. He was asking this question because I had just spent the past 12 minutes discussing the intricacies of land snail biology and ecology that would make them great organisms to use for ecological modeling in regards to disturbance.

Full-text: http://www.esajournals.org/doi/full/10.1890/ES12-00361.1
PDF: http://www.esajournals.org/doi/pdf/10.1890/ES12-00361.1


Land snail diversity can reflect degrees of anthropogenic disturbance
Volume 4, Issue 2 (February 2013)

Big Oaks in New York

by tomhoward » Sun Mar 03, 2013 12:01 pm

Here in Central NY I know of only 1 and possibly 1 other Oak with girth over 20 ft. The Oak that is definitely over 20 ft. girth is the largest tree here in North Syracuse, an open-grown White Oak 68 ft. tall (it has a wide spread but I haven't measured it yet) and 77 in. dbh (20.16 ft. cbh). This tree is growing very fast (in 2007 dbh it was 73.5 in.). It is a single-trunked tree. It is on a small hill in the back of Bear Rd. Elementary School, and seems to be no more than 190 years old, despite its great size. The tree was cored back in 1997 and there are only 44 rings on a 10” core. The best guess from an age estimated formula is about 190 years (or about 1820). The tree sits on the boundary of the towns of Cicero and Clay, and was possibly planted when Clay was set off from Cicero in 1827. Another large (but not as large as this) open-grown White Oak due north of this tree was blown down in 1998, and in 1999 I counted 180 rings on a cross-section of the trunk near the base - this could indicate a planing date of 1827. The much smaller in diameter forest-grown White Oaks in the North Syracuse Cemetery Oak Grove are estimated to be over 300 years old.

The other Oak in the 20 ft. dbh range is an open-grown Black Oak in Mt. Adnah Cemetery in Fulton in Oswego County. I have not seen this tree for many years, but it is a single-trunked tree 74 in. dbh (19.4 ft. cbh) in 2002. Its height is probably less than 70 ft. If it is growing fairly fast, it should be over 20 ft. cbh now.

Tom Howard

Re: Land snail diversity
/anthropogenic disturbance

by edfrank » Fri Mar 01, 2013 4:04 pm

Snails signal a humid Mediterranean
Posted on 3 February 2013
Kaesa’s Pine, Broad Brook, MA

by dbhguru » Fri Mar 01, 2013 12:27 pm

NTS,

This past week, I’ve been reconnecting with little Broad Brook, the stream that flows behind our house, and its forested sides. Broad Brook heads about 1.5 miles north of us and flows south behind our house and then flows to the east, passing under North Farms Road and into Fitzgerald Lake. The stream exits at a dam and eventually flows into one of the Valley’s two Mill Rivers, which in turn flows into the Connecticut River. The stream corridor behind our house is owned by Smith Vocational School, but the wetland areas and areas close to homes are usually left alone by their forestry program. The corridor is well wooded and includes one of the last stands of tuliptrees as one travels in a northeasterly direction. On Monica’s property, there are 10 tuliptrees, and up stream grow quite a few more. Altogether, there are around 50 stems.

One tuliptree on Monica’s property is 130.5 feet tall. As such, it is the northern most 130-foot tulip tree that I have measured in Massachusetts. I take great pride in that little bit of tree trivia. But the little Broad Brook corridor has other tall trees for the general region. The tallest is a huge white pine, a double, discovered by Will Blozan in 2007. It is approximately half a mile from the house as the crow flies. It is now 140.1 feet tall. There are at least 6 trees (five pines and one tulip) that reach or surpass 130 feet between our house and the head of the brook. Presently, I’m fine tuning the measurements of the six 130s, which brings me to the Kaesa Pine, named for Kaesa Fern, a composer friend of Monica’s and past participant on my interpretive walks. The full height of Kaesa’s pine is 130.2 feet. Here is an image of the Kaesa Pine taken from our back lot. A red arrow points to the top of the crown.

The second image is self-explanatory - I hope.

One interesting point is that the tangent-based error committed for the highest appearing top is largely canceled out relative to the height of the true top, which is a slightly more distant sprig. The actual measurement error for the tangent method here is 3.7
feet. However, the difference in height between the true top and the apparent top (the one that looks highest) is only a foot.

This example points to situation that often needs explaining. Let's assume a tree has been mismeasured through the tangent method. Another close by tree of the same species has nearly the same height as determined by the sine-sine method. The closeness of the two measurements may be seen as "proof" in the eye of the public of the accuracy of the first, even though different trees have been measured. If the tangent method yields an exceptional number, the existence of the second measurement may be cited as validating the first in the sense that the species can achieve such heights. Something close to that occurred in Congaree National Park. I could cite other examples.

We are left with a growing need to think of ways of explaining (and illustrating) how mis-information about a species gets promulgated. With the growth of websites, blogs, Face Book posts, etc. that repeat outdated and incorrect information, we amy be fighting a losing battle, but I'm motivated to keep plugging away at the problem.

Robert T. Leverett

Re: Kaesa's Pine

by dbhguru » Fri Mar 01, 2013 5:12 pm

Larry, The top 10 tall trees on Monica's property are as follows:

<table>
<thead>
<tr>
<th>Species</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>WP</td>
<td>136.0</td>
</tr>
<tr>
<td>TT</td>
<td>130.5</td>
</tr>
<tr>
<td>TT</td>
<td>128.3</td>
</tr>
<tr>
<td>WP</td>
<td>128.1</td>
</tr>
<tr>
<td>TT</td>
<td>126.7</td>
</tr>
<tr>
<td>TT</td>
<td>124.0</td>
</tr>
<tr>
<td>WP</td>
<td>119.0</td>
</tr>
<tr>
<td>TT</td>
<td>118.2</td>
</tr>
<tr>
<td>NRO</td>
<td>116.0</td>
</tr>
<tr>
<td>NRO</td>
<td>111.0</td>
</tr>
</tbody>
</table>

Avg = 123.7 feet

There are at least 5 other N. red oaks over 100 feet, plus a white ash at 103 feet, and a red maple at 100. Our neighbor's property has a white pine at 130.2 feet in addition to several over 120. The next neighbor has two white pines over 130 and several others over 120. A stand of white pines across Broad Brook are loaded with 120 foot trees. The tallest is 128. Several hemlocks on the other side of Broad Brook top 100 feet with the tallest at 117. There is a 72-foot tall hop hornbeam. About a half mile upstream on the east side, there are several large white pines with the tallest around 126. On the west side is where the 140-footer is located.

Truthfully, I've never fully appreciated the Broad Brook trees because they stand in the shadows of the super sites like Mohawk, Monroe, Ice Glen, and Bryant. But the time has come for me to update the Rucker and document the top 10 of each Rucker species, i.e. 100 trees. Oh, the awesome responsibility, the heavy burden. Woe is me (hee, hee).

Here is a look at Sarah and Phoebe's Pine, just a few yards from our back door. It is a drop dead gorgeous tree. It is the 128.1-footer in the above list. Its girth is 8.0 feet.

Robert T. Leverett
Leita Thompson Memorial Park, Roswell, GA

by Jess Riddle » Sat Mar 02, 2013 6:25 pm

Leita Thompson Memorial Park spreads across a hundred acres of mostly forested land in the northern Atlanta suburbs. A busy, six lane surface street runs along the park’s upper edge, and a creek meanders through a small floodplain along the opposite edge. Ravines drop 100’ in elevation between those boarders, so the slopes along them are steeper than those found in most of the surrounding rolling terrain of the Piedmont. That topography helps block out the hum of tires on asphalt, and even on a cold, drizzly, weekday afternoon a handful of fitness walkers and dog walkers take advantage of the park’s three miles of broad, graveled paths.

Typical forest at Leita Thompson Memorial Park

Hardwood dominated forests cover most of the slopes, around 100 years old based on a ring count from a trail cut tree. Patches of younger pine occupy some of the ridges, but some of them are now converting to hardwoods after southern pine beetle eliminated the overstory. Mature loblolly pine is also common of the slopes and alluvial flats, but tulipree and oaks make up most of the overstory. Sweetgum is also important on lower slopes and beech along a tributary stream. White oak is the most widespread of the oaks, but northern red oak is scattered at lower elevations, southern red oak common at the highest elevations, and scarlet oak generously scattered throughout. As is common in the region’s oak forests, sourwood makes up most of the midstory. Bigleaf magnolia grows more scattered under the canopy, and the need for reliable moisture restricts hornbeam to the lower slopes. In the understory, persistent white leaves make the abundant beech saplings conspicuous. Hiding amongst them are hickory and bigleaf magnolia saplings.
LeitaThompsonMeasurements.JPG (30.75 KiB)

The red maple, hornbeam, and Virginia pine are all height records for the county. Virginia pine is scarce in the area, though it becomes common just a few miles further north, and this tree was one of only two mature individuals in the bark. The scarlet oak is the largest I’ve seen in the state.

LeitaThompsonMeasurements.JPG (30.75 KiB)

Re: Leita Thompson Memorial Park, Roswell, GA
by Jess Riddle » Sun Mar 03, 2013 1:38 pm

Bob Leverett wrote: Really good to see you posting on new sites. How prevalent are mature loblollies in that region? Do you see an occasional really big one here or there? Outside of Congaree and isolated big tree reports, I don’t have a feel for how the species does over all. In the Northeast, I have a pretty good feel for how white pine expresses itself in different regions, but loblolly has always been a mystery to me.

Hi Bob, Loblolly pine is one of the most abundant species in the southeastern piedmont, and perhaps the most abundant tree in the Atlanta area. While they may have once been largely restricted to river swamps and rock outcrops, anthropogenic disturbances have allowed them to spread across the landscape in force. There are literally billions of mature loblolly pines across southeastern forests not counting the billions of young trees in plantations.

On most sites where loblolly pine grows, it is among the tallest and largest species. However, like almost any other species, certain conditions will allow it to grow much larger than the specimens typically encountered. For loblolly pine those conditions occur in river floodplains. Hence, Congaree National Park combines prime growing conditions with unusually old loblolly forest. Loblollies on productive upland sites occasionally reach the size of an average Congaree loblolly, but you don’t see entire groves of trees that size.

Jess Riddle

99” cbh x 113.7” scarlet oak

Jess Riddle
**La Pine ponderosa likely top of class**

by edfrank » Sat Mar 02, 2013 5:16 pm

Big Tree a national champion
La Pine ponderosa likely top of class
By Marielle Gallagher / The Bulletin
Last modified: March 02, 2013 12:45PM PST

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

---

**Re: La Pine ponderosa likely top of class, OR**

by KoutaR » Sun Mar 03, 2013 4:22 am

Ed, All the 10 places belong to conifers for sure. You forgot these:

Noble fir (Abies procera) 287
Grand fir (Abies grandis) 267
Port-Orford-cedar (Chamaecyparis lawsoniana) 266.0

Sources:
http://www.humboldt.edu/redwoods/photos/redwood.php
http://www.conifers.org/cu/Chamaecyparis_lawsoniana.php

---

**Re: La Pine ponderosa likely top of class, OR**

by edfrank » Sun Mar 03, 2013 1:07 am

One way this might affect our numbers is with regard to Rucker Index. Apparently American Forests is recognizing three separate records for different subspecies of Ponderosa Pine. If we were to do that then these taller Ponderosa Pines would bump some of the shorter species of our west coast Rucker Index values and bump up the RI for the west Coast and North America as a whole. This is what I have now, but likely some of these numbers are older and taller specimens have been found since:

- Coast redwood 379.65
- Giant Sequoia 314.0
- Ponderosa Pine 268.29
- Sugar Pine 264.0
- Sitka Spruce 317.19

Western hemlock 272.0
Douglas Fir 327.3
Western Sycamore 178.5
Tan Oak 162.0
Valley Oak 151.0
RI 263.5 feet

Replacing just the Valley oak on this list with a tree the 167.7 La Pine tree would jump it by 1.7 feet.
There likely are taller members of the three Ponderosa Pine subspecies.

Ed
Here is a new version of the West Coast Rucker Index including values I compiled a year ago when working on doing a world Rucker Index. I need to check where I found a couple of the numbers, in particular the noble fir.

Update the numbers are from [http://www.conifers.org](http://www.conifers.org) and reference:


I am not sure how these numbers were collected or if these numbers have been confirmed by recent laser measurements or climbs, but BVP was using a portable Total Station in the mid 1990's to measure heights.

Re: West Coast Rucker Index

Ed, Indeed, 295 ft for noble fir appears in older sources. As Sillett’s site now says 287 ft I have thought the tree’s height has declined, or maybe it has a dead top, I don’t know. Maybe Will knows or can ask western measurers.

Re: West Coast Rucker Index
by edfrank » Sun Mar 31, 2013 3:08 pm

I emailed Bob Van Pelt concerning these measurements reported in http://www.conifers.org as most of them referenced him.

My Email:

Bob, I have been working to update the Rucker Index for North America and wanted ask you about these four trees. The three tallest would be among the the ten tallest specimens. They are referenced on http://www.conifers.org with you as the source of the measurement.

Noble Fir  Abies procera 295.00 WA Mt. St. Helens National Monument  
http://www.conifers.org/pi/Abies_procer a.php

Grand Fir  Abies grandis 267.00 WA Glacier Peak  
http://www.conifers.org/pi/Abies_grandis.php

Port-Orford-cedar  Chamaecyparis lawsoniana  
266.00 CA Jedediah Smith State Park  
http://www.conifers.org/cu/Chamaecyparis_lawsoniana.php

Also of interest is this incense cedar:  
The tallest known Calocedrus decurrens (incense cedar), diameter 175 cm, height 69.8 m, is near Tiller in Umpqua National Forest, Oregon (Van Pelt 2000, 2001; Tanner Lakes Titan ht/dbh data from 2011 remeasurement, email, J. Black, 2011.07.27). This is from the Gymnosperm Database  
http://www.conifers.org/cu/Calocedrus_decurrens.php

Abies procera Noble Fir:  The tallest known tree is 89.9 m tall, dbh 192 cm, crown spread 13 m, stem volume 87.7 m3 in 1989; also in Goat Marsh Research Natural Area (Van Pelt 1996). The tallest one ever measured was 99.06 m tall (the tallest tree of Abies ever recorded). It grew near Harmony Falls northeast of Mt. St. Helens. The forest in that area was destroyed in the mountain’s May 18, 1980 eruption (Van Pelt 2001).

Abies grandis  Largest volume:  Height 77 m, dbh 185 cm, stem volume 68.3 m3 in 1988; along Duckabush River Trail, Olympic National Park, WA (Van Pelt 1996).  
Largest diameter:  Height 75.0 m, dbh 220 cm; along the Chilliwack River, BC (Robert Van Pelt, who measured the tree; e-mail 1998.03.18).  
Tallest:  Height 81.4 m, dbh 158 cm, stem volume 53.0 m3 in 1993; in the Glacier Peak Wilderness, WA (Van Pelt 1996).

Chamaecyparis lawsoniana  
The current largest living tree has a 365 cm dbh, height 69.8 m, crown spread 12 m, located in Siskiyou National Forest, OR (Van Pelt 1998). The tallest known is 81.08 m and 280.4 cm dbh, in Jed Smith State Park, California. This tree, measured in May 2009, had live foliage up to a height of 77.42 m with a spike top above that (Steve Sillett e-mail 2009.05.21). The next-tallest known tree is 72.8 m tall, located in the Coquille Falls Research Natural Area, Siskiyou National Forest, Oregon (tree measured by R. Van Pelt and C.J. Earle, 1999.05.13).


I am wondering if you know if these trees are intact?  
Do you have any newer measurements of these trees?  How were they originally measured?

Edward Frank

Bob Van Pelt’s Reply:

Ed, These are (were) all correct.

The noble fir is dead, and the tallest I know of now (measured this past August) is 264.1 feet.

The grand fir is a very old record, which for that species means it is probably dead or has a dead top.
Unconfirmed. A more recent record (2002) for grand fir is from Redwood National Park, at 262 feet.

There have been many other changes as well - 2 hemlocks over 80 m and a pondo nearly 82 m. The tallest sugar pine is dead, now only one known over 80 m.

Lots of new hardwoods as well - black cottonwood (187’), California sycamore (178.2’), California laurel (169.4’), tanoak and bigleaf maple (both 162’).

Cheers,
- BVP

Swift River Reservation

Hi ENTS -

Hiked through Swift Reservation (adjacent to the Harvard Forest in Petersham, MA) this weekend and measured a couple of white pines and a Hemlock. These trees stood out from those in the vicinity; the hemlock was a solo specimen, however the white pines were in a stand containing at least 4 more of similar size:

The first white pine measured 120' in height and 10'-10" in circumference (3.5' dia).
The second white pine measured 107' in height and 10'-7" in circumference (3.4' dia)
The hemlock measured 97’ in height with circumference of 9’-6” (3.0’ dia)
That is one stout tree!

These trees were all in fairly wet areas - the white pines next to a stream and the hemlock on flat ground between nearby slopes. Perhaps this accounts for the seemingly large girth relative to height?

Jeff K.
Re: Photo Measuring for Trunk Modeling

by dbhguru » Sat Mar 02, 2013 11:19 am

NTS, Returning to the photo measurement method using Excel, the image below shows the efficacy of the method. The Lyndacker Pine measures 17.8 feet in girth at breast height. In the photo, I’ve chosen the location on the trunk corresponding to Matt Lyndacker's chest height location. Monica stretches out to the left against the trunk. Here height at this point is about 5.5 feet. Here full height standing erect is between 5.6 and 5.7 feet. The remarkably close match of measurements (tape stretch vs. photo-Excel) still amazes me. I keep waiting for a mis-match to occur in which I can't explain the difference. So far that hasn't occurred.

Robert T. Leverett

Re: Photo Measuring for Trunk Modeling

by dbhguru » Mon Mar 04, 2013 9:42 am

NTS,

Below are the results of yesterday's photo measurement exercise. I decided to apply the simple photo-measuring method to the big double pine about half a mile upstream from the house. I keep close tabs on its height since it is one of a mere handful of trees in the lower Connecticut River Valley that reaches the threshold height of 140 feet. Yesterday's re-measurement yielded 140.3 feet. I have the variance down to 0.2 feet from the range of 140.1 - 140.3 feet.

Since the pine is a double, the form of the lower trunk is not circular. I think the Broad Brook Pine's form approximates an ellipse. It is definitely not circular. So measuring the girth with a tape and then calculating a diameter based on a circle should exceed the minor axis and fall short of the major axis. At the least, the photo-measured width of the major axis should exceed the circular diameter. That is what happened yesterday.
The point of measurement shown in the image is on the uphill side of the tree. I should have taken the time to have repeated the process at 90 degrees going around the trunk to catch the minor axis. I was floundering around in the snow, which is still quite deep. So, rested and then I decided to go a little farther upstream to a white pine stand that I visited fairly often back in 2007 when I was recovering from the shingles. It is a handsome stand, but devilishly difficult to measure. When the hardwoods leaf out, the measuring season ends. Well, outside the snow cover, yesterday, measuring conditions were ideal. I confirmed four new 130s with the tallest at 137.0 feet. This places the number of 130s in the Broad Brook corridor at 10. I plan to return to the stand today and resume the documentation.

I'll also take the minor axis measurement of big double. Since it doesn't take much time to take a photo of the trunk with a reference object, I can be productive when in the field. All the work is done back at my computer in comfort. The key is to be organized in terms of what you want to measure for a tree when on site.

Robert T. Leverett

### NY Champion Red Maple?

**by tomhoward** » Sun Mar 03, 2013 11:38 am

NTS,

I noticed that in his document on Historic Eastern Trees Colby Rucker mentioned the New York State Champion Red Maple as cbh 21'3", height 135 ft., spread 108 ft. These are incredible dimensions for Red Maple up here. The tree is listed as in Madison County, which is next door to the east of Onondaga County where I live. These dimensions are listed in the 2010 NY State Champion Tree list, and the tree is given 417 points - this would make it to have been possibly the 2nd largest Red Maple in the USA! I have never been able to find information about this tree, and it is not listed in the current 2013 NY Champion list. Since I have no vehicle, it is not possible for me to even try to locate this tree at the present time.

I do not believe this tree was measured accurately. The incredible cbh almost certainly means it is multi-trunked, and the 135 ft. height (far too high for this species up here!) indicates most likely the inaccurate tangent method. It is (was?) definitely an open-grown tree with a spread of 108 ft. (that could be an error also).

The tallest accurately measured Red Maple in Central
NY that I know of was measured by Jess Riddle at Green Lakes in 2011 at 111.8 ft. There is a Red Maple at the Wizard of Oz Oak Grove here in North Syracuse that is 111.6 ft. tall. Both of these are slender forest-grown trees. The largest Red Maple I know of here in Central NY (or here in Onondaga County) is a forest-grown tree in the Liverpool School Maple Grove 108 ft. tall, 37.2 in. dbh, far, far smaller than the questionable Madison County tree. The tallest accurately measured Red Maple I know of in NY State is a tree measured in 2003 at 119.1 ft. in the neglected Zoar Valley.

Tom Howard

---

**Re: NY Champion Red Maple?**

*by tomhoward » Mon Mar 04, 2013 9:09 pm*

Bob, Joe, I have never seen a picture of the big Red Maple in Madison County, and I've never seen a Red Maple that comes close to approaching such an incredible size. Bob, you're right, it has to be multi-trunked to be so big. For an open-grown Red Maple even 100 ft. is quite a stretch up here.

Here is what I think is the finest Red Maple in this area - a forest-grown tree in the Wizard of Oz Oak Grove in North Syracuse that is our area's "Magic Maple"; it is a shaggy spiral-grained old forest-grown tree in the Forest Cathedral, 26.7” dbh, 110.5 ft. tall. The Maple is the tree at left center.

---

**Re: NY Champion Red Maple?**

*by Joe » Sun Mar 03, 2013 4:04 pm*

Tom, are any photos of it available to us? As a forester, I see countless red maple, most small- or most of the larger ones were left in high grading logging jobs- so it'd be nice to what an exceptional specimen is like. Whenever I see a very large, very nice (vigorouos and or/ pretty) red maple- I almost always leave them, since I see so few- but I have seem some beauties-- as Bob L. said in another thread, seeing what the potential is for the many species is important.

Joe

---

Tom Howard
Larry Tucei wrote: Hi Tom. I know you have measured many Oaks in the North do you think that before Europeans many New England trees might have been many over 20’? Larry

Larry, There seem definitely to have been at several Oaks in pre-settlement New England that were over 20 ft. girth. I downloaded a copy of Historic Trees of Massachusetts by James Symmons (1919) and he mentioned several Oaks over 20 ft. girth - these measurements may not have been made a breast height. They were mostly White Oaks with at least one Red Oak. All these Oaks were open-grown, and none approached 100 ft. in height. It’s curious that all (or nearly all) the historic trees in a heavily forested region like New England were open-grown - maybe they spent most of their lives in clearings made by European settlers? Or they stood in native American fields? Or could New England have had natural Oak Savanna? The most famous group of Oaks in the region was the Waverley Oaks, an open-grown stand of White Oaks on a knoll in Belmont MA. These trees were said to have been 500-1000 years old. I read a report (found online in an article about 1907) that James Russell Lowell counted 750 rings on the stump of one of these trees about 1845. Charles Sprague Sargent, writing in 1890, doubted such great ages, and believed them to be at most 500 years old. They had the gnarled look of very old Oaks. The largest seems to have had a girth of just over 19 ft. The site today is Beaver Brook Reservation in Belmont, but all but 1 of the great old trees are gone, all but that one dying sometime after 1920. The surviving tree is near the park entrance, and is mentioned in Symmons 1919 book as over 14 ft. girth. My brother and I saw this tree in 2010, and it was about 13.5 ft. cbh, meaning that it had scarcely grown since 1920 - It was only 50 ft. tall.

Tom Howard

Re: Large Oaks in Pre-settlement New England/Waverly oaks
by tomhoward » Mon Mar 04, 2013 9:39 pm

Here are a couple pictures of what the Waverley Oaks area looked like in 2010.

The first is a picture of the last surviving Waverley Oak.

The last picture shows the knoll where the oldest Oaks stood, in 2010 with 2nd growth Oaks.

Tom Howard
**Hemlock Bluff Nature Preserve (IN)**

by [pitsandmounds](#) » Mon Mar 04, 2013 10:21 pm

Wander Indiana . . .

After spending the better part of a morning trying to locate tops in a dense flatwood forest, I decided to change up my strategy and find some elevation. I headed over to Hemlock Bluff Nature Preserve in Jackson County, IN and was not disappointed.

The description claims that the preserve contains the largest Hemlock in Indiana at 33” DBH. It may be referring to the same tree that I measured at 8.4’ CBH with a height of 108.9’. That claim appears to be dated though, as the 2010 Indiana Big Tree Register has a Hemlock with a CBH of 9.4’ and a height of 135’.


Panorama

Eastern Hemlock, 8.4’ CBH (the tree on the left) - [http://photosynth.net/view.aspx?cid=1b539daa-12d6-40af-9447-e2e99a40d077](http://photosynth.net/view.aspx?cid=1b539daa-12d6-40af-9447-e2e99a40d077)


---

**Eastern hemlock**

By the way, thanks for allowing someone with no formal “dendro” background hang out with you guys/gals. It’s a testament to your hospitality and graciousness.

- Matt

---

<table>
<thead>
<tr>
<th>Site Name</th>
<th>Species (Scientific)</th>
<th>Species (Common)</th>
<th>Height (ft)</th>
<th>Girth (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemlock Bluff Nature Preserve</td>
<td>Tsuga canadensis</td>
<td>Eastern Hemlock</td>
<td>111.5</td>
<td></td>
</tr>
<tr>
<td>Hemlock Bluff Nature Preserve</td>
<td>Tsuga canadensis</td>
<td>Eastern Hemlock</td>
<td>108.9</td>
<td>8.4</td>
</tr>
<tr>
<td>Hemlock Bluff Nature Preserve</td>
<td>Tsuga canadensis</td>
<td>Eastern Hemlock</td>
<td>105.6</td>
<td></td>
</tr>
<tr>
<td>Hemlock Bluff Nature Preserve</td>
<td>Tsuga canadensis</td>
<td>Eastern Hemlock</td>
<td>104</td>
<td></td>
</tr>
<tr>
<td>Hemlock Bluff Nature Preserve</td>
<td>Tsuga canadensis</td>
<td>Eastern Hemlock</td>
<td>103.5</td>
<td></td>
</tr>
<tr>
<td>Hemlock Bluff Nature Preserve</td>
<td>Tsuga canadensis</td>
<td>Eastern Hemlock</td>
<td>102.9</td>
<td>7.5</td>
</tr>
<tr>
<td>Hemlock Bluff Nature Preserve</td>
<td>Tsuga canadensis</td>
<td>Eastern Hemlock</td>
<td>101.4</td>
<td>6.8</td>
</tr>
<tr>
<td>Hemlock Bluff Nature Preserve</td>
<td>Tsuga canadensis</td>
<td>Eastern Hemlock</td>
<td>101.3</td>
<td></td>
</tr>
<tr>
<td>Hemlock Bluff Nature Preserve</td>
<td>Tsuga canadensis</td>
<td>Eastern Hemlock</td>
<td>99.7</td>
<td></td>
</tr>
<tr>
<td>Hemlock Bluff Nature Preserve</td>
<td>Tsuga canadensis</td>
<td>Eastern Hemlock</td>
<td>98.7</td>
<td></td>
</tr>
<tr>
<td>Hemlock Bluff Nature Preserve</td>
<td>Tsuga canadensis</td>
<td>Eastern Hemlock</td>
<td>7.6</td>
<td></td>
</tr>
</tbody>
</table>
20+ CBH Oaks in Southern New Jersey
by JohnnyDJersey » Tue Mar 05, 2013 8:06 am

Here a few of the 20+ CBH Oaks I’ve visited and some I’ve discovered in South Jersey.

ATTACHMENTS

Willow Oak 20ft4in

Willow Oak 20ft6in CBH

Clement Oak 20ft1in CBH
The Keeler Oak 22'6" CBH

White Oak/second oldest NJ 20'6" CBH

Salem Oak 22'5" CBH

White Oak 21' CBH

John D Harvey
East Coast Big Tree Hunter
Re: 20+ CBH Oaks in Southern New Jersey
by dbh guru » Tue Mar 05, 2013 9:19 am

Johnny, Wow! Super images. It is apparent that southern New Jersey needs a lot more attention. My time spent in New Jersey has been all too little. There are locations for tall tuliptrees that are calling to be recognized. I have one tree at 150 feet in Morristown National Historical Park. I'm one hundred percent sure there are taller ones in the Garden State.

Robert T. Leverett

Re: 20+ CBH Oaks in Southern New Jersey
by JohnnyDJersey » Tue Mar 05, 2013 12:24 pm

Bob: There certainly are many large trees in New Jersey. In total for all types I've paid visit to, over 25 trees (mostly Sycamore, Oaks, Tulip Poplar) with a CBH over 20ft. I know of a few more that I haven't visited yet that are over 20' as well. There are about 15 more that I've seen that are in the 19'+CBH. I have a list that needs some updating and verifying of heights. I'm sure that quite a few Tulip Poppers in South Jersey are over 150' high. Id bet on it. Just have to get that range finder....

Larry: Yes I'm sure there were hundreds or thousands at one time. I'm convinced there are quite a few undocumented 20+CBH oaks out there right now. A couple of the trees above I just stumbled upon, not to mention many other oaks over 17'. Recently there were several 15'-17' CBH white oaks along a road in Sommerville NJ that were all cut down because they were afraid they would fall into the street. Its a shame but other than a couple historical examples, I would say almost every big tree in NJ is still in danger of being lost to the chainsaw.

John D Harvey

Re: 20+ CBH Oaks in Southern New Jersey
by Johnny Jersey » Tue Mar 05, 2013 3:37 pm

One more of my favorites. Giant Black Oak in historic Haddonfield NJ. No tripod or cameraman available, just self timer on my cellphone, proped up against a rock.

Black Oak

John D Harvey
East Coast Big Tree Hunter

“For me, trees have always been the most penetrating preachers. I revere them when they live in tribes and families, in forests and groves. And even more I revere them when they stand alone.” — Hermann Hesse, Bäume. Betrachtungen und Gedichte
Cypress Trees Pascagoula Wildlife Management Area

by Larry Tucei » Tue Mar 05, 2013 12:04 am

NTS, I went to the Pascagoula River Mgt Area today to measure some of the larger Bald Cypress trees that I reported on in the past, 2008. We have had above avg. rainfall this year and the River is at flood stage. PRWMA is located in Southeastern Ms., containing around 35,000 acres in Jackson, and George Co., Ms. The area spans the River north and south for 25 miles; this is one of the last remote places in Ms. I launched my boat at Parker Lake on Wade Vancleave Road and went north and west for ¼ mile of scouting for larger Cypress into the flooded timber. I managed to locate several larger Cypress but I only measured 6 of them. These Cypress were the exception with CWL at 15’- 20’, CWL- Circumference at water line. This was the first time I have ever measured trees from a boat what a challenge. I shot straight up on them and got really close to the tops maybe slightly lower than the tip top. I also added the depth of the water to the height; I have a depth finder on the boat. The current was steady but I managed, the real tough thing was the Circumference. I had to take my time fastening the tape to the tree then easing around the tree and obstacles. I’ll call them Bald Cypress 1-6 with various photos. #1 CWL-15’, Height-74’+ 10 water depth for a total of 84’, #2 CWL-17’, Height-82.5’ + 10’ water depth total height 92.5’, # 3 CWL-16’ 6”, Total Height- 88’. This Cypress was hollow and I got some shots from inside. #4 C2’ above WL-16’, it had a buttress, Total Height- 87.8’, #5 C4’ above WL- 18’, it also had a large buttress, 20’+ CWL, Total Height- 87.5’, the largest Cir. of the 6. This Cypress also had a Bee Colony at 60’ up, way cool! The last Cypress of the day was #6 CWL-17’, Total Height-98’, the tallest of the day. Most of crowns had wind damage from storms in the past so some of them would have been much taller. Larry
Cypress 1

Cypress 1
I recall that right before Hurricane Katrina the timber industry was whining that they should be allowed to go in and cut the timber in the lowlands protecting southern Louisiana and Mississippi. The devastation wrought in part because of the shredding of those forests shut them up for a while. But I have no doubts they'd want to get in there and take down the mature cypress trees to this day.

James Robert Smith
Re: Cypress Trees Pascagoula Wildlife Management Area

by Larry Tucei » Tue Mar 05, 2013 11:50 am

James- No doubt. Thankfully the Nature Conservancy controls these Forests and loaned them to the State for Wildlife Mgt and recreation. With strict guidelines, they will never be cut as long as they control it. Hopefully forever. This post is a drop in the bucket from this area. http://www.nature.org/ourinitiatives/regions/northernamerica/unitedstates/mississippi/placesweprotect/pascagoula-river-watershed.xml

Larry Tucei

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

by M.W.Taylor » Tue Mar 05, 2013 1:55 pm

Floyd Otter is on the hillside just above King Arthur in Garfield Grove. Wendell Flint never got the chance to measure the Floyd Otter volume with transit. Bob VP has not measured this tree as far as I know. I have never seen it.

This June I plan to go in there with a few friends and put the Solo RT on it's massive bole for a volume estimate. Get good photographs. Generate a point cloud map of the lower trunk to get further refine volume estiamte. The fire scar creates an extreme "out of round state". Radii type models may not properly account for the missing wood.

Hope to have a volume estimate on Floyd Otter in about 4 months.

Michael Taylor

WNTS VP
www.landmarktrees.net
American Forests Califronia Big Trees Coordinator

Chestnuts in Woodfin, NC

by bbeduhn » Tue Mar 05, 2013 4:42 pm

These are almost certainly castanea sativa. I'll confirm when the leaves come out. I didn't get a picture of the catkins when they appeared last spring, alerting me to the trees' presence. These are the largest chestnut trees I've seen.

The “small” one 8’6” cbh ~40’ tall, ~60’ spread

The “big” one 9’4” cbh 49.6’ tall 73.5’ spread 180 points
Castanea sativa is a species of deciduous tree with an edible seed. It is commonly called sweet chestnut and marron. Originally native to southeastern Europe and Asia Minor, it is now widely dispersed throughout Europe and in some localities in temperate Asia. The tree is hardy, long-lived and well known for its chestnuts, which are used as an ingredient in cooking.

Photo Measuring the Broad Brook Grandmother Pine

Today I returned to remeasure the Broad Brook Double Pine which Monica has renamed the Broad Brook Grandmother Pine. Fine by me. I had done one photo measurement of the trunk diameter, and my instinct told me that I was pretty lucky with the result I got because the shape of the trunk is definitely not circular. Plus, I got sloppy and didn’t take into account the difference in distance between the reference object and target. I also mis-measured the girth by 0.1 feet at the point I placed the marker because my tape wasn’t level going around the tree. When I eliminated the problems, the difference between the computed girth based on the photo measurement and the taped measurement became 5.15 inches. This is to be expected given the shape of the trunk, which is much more elliptical than circular. So, my plan was to measure the trunk’s major axis and its minor axis and using them compute the perimeter of the ellipse and then compare it to a tape-measured result. The two images that follow tell the story. The first images show the measurement of the major axis and the computed girth I get using it though it were the diameter of a circular trunk. The second images shows the comparable process for the minor axis, plus the computation of the perimeter of the ellipse from the photo-measured major and minor axes. The girth of Grandmother is 15.2 feet at the center of the reference object. The computed perimeter of the ellipse is 15.04 feet. The difference between the taped result and the perimeter of the ellipse is 1.3%. I think that’s remarkable. I probably got lucky, but only to an extent. The photo method is proving itself in these tests.

Robert T. Leverett
Re: Photo Measuring the Broad Brook Grandmother Pine

by Bart Bouricius » Tue Mar 05, 2013 11:02 pm

I suspect it would vary by species, but I am thinking it would be interesting to compare the random diameter you have chosen to the compiled average of two diameters taken perpendicular to each other with respect to the average accuracy of the then calculated circumference. I suspect this might be done by extrapolation, however a real statistical sample of measurements taken from two differently shaped tree types might be interesting. In the case of perfectly elliptical tree trunks, I suspect it should average out to be roughly the same, but the more I think about it
the less sure I am. I think this can be done theoretically by looking at cross sections of logs that I cut up at work to begin with. What do you think? We all have seen trees that are cupped or quite oblong in shape, and in these cases I suspect averaging 2 perpendicular photo measurements would greatly improve the accuracy in a particular tree. My question is how much on average with a given species?

Re: Photo Measuring the Broad Brook Grandmother Pine
by Bart Bouricius » Tue Mar 05, 2013 11:41 pm

Sorry Bob, I see you already addressed this. This could be quite helpful in getting above measurements on buttressed trees in the tropics as Will has suggested I do.

NTS Book Project on Big Trees of the World
by dbhguru » Fri Mar 01, 2013 11:59 am

Rand, Kouta, et al.,

If we all cited anecdotal accounts that we've read of tall trees of yesteryear, I'd bet the BBS would ring with "Erhms" for fully the next 7 days. And now we have well-intentioned, but totally naive people interested in big tree superlatives adding to the deluge of goofy numbers via blogs, websites, etc.

One good source for sorting some of it out is Al Carder's *Forest Giants of the World Past and Present*. Carder casts doubt on some of the stretched accounts of tall trees, but accepts others uncritically. Here are some examples.

(1) He cites dimensions for the Reems Creek Poplar as 198 feet tall and breast high diameter of 11 feet. We have images of that tree and a second set of dimensions. The second numbers are 144 feet in height and 28 feet in girth. These latter numbers are more reasonable. Carder also states that:

> **Two other species are known to have produced specimens that have reached 200-foot height, Trees of Shumard oak, [i]Quercus shumardii have been found which tower this high, and a sweetgum tree, *Liquidambar styraciflua*, in South Carolina was this tall. [i]**

Carder goes on to state that bur oak reaches 180 feet in height as does the pecan tree. He further lists the multi-trunk sycamore in Jeromesville, Ohio as being 129 feet tall with a breast-height bole diameter of 15.3 feet. We all know what that tree complex looks like. Carder was simply quoting from the National Register of Big Trees. He discusses accounts of super white pines being measured to heights of up to 264 feet.

I could go on, but the point is that Al Carder is no lightweight. I regard him as highly professional and competent, but he, like most, is hostage to the misinformation that is out there on forest giants of the world - past and present. It makes our job ever more important. We must be the one source of truth in big tree numbers. On occasion, I've thought about proposing that we collectively undertake publishing an Internet book on big trees, with each of us choosing a species and developing a chapter on it. For example, I would volunteer to do a chapter on *Pinus strobus*. I expect that I have the most data and sources on that species. We could also collaborate. That might be the better way to spread the workload. Dale Luthringer and I could coauthor the chapter.

Kouta, Jeroen, and Michael Spraggon could coauthor a chapter on the Norway spruce. It would be a spectacular chapter, I have no doubt. Obviously Live Oak Larry would handle the southern live oak. Will, Michael Davie, and maybe Jess Riddle could handle the tuliptree. Obviously Will and Jes would handle the eastern hemlock. Maybe we could talk Don Bertolette, Michael Taylor, Mario Vaden, Eli Dickerson, Brian Behdun, Doug Bidlack, George Fieo, Rand Brown, Steve Galehouse, Bart Bouricius, and others to join in with species of their choice. The brain trust that we have available for such a project is
not to be dismissed. The book project could take as long as needed. As an Internet product, Ed Frank would need to figure out how to put it together, plus do a species or two himself, if he wished. Ed might handle silver maple, as an example. Others of us would be available to help. In fact, we'd all act as a pool to assist those responsible for particular species. For example, I have lots of data on how *Liriodendron tulipifera* expresses itself in its northeastern limits, which I'd provide to Will, Michael, and Jess, or whomever.

The problem we now have is that our efforts are far too scattered to have maximum impact. Researchers need to be able to turn to a single source to sort out all the anecdotal account and mis-measured trees in the champion tree programs from credible historical sources and what we have collected today in NTS. We could start small. I'd be willing to kick off the effort for the white pine working with Ed on format.

If this is a goofy idea, please don't hesitate to say so.

Robert T. Leverett

---

**Re: NTS Book Project on Big Trees of the World**

*by dbhguru » Fri Mar 01, 2013 2:39 pm*

Doug,

Actually, I had the idea of a minimum height threshold in mind. I just didn't express it in the post. So, we're on the same page to use that much over-used phrase. What species might you be willing to take prime responsibility for either solely or with a partner(s)? Since you have strong Michigan roots, would red pine interest you? Just throwing it out. You can select any species you want, but south for the 43rd parallel, red pine does next to nothing as a natural species. Then there is hackberry. Choices, choices.

Robert T. Leverett

---

**Re: NTS Book Project on Big Trees of the World**

*by Will Blozan » Fri Mar 01, 2013 6:49 pm*

NTS,

Great idea Bob! I would definitely take on some species that I am personally familiar with or working with. For starters I would volunteer for ten (and work with others of course) I have listed more than ten below- it is hard to draw the line!

*Tsuga canadensis*
*Tsuga caroliniana*
*Halesia tetraptera*
*Liriodendron tulipifera*
*Amelanchier laevis*
*Oxydendrum arboreum*
*Celtis laevigata*
*Pinus taeda*
*Pinus virginiana*
*Ilex opaca*
*Picea rubens*
*Quercus rubra*
*Quercus montana*
*Quercus coccinea*
As for the 30 meter cut off it does exclude many species but it could be a great start to work things out. Still 30 m would include an immense number of tree species worldwide. Maybe a higher cut-off- 40 meters? I am all for equality in the species and a superlative dogwood is just as exciting as a hemlock.

Let's keep discussing...

Will

**Re: NTS Book Project**

[dbhguru] » Fri Mar 01, 2013 9:57 pm

Will, Doug, Ed, Rand, Kouta, et al.,

Wow, Will, that is quite a list. For the first effort we could include only the species that produce fairly large trees. Perhaps the criteria of: (1) achieves a height of at least 40 meters, or (2) reaches a breast-high diameter of at least 1.5 meters for eastern species. This would narrow the list to something manageable. In addition, if we're going to present analyses of accounts of past giants, I'd think that we'd be looking at species that have been showcased by past chroniclers. There are plenty of huge West Coast species that could be included. We might have higher thresholds for the initial list. From my perspective, a key feature of each species would be an analysis of the historical accounts and what we regard as the maximum size we think a species can reach. Just my musing at this point. Others may have a better approach.

Robert T. Leverett

**Re: NTS Book Project**

[dbhguru] » Fri Mar 01, 2013 9:57 pm

OK, so maybe a 40m height and 1.5m diameter would be best for a world list. I prefer girth to diameter. It has already been well argued that we are actually measuring girth and not diameter so it seems to me that that is what we should be recording. How about a girth of 5m instead of a diameter of 1.5m? It's only a little bit larger. Even with this cutoff it will be unrealistic to think that we will measure all the tropical species in a timely manner. There are simply too many tropical species in too large an area with too little manpower. This is simple reality but it doesn't mean that we can't begin such a list now.

We could begin one world list with the above criteria or something similar and then begin several more regional lists, such as eastern North America, with less stringent criteria.

I like the idea of eventually addressing historical accounts. However, I think we should begin from a solid foundation by sticking to measuring what we can actually measure today. I think trying to address questions that cannot be reliably addressed today can get us involved in arguments that we cannot win and this will hurt our credibility. We cannot be challenged on actual measurements of actual trees.

If I could choose trees to measure for the 40/1.5 or 40/5 criteria, these are the ones that I would choose first.

- Pinus resinosa
- Quercus alba
- Quercus bicolor
- Quercus macrocarpa

Additional floodplain species of great interest:
- Celtis occidentalis
- Gleditsia triacanthos
- Gymnocladus dioicus
- Juglans nigra

Some potential northern species:
- Picea glauca
- Thuja occidentalis
and perhaps also Populus balsamifera and Populus grandidentata
Naturally, I'd like to help with other species as well.

Maybe we could organize some meetings in the future specifically to quickly measure many tree species in hotspots. Wouldn't that be fun?

Doug

Re: NTS Book Project

by edfrank » Sat Mar 02, 2013 12:59 am

We should compile a list of trees with misrepresented heights and work from there, rather than just pick trees that get big that are rarely mentioned and building a list based on just that they grow big.

Another good beginning would be Colby Rucker's article on great trees of the past and present here: http://www.nativetreesociety.org/bullet ... v03_04.pdf It really should not be some arbitrary height or girth requirement, just a species that has frequently been misreported.

One species that deserves some consideration is American Chestnut, which we have discussed widely here before. But we should go with whatever the group as a whole want to do.

Ed Frank

Re: NTS Book Project

by KoutaR » Sat Mar 02, 2013 9:03 am

dbhguru wrote: Kouta, Jeroen, and Michael Spraggon could coauthor a chapter on the Norway spruce.

I am in. Good idea!

If this was to be an international project and not just US + Norway spruce, it would be important to get as many non-US writers as possible. In every case, the result will be only a very small selection of the world's tree species as we have no reliable data for the majority of the land surface. Bart has some data for Latin America. Matt could write about some NZ tree species. Brett Mifsud just wrote his first message here (I hope it was not the last one). If somebody doesn't know who he is: according to Stephen Sillett's site (http://www.humboldt.edu/redwoods/sillett ... rats.php) he has found and measured nearly all of the tallest known flowering trees over 80 m on Earth. He also climbed the tall trees in Borneo with Roman Dial. I must say that I was a bit surprised as his first message did not raise any comments. Then we have Darrin in Peninsular Malaysia. Unfortunately, he does not yet measure tree heights, maybe we together could buy a Nikon 550 for him...

If there was to be height / girth limit, it should be different for different regions. 40 m is good for the eastern US and Europe but too low for western US.

Ed's suggestion is good, too. Concentrating on mismeasured/misinterpreted species gives to the book a real mission. But I think we have not enough data to discuss European trees in that context. Abies alba could be one such species, but we have not enough data to say it for sure.

Kouta Rasanen

http://baumzaehlen.de

Re: NTS Book Project

by dbhguru » Sat Mar 02, 2013 9:53 am

Ed,

Thanks for posting the link to this best of all issues of the Bulletin. Colby was the best of the best. I look at his compilation of big trees past and present and realize what a service he provided us.
Here is an excerpt from the bulletin. It is Colby's write-up on the Virginia Bedford Poplar.


This tree is one of those that Will and I used early on to point to significantly mis-measured trees. The height of 146 feet listed in the National Register was exaggerated by at least 35 feet. Measurements of 110 and 111 feet were obtained by Will and I. Colby himself measured a white oak that had its height mis-measured by others by a full 50 feet. We have periodically discussed significantly mis-measured trees to include the pignut hickory in Robbinsville, NC, the red maple in Michigan, the tuliptree in Winterthur, and many others. I once received word of a 175-foot white pine in Shelburne, MA. Jack Sobon and I measured it to 137 feet. That same tree had been originally quoted as being 225 feet in height. I won't get into who made the claim, but it was made.

In my original post on this topic, I felt the time had come for us to re-address the issue of what these species can do and what we believe they may have achieved in the past. I appreciate the expression of interest that has followed. Please, let's continue exploring the subject. I do realize that we have to tread lightly in dealing with other people's measurements. But if our numbers are going to be accepted as the gold standard, an electronic book would be a not only a convenient vehicle for our measurements, but also for presenting an unemotional analysis of some of the past big tree claims that can't be substantiated.

This is presented as food for thought. As a minimum, I hope we can move forward and put together a guide to tree maximums in today's forests and where they occur with some analysis of anecdotal accounts of the past.

Robert T. Leverett

**Re: NTS Book Project**

by DougBidlack » Sat Mar 02, 2013 3:20 pm

Ed, I guess I was just thinking of how I like to solve a problem in my last post. For me to accomplish anything I need to focus on tall/big trees first and then work down. Maybe some of us can work on measuring tall/big trees, others can work on historical and current mis-measured trees and others can do both. I'm sure there will be strong overlap since I feel that the larger the tree the more likely it is to be mis-measured.

Kouta, glad you're in! Not that I'm surprised or anything. You guys have quite a few more species than just Norway spruce to think about! As for the 40m limit I wonder if it is really true that 40m is too low for the western US. I suspect it is not. Perhaps Michael Taylor or someone else can weigh in here. I'm not sure but I am guessing that the number of 40m species in the east may rival the number of 40m species in the west. Am I way off base here?

Doug Bidlack

**Re: NTS Book Project**

There are several dozen more posts on the proposed book project. The entire discussion can be read on the BBS by clicking on the link above.
Re: Percent Cylinder Occupation

by Michael J Spraggon » Sat Mar 02, 2013 12:23 pm

I've calculated the cylinder occupation of Long John Silver, a giant Eucalypt that my friend Ben Rose climbed and measured with Brett Mifsud. The tape wrap and height data is here on Brett's website: http://victoriasgianttrees.weebly.com

The volume of 185.8m³ is excluding branches. Height is 81m, cbh (1.4m) is 13.0m. Diameter at 75m is 0.2m so it is pretty much complete.

% occupation is 17.1% based on these figures. However, if we extrapolate the taper from 20.6m to 11.0m above the flared base down to the ground then the girth at ground level would be 7.1m. This gives a percent occupation of 56.8% excluding branches!

This high figure must be related to how fast Eucalypts reach full height. Could it be that the tallest ones have a greater average height of wood above ground level than the tallest Sequoias?

Michael Spraggon

Re: Percent Cylinder Occupation

by edfrank » Sat Mar 02, 2013 2:41 pm

Michael, Kouta, Could you explain what you mean by "average height of wood"? The meaning is not clear to me.

Ed Frank

Re: Percent Cylinder Occupation

by KoutaR » Sat Mar 02, 2013 5:27 pm

Ed, I understand it: the height of every piece of wood, and the heights averaged. If we have girth measurements at every 5m intervals, for example, we can calculate the volume of every 5m piece, then calculate (volume * height) for every piece and finally average the values.

"Average height of leaves" similarly.

Kouta

Re: Percent Cylinder Occupation

by KoutaR » Sat Mar 02, 2013 1:10 pm

Michael J Spraggon wrote: Could it be that the tallest ones have a greater average height of wood above ground level than the tallest Sequoias?

I can't answer to your question, but "average height of wood" is an interesting measure. "Average height of leaves" would be another - the tallest eucalypts and tropical trees would beat the western conifers.

Kouta

Re: Percent Cylinder Occupation

by fooman » Sat Mar 02, 2013 6:02 pm

That measure of "average height of wood" could actually be done via a 2nd moment of area type calculation. Effectively you are after the centroid of (mass/volume/area). In a perfect cylinder, the centroid would be at half height (from base). For a cone, 1/4 height from base, etc.

Cheers,
Matt
Re: Percent Cylinder Occupation

by Michael J Spraggon » Mon Mar 04, 2013 7:23 pm

The centroid - exactly. So this could be thought of as the organisms ability to raise nutrients above the ground and create new cells. A high cylinder occupation is not necessarily the same as a high centroid position - for example a cone has the same cylinder occupation as in inverted cone but the centroid of the inverted cone is higher at 3/4 of its height instead of 1/4 of its height. This could be a useful measure of tree morphology.

Michael Spraggon

Re: Percent Cylinder Occupation

by edfrank » Mon Mar 04, 2013 8:45 pm

Matt and Michael,

The concept is sound, but we are not dealing with cones. We are talking frustums of cones - essentially the cone with the top cut off. So the center of mass is only slightly below the center height, not at 1/3 the length. The smaller the difference between the upper section diameter and that of the lower diameter, the closer the center of gravity will be to the halfway point.

Edward Frank

Re: Percent Cylinder Occupation

by Michael J Spraggon » Tue Mar 05, 2013 1:59 pm

I wasn't wanting to get caught up in maths at this point either. I was just thinking that if some trees would have more of their volume high up than others and that if it were calculated then the data might be useful. Photo mapping might be the easiest way to do it.

Re: Percent Cylinder Occupation

by fooman » Tue Mar 05, 2013 4:39 pm

Bob, Don't reinvent the wheel, let Wolfram do it for you!

Conic frustum formulae:

http://mathworld.wolfram.com/ConicalFrustum.html

Paraboloid:

http://mathworld.wolfram.com/Paraboloid.html

etc...

Ed, The other thing to use to give more resolution to the descriptive number would be the ratio of centroid height to that of a cylinder, e.g. cone to cylinder has ratio of 0.25 to 0.5, or 1/2. Non-tapering cylinder has ration of 0.5:0.5 or 1. This factor could be used to modify the standard height/girth measurements to provide a representation of the "bigness" of the tree.

Cheers,

Matt

Re: Percent Cylinder Occupation

by dbhguru » Wed Mar 06, 2013 9:54 am

Matt, Good point. You used your head. Wolfram is awesome.

Strangely, I enjoy deriving the equations (masochism to many minds) to keep my aging brain from completely atrophying (alas, a losing battle), but By Jove, I did it. I'll post the derivation in the future just for the heck of it.

Here is an image that shows the centroid and
associated formula for the complete conoid form and frustums thereof. I show a frustum. The conoid family includes cylinders, which can be thought of as a frustum of a cone which has equal upper and lower diameters.

\[
\bar{y} = \frac{H}{4} \left[ \frac{R_1^2 + 2R_1R_2 + 3R_2^2}{R_1^2 + R_1R_2 + R_2^2} \right]
\]

Robert T. Leverett

---

**Cut all ash due to ash borer?**

by Joe » Sun Mar 03, 2013 4:14 pm

I’m now seeing here in Mass., pressure by some forestry establishment types to cut most of the ash in this state. On one of my client’s timber harvests that I marked- there was a lot of ash and I did mark quite a bit, but I also left quite a few, including some fairly large trees- over 20” DBH. I’m probably the only forester in this state that would have left those--- but, the ash borer hasn’t yet arrived in South Berkshire County where the property is- it might never- and some of those trees I’d like to leave may be resistant.

A few years ago I went to a Forest Guild event put on by the American chestnut assoc.-- an expert was there who told the story that when the chestnut blight struck, everyone (forestry people) went around telling everyone to cut every chestnut- but, it turns out may were probably resistant, as we see with surviving trees to this day--- so I didn’t want to make that same mistake with the ash.

So, lo and behold, the state service forester showed up one day when I wasn’t there, started talking with the logger- about how I should have marked more ash- of course the logger was happy to do so- the suggestion then got passed to the owner who didn’t mind making a few extra bucks and they went ahead and cut more.... which has left me with an incredible level of .... er.... uh.... displeasure with the state and the forestry establishment which seems to be pushing this... which I think is just another rational to cut heavy.... they’re always looking for such excuses, such as, "we must do huge clearcuts for wildlife"- as if they really give a dam about the wildlife..... of course they don’t appreciate it when I point this out

Joe Zorzin
"The Michael Moore of the Mass. forestry world"

**Re: cut all ash due to ash borer?**

by Will Blozan » Sun Mar 03, 2013 4:51 pm

Joe, I know of no resistant American chestnuts or ash. Some large-ish chestnut remain in isolation or planted outside of blight range (at least formerly) but
soon die when exposed. I seriously doubt there is a single pre-blight chestnut within the range of blight fungus, unless it is a dwarfen shrub on a less than ideal site.

Seems to me leaving ash trees in the hopes of resistance could be a good idea but the timber would be likely be lost. By the time you realized they were not resistant the wood would be seriously damaged. However these snags could be really good habitat and soil builders.

Will

Re: cut all ash due to ash borer?

by Rand » Mon Mar 04, 2013 11:20 pm

I actually came across a blurb about this in some ACF literature, and they came to the same conclusion, with a small caveat. They have found a few trees that survived the original infestation, but disappointingly it was not from resistance, rather the trees were colonized with hypo-virulent strains of the fungus, and were growing on ideal sites.

Pretty disappointing...

Rand Brown

Re: cut all ash due to ash borer?

by Don » Tue Mar 05, 2013 4:20 pm

While most everyone has an aversion to 'destructive sampling', it has occurred to me that when we have a species being mortally attacked by whatever pathogen, would I be a terrible ogre in suggesting that there is an opportunity here to randomly sample a small percentage of the dying species, with an eye to studying it dendrochronologically...that is to say felling those to be sampled and learning what we can from such a study?

Don Bertolette

Re: cut all ash due to ash borer?

by Joe » Wed Mar 06, 2013 7:22 am

the problem with concluding that there were few if any resistant chestnut is that almost all were cut-that's my point, if many were not cut- we'd have a better understanding- the fact that many cut trees send up sprouts doesn't tell us all that much- I would rather that many were left

as for the ash- I'm still royally pissed off that the state service forester got between me and the logger and encouraged him to cut more- he did of course say to speak first with me and the land owner, but he should have kept his overpaid mouth shut- when I marked the stand, I was well aware of the ash borer approaching western Mass. but I decided to leave some very nice specimens with the hope that they MIGHT survive.

every time a new pest shows up- we can't just go out and cut every specimen of that species or we'd have nothing left out there,

furthermore, I've found after 40 years in the forestry profession- that loggers and foresters, including the state guys- are looking for every excuse to cut heavy and clearcut- they'll use eco sounding rationalizations, but the real reason is TO CUT MORE TREES FOR MONEY

I have a split brain regarding forests- half my brain wants to leave them all alone and tells me to go back to the life of a paleolithic hunter, the other half of my brain went to forestry school where I was exposed to the lamest possible propaganda about the glories of forest mgt.- only to find out that only a trivial percentage of all the logging on this planet is done well, IMHO- so I'm always extremely skeptical of whatever "professional foresters" have to say as to how a forest should be harvested

I could go on all day about my cynicism of "professional forestry" but I won't bore you all with that, at least not now
our nation spends - what, seven hundred billion on defense? what do we spend on saving the forests?

just think - the cost of - I think it's called the F22 fighter- is something like 350 million dollars a piece - could we not give up one and spend that on saving our species? I should think if we can go to the moon, we could figure out how to stop the ash borer

but no, the forests get ruthlessly exploited - it really burns me up.

Joe Zorzin

Re: cut all ash due to ash borer?
by pitsandmounds » Wed Mar 06, 2013 1:28 pm

Joe, Thanks for the honest opinion. You remind me of this Thoreau quote:

"If it is necessary, omit one bridge over the river, go round a little there, and throw one arch at least over the darker gulf of ignorance which surrounds us."

-Matt

Re: cut all ash due to ash borer?
by dbhguru » Wed Mar 06, 2013 2:26 pm

Joe, Many of us feel your pain. I fear that, as a whole, our species has not evolved far enough to put the needs of other species, and the planet, above (or at least equal to) our short term self-interests. Trees, rocks, oil, whales, cod, seals, etc. will always be seen by a sizable part of our species as valuable primarily as economic resources to exploit. With absolutely no impulse by the majority of our species to see a runaway population as a dire threat to the planet, the future for the survival of other species in anything approximating a natural form, grows dimmer. I for one salute you for continuing to try to do right by our forests as you do your best to balance human desires for forest products with what needs to be done for the trees and forest critters seen as having intrinsic value.

Robert T. Leverett

St. Cloud MN Ash
by Jimmy McDonald » Wed Mar 06, 2013 12:18 am

One of my friends knows that I'm interested in trees so he wanted to show me a tree. It ended up being a Silver Maple that was 17'8". A nice size Silver Maple but not uncommon along the Mississippi area. Just before we were about to leave we had to stop and pick up a few things in the same area. When we stopped I started to look around and noticed the top of quite a nice Ash tree. I got out to take a look and I was pleasantly surprised. 12'7" cbh and such a beautiful shape. We came for one tree and found another.
That Picture is from October I believe. We actually have had an average winter this year. Probably two feet of snow on the ground right now and a few different times we’ve had low temps before wind chill around -20 F in St. Cloud.

Chestnuts are not listed in the MN Big Tree Registry which lists only native to MN species. I'm not sure on the historical range of chestnuts either. I do remember growing up that a neighbor had a tree I would climb and take Chestnuts out of it and there was also a tree in town that I was amazed to find as a kid because the size of the chestnut’s bur(I think thats what it is called) and the bur would have like 7 or eight individual nuts in there. We just called them chestnuts I'm not sure what type they were. I'm an amatuer.

Thats actually a large deck/ viewing platorm that looks down toward the Mississippi River.

Jimmy McDonald
**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’

---

**Re: MN Champion American Elm**

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

I'm usually disappointed by Champs because they are
doubles. Here are some additional photos.
Re: Tree Humor

by pitsandmounds » Wed Mar 06, 2013 7:51 pm

Another cartoon using my mad graphic skills :)

- Matt
New member, Craig D. Allen
by Ecoloco » Mon Mar 04, 2013 4:41 pm

Greetings, I'm a research ecologist with the US Geological Survey, grew up in Wisconsin where I still head back to make (red) maple syrup with family a bit north of Green Bay most springs, have been based in the Jemez Mountains of northern New Mexico since 1986, more at: http://www.fort.usgs.gov/CAllen/

My ecological research has been rather wide-ranging, from environmental histories of vegetation change and past/emerging patterns of fire to interactions with land managers on ecological restoration efforts -- in recent years working from multiple angles with many colleagues on climate-driven forest stress and tree mortality in the West and world-wide. Work I am involved with increasingly suggests that projected temperature increases this century of 2-4 degrees C may exceed the drought stress tolerances of historically dominant (i.e., old) trees perhaps globally, thus old trees and ancient forests may be at risk of wholesale die-off within decades -- given my love and appreciation of old trees, I find this deeply disturbing. So I have been thinking harder about what things are most important/constructive to be doing now, and my explorations into what other folks have been doing around such issues led me to run across the NTS online. Many of us are amateurs but many are scientists as well. It's a good blend.

Craig

Re: new member, Craig D. Allen
by Don » Tue Mar 05, 2013 3:51 pm

Craig-
Welcome to our forum, and as co-founder of WNTS (the Western branch of NTS), I'm especially pleased with your interest in our site. As one who spent some excellent semesters at NAU (with Wally C. and Pete F.) from the mid-90's on, focusing on ecological restoration issues (Flagstaff Plan), I've found your name and work has been cited widely. As the Restoration Forester/Vegetation Program Manager at Grand Canyon National Park until I retired in 2007, your name comes to mind most familiarly in the Ponderosa Pine Forest Ecosystems and the role wildfire plays in forest structure and composition.

That said, the NTS-BBS originated in the Eastern US, then Westward, and now has spread surprisingly far and wide, with some pretty interesting folks informing us of native tree's goings-on in Scandinavia, Europe, Mongolia, New Zealand, South America, and more. If your interests in old trees (we still have those among us that won't give up the descriptor of old-growth despite how politically loaded it became) knows no boundaries, you've come to the right place!

Brian has characterized us well, as most all of are well practiced in self-restraint. This often surprises me, as I know how passionate many of our members are in their love of all things forested. Please feel free to inquire, explore, advocate, and express your self...you're very welcome here.

I know that the schedule of an academic is often full and committed far into the future, but I'm compelled to invite you to our 3rd Annual WNTS Rendezvous, this year in Durango, Colorado during the last week in June (26th through the 29th). While we have yet to find American Forests registry champs in the area,
we have found surprisingly tall spruce at surprisingly high elevations, and usually part of the Rendezvous is out in the woods, in the hunt. I know that there are those among us, who would be very interested in your take on our advocacy for more accurate tree measurement (height, girth, crown spread), in the context of each of the tree species’ size maxima.

Don Bertolette

Re: new member, Craig D. Allen

« by DennisCrowe » Sun Mar 10, 2013 10:03 pm

Craig, I just read your self-introduction at NTS this afternoon, and this evening just now came across a section in The Man Who Planted Trees by Jim Robbins (p27-29), referring to you and your work. Part of my high school and college years were in Colorado and the descriptions I’ve read of the pine die-offs are wrenching. Here in this part of northwest Wisconsin the diversity of our forests haven’t been impacted too much by climate change yet, but each year of drought, like the late summer of 2012 locally, impacts the next season’s health of paper birch, which are at the southern end of their range here. The damage to stressed trees is mostly by birch borer I am told. Well, as I write this I realize that we finished setting up for this year’s hoped-for syrup run today; we’ve been harvesting mostly red maple syrup for 36 years and the 2012 season was the first crop failure. The crazy warm January and February 2012 affected the maples in ways no one here remembers. After a cold March the trees just did not run, but bloomed and leafed-out ok. This winter has seemed quite "normal" to everyone’s relief and we are hoping for a "normal" run and the gifts of the trees.

I need to visit the West again to see what’s happening. Thank you for your work; I look forward to your contributions here.

Dennis Crowe

Tasmania's largest rainforest threatened

« by KoutaR » Thu Mar 07, 2013 5:30 pm

NTS,

Tarkine is an outstanding wilderness area in northwestern Tasmania. It contains Australia's largest remaining tract of virgin temperate rainforest, about 2000 km2 (=770 sq mi = 500,000 acres). There are also clearcut and selectively logged areas in the periphery, and the loggers and the miners say that's what the whole Tarkine is. But I have seen with my own eyes that it is not true. Indeed, this is the area where I have had my most memorable wilderness experiences. You find some my photos here:
http://baumzaehlen.de/en/areas/australi ... rkine.html
With a Google search you will find much more (and better) photos.

The status of the area has long been tried to elevate to national park or world heritage area. There is a summary of world heritage values here:
http://ebookbrowse.com/tarkine-world-he ... d372608566

Originally logging was the biggest threat to but now the Tarkine is facing a new acute threat from mining. Australian environment minister Tony Burke just rejected advice from the Australian Heritage Council that 433,000 hectares should be heritage listed. So he practically opened the area for mining, probably as a result of lobbying by mining companies. Ten new open-pit mines are being planned. This like scenes
Conservationists are planning similar mass protests that eventually saved Franklin River from damming and later Styx Valley's giant eucalypts from logging.

You can help: Sign this petition: http://tarkine.org/ill-stand-for-the-tarkine/
I contacted a leading local conservationist and he said they also welcome every non-Australian signature, as it shows that the future of rainforest/wilderness areas such as the Tarkine is an international issue.

Read more: http://www.tarkine.org/

Kouta

Re: Tasmania’s largest rainforest threatened
by Mark Collins » Sun Mar 10, 2013 6:51 pm

James, Joe,
I still like to believe we can make them stop, without having to resort to killing innocent people who are just doing their jobs. There is a lot of power to be found in a small group of concerned citizens rallying around a cause. As you may already know, the movement can take on a life of its own when each person contributes in a way that best suits their talents. There can be folks who deal with legislation, others who inspire with art, others who contribute through independent journalism, others who literally put their bodies on the line, others who teach, etc, etc. In this day and age, especially with the internet, it's becoming more and more possible for people to educate themselves, and connect effectively. Of course, that job thing always seems to get in the way, making it easy to just let someone else do the work. An activist friend of mine said to me recently, "Action is the antedote to despair." Finding a cause and acting on it really is fulfilling, despite the outcome. Not only that, it brings community together and tightens relationships. It is my hope that more and more people will become active if they can spare the time. In my opinion that will be the best way to redirect this crazy, dominating culture that we currently live in. Of course we all currently
contribute to this paradigm to some degree, and we all will have to find ways to limit our contribution if there is any hope for our planet and us.

Another guy I was talking to recently described an interesting metaphor. He compared our current civilization to that of a caterpillar. Hopefully, this current stage in our development will come to an end soon, and we can eventually become butterflies without ever having to look back again!

Miranda Gibson in Eucalyptus tree for over a year

Conservationist Miranda Gibson ascended "The Observer Tree" on Dec 14th, 2011 and vows to remain there, perched on a platform 60M above the ground, until the forest is protected. The tree is an old-growth Eucalyptus in the heart of Tasmania’s southern forests.

Miranda’s blog:
http://observertree.org/

Tassieforests youtube page that is posting videos from the tree:
http://www.youtube.com/user/Tassieforests

News article about World Heritage nomination to extend protection:
http://news.ninemsn.com.au/national/2013/01/31/18/02/tassie-forests-up-for-world-heritage-list

- Matt

Re: Miranda Gibson in Eucalyptus tree for over a year

by edfrank » Sun Feb 03, 2013 1:45 pm

Matt,

She is a very inspiring person. I have been following her on Facebook, and posting links about her protest on the Facebook NTS page.

http://www.facebook.com/ObserverTree?ref=ts&fref=ts

Ed
Re: Miranda Gibson in Eucalyptus tree for over a year
by Joe » Mon Mar 11, 2013 11:19 am

it's unfortunate that anyone should have to do this to save a tree or forest- the lame brained politicians should be doing this without someone having to sacrifice so much of their life--- perhaps as punishment, that "federal minister" Tony Burke should have to spend a week or so up there.... we pay politicians to "lead" but most are cowardly nitwits too busy trying to balance off lobbyists, while paying little attention to those who can't afford lobbyists

meanwhile, too many enviro groups have turned into lobbyists rather than dedicated fighters....

Joe

Re: New sites on giant eucalypts
by Jess Riddle » Sat Mar 02, 2013 4:39 pm

Brett,

Thanks for the additional information and sharing the trees on your fantastic website.

The climate on Tasmania sounds similar to other climates that support the world’s largest trees: abundant rainfall, a pronounced dry season, and mild temperatures during the wet season. Your comment about post fire competition is interesting. I wonder how much that has driven the evolution of the evolution of high growth rates in the species. Douglas fir seems to fit that same model, but I’m not sure about post fire regenerators in colder climates.

To put my original question a different way, when you’re trying to discover a new giant Eucalyptus, where do you look? South facing coves? Sheltered, well drained valley bottoms? Small river floodplains? Acidic soils? Circumneutral soils? Mafic soils? Elevation? The evolutionary drivers of tree size are always interesting, but I’m also curious about how local conditions drive tree size too. Local factors vary by region and by species, even for species that commonly grow together.

Re: New sites on giant eucalypts
by Brett Mifsud » Tue Mar 05, 2013 6:52 am

very good questions Jess.

Firstly climate: While there is a winter, spring maximum for rainfall in both Victorian and Tasmanian big tree areas, summers generally have some rainfall (averages vary in different regions, however, average falls are between 70 - and 100mm per month in E regnans zone) But as occurred in 2011 and 2012, la nina weather events can even bring a summer maximum rainfall 9150- 250mm / month)

Some good information on soil, rainfall and aspect can be found at http://oldforests.com.au/pages/Posters/Balmer.pdf

Part of the wet forest eucalypt high growth rate is related to their need for light (the tallest species are very shade shy) After a fire you may have millions of seedlings per hectare. Only the fastest and most vigorous will survive to maturity. Furthermore, after 500 years, you may only have 3-4 per hectare.

My searches these days are much more focussed than in the early 1990s! These days I use google satellite maps to locate potential large crowns. In Victoria: Elevation range 200- 800m altitude, best on south/ south east facing slopes (Victoria is prone to hotter weather- so north and west are not ideal for the largest trees especially in lower elevations. Altitudes above 800m may contain giant E nitens, or other species in Far east Gippsland. In Tasmania: Elevation range 100-550m, Most of the tallest trees are on E and NE facing ridges, this protects them from the prevailing SW winds - There are not as many days of extreme temperature in Tasmania.

It may seem surprising but not many of the giant trees in Tasmania are near well drained valley bottoms or small river floodplains. In fact in both
Tasmania and Victoria, the land closest to the creeks and rivers, is usually devoid of giant trees and is covered in rainforest species and riparian vegetation. The terrain for the best trees in both states is usually quite steep, but a lot of the best trees are on small benches on ridges and slopes. (Centurion is 99.6m tall and grows on a slope on small bench - nowhere near a stream) Victoria has a lot less old growth and so you usually only find small patches of old trees to make assumptions about where the best trees are. For instance, we had some 91 and 92m trees in Wallaby creek that died in the 2009 fires. However, the best regrowth we have, in more fertile and protected sites, is already up to 87m tall and is 220 years younger than the Wallaby Creek site. The implication is that there is the potential for super tall trees in the next 100-200 years if these sites remain fire free.

regards
Brett

Re: New sites on giant eucalypts

by KoutaR » Tue Mar 05, 2013 5:14 pm

Brett,

Is there any chances that Centurion will be dethroned?

I guess that the reason why the giant eucalypts grow on ridges and slopes and not on valley bottoms is that the latter sites don't burn or burn very rarely, so eucalypts have no chances to regenerate?

Kouta

Re: New sites on giant eucalypts

by Jess Riddle » Fri Mar 08, 2013 12:53 am

Brett,

Well, I’m glad I asked, because several of your answers and figures in the Forestry Tasmania poster surprised me. I thought the region was much wetter with precipitation comparable to the pacific coast of the northwestern United States. I knew Eucalyptus were efficient water users, but reaching those heights and sizes with less than two meters of precipitation is still impressive. The weak effect of aspect is also surprising. Looking at the Forestry Tasmania figure, the preference for north and east aspects is quite weak. In eastern North America, aspect plays a strong role in determining maximum tree height. Tall trees usually grow on north to east aspects, and tall forests on south aspects are typically associated with unusually rich soils.

Many of the tall Eucalyptus seem to grow on calcium rich soils. I wonder if the giant trees on more acidic bedrock are actually growing in areas with small lenses of richer bedrock or where topography has caused nutrients to accumulate. We don’t have good data, but that pattern seems to occur in eastern North America.

The Forestry Tasmania poster provides a nice overview of where the giant Eucalyptus grow, and takes advantage of available hard data. It would be nice to see separate figures for large and tall trees in case there are subtle differences in where they grow. I may be inspired to produce something similar for some Southern Appalachian species.

The logging/preservation of these trees is a little hard to grasp too. I was very surprised to read that it wasn’t until the 1990’s that prime areas of the Styx Valley were set aside; campaigns focused on protecting old-growth forests established much earlier in the United States. It sounds like that attitude has shifted considerably since individual trees now receive protection based solely on their size, and there is even thought towards protecting exceptional regrowth that may produce future giants! One tree that really stands out in the figures and stats
is Rullah Longantyle, the giant E. globulus. It appears to be far larger than any other known member of its species. I assume it has just managed to compete with the mountain ash on a site that is productive enough that they would normally exclude all other Eucalyptus.

I wish our trees were big enough to pick out the big ones with Google map photos.

Thanks,
Jess

Re: New sites on giant eucalypts
ิby KoutaR » Mon Mar 11, 2013 11:59 am

Jess,

Unfortunately, it looks like Brett Mifsud registered at ents-bbs.org only for answering to your questions after I alerted him. I did it twice but I will not do it anymore. You can contact him through his site:  
http://victoriasgianttrees.weebly.com/contact.html

His e-mail is here:
http://www.landmarktrees.net/contact.html

Kouta

Little Broad Brook, MA Flexes Its Muscle
by dbhguru » Tue Mar 12, 2013 4:57 pm

NTS,

As the snow melts and before Monica's and my upcoming trip to the Smokies, I've returned to documenting the forests on little Broad Brook that flows behind our house. The attachment has been developed for City Planners and others with an interest in preserving the forests along the Broad Brook corridor.

Robert T. Leverett
Little Broad Brook Flexes Its Forest Muscles – Part I
By Bob Leverett

Overview of Fitzgerald Lake Conservation Area

For urban dwellers, the quality of life can improve when plenty of open space exists in the form of nature parks. This applies to cities, large and small. Northampton, MA recently added 80 acres to its popular Fitzgerald Lake Conservation Area located in the northwest corner of the city. You can read about the property at www.broadbrookcoalition.org/fitzgerald-lake/photo-gallery. The total acreage now is close to 800, an impressive accomplishment for a town the size of Northampton, and there are plans to add more land. The key to the success of ‘Fitz Lake’ lies in the partnership between foresighted city planners and the Broad Brook Coalition, a conservation group that helps manage the property. Monica is a past president of the Coalition. Needless to say, I have a strong interest in supporting the cause.

One entrance to the Fitzgerald Lake Conservation Area is hardly a 10-minute trek from our front door. Monica ritualistically walks down the street, crosses North Farms Road to the entrance to Fitz Lake, passes through a grove of hemlocks, follows a boardwalk to a dock and returns by a circular route that goes through a second swath of attractive hemlocks and white pines and by a favorite boulder, which she has affectionately named Dame Lady Rock. Fitz Lake has provided Monica with immeasurable enjoyment over the years. I now share in the rewards. During the past 6 years, we have shared images of the lake and surrounding areas with friends and in postings to the Native Tree Society.

Local people visit Fitzgerald Lake to ice fish, ice skate or cross-country ski in the winter, and fish, kayak/canoe, hike or walk their dogs, year around. Friends and relatives who visit us usually get treated to at least one walk in the conservation area. Despite Fitz Lake’s popularity, you can still find peace and solitude on the several miles of developed trails. The ones that border the lake are my favorites. Here is an image of the lake taken on a still autumn day.
Fitz Lake is an urban dweller's wildlife paradise. There is a thriving black bear and bobcat population. We think at least one moose has taken up residence and there are beavers, muskrat, mink and fishers. Lots of critters call the woodlands around the lake home. With the new acquisition, a Great Blue Heron rookery has been added, and a neighbor has seen river otter.

Regardless of where you go, there is the possibility of seeing wildlife and fairly diverse plant communities. An example of a rare plant community is an extraordinary swath of chestnut coppices that give hikers a look at chestnut leaves. Chestnut sprouts are not that uncommon in the woodlands of Massachusetts and Connecticut, but seldom in abundance. Here is the list of tree species that we’ve compiled so far along the Broad Brook corridor, primarily in the Conservation Area. Each species is followed with an abundance code: A= very abundant, C=common, I = infrequent, R = rare, E = Extremely rare.


There may be a little silver maple, swamp white oak, pin oak, and hackberry near where Broad Brook joins the Mill River. I don’t know. Wetlands along the Connecticut River and across the broad valley with meandering streams that flow into the Connecticut characteristically possess these riparian species. The cutoff to where you see them and where you don’t is an irregular line that has a lot to do with the level of the ground water, the frequency of flooding, and the depth of the soils.

At this point in our tree cataloging, the maximum number of tree species probably falls just shy of 40, which is not bad diversity for the latitude. And this does not include non-native species in the area, which will likely increase the count by 10.

Fitzgerald Lake is a conservation success story and we anticipate its importance will continue to grow, but the general area has another story to tell, one not well known. The second story centers on Broad Brook, the primary stream that forms Fitzgerald Lake. More particularly, my focus is on the part of the stream above the lake to the west of North Farms Road. Perhaps a map will help.
The Rest of the Story

Broad Brook begins north of our house in a wetland and meanders for about a mile and a half before entering Fitz Lake. Its origins are a marsh surrounded by sloping ridges. From a coalescing path, the brook establishes a recognizable channel and flows southward, eventually passing our house before turning eastward where it flows under North Farms Road through a culvert and then gently spreads into a cattail marsh at the head of Fitzgerald Lake. For most of this length, the little stream runs through a small valley that narrows to a steep, though not deep, ravine just north of our house. Much of the land along the brook is owned by Smith Vocational High School, which uses the forests in its forestry program.
So what is the untold story about Broad Brook? Before relating it, we should point out that most of the forests in the primary conservation area are young and recovering. While there are small swaths of woodlands that are quite pleasing to the eye, especially those bordering the lake, most of the area carries the unmistakable mark of having been exploited in the past. So, despite its obvious charms and wildlife appeal, Fitzgerald Lake Conservation Area is not the place to go to see outstanding trees.

The place to go is the forested corridor along Broad Brook west of North Farms Road. The area isn’t old growth and it has had more than its share of having been tampered with, but there are plenty of stately, mature trees that change its appearance, stirring the imagination by conjuring images of a wooded landscape of New England past. But photographs can better convey the feel one gets when visiting these woodlands. The first image we present is of a large white pine that is about a 15-minute walk up the brook from our house.

This big white pine approaches old growth status. Joan Maloof and Monica serve as models to showcase its size. Its girth is an impressive 11.6 feet and its height is just shy of 124 feet. That is a good start.

Most people we take up the brook are impressed by this big tree, but within sight of it, stands an even larger pine, which was first measured by Will Blozan in October 2007. It was then around 135.5 feet tall. In 5 growing seasons, it has put on annual growth leaders of nearly a foot and now just exceeds 140 feet. The pine has two trunks that are fused for the first 15 feet or so. Most people will see it as a single tree. I have showcased this big double in past posts to the Native Tree Society BBS. In recognition of its matriarchal role, it has been named the Grandmother Tree. Let’s take a look at Grandmother.
Grandmother’s fused trunk measure 15.2 feet around at mid-slope, and its southern trunk of the pair is between 140.1 and 140.3 feet in height, as measured with a laser rangefinder an inclinometer and with a generous dose of trigonometry. This height presently makes Grandmother one of only three trees in the lower Connecticut River Valley in Massachusetts to surpass the height threshold of 140 feet. That’s a pretty exclusive club. Let’s look at the twin trunks.
I think that the big tree is between 170 and 200 years in age. I haven't modeled it for volume, but I would be surprised if there isn't at least 800 cubic feet in the overall structure. To put this volume into perspective, the first white pine shown has between 400 and 500 cubic feet, and the largest we have modeled, the Grandfather Pine in Monroe State Forest, has 1075 cubic feet.

Father up the stream corridor, but still within sight of the big double, a small cluster of attractive pines makes its presence known. They have entered their maturity and are handsome trees with straight trunks. Five of them exceed 130 feet in height, with the tallest at 139.0 and a second at 135.8. Here is a look at #2 in the height list. Monica stands behind the tree for scale.
Including the big double, this section on the west side of Broad Brook now boasts 6 pines over 130 feet and another half dozen over 120.

Across the brook to the east, two more pines in this upper section of Broad Brook exceed 130 feet, bringing the total to eight. But the story doesn’t end here. Five pines downstream on the east side and one tuliptree bring the total of trees making the 130-foot threshold to fourteen growing on either side of a mile-long stretch of Broad Brook. This is a very significant total of trees in this height class for the Connecticut River Valley region of Massachusetts. Presently, the number surpasses the other lower valley tall tree hot spots, including Robinson SP, Mount Tom State Reservation, Look Park, Stanley Park, Forest Park, Smith College property, a site in Easthampton, and Old Deerfield, most of which are far larger than the Broad Brook corridor. The little stream flexes some real muscle. Here is a list of the 130-footers. The last is a tuliptree.
<table>
<thead>
<tr>
<th>Area of Broad Brook</th>
<th>Tree Name</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper-West Side</td>
<td>Grandmother</td>
<td>140.2</td>
</tr>
<tr>
<td>Upper-West Side</td>
<td>Unnamed</td>
<td>139.0</td>
</tr>
<tr>
<td>Monica’s Woods</td>
<td>Monica’s Pine</td>
<td>136.2</td>
</tr>
<tr>
<td>Upper-East Side</td>
<td>No 2 Double</td>
<td>136.0</td>
</tr>
<tr>
<td>Upper-West Side</td>
<td>Unnamed</td>
<td>135.8</td>
</tr>
<tr>
<td>Upper-West Side</td>
<td>Unnamed</td>
<td>135.2</td>
</tr>
<tr>
<td>Upper-East Side</td>
<td>Unnamed</td>
<td>132.0</td>
</tr>
<tr>
<td>Upper-West</td>
<td>Unnamed</td>
<td>131.9</td>
</tr>
<tr>
<td>Upper-West</td>
<td>Unnamed</td>
<td>131.2</td>
</tr>
<tr>
<td>Upper-West</td>
<td>Unnamed</td>
<td>130.5</td>
</tr>
<tr>
<td>Upper-West</td>
<td>Unnamed</td>
<td>130.2</td>
</tr>
<tr>
<td>Neighbor’s Property</td>
<td>Unnamed</td>
<td>130.1</td>
</tr>
<tr>
<td>Neighbor’s Property</td>
<td>Kaeza’s Pine</td>
<td>130.0</td>
</tr>
<tr>
<td>Monica’s Property</td>
<td>Monica’s Tulip</td>
<td>130.5</td>
</tr>
</tbody>
</table>

To put these numbers into perspective, there are over 1,000 trees in Mohawk Trail State Forest that exceed 120 feet in height and numbers in the low hundreds making the grade on the Bryant Homestead in Cummington, and in Ice Glen in Stockbridge. However, as of this writing, we’ve broken 130 feet only once east of Worcester, MA. The distribution of tall trees greatly favors western Massachusetts, with most being in a relatively few spots in the Berkshires and Taconics. Thereafter, comes the Connecticut River Valley, and little Broad Brook makes its debut.

If the pines and the tuliptrees of Broad Brook win the stature contest, the hemlocks have their own aesthetic appeal. Trees in the 100 to 110-foot height class are common along Broad Brook, and several trees are taller. So far, the champion grows a few yards below the 139-foot pine, a double-trunk hemlock that just reaches 120 feet - a respectable achievement for the species anywhere in Massachusetts. However, height is not everything. One old hemlock in particular reminds us that it and other more full-figured members of its species are not to be taken for granted. In the next image, Monica stands behind it, so it looks very large. It is, in fact, 11.5 feet in girth and 106.5 feet in height.
Aloft, the old hemlock is a mass of unruly limbs. One gets the feeling of forest wisdom. So far as we’ve found, it is the largest of its species on the Brook west of North Farms Road.

Elsewhere, the uniform trunks of hemlocks create aesthetic wooded corridors. Here's a view along a snow mobile path. The triple on the right is a northern red oak. The original tree would have been quite large. The trees on the left are hemlocks. From a distance, their impact is muted.
Drawing closer to the hemlocks, their impact grows as the following image shows.
What makes the forests along this section of Broad Brook so appealing to Monica and me? I'll deal with this question later in greater detail, but I believe that a no less iconic figure than Henry Thoreau would have not shrunk from elevated descriptions of the pines, hemlocks, and oaks along the corridor especially after surveying much of today’s worked-over landscape. Here is a look at the two 130-foot white pines on the upper east side of the brook.
The one on the right measures 8.9 feet in girth and stands 132.0 feet tall. The left pine is a huge double with a breast-high girth of 12.6 feet and a height that just reaches 136 feet, making it one of a baker’s dozen trees in the lower Connecticut River Valley in Massachusetts to achieve the 136-foot threshold. There may be more, but I haven’t confirmed them.

The big pines along the east and west sides of the Brook fit our perception of what a mature New England pine forest should look like. Their deeply furrowed bark suggests ages over 150 years. Many of these pines have largely shed their lower limbs, which magnifies their height. The vertical dimension of a forest is what creates that cathedral appearance which appeals to practically everyone. Here are two examples.
By contrast, travelers through the wooded countryside of southern New England often view recovering forests featuring cluttered stands of spindly trees in the one to two-foot diameter class. Tree plantations around reservoirs add insult to injury, exhibiting uniformly spaced, densely distributed, pole-sized trees. These junior forests are, for the most part, quite frankly, boring. Woodlands bordering roadways are often choked with vines. The public has grown accustomed to such a scraggly backdrop as the forest norm for our region. It wasn’t always that way.

By contrast, in addition to bigger trees, mature woodlands have a complex structure that provides a variety of wildlife habitats. In addition, ground plant colonization tends to be richer and more complex with a wealth of lichens, mosses, liverworts, and ferns. In mature and old growth, one becomes more conscious of the death and decay cycle of forest ecosystems. This doesn’t sound attractive, yet oddly, natural events that create the complex structure previously mentioned can produce photograph opportunities. In the following image, we see a large wind-throw that creates a different habitat and microclimate. The cavity at the base of the roots ball stays cooler in the summer. The soil on top of the ball offers a seedbed to species like yellow and black birch, which have tiny seeds needing mineral soil to germinate.

The embedded rocks are glacial till. The entire region was a dumping ground for receding glaciers. This geological formation continues to the east and is dominant in the conservation area.

Next is a close up of fungus on the decayed trunk of a small hemlock. Artistry through degeneration.
And a final look at the hemlock-dominated forests of upper Broad Brook and its structural complexity.
Leaving the conspicuous pines and hemlocks, the tuliptree community is our next species to profile. Range maps for *Liriodendron* show this lord of the eastern forests as reaching southern Massachusetts and abruptly stopping. This is what Professor Gary Beluzo and I have confirmed in our distribution studies. So, an important part of the second story of Broad Brook pertains to the tuliptree. This more southerly species of the magnolia family makes one of its last stands in the northeasterly part of its range along little Broad Brook. Farther north, it exists primarily as a yard tree. There is an outlier stand of *Liriodendrons* in Keene, New Hampshire near a lake, but their scraggly appearance suggests that they escaped from planted trees in the area. They show no signs of natural adaptability to the region.

The tuliptrees along Broad Brook are among the last that grow naturally in the northeasterly part of the range. Altogether, counting saplings, arborist Bart Bouricius and I have identified over 50 tuliptrees in the corridor from our house to a mile upstream. This is an ecologically significant community. But the story does not end with the simple existence of the Broad Brook tuliptrees. *Liriodendron* is no ordinary species. To my mind, it is the king/queen of the hardwoods. No eastern species achieves greater stature. It reaches its zenith in the southern Appalachians where we measured one specimen to 191.9 feet, and have documented around one hundred at 170 feet or more. But this is at the center of the species distribution.

Moving northward, *Liriodendron* holds significant height into southern New York and New England, and westward into Ohio and southern Michigan. In our region, we have measured trees to 155 feet in lower Connecticut and along the Hudson in southern New York. At about 41.5 degrees latitude, the species loses its competitive advantage, but refuses to surrender its tall tree image. Even farther north, at just above 42 degrees north latitude, the tulips do not go out with a whimper. While diameters for the Broad Brook tulips are modest at only slightly more than two feet, four trees exceed 120 feet in height, including one at 130.5 feet. This lone tree grows on Monica’s property and so
far as I have been able to determine is the northeastern most 130-foot of its species. A fifth tuliptree will like reach 120 feet in 2 to 3 years, and a sixth could make it in five.

The next image shows two tall tuliptrees on Monica’s property. The tuliptrees are the ones in the center and left of center. The one on the left is the 130.5-footer. The one on the right is 126.6 feet tall.

The tulips have lots of company. Notice the tree just to the right of the center tulip. It is a gorgeous white pine that we’ve named in honor of two friends. It is the Sarah and Phoebe Pine and it is 128 feet in height and 8 feet in girth. It is a relatively young pine with lots of growing left to do. Here is an image looking up its trunk.
I have concentrated on the pines and tuliptrees as the tallest species in the eastern forests. It is appropriate to the story that these species make one of their last showings together along Broad Brook. But I do not want to ignore other species. One pignut hickory on the west side of the brook north of the Grandmother tree is hardly noticeable with its slender trunk measuring only 4.7 feet around. But if you stand beneath this little hickory and look upward, its height is amazing. I measured it to 121.5 feet. I have no explanation for such height given the very small girth. The view looking up the ramrod straight trunk follows.
I’ll now summarize the tall tree numbers for upper Broad Brook, i.e. the 120s and above. I have not measured all the white pines in the height range of 120 – 129.9 feet along the corridor, but I believe there to be between 35 and 40. So, if we take the 14 pines in the 130 feet and above class that I have measured, add the hoped-for 40 in the 120 to 129.9-ft class, throw in the 4 tuliptrees over 120 feet, the one hemlock, and the lone pignut hickory, we have no less than 60 total trees reaching to 120 feet or more along a mile and a half of Broad Brook. My current plan is to measure and document all of them.

As a final exploration of the numbers, turn to Broad Brook’s Rucker Index. The Native Tree Society uses the Rucker Index as a measure of stature for a forest. The heights of the single tallest member of each of the ten tallest species are added and averaged. In New England, Mohawk Trail State Forest has the highest index at 136. In Massachusetts, Ice Glen is second with 127, followed by Monroe State Forest at 124. Robinson State Park and Mount Tom State Reservation follow at 119 each. Mount Greylock State Reservation is around 117. After Greylock, Broad Brook and a few other sites vie with one another for the next highest Rucker. Broad’s Brook’s index presently stands at 115. This almost certainly insures a spot in the top dozen Massachusetts sites and maybe the top ten.

The final story of this initial submission on Broad Brook touches on the northern red oak. Big red is a commercially valuable species and catches the eye of the lumberman. It is an important wildlife tree. Oaks of all species connote power and solidness. Mature specimens are scattered along the path of Broad Brook from North Farms Road to the head of the stream. Most of the older trees are between 7 and 9 feet in girth and 90 to 110 feet in height. The tallest I’ve found just eclipses 116 feet, and that tree is on Monica’s property. I expect there are a few others near this height, but I like to think that her trees benefit from the proximity of her music room. On Monica’s property, alone,
at least nine northern reds exceed 100 feet in height. On adjacent Smith Vocational property, a handsome large oak exceeds 9 feet in girth and reaches to 102 feet in height. We regularly pass by the imposing oak on our way to the upper reaches of the brook. It has become an old friend. But it is not alone. Other isolated large oaks dot the path going upstream until an area owned by a third party is reached. The big trees stop there.

The Meaning of the Numbers

I apologize for the preceding deluge of numbers. But, the real story of upper Broad Brook’s forests lies in its tree statistics. I should explain. Some nature lovers walk woodlands paying minor attention to the trees. They relate to forests primarily as wildlife habitat. Others focus on wildflowers or mushrooms. This is perfectly okay, but upper Broad Brook’s exceptional qualities, as a forest, lie in the abundance of its mature trees and the visual images they provide us. Consider a tree that is 20 inches in diameter, free of limbs for 30 feet, and 60 to 80 feet tall. These dimensions will not make much of a visual impact, and a smaller tree will look decidedly juvenile. Now, add 6 inches to the diameter, 10 more feet of limb-free trunk, bring the total height to 100 feet, and we have a tree that makes an impact. Add still another half a foot of diameter, 10 more feet of limb-free height, and increase the total height to between 110 and 130 feet and we have reached the tree size appropriate for a stately northeastern forest. I have just described trees you can see along parts of upper Broad Brook.

Summary

I was first introduced to upper Broad Brook in 2005. My initial impression was favorable, but colored by the superlative big forests that I was studying elsewhere. Cook Forest, PA, Hearts Content, PA, and Mohawk Trail State Forest, MA in the Northeast; Joyce Kilmer in North Carolina; the Great Smoky Mountains National Park, TN-NC; Congaree NP, SC; the Porcupine Mountains, MI and other such places are top-of-the-line – the East’s forest icons. By comparison, little Broad Brook struggles. But it is manifestly unfair to compare the 100-acre swath of woodlands to the iconic, world-class places. By contrast, when compared to the bulk of the Massachusetts regrowth landscape, little Broad Brook flexes its muscles. It boasts trees to impressive heights of 140 feet and girths to 12, one of the northeastern-most stands of tuliptrees, abundant wildlife, and solitude. It has the look and feel of an attractive New England forest, the type that Thoreau wrote about as he witnessed the loss of the virgin woodlands to wide-scale logging. With its mature forest cover, upper Broad Brook gives us a hint of a lost heritage, a heritage that can only exist in places protected from exploitation. In our geographical region, trees require between a century and a century and a half to achieve sizes that tease the Tolkien imagination. Upper Broad Brook gives us the hope of recapturing a bit of New England past.

I will close with three scenes. The first two are taken from a spot on little Broad Brook’s meandering course about half a mile south of its source.
Lastly, we see Monica’s favorite tree, standing at the base of the hill behind the house. It is a tuliptree that sends its arrow-straight trunk 128 feet skyward. The tulip’s diagnostic grooved bark is showcased behind the tuning fork shape of a closer, young white pine.

Part II of the Broad Brook series will focus on other tree species growing in the corridor.
Pareidolia in TN: Face in the Waterfall

by pitsandmounds » Wed Mar 13, 2013 7:14 pm

Here's a case of Pareidolia.

Check out the face in the rock right next to the waterfall. You're looking at the side of his face. This is on the Falls Branch hike in Citico Creek Wilderness. The trail starts next to the Cherohala Skyway and is marked as Rattlesnake Trail West. There were some old growth Yellow Buckeyes there, but this was before my measuring days.

- Matt
Hemlock Legacy Project

by Neil » Sun Mar 03, 2013 10:09 pm

Dear NTS of the eastern US and Canada,

There is a new opportunity for citizen science that is right up our alley: collecting and preserving hemlock samples before they are lost through the Hemlock Legacy Project - HeLP. There will be an article coming out soon in a mainstream source about it and there was this clip, too:


It will take some time to coordinate the project in its entirety. Most of the coordination will come out of Dr. Amy Hessl's lab at West Virginia University. http://hessl.eberly.wvu.edu/ - there might be a grad student and web page in the fall organizing the project a little more formally. I'll def keep you updated as things develop.

The original article is available below at the open access site of Columbia University. It has recently become CU's policy that its researchers make their publications available to the public - hear, hear! So, download HeLP here:

http://academiccommons.columbia.edu/catalog/ac%3A157045

Neil Pederson

Eastatoe Creek Heritage Preserve, SC

by bbeduhn » Wed Mar 13, 2013 4:56 pm

Eastatoe Creek forms a gorge on the edge of The Jim Timmerman Natural Resources area. It was listed on National Geographics "50 Places to visit before you Die" list. Some very rare ferns grow there. the original trail that led down to the gorge suffered considerable damage from hurricanes in 2004. I followed the old route for a while on an old logging road but doubled back about a quarter mile into single track. It became very steep with blowdowns and washed out trail. Since there was a chance nobody else would even be in the Preserve that day, let alone on the closed trail, I figured it was best to get back on the new trail.

The trees get tall from the get go. Tulips are at their highest along with white oak at the slightly higher altitude. Hickories are rather puny at first but more than make up for it later on. There's a relatively flat area with little undergrowth along the creek which harbors tall, fairly young specimens, including one of the best second growth hemlock forests I've seen.

As always, there's certainly a chance I got a couple of the hickories wrong.

<table>
<thead>
<tr>
<th>Species</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pinus rigida</td>
<td>92.2’ 101.4’</td>
</tr>
<tr>
<td>Pinus Virginiana</td>
<td>91.0’ 108.9’</td>
</tr>
<tr>
<td>Pinus echinata</td>
<td>83.3’ 117.4’</td>
</tr>
<tr>
<td>Pinus strobus</td>
<td>131.7’</td>
</tr>
<tr>
<td>Tsuga canadiensis</td>
<td>106.2’ 106.2’</td>
</tr>
<tr>
<td>Tsuga morte</td>
<td>138.6’</td>
</tr>
</tbody>
</table>

Thank you,
neil

Re: Hemlock legacy Project

by Neil » Thu Mar 14, 2013 8:56 am

Dear NTS,

I posted in the Hemlock Legacy Project already, but want to drop a quick note here as well.

The project's web site is now live here: http://www.geo.wvu.edu/hemlocklegacy/

There are many ways to participate. Please join in and HeLP as you can.
appears these easily topped 150' before infestation

Juglans cinera  butternut  81.0'  84.7'
84.8'

Carya alba  mockernut hickory  116.7'  123.0'
123.1'  123.1'  126.7'  131.2' (141.5' may be bitternut)

Carya cordiformis  bitternut hickory  126.6'
130.5'  141.5'

Carya glabra  pignut hickory  117.5'
121.9'

Carya pallida  sand/pale hickory  95.5'

Quercus alba  white oak  113'  125.6'

Quercus rubra  red oak  107'

Quercus montana  chestnut oak  102.4'

Fagus grandifolia  American beech  104.7'
111.6'  113.5'

Acer rubrum  red maple  104.6'
117.0'

Robinia pseudoacacia  black locust  104.7'
115.7'  117.2'

Oxydendrum arboreum  sourwood  72'

Magnolia acuminata  cucumbertree  120.8'

Magnolia fraseri  Fraser magnolia  80'  98.8'

Sassafras albidum  sassafras  96.5'

Diospyros virginiana  persimmon  84.0'  107'

Fraxinus Am. var. biltmoreana  biltmore ash  76.6'

Liquidambar styraciflua  sweetgum  109.3'

Betula lenta  black birch  101.0'
102.3'

It's interesting to see the height disparities between this site and Laurel Fork, as they are just a few miles apart. VA pine, sourwood and sweetgum all shine at Laurel Fork. Hickories dominate at Eastatoe. Tulips do well at both sites. White pine is almost nonexistent at Eastatoe and dominant at Laurel Fork.

Mockernut or bitternut  141.5'
Mockernut or bitternut crown 141.5'

Eastatoe sluice

Pitch pine 124.5'

Interesting mockernut bark
Whitest mockernut I've seen

41 foot Japanese Umbrella Pine | SW Portland, OR
by mdvaden » Wed Mar 13, 2013 8:39 pm

Unique find today, considering that 41 feet is so short compared to native conifers ... but I spotted a Japanese Umbrella Pine in a back yard while discussing drainage with someone. 41 feet is a lot shorter than it's native habitat's older trees, but 41 feet is the tallest one I've seen in an Oregon landscape setting.

The location is not the most photogenic, but it's an okay looking tree. Not real full, but it adds some character. Leaves look very healthy. First time I've ever seen cones on one too.

M. D. Vaden of Oregon

Re: Eastatoe Creek Heritage Preserve
by bbeduhn » Thu Mar 14, 2013 9:53 am

Bart Bouricius wrote: Is the ravine deeper here than at Laurel Fork?

Bart, Yes, the ravine is deeper than at Laurel Fork, but not by too great a margin. Both ravines are relatively steep. The Eastatoe creek runs basically due south, with some twists and turns. Laurel Fork runs southwest where tulips and sweetgum dominate, and a few yellowwood reside. It then heads due west and the ravine opens up and becomes a bit more level. Pines dominate in the westerly section.

I counted 160 rings on a hemlock roughly 2’ d at Eastatoe. I counted 160 rings/whorls combined on a white pine at Laurel Fork, nearly 3’ d. The white pine was located on a 10’ high bluff and growing up from the side of the bluff. I assume the bulk of the white pines at Laurel Fork are a bit younger (100-130 yrs. but it's just a guess).

Brian
**Re: 41 foot Japanese Umbrella Pine | SW Portland**

by JohnnyDJersey » Wed Mar 13, 2013 10:47 pm

Now see Mario, thats how you can tell a real tree fanatic from an ordinary guy who just likes trees. Photographing a 41ft tall tree. :) Reminds me of when I first met the wife and we were out all day measuring 20+ ft CBH Oaks and Sycamores. Suddenly I run into the woods all excited to measure a 13ft CBH American Beech. She said, "Come on John, this is getting out of hand, if your gona measure that tiny tree you might as well measure the entire forest." I said, "No you dont understand, its a BEECH! Its huge!" Lol. When your a tree lover you just have a different perspective on things.

John D Harvey

---

**Eastern hemlock needle tea**

by sylvanicdawn » Thu Mar 14, 2013 8:52 am

Just curious about something: I've read somewhere that people have made tea from hemlock twigs. It's something I've never done, and would like to try, since there are still some tsuga trees alive in my area. But what if, for example, I was in a park where hemlock trees had been chemically treated? Would traces of the chemical in the tree render the bark of the twigs absolutely unsafe for making a hemlock tea, or would it be OK to still use them?

---

**Re: eastern hemlock needle tea**

by Will Blozan » Thu Mar 14, 2013 6:21 pm

I think regardless of chemical traces the tea would be nasty. Carolina might be pretty good with the tangerine essence. With chemical traces any lice, fleas, ticks would have a rough time... but wouldn't harm you unless allergic. I'd steer clear if you suspect they have been treated.

---

**Laurel Fork Heritage Preserve, SC**

by bbeduhn » Mon Mar 11, 2013 3:57 pm

The Laurel Fork Heritage Preserve is located in the Jim Timmerman Natural Resources Area, aka Jocassee Gorges. There are several old logging roads on the property, and the Foothills Trail traverses it east to west. I measured along the Foothills Trail for about two miles west of the Preserve as well.

The Virginia pine would be a new record. It appeared to be mid 110's but came out at 124.6’. I didn't crunch the numbers in the field so there is a slight chance that it is in error. I'm not sure when I can get back to confirm it and take pictures. The tallest Sweetgum is easily the tallest one I've seen. I don't know if it is a mountain record. It's still 10’ shy of Congaree.

- *Pinus rigida* pitcher pine 104.2’ 108.4’ 111.3’ 114.0’ 114.1’ 115.8’ 116.1’ 116.5’ 121.9’
- *Pinus Virginiana* VA pine 102.3’ 104.1’ 110.9’ 113.6’ 113.7’ 113.9’ 124.6’ potential new record
- *Pinus strobus* white pine 141.6’ 144.4’ 146.3’ 147.4’ 151.0’ 151.5’ 156.3’ 157.5’ 161.9’
- *Pinus echinata* shortleaf pine 106.1’ 109.2’ 110.4’ 116.6’ 118.2’ 123.9’ 124.0’
- *Tsuga canadiensis* hemlock 107.5’ 113.4’ 115.0’ 119.0’
- *Tsuga morte* dead hemlock 143.6’ 148.9’
- *Lirio. Tulip.* tuliptree 141.9’ 143.1’ 143.5’ 144.2’ 145.5’ 146.6’ 147.2’ 148.2’ 152.7’ 157.3’
- *Liquidambar styraciflua* sweetgum 130.0’ 131.0’ 133.4’ 133.9’ 137.6’ 138.0’ 146.7’
- *Robinia pseudoacacia* blk. locust 123.6’ 129.4’
- *Carya alba* mockernut hickory 114.5’ 117.0’
138.5’
Betula lenta  black birch  105.6’
Oxydendrum arboreum  sourwood  82.5’  97.3’
quercus alba  white oak  112.9’
Acer rubrum  red maple  114.0’
Carya cordiformis?  Bitternut hick.  96.0’
Nyssa sylvatica  Black gum  95.3’

Appears to be sugar maple but I could find only red maple leaves

Mystery tree crown  96.0’

157.5’ white pine
Cool shortleaf bark

Virginia Hawkins Falls

Black gum

Black gum crown
Saluda Incense Cedars

by bbeduhn » Fri Mar 15, 2013 10:06 am

This property is under the care of Will Blozan and his crew. I was driving by it over a year ago and noticed the incense cedars. They really stuck out. I originally thought they might be sequoias. I measured on the spot, let Will know about them and he told me he had measured the tall one to 122' in 2006 or 2007, while I came up with 112'. My vantage point wasn't the best as I was still learning how to measure properly. I got a higher figure but still may not have hit the top as it is rather rounded.

Calocedrus decurrens Incense cedar 122.5'
110.0' 80.0'

Cunninghamia lanceolata China-fir 64.5'
63.3'

122.5' incense cedar

110' incense cedar
NTS, Attached are the results of a trunk modeling this afternoon by Bart Bouricius and yours truly using photo analysis and a reticle monocular. The results speak for themselves. The method continues to show its relevance and power.

Bob Leverett

Photo Measuring with Bart Bouricius
by dbhguru » Mon Mar 11, 2013 7:44 pm

NTS,

Attached are the results of a trunk modeling this afternoon by Bart Bouricius and yours truly using photo analysis and a reticle monocular. The results speak for themselves. The method continues to show its relevance and power.

Bob Leverett

Re: Photo Measuring with Bart Bouricius
by dbhguru » Wed Mar 13, 2013 9:44 am

NTS, I've done more analysis on the photo modeling that Bart and I did. This time I compute trunk length segments via photo analysis to see how they match
up to the laser-clinometer determined lengths. I’ve attached an updated version of the spreadsheet showing the results. I’ll let the spreadsheet do the talking.

Bob Leverett

PhotoMonocularMeasurementBart.xlsx

Re: Photo Measuring with Bart Bouricius

by edfrank » Thu Mar 14, 2013 12:04 am

NTS, Bob, and Bart,

I am optimistic that this will be a great tool for measurement. Essentially what you are doing is determining an optical factor for a particular lens focal length using a scale. The scale is measured and the optical factor is determined. All the points in that same photo have the same optical factor. The formula for a reticled monocular is as follows:

\[
\text{Diameter} = \left(\frac{\text{Reticle scale} \times \text{distance to target}}{\text{optical factor}}\right)
\]

In the case of these measurements the above calculations are carried out for each position selected via the Excel spreadsheet. The distances to the target position are measured via the laser rangefinder. The width is measured on the photograph. There is no reason at all that this should not work exactly like a reticled monocular for girth measurements.

I need to think about how you are determining trunk length. The top and bottom of each segment are at different distances from the camera, even if you consider the trunk to be straight up and down and not leaning. Perhaps you can elaborate how the trunk length is being determined. You also suggested when I talked to you, and it is in Will’s Tsuga Search guidelines about breaking the trunk into sections for volume modeling based upon interpolation between actual measurements. How are you determining on the photograph exactly the height where the diameters are being taken given that the sections are progressively farther away from bottom to the top and the scales are changing (think of a log type scale). It is a smooth change and I am sure it can be calculated, but if this process could be articulated, it would be helpful.

Overall I think it is fantastic that the volume can be calculated from a photograph gives a scale and a handful of distance measurements. It will make the process of volume calculations more accessible and usable by anyone with a camera and rangefinder. Looks good. it will change the paradigm of trunk volume modeling for trees where a good shot or series of shots of the entire trunk can be taken from one position.

The other concern is potential lens distortion, but you can work to minimize that effect in a given photograph.

Edward Frank

Re: Photo Measuring with Bart Bouricius

by Bart Bouricius » Thu Mar 14, 2013 8:26 am

Ed,

I am sure Bob will give a better answer than this, but calculating the length is not a problem as we have the laser measurements to the previous measurement point on the tree and the new one. just as in measuring height with the Nikon 440 alone, as long as you check the angle, It does not matter if the tree leans because we have the lengths of the sides and the shape of the triangle in question, one of who’s sides represents the length of trunk. It would be a problem if the trunk was strongly curved, such as an extremely squirrely pitch pine for example, but this example would create difficulties with other measurement methods as well. Depending on the shape of the trunk cross section, a perpendicular shot
would be required as well. I doubt that this method will be as accurate for volume as actual circumference measurements but it will be interesting to compare this method with trees that have been measured by hand, at least as far as the trunk volume is concerned. In trees such as Ceiba pentandra, where gigantic branches make up a very important part of the volume, using photos of branches from the center of the tree may be sufficient to decrease the time substantially in getting a volume measurement for the entire tree. Time and experiments will tell. I hope this is not confusing, or that I am not confused. I will let Bob correct me if I am.

Bart Bouricius

--

Re: Photo Measuring with Bart Bouricius

by edfrank » Thu Mar 14, 2013 9:48 am

Bob, Bart, I am just wondering about the interpolation. If the tree were vertical with the upper measured value for the trunk directly over the base, then the height would be \( \sin A \times \text{hypotenuse} = \tan A \times \text{horizontal distance to the trunk.} \) If the section from the top to the bottom as shown on the photograph were broken down into equal length segments, each segment would have the the same number of degrees of angle but would be of different lengths. But then you could go back and use the tangent function to determine the height of each of those points, and thus determine the segment length between each of the interpolated lengths. If the tree were slanted from vertical but still straight, then this process would give you the base length of a similar triangle with a length of trunk = hypotenuse = \( \arctan \) (angle from base to uppermost measurement). So the length of the trunk segments could be calculated if the tree were straight and either the upper and lower measured sections were directly over each other, or if the section was tilted and you were looking in the same plane as the tilt angle. A 10 degree slant in the tree would only affect the calculated length by 1.5% so minor irregularities on the trunk will not make that much difference. So segment length could be calculated if you treat interpolated points as angles and work from there.

The basic point being if you can calculate the height of a particular cross-section then you can calculate the distance as \( \sqrt{[\text{height}]^2 + (\text{horizontal distance})^2} \) and thus determine the width at the interpolated point. The diameter of a cylinder isn't going to change no matter what the viewing angle, so the angle to the width measurement point only matters in regard to length.

In the field the angles to the measurement points could be directly measured with a clinometer, but I am trying to present a possible work-around for measurements based on a photo.

Edward Frank
Re: Photo Measuring with Bart Bouricius
by dbh guru » Thu Mar 14, 2013 1:47 pm

Ed, Bart, Larry, Doug, Will, et al.

The attached Excel workbook just confirms what you already recognized, Ed. We can take multiple close up images from the same location and a reference object in any one of the images applies to the others. In the attachment, you'll notice three images of different parts of an oak named Pokey. I chose a spot in the dining room where I could see the tree to be measured. From there, I split a section of the tree up in three photos, keeping the same focal length throughout. Absolutely no change of camera settings. I also shot distances and reticle values to points in the three separate images. The reference object is the diameter at the location of the round marker near the base.

As you can see, I got extremely close measurements via the reticle and the photo process. My next step is to develop a clean spreadsheet template for this process and good user instructions. The method really does work on circular objects. With reference object of known dimension, laser rangefinder, clinometer, and digital camera, we can model trunks for volume. Throw in a compass to get horizontal angles and the process can be extended to limbs at all angles.

[PhotoMeasurementPokey.xlsx]

Robert T. Leverett

Re: Photo Measuring with Bart Bouricius
by edfrank » Fri Mar 15, 2013 7:56 pm

Don, My use of optical factor really refers to the scale to distance ratio for the particular focal length. It is the term used by the manufacturers for the reticle/monocular. The distortion is something to be aware of. Using multiple images will help in this regard as the diameters to be measured can be centered in each individual photo rather than up and down the entire frame. We really should look at photographing something like a brick wall with a
regular grid pattern to see the potential effects of this distortion on the measurements.

Edward Frank

---

**Re: Photo Measuring with Bart Bouricius**

*by dbhguru » Fri Mar 15, 2013 9:32 pm*

Don, Ed, Keeping the target centered and small is the current order of the day. I plan to experiment more and will use a flat vertical surface to experiment with. There is another consideration for the method I'm using with Excel for a vertically oriented object seen at a high or low angle. I'll give an example. Suppose we're photographing a 160-foot tall tree from a baseline of 100 feet. The last 10 feet of trunk tends an angle of 1.7 degrees, i.e. the field of view is 1.7 degrees for the segment from 150 to 160 feet. Now the angle for the first 10 feet (assuming our eye is at base level) is 5.7 degrees. Stated another way, an angle of say 1 degree covers more trunk farther up the tree. The implications in photographic images rule out measuring height directly from a photograph by any simple process. A pixel higher up the trunk becomes worth more, but how much more?

Edward Frank

---

**Tomorrow, Monica and I head to Plattsburgh, NY for a couple days. I hope to extend the photo analysis beyond what I've done thus far, but the road has suddenly gotten rough. However, for the simple measurements done and passed along in the series of spreadsheets, we've got us a new technique.**

Robert T. Leverett

---

**Re: Photo Measuring with Bart Bouricius**

*by edfrank » Fri Mar 15, 2013 10:00 pm*

Bob, You can measure height if you are willing to accept a tangent height and the error problems it entails. You know the distance to the target and the size of the target. From that you can calculate the angle that the length of the measuring stick represents. From this you can measure the height of the tree in terms of the number of times that angle is expressed from top to bottom. Thus you know the angle to the top of the tree, and at basically any point up and down the tree. By using the tangent function you can calculate the height based upon the original horizontal distance to the tree.

You could also measure the distance to the top of the tree with the laser rangefinder and just make everything easier. The angle to the top could be measured on the photo as outlined above, or more easily measured by a clinometer in the field.

Edward Frank

---

**Re: Photo Measuring with Bart Bouricius**

*by dbhguru » Sat Mar 16, 2013 8:54 am*

Ed, We have taking measurements in the field and using them in abstract mathematical models down pretty well. How well, we can then apply some, or all, of the field measurements to a photograph is a different proposition. I'm satisfied that we're okay in measuring narrow widths or heights at known distances on the photos using proportionality. But when we expand the area to be measured on the photograph and use an overlaid object like an Excel line shape compared to another overlaid shape line of known distance and actual size, we encounter a different set of challenges. I'll attempt to illustrate these challenges on a series of spreadsheets over the next week. Maybe we can settle on the combination of measurements and objects needed to bump this
methodology up to the next level.

I really appreciate you, Don, and others joining me on the project to develop photo measuring as a productive tool for us. I usually make these posts, recognizing that they have a limited appeal because I'm working on the fringes. On occasion, a new technique holds real promise. I believe, as do you, that the photo measuring has a place in our repertoire. Again, thanks.

Robert T. Leverett

---

Re: Getting started with the Fusion program and LiDAR data

by pitsandmounds » Sat Mar 09, 2013 7:24 am

Steve,

Thanks so much for sharing your process on how to analyze the OGRIP files with Fusion. Your step-by-step explanation made it easy to jump in and get started.

So far I've used it for scouting purposes, but now I want to find the individual trees that caused the tallest hits. Utilizing the view of the terrain has put me in the right area, but I want to use latitude/longitude to ensure that I'm not misreading the terrain and that I'm actually in the right spot.

I haven't been able to figure out if Fusion can show the latitude/longitude of a specific point, but I've been able to find it using this method. If anyone knows how to pull latitude/longitude directly from Fusion, please let me know.

1) Use the LIDAR Data Viewer to pinpoint the tallest hit.

2) Select a very small area on the Fusion image that includes the tallest hit.

3) Right click on the Fusion image until the individual tree is visible.

4) Compare the Fusion image with maps.google.com and line up a couple landmarks, and match up the location of the tree. Use the “What’s Here” functionality on maps.google.com to find the latitude/longitude.

Or, Compare the terrain on the LIDAR Data Viewer with the terrain on the USGS National Map Viewer. Place the cursor on the spot of where the tree would be on the USGS National Map Viewer and the cursor position will show the latitude/longitude.

5) For verification purposes, enter the latitude/longitude into the OGRIP site and make sure that the tree image matches the tree image that was on the Fusion image.

- Matt

---

Re: Getting started with the Fusion program and LiDAR data

by Steve Galehouse » Sat Mar 09, 2013 12:16 pm

Matt-

I've also tried to get lat/long co-ords directly through Fusion, without success. There must be a way to do so, as the viewer screen has a button for GPS values. I end up doing something similar to what you do, but I've found Big Birdseye images to be more helpful than google.maps. The tall trees in my area are nearly always associated with topography that readily relates the screen image to the actual location.

Steve Galehouse
Re: Getting started with the Fusion program and LiDAR data

by Jess Riddle » Sat Mar 16, 2013 5:10 pm

Steve, Matt;

If you're just interested in the highest points, there is a clunky way to get coordinates out of Fusion. Try Tools->Terrain model->describe terrain model then select the canopy height model that you're interested in. In the "Describe DTM" window that pops up, hit the "view elevation data" button. A new window should open with a contour map of your canopy height model. Increase the contour interval to slightly less than the tallest trees. You should then see a nearly blank map with a few small rings that indicate where the highest canopy is. Move your cursor over the tall tree area of interest, and the X and Y boxes will display the coordinates in the same units as the original LiDAR data.

Jess Riddle

Sweden's Bioenergy Success Story

by Joe » Sun Mar 17, 2013 8:14 am

I don't see a sub forum for Sweden, so I'll post this here.

please read the following: http://www.renewableenergyworld.com/rea/news/article/2013/03/swedens-bioenergy-success-story

and be sure to read the comments at the bottom.

regarding the guy I dialogue with near the end, a big critic of Swedish forestry- he's posted an article on the Yale360 web site: http://e360.yale.edu/feature/swedens_green_veneer_hides_unsustainable_logging_practices/2472/

Hello from "Wild and Wonderful" WV

by Brian VTL C » Sun Mar 17, 2013 8:38 am

Hi everyone,

I was afforded the opportunity of a lifetime about a year ago to join a wonderful new company, Virgin Timber Lumber Company. We are building some really incredible furniture from 100% recycled timber from the old growth virgin forest of the Appalachian mountains that built southern West Virginia during the coal and timber boom of the late 1800's and early 1900's. Now over 100 years later we are saving these dilapidated structures from the landfill and giving the wood a second chance at life, to be enjoyed for generations to come.

Being from a family that has always been in the construction business I guess it was inevitable that I would follow the many generations before me and become a home builder as well. It has always been a struggle though! Being an avid environmentalist it was tough seeing all the wastefulness that is involved with the construction industry. Luckily my new career path has remedied this struggle.

While we travel around WV reclaiming these dilapidated structures that were built during the time period (early 20th century) that the virgin forest of WV were being cut, we also like to document everything we can to help tell not only our story but the story of these once great trees and forest that built this country. Here's a link to some pics from our stop at Gaudineer State Park, WV after making a delivery

and his personal web site: http://erikhoffner.com/index.html

reading Erik's personal web site, i see he wrote an article about Poland’s Bialowieza National Park : http://www.earthisland.org/journal/index.php/eij/article/forest_medieval/

Joe Zorzin
to northern Virginia last summer. [http://www.facebook.com/media/set/?set= ... 019&type=3](http://www.facebook.com/media/set/?set=...019&type=3) I hope you enjoy.

Brian Sutphin

[www.virgintimberlumber.com](http://www.virgintimberlumber.com)

*Red Spruce in Gaudineer State Park, WV*
Chile Trip Part 1: Rio Puelo and Parque Tagua Tagua

by Josh Kelly » Fri Mar 15, 2013 11:39 pm

Dear NTS,

I recently took an unusual four week vacation to Chile with my wife to visit my sister and Chilean brother-in-law who became sweethearts when my sister visited as a high school exchange student over 15 years ago. Taking so much time off of work is unusual in the nose-to-the-grindstone work culture of the U.S. - a trend I think it would be healthy to change. We were joined for two weeks by mutual friends from Asheville. All told, we saw a fairly wide swath of the country, mostly in Santiago and just north in Pichidangui, and also in the Auracaria and Lakes Districts.

I have long had an interest in Chile and its mountains, rivers, and forests. My sister lives in the semi-arid north of the country, where what trees do occur are non-natives like Eucalyptus and Ailanthus. I made sure to schedule about 20 days of travel in the south of Chile, where a climate ideal for temperate rainforest occurs south of the 35th parallel and in isolated areas further north.

Because I was travelling in a group, and because my own interests are diverse, I did not spend as much time measuring trees and exploring primary forests to satisfy my own desires, though I still feel fortunate to have the opportunity to travel. I hope that the members of this forum find what I share to be interesting, despite the limited amount of empirical data gathered on my journey. Given that Chile uses the metric system, I will report what measurements I did take in metric and English units.

On March 25, our party of six arrived in the small community of Puelo (elevation 700 m), on the banks of the mighty Rio Puelo, and surrounded by coastal montans, including Volcan Yates (~2187 m; 7175') – whose glaciated volcanic cone made for good scenery if you could ignore a recently erected communications tower on its slope. Treeline in the area is above 1500 meters and most of the forest below 1200 meters is evergreen, Valdivian Rainforest.

Volcan Yates

Valdivian Rainforest is the name given to a large band of evergreen, temperate rainforests in southern Chile and Argentina. While these forests are evergreen, they are dominated by angiosperms, not gymnosperms.

Some great links for learning more about valdivian rainforest are: http://en.wikipedia.org/wiki/Valdivian_...ain_forest
http://www.eoearth.org/article/Valdivia...
opic=49597

Some of the common trees I learned to recognize were Nothafagus dombei (common coihue), Eucryphia cordifolia (Ulmo), Weinmannia trichsperma (Tineo), Podocarpus nubigina (manio), and several shrubs, including Luma appiculata (Arrayan). There were a great many more shrubs that I failed to put a name on, as well as many woody vines. Epiphytes, especially filmy ferns, mosses, and liverworts are abundant – Valdivian Rainforest is a paradise for bryologists.

I spent the 26th fishing a fantastic tributary of Rio Puelo, landing several trout between 16 and 22”, and hooking a two that were even larger. I thought that the fishing in Chile was going to be as good as I saw on YouTube, but this was to be my glory day
angling. I had other days with many fish, but not huge fish. The stream I spent my time on was absolutely gorgeous, surrounded by native forest and agricultural fields. My eye became accustomed to the different forms of the Nothofagus dominated forest around me, and I did my best to drink in the beauty with every breath. Despite the non-wilderness character of the area, I was absolutely entranced by this landscape and its broad swaths of forest. The fact that the area really is still a frontier in some ways was something that I could feel.

On the 27th, we had arranged to visit Parque Tagua Tagua, a private park consisting of a 4,000 ha watershed on Tagua Tagua Lake, the lowest elevation glacial lake in the Rio Puelo Watershed. Arranging the visit was difficult, requiring a bank transfer from a Chilean bank, and somewhat expensive; about 30 USD per person for a 6 hour tour. To get to the park, you can take public transportation to Tagua Tagua Lake, a public ferry across the lake, and then you are picked up by the staff of Mitico Puelo Lodge and taken across Tagua Tagua Lake on a smaller boat to the park.

On our way across the lake we saw what became a common sight: thousands of hectares of forest killed by human ignited fires. Clearing land with fires has had a long and disastrous history during the Spanish Colonization of Chile. From colonial times up until the 1940’s, title to land was granted by clearing it, and fire was the preferred method. I saw lots of different figures for the loss of forest, but during the 1900’s alone, a minimum of 4,000,000 ha of primary forest was cleared through burning, and much more was damaged and is reforesting. Even more than industrial forestry, this tradition of burning has damaged and continues to damage forests in Patagonia. The situation is different in Chile’s Cordillera Costal and Central Valley, where industrial forestry really is the devil following on the heels of colonial burning, as far as I can tell.
forest is primary Valdivian Rainforest. I was attracted to the park because of reports of high-quality alerce (Fitzroyia cupressicoides) forest there. To my surprise we were provided with a guide – more like a baby sitter – that demanded that we stay within sight and on the trail at all times. Our guide was a nice college kid – a total novice naturalist – and just following orders, so I tried not to hold the restrictive policies of the park against him. Given the difficulties of going there, I probably wouldn’t return.

Tagua Tagua Falls

Our guide urged us to hike quickly if we wanted to see the alerce forest, which we did, so most of our day was spent on a militant trek to a supposed alerce stand. We were quite disappointed when we got to the alerces hundidos (flooded alerces) and found them all dead, killed by a lake caused by a landslide in these geologically active mountains. There are living alerces further up the valley that we did not have time to see. Fortunately, the forest on the way to the “alerces” is fantastic. Nothofagus dombeyi rules here, and in most settings of Valdivian Rainforest I visited. I was surprised that even the most towering trees I measured (only four in all, given the time restrictions) maxed out at 40.45 m (132.7”) in height.

"Alerces Hundidos" and Granite Peaks

Measuring a Coihue (Nothofagus dombeyi)
I learned here that the largest individuals of *Nothofagus dombeyi* are uniformly buttressed, and that measuring the diameter above the buttress is a major chore, one that I never undertook. I got excited when I measured a tree with a swollen base at 184 cm dbh (72.4”). I soon found trees this size to be common along the trail. One buttressed individual, the 40.45 M tall tree was over 260 cm dbh (>102.4” dbh, see photo). Other common trees at the site included Ulmo (*Euchrypia cordifolia*), Manio (*Podocarpus nubigena*), and Tepa (*Laureliopsis philipiana*).

It was at Tagua Tagua that I first perceived that Valdivian Rainforests reminded me much more of tropical cloud forest than of the temperate hardwood forests of the Southern Appalachians I know so well, or the temperate rainforests of the Pacific Northwest. The Valdivian Rainforest is dominated by angiosperms, like the Appalachian moist forests, but the trees are evergreen, and herbaceous diversity in the deep forest was quite low. By contrast, the forests of the Pacific Northwest are dominated by gymnosperms. Much like tropical cloud forest, there is high botanical diversity of epiphytic ferns, woody vines, mosses, and liverworts. Diversity of woody plants in general is quite high. The overall impression is interesting ecologically and gorgeous aesthetically. Because of the great beauty of the forest, I thoroughly enjoyed my trip to Parque Tagua Tague, despite what I would describe as administrative shortcomings there. Stay tuned for several more postings on my trip to Chile.
Large Ferns

Valdivian Rainforest
Bryophytes and Filmy Ferns

Large Coihues
Chile Trip Part 2: Parque National Vicente Perez Rosales

by Josh Kelly » Tue Mar 19, 2013 12:13 am

Trip to Chile Part 2: Parque Nacional Vicente Perez Rosales

On March 1st, two friends, my wife and I, embarked on a 3 day backpacking trip to Parque Nacional Vicente Perez Rosales. Vicente Rosales was a mining magnate in Southern Chile who used his great wealth to purchase and protect what is today’s national park. The 253,000 hectare park (977 sq. miles) includes volcanoes, Lago Todos los Santos, and lush Valdivian Rainforest. Annual precipitation at the lake is reported to range from 3,000-4,000 mm (up to 157 inches) and may reach five meters (197 inches) in the mountains.
Volcan Puntiagudo

Getting to the trailhead for our hike was half of the fun. We started in Puerto Varas at around 11 a.m., taking a bus to Petrohue, at the outlet of Lago Todos Los Santos. The public transportation infrastructure in Chile allows travelers to take buses just about anywhere, including national parks. At Petrohue, there are many tour boat operators waiting to take tourists on half-hour site seeing tours. Our destination was much further away – over an hour and half to the trail head. After chatting and bartering with some of the boat operators, we agreed upon a price and were underway within 20 minutes and with very little hassle. The fact that Becky spent two years in the Peace Corp in a Spanish speaking country came in handy at time such as these.
The turquoise waters of Lago Todos Los Santos

Lago Todos los Santos surrounded by mountains, including two volcanoes, Osorno (2,652 meters; 8,701') and Puntiagudo, and the highest peak in the Chilean Lakes District, Monte Tronador (3,491 meters; 11,453 ft). The lake has the characteristic aquamarine clarity of many of southern Chile’s water ways and is ultra scenic, and we enjoyed the ride both to and from the hike.
Monte Tronador

Upon being left off at the trail head at around 3 p.m., we proceeded up a cattle trail through mostly private land. Chile allows private in-holdings in its national parks so long as they pre-date the park. The valley we were hiking up had three working farms, two of which ran guest houses (hospedajes). Had it not been for the farms, there may have been no trail present, because the trail was basically unmaintained and without grading, water bars and other features. The trail, and most others in Chile, was not up to North American standards. It was fairly muddy and included lots of up and down. Some particularly eroded sections were like small canyons through the deep volcanic soil. Looking at these eroded banks we could see dark layers of volcanic ash deposited many times over the centuries, which built deep and apparently very productive soils.
Deeply eroded cattle/hiking trail

After hiking 11 kilometers, we arrived at Hospedaje Dos Condors where we elected to set up our tents and enjoy a wood fired hot shower. We ate a nice backpacker’s meal around a camp fire and were bedazzled by zillions of stars before we called it a night. The next day we hiked to a scenic double water fall and I spent some time measuring trees and fishing – competing interests of mine throughout the trip.

The farm we were camping at had been founded in 1935, carved out of primary Valdivian Rainforest. On the hike in I noted that the trees looked a bit taller than elsewhere in Chile, and when I broke out the laser range finder and clinometer I found out that my eyes did not deceive me. The tallest Nothofagus dombeyi I found at Parque Tagua Tagua had been 40.45 meters. Here I could find Nothofagus over 40 meters with ease. The large trees on the edge of pastures were particularly easy to measure, and I did a thorough job on a few and gave a rough measurement to many.
On the edge of the homestead where we were camping I found the tallest coihue (Nothofagus dombeyi) I saw on the trip. It measured 49.2 meters tall (161.9’). The largest tree I saw, however, was another huge coihue with a large buttressed base and a thick-limbed crown. It had the look of a respectably old tree. On the note of age, I counted several trail cut coihues at over 300 years, for what it’s worth. This large coihue had a diameter of 3.32 (10.9’) meters at breast height and appeared to be approximately two meters in diameter above the buttress. It measured 47.6 meters (156.2’) tall.

Ironically, every primary forest I visited in Chile was reputed to have trees over 50 meters tall. The fact that I found no angiosperms over 50 meters in height reinforces one of the core observations of NTS members: tree heights are almost always exaggerated. Now, I am sure there are many coihues out there over 50 meters, but I am also sure that these occur on a tiny fraction of growing sites.

The forests of P.N. Vicente Perez Rosales left me in awe of coihues (Nothofagus dombeyi). So, let me try to convey some of its characteristics. First, it is the most common canopy tree in the mountains of southern Chile. Its dominance is comparable to tulip poplar (Liriodendron tulipifera) in the Southern Appalachians, but it occurs over a broader range of landforms, from ridges, to slopes of various grades and aspects, to nearly level benches and gentle coves, where I saw the largest individuals. It reaches diameters of over 1.5 meters (~60”) before buttressing, and trees of this size are as common as .9 meter (3’) dbh trees in the Southern Apps. Larger and older trees are buttressed up to 2.5 - 4 meters (~8-12”) above ground level and many are over 1.5 meters diameter (15’ gbh) above the buttress. Many specimens taper quickly but some do not, and instead
maintain large boles over 25 meters up, and support massive, thick-limbed crowns. Coihues can also have very large crown-spreads of over 100 ft. To make an analogue to a North American tree, they reminded be a bit of a longer lived, larger, slower tapering, much thicker limbed cherry bark oak (Quercus pagoda).

Given how few sites I saw and how large some of the trees were (I don’t see 34.6’ gbh x 156’ tall angiosperms too often – yeah, I know, the girth includes buttress, but still!), I wonder if Nothofagus dombeyi might be in the running for the largest member of the Fagaceae Family. I would be interested to hear folk’s thoughts on that. Some of the photos of Quercus castanifolia that were posted from Iran a couple of years ago looked off the charts, though. In any case, Nothofagus dombeyi is an abundant, mighty, and ecologically important tree in Chile of which. “El Rey del bosque”, as one of the locals told me. I have seen just a small portion of its range, so I think I only have an inkling of its maximum potential.

Also of note in the area were the ulmo trees (Eucryphia cordifolia). These were perhaps the second most abundant, and definitely the second largest canopy trees I saw in the area. They have beautiful white blossoms that make a delicious honey that is famous throughout Chile. From a distance, you can see whole slopes dominated by their white-flowered crowns. Ulmos regularly exceed one meter in diameter at Rio Sin Nombre and may reach two meters. It’s height is not as impressive, the tallest individual I measured was 37.5 meters (123.1’). I
suspect this is nowhere near the maximum for this species.

I also measured a straight tepa (Laureliopsis philliana), a member of the sassafras (Lauracea) family. The leaves of this tree are pleasantly fragrant. While the form of this tree was nice it topped out at 30.6 meters (100.4’). I’m sure taller ones can be found.

For me, three days was far too short a time to spend along the ironically named “Rio Sin Nombre”. Tantalizingly, our hosts told us that alerces larger than any of the coihues I measured were to be found about 10 kilometers from our camp site. Exaggerated big tree stories are just as common in Chile as anywhere else, but from what I saw of the stature of other species growing on the amazing volcanic soils at P.N. Vicente Perez Rosales, this could be a great place to look for truly huge alerces, and I am positive there are larger specimens to be found of every species I measured, basking in the sun and rain in the lush valley of Rio Sin Nombre.
Re: Chile Trip Part 2: Parque National Vicente Perez Rosales

by KoutaR » Tue Mar 19, 2013 8:33 am

Josh,

Outstanding report! There are many interesting similarities with Tasmanian rainforests where Nothofagus cunninghamii is the most important tree, but N. dombeyi appears to become a bit taller and likely also a bit thicker: the tallest measured *N. cunninghamii* is 46.7 m. The secondmost and thirdmost important rainforest trees in Tasmania also have Chilean counterparts. *Eucryphia lucida* is clearly smaller than *E. cordifolia*: I think that the maximum of the former could be 30-35 m. *E. lucida* is famous for the honey, too. The Tasmanian counterpart of Laureliopsis philippiana is *Atherosperma moschatum*, the both being in the Atherospermataceae family.

The *Nothofagus* trees and forests in your photos looks very similar to their Tasmanian counterparts.

Of course, there are also marked differences. The precipitation in NW Tasmania (where the "rainforests" are the most luxuriant) is only 1200-2400 mm. There are no recent volcanoes in Tasmania. And in Tasmania there are eucalypts.

Today, *Nothofagus* is placed in a monogenic family Nothofagaceae. According to molecular studies, Fagaceae is more closely related to families like Juglandaceae and Betulaceae than to Nothofagaceae. [http://www.mobot.org/mobot/research/APw ... tm#Fagales](http://www.mobot.org/mobot/research/APw ... tm#Fagales)

Chile is high in my dream destination list. Is hiking free in the park or is it restricted to the trail you hiked?

Kouta
Re: Chile Trip Part 2: Parque National Vicente Perez Rosales

by Josh Kelly » Tue Mar 19, 2013 10:39 am

Kouta, Thanks for the compliments, the comparison with Tasmania, and the correction on my understanding of Nothofagus phylogeny. It's fascinating how these two isolated remnants of Gondwanaland have similar dominant genera after being separated for 10's (or 100's?) of millions of years.

So, it sounds like N. dombeyi could be in the running for the largest member of Nothfagaceae?

There is no entrance fee to Parque National Vicente Perez Rosales. There seem to be few trails outside of those used by farmers.

Some Chilean Parks do charge an entrance fee. Huerquehue, which I will report on later, charged 4500 Pesos/Day - about $9.50 USD - for foreigners. There is a lower rate for Chileans. Alerce Andino National Park charged 1500 Chilean for entry.

Re: Chile Trip Part 2: Parque National Vicente Perez Rosales

by KoutaR » Tue Mar 19, 2013 6:22 pm

Josh Kelly wrote: So, it sounds like N. dombeyi could be in the running for the largest member of Nothfagaceae?

Might be. At least it is one of the largest. I have seen only the Australian species. N. moorei of NE NSW and SE Queensland is of about the same size as N. cunninghamii. According to "The Ecology and Biogeography of Nothofagus Forests" (ed. by Veblen et al.), some New Guinean species can reach 50 m. New Caledonian species are lower and the tallest New Zealander N. fusca has reached 43 m. According to the book, N. dombeyi often exceeds 50 m. Can't wait to read your Alerce Andino report!

Kouta

Re: Chile Trip Part 2: Parque National Vicente Perez Rosales

by Josh Kelly » Tue Mar 19, 2013 11:24 pm

Also, thanks for the correction about Laureliopsis, it is in Laurales, but not Lauracea.

There are many Eucalyptus plantations in Chile and some very large individuals. Eucalyptophiles would probably enjoy a trip to chile to see how that species performs there.

Josh Kelly

Re: Chile Trip Part 2: Parque National Vicente Perez Rosales

by Kouta » Wed Mar 20, 2013 3:43 pm

Josh wrote: Everywhere I went in Chile people told me that the large trees were 50 meters or taller. According to my laser, only one tree I measured in Chile out of dozens (rough measurements of the biggest trees) exceeded 50 meters. I'm sure that Nothofagus dombeyi exceeds 50 meters. I would be willing to wager that most of the reports of 50 meter trees are false. My Alerce Andino post will be illuminating on that subject.

Josh
Re: Chile Trip Part 2: Parque National Vicente Perez Rosales
by KoutaR » Wed Mar 20, 2013 2:46 am

Josh,

I meant "exceeds 50 m" only as a comparison with other species. If other species only REACH 50 m and *N. dombeyi* OFTEN EXCEEDS 50 m, the latter may be the tallest supposing that all have similar measurement errors (which in fact is not true as different regions countries have different authors in the book, and the New Guinean spp. are certainly poorly known).

Kouta

---

Re: Chile Trip Part 2: Parque National Vicente Perez Rosales
by Jess Riddle » Wed Mar 20, 2013 6:49 pm

Josh, Great report. Sounds like a stunningly beautiful area. I like your inclusion of details on the precipitation, soil, and species to give a well-rounded picture on the area. The pictures look good too, especially the mountain shots.

In several of the pictures around the edge of the farm, there are dense columns of foliage that reach up to the bottom of the ulmo crowns. Are those a smaller tree species or lianas on the ulmos? It also looks like there is a browse line at the bottom of some of the vegetation. Do you know how far the cattle ranged into the forest and how great there impact on tree regeneration is?

Jess Riddle

---

Re: Chile Trip Part 2: Parque National Vicente Perez Rosales
by Bart Bouricius » Wed Mar 20, 2013 8:56 pm

Wonderful report, this starts to make up for the defects of an expensive several day long "expedition" to see old growth Alerce forest where no heights were measured, and only a few images from this expedition web site even show trees. I would have to look back in the Board index to find it. It was done by the "Global exploration and Oceanographic Society". They were documenting Alerce trees *Fitzroya cupressoides* looking back at it I notice that when Kouta suggested measuring the height of the trees, an expedition responds "I am unfamiliar with the diagnostic value of fitzroya height measurements". The site is at: [http://www.g-eos.org/2010/03/explorers- ... field.html](http://www.g-eos.org/2010/03/explorers- ... field.html) I do not wish to be to harsh regarding this expedition which, after all did have as a goal conservation of Alerce trees which are theoretically already protected, but are still illegally cut. They did not post this on the Bulletin Board, but I believe Ed posted a link to it there.

---

Re: Chile Trip Part 2: Parque National Vicente Perez Rosales
by Josh Kelly » Wed Mar 20, 2013 9:12 pm

Kouta,

I agree with your assessment of the implications of height reports of *Nothofagus* from around the world. I hope that excellent and superlative examples of *Nothofagus* species can be protected in New Guinea, Tasmania, Chile and elsewhere, because it's wood surely is beautiful and valuable. It seems to be tight grained, hard, and rot resistant and *N. dombeyi* is frequently used in construction in Chile.
Re: Chile Trip Part 2: Parque National Vicente Perez Rosales

by Josh Kelly » Wed Mar 20, 2013 9:20 pm

Jess, Cattle and goats have a measurable impact on the understory near the farms, as does selective logging. The best indicator I found of truly primary forest was the presence of large Podocarpus nubigena (manio) and a lack of other signs of human disturbance. Manio was present on the National Park lands but hard to find in the privately owned tracts. Grazing tends to denude the understory, while logging allows more light in for the growth of weedy shrubs such as Rubus.

Bart, I find the report by this charitable organization to be quite comical, really. Their "exploration" is of a well known and popular backpacking and rock climbing location in Coquimbo Valley known as La Junta. The site is even in Lonely Planet and Becky and I had plans to visit, courtesy of excellent public transportation and our boots, but the weather did not cooperate. Check out the site http://www.cochamo.com/ for trail maps to the two Alerce stands these intrepid explorers supposedly documented. Again, well known and visited by tourists for quite some time now. I'm sure there are little known and possibly "undiscovered" stands of alerce out there, but these global explorers did not document any new areas, as far as I can tell.

Josh Kelly

Explore: The Ancient Trees Of Africa: Tree Height Data

by edfrank » Mon Mar 18, 2013 10:21 am

Measurement Data from the 2013 Explore: The Ancient Trees of Africa expedition by David "Dak" Wiles

https://www.facebook.com/ExploreTheAncientTreesOfAfrica

http://exploretrees.com/

The Team

David “Dak” Wiles (RSA/UK)
Stephen Fry (UK)
Geoff Pugsley (UK)
Drew Bristow (NZ)
Greg Parker (NZ)
Rob Fisher, Photographer
Vince Jolin (Canada)

Explore: Yellowwoods

http://www.youtube.com/watch?v=DX9UA3VWL7s

An edit focusing on the Yellowwood trees of South
Africa. These trees were climbed as part of a 4 week expedition throughout South Africa, Documenting and climbing South Africa's Champion trees.

**Explore: Baobabs**

[YouTube Video](http://www.youtube.com/watch?v=BU6_haz3vuo)

An edit focusing on the Baobab trees of South Africa. These trees were climbed as part of a 4 week expedition in Jan 2013 throughout South Africa, Documenting and climbing South Africa's Champion trees.

**Yellowwood Canopy**

[YouTube Video](http://www.youtube.com/watch?v=PDY4r2z3eUE)

Just a brief Iphone 4s view of the upper canopy of the Eastern Monarch Yellowwood, Hogsback, South Africa. This tree had never been climbed before and the video is shot at about 32m.

*View from Old Growth Yellowwood Forest, nr Kynsna. photo by Drew Bristow*
<table>
<thead>
<tr>
<th>DATE</th>
<th>LOCATION</th>
<th>TREE NAME</th>
<th>SPECIES</th>
<th>HEIGHT (m)</th>
<th>CIRCUMFERENCE (at 1.3m) (m)</th>
<th>DIAMETER (m)</th>
<th>CROWN DIAMETER (m)</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/5/2013</td>
<td>Arboreno Gardens, Claremont, Cape Town, Western</td>
<td>Muirin Bay Fig</td>
<td>Ficus microphylla</td>
<td>27.4m</td>
<td>11.2m</td>
<td>8.6m</td>
<td>40.15m and 42.12m</td>
<td>Extensive helical decay cavity midway up main stem (20m+). Extensive cavity also present in base and evidence of</td>
</tr>
<tr>
<td>1/6/2013</td>
<td>Arboreno Gardens, Claremont, Cape Town, Western</td>
<td>Aleppo Pine</td>
<td>Pinus halepensis</td>
<td>82.8m</td>
<td>5.48m</td>
<td>1.74m</td>
<td>39.4m and 31.8m</td>
<td></td>
</tr>
<tr>
<td>1/7/2013</td>
<td>Stellenbosch University Theological Faculty, Western Cape</td>
<td>Norfolk Island Pine</td>
<td>Araucaria heterophylla</td>
<td>46.3m</td>
<td>8.00m</td>
<td>0.91m</td>
<td>21.33m and 21.78m</td>
<td></td>
</tr>
<tr>
<td>1/9/2013</td>
<td>Cellier's Hook, Bergvliet Forest Estate, Western Cape</td>
<td>Woosley Big Tree</td>
<td>Podocarpus foetans</td>
<td>34.0m</td>
<td>8.8m</td>
<td>2.8m</td>
<td>34.1m and 27.0m</td>
<td></td>
</tr>
<tr>
<td>1/10/2013</td>
<td>Krugersdorff, Klipspruit Forest, Western Cape</td>
<td>Dalziel Mastree Big Tree</td>
<td>Podocarpus foetans</td>
<td>55.6m</td>
<td>5.41m</td>
<td>1.72m</td>
<td>27.73m and 19.0m</td>
<td></td>
</tr>
<tr>
<td>1/10/2013</td>
<td>Krugersdorff, Western Cape</td>
<td>Circles in the Forest Tree</td>
<td>Podocarpus foetans</td>
<td>at wet slime</td>
<td>6.31m</td>
<td>2.01m</td>
<td>did not measure</td>
<td></td>
</tr>
<tr>
<td>1/11/2013</td>
<td>Diepvallei Forest Estate, Western Cape</td>
<td>King Edward VII Tree</td>
<td>Podocarpus foetans</td>
<td>39.9m</td>
<td>6.65m</td>
<td>2.12m</td>
<td>35.6m and 27.1m</td>
<td></td>
</tr>
<tr>
<td>1/12/2013</td>
<td>Piedraos Nature Reserve, Eastern Cape</td>
<td>Tsalickemba Big Tree</td>
<td>Podocarpus foetans</td>
<td>59.16m</td>
<td>8.71m</td>
<td>2.77m</td>
<td>35.6m and 33.0m</td>
<td>Evidence of vertical shearing on the backside of main stem, maybe due to heavy lean. Cavity in base also</td>
</tr>
<tr>
<td>1/14/2013</td>
<td>Auckland Nature Reserve, Keiskamma Forest Estate, Eastern Cape</td>
<td>Eastern Monarch</td>
<td>Eucalyptus saligna</td>
<td>39.49m</td>
<td>8.55m</td>
<td>2.75m</td>
<td>29.29m and 30.18m</td>
<td></td>
</tr>
<tr>
<td>1/16/2013</td>
<td>KwaZulu-Natal Botanical Gardens, Pietermaritzburg, KwaZulu-Natal</td>
<td>Central Eucalyptus growing in the triangle of the footprint, near the pond, and in front of the sign for gum tree</td>
<td>Eucalyptus saligna</td>
<td>59.1m</td>
<td>4.18m</td>
<td>3.32m</td>
<td>15.5m and 18.20m</td>
<td></td>
</tr>
<tr>
<td>1/31/2013</td>
<td>Mutsal Municipality, Limpopo</td>
<td>Sagoie Baobab</td>
<td>Adansonia digitata</td>
<td>20.55m</td>
<td>47.25m with large 8m (15.22)</td>
<td>43.15m and 37.0m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/31/2013</td>
<td>Suidland Estate, Pretoria, South Africa</td>
<td>Suidland Baobab (Pub Tree)</td>
<td>Adansonia digitata</td>
<td>18.08m</td>
<td>46.55m with large 7m (13.86)</td>
<td>37.96m and 34.23m</td>
<td>Evidence of decay in the main fork of stem growing out towards the car park. Decay also present around pub door cavity entrance. Young fig tree working its way into main stem and upper canopy.</td>
<td></td>
</tr>
<tr>
<td>1/31/2013</td>
<td>Amorentia Estate, Mooketsi Valley, Limpopo</td>
<td>Amorentia Big Matumi</td>
<td>Eremeda salicina</td>
<td>30.64m</td>
<td>8.81m</td>
<td>2.81m</td>
<td>36.66m and 38.10m</td>
<td></td>
</tr>
<tr>
<td>1/31/2013</td>
<td>Amorentia Estate, Mooketsi Valley, Limpopo</td>
<td>Amorentia Tall Matumi (opposite main nursery gate)</td>
<td>Eremeda salicina</td>
<td>36.65m</td>
<td>7.58m</td>
<td>2.41m</td>
<td>27.18 and 18.06m</td>
<td></td>
</tr>
<tr>
<td>1/26/2013</td>
<td>Woodburn Plantation, Harrington, Limpopo</td>
<td>Twin No. 1 (left of path when facing away from tripod)</td>
<td>Eucalyptus saligna</td>
<td>78.7m</td>
<td>4.14m</td>
<td>1.31m</td>
<td>19.97m and 19.25m</td>
<td></td>
</tr>
<tr>
<td>1/26/2013</td>
<td>Woodburn Plantation, Harrington, Limpopo</td>
<td>Twin No. 2 (right of path when facing away from tripod)</td>
<td>Eucalyptus saligna</td>
<td>79.0m</td>
<td>4.00m</td>
<td>0.96m</td>
<td>14.89m and 7.59m</td>
<td></td>
</tr>
<tr>
<td>1/26/2013</td>
<td>Woodburn Plantation, Harrington, Limpopo</td>
<td>The Triplet (probably the tallest tree in Africa with display sign)</td>
<td>Eucalyptus saligna</td>
<td>80.3m</td>
<td>4.20m</td>
<td>1.36m</td>
<td>23.57m and 19.44m</td>
<td></td>
</tr>
<tr>
<td>1/26/2013</td>
<td>Woodburn Plantation, Harrington, Limpopo</td>
<td>The Quartet (possibly the tallest tree in Africa next to the tripod)</td>
<td>Eucalyptus saligna</td>
<td>81.5m</td>
<td>4.38m</td>
<td>1.04m</td>
<td>10.78m and 10.34m</td>
<td></td>
</tr>
<tr>
<td>1/26/2013</td>
<td>Woodburn Plantation, Harrington, Limpopo</td>
<td>First accent tree</td>
<td>Eucaelyptus grandis</td>
<td>72.3m</td>
<td>4.11m</td>
<td>2.06m</td>
<td>18.5m and 14.5m</td>
<td></td>
</tr>
<tr>
<td>1/26/2013</td>
<td>Woodburn Plantation, Harrington, Limpopo</td>
<td>Second accent tree</td>
<td>Eucaelyptus grandis</td>
<td>72.3m</td>
<td>4.11m</td>
<td>2.06m</td>
<td>18.5m and 14.5m</td>
<td></td>
</tr>
</tbody>
</table>

[link to Africa Explore 2013 tree data.xls]
West Coast Forest Products
Production in WA - Schafer Bros

by edfrank » Tue Mar 19, 2013 1:01 am

Historic footage from 1926 by Schafer Bros. of Montesano, WA. This reel shows Grays Harbor County cities, lake, maps, timber cruiser, Schafer offices, Railroads
https://www.youtube.com/watch?v=BcHO2UzJr7w

Historic footage from 1926 by Schafer Bros. of Montesano, WA. This reel shows tree falling, spring boards, logging of Douglas Fir, Sitka Spruce and Western Red Cedar. Also log bucking, scaling, spar tree topping and setting up the spar tree.
https://www.youtube.com/watch?v=p27MX9Vy4Jk

This reel of the 1926 Schafer Bros of Montesano WA historic footage shows choker setters, a steam donkey, loading lumber onto a train, steam locomotive, log dump into the river, grading and sorting the logs in the river and a raft of logs heading into the mill.
https://www.youtube.com/watch?v=C95EFowJUXg

Part of the 1926 historic Schafer Bros. logging films. This reel involves moving hemlock, spruce and red cedar into the four Schafer mills for processing. Shows moving logs into the mill up a log slip, a shingle mill, kiln drying, making of various boards including cants and lath.
https://www.youtube.com/watch?v=9wOoOfbn3_E

The last reel from the Schafer Bros. historic film from 1926 covering logging and lumber operations in the Grays Harbor County area. This reel covers lumber production, including kiln drying and planer operations, planer, resaw, mouldings, tongue & groove, and shipping to Japan of huge cedar logs and large unfinished lumber.
https://www.youtube.com/watch?v=pqDK14lhbUk
Re: West Coast Forest Products Production in WA - Schafer Br

by edfrank » Tue Mar 19, 2013 1:05 am

Schafer Bros. Historic Film - Manufacture of Douglas Fir Doors

At the former Knox and Toombs plant in Hoquiam, Washington. Historic footage provided by Schafer Bros. of Montesano, WA. I'm unsure of the year, but believe it is 1926 when the many of the other films were made by the 4L Organization, such as this one. https://www.youtube.com/watch?v=23hxbP5Ada8

Harbor Plywood Historic Film from Schafer Bros
I don't know the date of this film, but the other films in the Schafer Bros. collection were from 1926. This is at the Harbor Plywood Plant in Hoquiam, WA.

Amazing footage of the veneer processing. https://www.youtube.com/watch?v=yrisN16mJX0

n WA - Schafer Bros historic film
Logging and lumbering operations of Schafer Bros. at Montesano, WA. Filmed by HH Damman of the 4L Organization. Contains many factions of logging including tree topping, logging, choker setting, steam donkey, railroad carriers, loading lumber on a ship, scenes from Grays Harbor towns, and more. Very interesting! Courtesy of the Schafer family, films have been turned over to the WA State Archives. Probably around 1926. https://www.youtube.com/watch?v=4WHvoTZ6aM

121
Dust storm at solar farm

by Joe » Sun Mar 17, 2013 1:02 pm

I took several hours of video and several hundred photos of the construction of the solar "farm" in Orange, MA- including planning board meetings, cutting of the forest, grading of the 18 acres and all phases of the construction. My intent was to produce a substantial "expose" of this "green, renewable energy"- but, due to a lack of time, money and talent, I decided to not bother and instead, show what I felt needed to be shown in under a minute. The video is on Vimeo at: https://vimeo.com/62009308

Joe

Cooper Creek, GA

by Jess Riddle » Mon Mar 18, 2013 10:45 pm

The Cooper Creek watershed lies in the heart of the north Georgia Mountains. Cut off from the rest of the state by an arc of high mountain ridges and the incised middle reaches of the Toccoa River, which Cooper Creek empties into at just under 2000' elevation. Despite that isolation, Cooper Creek is a popular recreation destination. Two Forest Service campgrounds attest to the area’s popularity, and the stream’s size and relatively high elevation make it one of the best trout fishing destinations in Georgia.

Forests also lure people out of their way to the Cooper Creek area. A three mile hiking trail winds along the higher elevations of the 1240 acre Cooper Creek Scenic Area, but an unmarked trail leads to the more impressive forests of the “Valley of the Giants”, which Eli Dickerson reported on a few months ago (http://www.ents-bbs.org/viewtopic.php?f=73&t=3875). Outside of that refuge for large hardwoods, it is unclear how much of the scenic area is unlogged, though some groups have claimed nearly the entire scenic area is old-growth.

Dark corridors dominated by eastern hemlock and white pine line Cooper Creek and its largest tributaries, and they contain an abundance of conifers that predate European settlement rarely encountered elsewhere in north Georgia. However, deciduous hardwood forests dominate the bulk of the area. Oaks occupy the overstory in many of those forests, and as a whole the upland forests seem less productive than in many other areas of north Georgia; a list of dozens of botanically rich coves spread across the north Georgia mountains does not mention any from Cooper Creek or the adjacent Toccoa River watershed. Most of the oak forests are not gnarled with age, but they generally lack the old logging roads so common in most of the region’s forests.

For Cooper Creek, like most watersheds in Georgia with abundant white pine, LiDAR data show many 160’+ hits on the steep slopes flanking the main stream. Those hits are scattered; individual tall trees project out of a much lower canopy. Unfortunately, distinguishing between very tall trees and trees of moderate height that lean downhill is difficult. However, unlike most of the other Georgia white pine watersheds, LiDAR also shows a few areas with dense, closed canopy white pine forest on gentler slopes along Cooper Creek. The canopy in these areas does not quite reach the hits of the isolated LiDAR hits, but the canopy structure suggests unusual growing conditions. Just after New Years, I visited three of these sites in hopes that one of them would have impressively tall white pines and that they would all have hardwoods driven to great heights by completion with the tall pines.

The first site was a southwest facing bowl split in half by a low, rounded spur ridge. The bowl spanned from a low point on a major ridge around 2600’ elevation down to Cooper Creek at 2300’. White pine dominated the overstory in most of the area, and formed a dense stand in the middle section of the bowl. Mixed in with them were scattered white oaks on the lower slopes, black oak on the upper slopes, and a few tuliptrees in the wettest areas. At the lower end, the pines gave way to a much shorter canopy of hemlock with a few scattered, emergent, pines. Hemlock also formed the midstory at the lower end, but silverbell, red maple and to a lesser extent tuliptree were more common under the pines higher in the cove. Except for rhododendron near Cooper Creek, the understory was open with scattered
silverbells, American holly, and small patches of huckleberry and hazelnut. The forest appears well under 100 years old except for a few remnant white pines at the lower end and a few hardwoods.

An unusual sourwood log

The second site lies right behind one of the campgrounds. It resembles the first site in facing southwest and occupying a gentle slope, but it is much more exposed. An ephemeral stream trickles down into the stand from the high, steep slope to the northeast, but the tree tops project above the height of the ridges on either side of the stand. White pine again dominates the overstory, but they are slightly larger than the first stand and mixed with tuliptree. Instead of hemlock or rhododendron, American holly and a few hornbeams make up the understory.

Canopy of the second stand

The final grove stands on an alluvial flat in a broad bend of Cooper Creek, the only alluvial flat on the lower reaches occupied by mature forest. White pines form a high closed canopy with the tallest tuliptrees reaching only intermediate canopy positions. A midstory of hemlocks await any canopy gaps, but the understory is open except for rhododendrons along the stream. The canopy in the flat is around 100 years old, but scattered older white pines grow on steep slopes and a small flat on the other side of the stream. One small part of the flat near the base of the slope has also been logged in the last couple of decades, and tuliptrees are the primary regeneration.
Ironically, the two shortest trees are state height records. The mockernut hickory and black oak are also top ten in the state, and the southern red oak is the second tallest I know of in the mountains.

The white pines appear to have significant potential for continued height gains. Most of the trees in the first stand are only five to seven feet cbh, and appear younger than most tall white pine stands in North Georgia. The third stand is more typically in age, but the crowns remain fairly pointed.

Jess Riddle

**Chattooga River, SC**

by **bbeduhn** » Tue Mar 12, 2013 4:12 pm

I planned to do a good stretch of the Chattooga River and the East Fork as well but there was just too much quality in the two mile stretch I did measure from Burrell's Ford Campground to the East Fork of the Chattooga. This is the river where the movie "Deliverance" was filmed. It hasn't changed drastically since filming (other than most hemlocks dying). The part I measured is basically second growth with some old trees mixed in. There's a fair amount of old growth south of the campground (very tall and old white pines) that I'll try to get to sometime this year.

The stars of the day were pitch pine and sourwood. The tallest sourwood shatters the state record from the SCMaxlist version that I have, but there's a chance a taller one has been found. The tallest pitch still falls a bit shy of the state record but is nonetheless impressive.

*Oxydendrum arboreum* sourwood 88.1' 91.0' 94.1' 95.2' 97.0' 97.3' 102.8' likely state record

*Pinus rigida* pitch pine 111.7' 115.1' 115.3' 115.5' 115.9' 116.6' 117.0' 117.1' 117.2' 117.3' 118.3' 120.0' 120.8' 121.5' 124.8' 128.0' 128.5' 130.3' 131.8'

*Pinus strobus* white pine 136.6' 137.8' 139.8' 140.8' 145.2' 145.5' 147.3' 146.2' 147.4' 151.9' 152.8' 153.7' 154.1' 154.1' 161.0'

*Pinus strobus* in Georgia (the other side of the river)
white pine 153.1' 165.9'
Liriodendron tulipfera tuliptree 125'7' 129.6'
it was nice to see them outcompeted
Tsuga canadiensis hemlock 122.8' 133.0'
Quercus rubra red oak 127.2'
Acer rubrum red maple 105.1'
Magnolia freseri Fraser mag 89.0'
Betula lenta black birch 90.0'

Black birch with unusually large limbs

124.8' pitch at the campground

7'5" cbh pitch
Pitch with quadruple crown ~100'

Old black gum along the river

102.8' sourwood 14"d
Big double sourwood  95.2’
7’ cbh @ 2’ 4’3” & 3’8” cbh at 4.5’

Very old sourwood  94.1’  5’6” cbh

Very old sourwood crown  94.1’  30’ spread
Another very old sourwood  97.3’  5’6.75” cbh

128.0’ pitch  8’4” cbh

Jocassee Gorge view
Lake Jocassee

Bad Creek reservoir
Re: Chattooga River

by bbeduhn » Wed Mar 13, 2013 8:55 am

Larry, It took a year to find an 80' sourwood. I was ecstatic when after another year I finally broke 90'. 102' is phenomenal! I think the record is 108', in the Smokies. Most sourwoods in the mountains are 40'-60'.

Re: Chattooga River

by Jess Riddle » Sat Mar 16, 2013 8:35 pm

Brian, That’s a nice collection of pitch pines. Alluvial flats and gentle slopes in the Chattooga watershed seem to be the place to find tall pitch pines. I wonder what grew in some of the small valleys that are now open fields.

Unfortunately, the forests along the Chattooga have changed drastically in one way. The hemlocks are all dead.

I’m not surprised that you found tall sourwoods in the area, but I didn’t expect there to be quite that many or quite that tall. I believe you have the six tallest sourwoods measured in SC!

Jess Riddle

Re: Chattooga River, SC

by bbeduhn » Tue Mar 19, 2013 4:14 pm

Jess,

Wow, I didn’t expect the 6 tallest sourwoods in the state either. I plan to search the East Fork and further downstream on the Chattooga. The forests are a bit older there from what I’ve seen. I almost always find tall pitch pines in the alluvial flats. They seem to get
a 20-30' boost on the flats. One exception is the 124.8' in the campground. That one was a bit above the flats.

Second growth hemlocks are doing well at the mouth of the East Fork and at The Walhalla Fish Hatchery, including a few older hemlocks. Hopefully, the East Fork sports some healthy hemlocks as well. Obviously, the super tall hemlocks above East Fork are long dead.

Brian

**Introduction – John Mantague**

by John Montague » Mon Mar 18, 2013 5:32 pm

Hello,
I am new to the board and thought I would introduce myself. I have been learning the ways of tree measuring over the past year, and I think this is a great forum for people like us.

My interest in tree measuring came as a result of wanting to find Hyperion. In my quest for the world's tallest tree, it became apparent that I needed to know how to measure a tree in order to find it. I located Hyperion in July, and over the course of the months I spent looking for it, I fell in love with looking for tall trees. I am now on a quest to find every tree over 350'. There are currently 220 confirmed redwoods over 350'. In the past year, I have located 80 of them. I am also in the process of verifying several possible new additions to the list. I work with laser tech rangefinders. I scout with a handheld tru pulse, and if I find something worth confirming or measuring properly, I return with my tripods, prisms, and my impulse.

I've included a picture of a recent find, This is UT-35. The tree was identified by LIDAR, but had never been located on the ground. Well, I found it on a recent outing in Humboldt Redwoods State Park. My handheld readings suggest this tree should top 350'. I will return soon with my tripods and confirm. It is a remarkable tree!
Carolina hemlock genetics study

by Steve Galehouse » Wed Mar 13, 2013 10:34 pm

ENTS: I received an e-mail from Robert Jetton of NCSU today, saying that a population genetics study of Carolina hemlock is planned for later this year, and that samples of the local Ohio populations will be taken. I’m hoping this will explain their existence in NE Ohio.

Steve Galehouse

Re: Carolina hemlock genetics study

by edfrank » Mon Mar 18, 2013 4:44 pm

Maclura, that is what we are trying to figure out. Steve Galehouse found the first population a couple years ago. Some people at the park knew they were there, but assumed they were planted by the CCC. Looking at older photos it appears that they were well established at the time the CCC worked in the area. I believe they are a relict disjunct population, rather than a planted one.

https://groups.google.com/forum/?hl=en& ... EUg-hWhd-0

http://www.nativetreesociety.org/fieldt ... n_ohio.htm

There has been quite a bit of research done and contacting different people outside of the posts on the BBS and website also.

Edward Frank

Re: Carolina hemlock genetics study

by DougBidlack » Wed Mar 13, 2013 11:29 pm

Steve, very cool! I hope you let us know how this goes. Hopefully the Ohio trees really are a disjunct population. Can’t wait for the results!

Doug Bidlack

Re: Carolina hemlock genetics study

by Steve Galehouse » Wed Mar 13, 2013 11:55 pm

Doug: I hope they are genetically distinct also, but if not, at least we’ll probably know their provenance. At the very least these trees likely will be the last reproducing population exposed to HWA.

Steve Galehouse

Re: Carolina hemlock genetics study

by Steve Galehouse » Mon Mar 18, 2013 5:50 pm

Maclura(Tom?)-

Here is a link to a photo album of these trees, which are located in the Ritchie Ledges/Virginia Kendall area of the CVNP, about a mile south of the Ohio Turnpike in Peninsula, OH. As Ed mentioned, we’ve been discussing these trees for some time—–I think I first posted about them about five years ago; I’ve been observing them for the past 40+ years.

https://plus.google.com/u/0/photos/1075 ...
Ed and I certainly think they could be a disjunct native population, due to: the relatively large size of some individuals, the fact that they are a mixed age/size reproducing population, that there are the expected associated species growing along with them, the site conditions are right for the species, and the fact that there is an extensive obviously native population of eastern hemlock growing adjacent to them(which could readily been used by the CCC for stock). These factors combined with the relative obscurity of the species, especially in park plantings(we know of no other CCC park projects that used the species) leads us to consider the possibility that they are native.

I showed these trees to Dr. Robert Jetton of NCSU two summers ago, and recently got a message that they would be included in the upcoming genetics study. My attempts to get more information on them through local universities, museums, and park systems have produced no solid results. Hopefully the genetic study can determine if they are distinct from the other southern populations, or at least from which southern population they were derived from.

Steve

**Re: Carolina hemlock genetics study**

This is a fascinating discovery, and I would love to see those trees. We pretty much accept Little's range maps (which were derived from Sargent’s) as gospel, but relict or disjunct populations are easy to overlook. I have to agree with the prior discussion that it seems unlikely that these are CCC trees. I doubt they would have had access to Carolina hemlock in Ohio. If they are relict, they have to date from the post-glacial resorting of eastern forests. I look forward to learning more.
A final shot along the Ancient Forest Trail.

The park was beautiful with fresh snow hanging on the hemlock branches. It is sad to think how the park will change with the coming of the hemlock wooly adelgid over the next few years. I was leading a good sized group on a hike, and afterward was pressed for time afterward, so I did not get a chance to do the photography I would have liked. These really are color photos.

Edward Forrest Frank

Re: White Pine Crowns, Cook Forest SP, PA

Ed,
Those pines look fantastic in the snow! You have some very nice reiteration shots against the pale sky. The pictures look black and white...or green and white. Hopefully, the adelgid won't have as much success in colder climes. At least the big hemlocks can be treated immediately, so they'll have a fighting chance.
Brian
Using a monocular to determine limb length

by dbhguru » Tue Mar 19, 2013 8:32 pm

NTS,

I’ve been exploring photo-Excel methods for measuring trunk and limb diameters. As seen in my latest posts, I’ve been enjoying a good bit of success. I often use a reticle monocular to check the photo-based measurements. The monocular has been a mainstay of our measuring arsenal for years, thanks to Jess Riddle’s father for introducing us to the instrument.

I’ve begun to think about how the monocular could help us measure the lengths of limb segments. I’ve thought of this potential use in the past, but haven’t pursued the matter. Basically, we use the monocular to measure the width of an object oriented at right angles to the line of sight. For trees, by shooting to the edge of a trunk (as opposed to the middle), we use the hypotenuse as a surrogate for the line from the monocular to the center of the trunk. So long as the object being measured isn’t too close, this substitution works fine. And since the tree’s trunk is basically round, the line of sight is at right angles to the diameter that creates the largest angle to the eye.

However, measuring the length of a limb that is not at 90 degrees to the line of sight presents us with a real problem. I think I have the solution. The attached Excel spreadsheet shows the results of three tests I ran today. Tomorrow, I’ll run several more. Hopefully, it will open the use of the monocular for determining the length of limb segments.

I’ll have a clearer presentation of the mathematical model for computing the width of an object oriented at not 90 degrees to the line of sight. Basically, we treat the width as the diagonal of a regular trapezoid.

There is a limit to how much measuring equipment most Ents are willing to acquire in order to measure the dimensions of trees that interest us most. Here is my list in order of priority. I give each item a priority ranking. Priority #1 is essential. Priority #2 is highly desirable. Priority #3 is icing on the cake.

<table>
<thead>
<tr>
<th>Item</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laser Rangefinder</td>
<td>#1</td>
</tr>
<tr>
<td>Inclinometer</td>
<td>#1</td>
</tr>
<tr>
<td>Scientific calculator</td>
<td>#1</td>
</tr>
<tr>
<td>Tape Measure</td>
<td>#1</td>
</tr>
<tr>
<td>Excel</td>
<td>#1</td>
</tr>
<tr>
<td>GPS Receiver</td>
<td>#2</td>
</tr>
<tr>
<td>DTape</td>
<td>#2</td>
</tr>
<tr>
<td>Monocular</td>
<td>#2</td>
</tr>
<tr>
<td>Compass</td>
<td>#2</td>
</tr>
<tr>
<td>Densitometer</td>
<td>#2</td>
</tr>
<tr>
<td>Tripod</td>
<td>#2</td>
</tr>
<tr>
<td>Digital camera</td>
<td>#2</td>
</tr>
<tr>
<td>Hypsometer</td>
<td>#3</td>
</tr>
<tr>
<td>Calipers</td>
<td>#3</td>
</tr>
<tr>
<td>Industrial laser (red beam)</td>
<td>#3</td>
</tr>
<tr>
<td>iPhone with apps</td>
<td>#3</td>
</tr>
<tr>
<td>CruzAll</td>
<td>#3</td>
</tr>
<tr>
<td>Transit</td>
<td>#3</td>
</tr>
</tbody>
</table>

I’m beginning to think that the monocular should be moved up to priority #1.

Robert T. Leverett

Re: Using a monocular to determine limb length

by dbhguru » Wed Mar 20, 2013 12:17 pm

NTS,

Here are the results of the latest test.

I'll have a clearer presentation of the mathematical model for computing the width of an object oriented at not 90 degrees to the line of sight. Basically, we treat the width as the diagonal of a regular trapezoid.

There is a limit to how much measuring equipment most Ents are willing to acquire in order to measure the dimensions of trees that interest us most. Here is my list in order of priority. I give each item a priority ranking. Priority #1 is essential. Priority #2 is highly desirable. Priority #3 is icing on the cake.
I'll continue conducting tests of overall accuracy of the method, but at this point, it looks like it provides us with a viable alternative to measuring the lengths of limb segments at a distance without having to try to maneuver ourselves to be directly under the ends of the segment or to use the horizontal sweep angle method.

Robert T. Leveret

**Re: Using a monocular to determine limb length**

*by Bart Bouricius* » Wed Mar 20, 2013 7:39 pm

I am thinking that the monocular should be #1 along with the camera which not only can provide regular photo documentation and diameters at various points, but some newer cameras provide a GPS reading as well for additional documentation without carrying a separate GPS unit. The Canon SX 260 Hs and SX 230 Hs Panasonic, Sony, Pentax Optio WG-1 GPS and several other medium range cameras have GPS capability. How accurate it is needs to be confirmed.

**Re: Using a monocular to determine limb length**

*by edfrank* » Wed Mar 20, 2013 9:15 pm

Bob, Looking at your list I would do some rearrangement.

<table>
<thead>
<tr>
<th>Item</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laser Rangefinder</td>
<td>#1</td>
</tr>
<tr>
<td>Inclinometer</td>
<td>#1</td>
</tr>
<tr>
<td>Scientific calculator</td>
<td>#1</td>
</tr>
<tr>
<td>Tape Measure</td>
<td>#1</td>
</tr>
<tr>
<td>Digital camera</td>
<td>#1</td>
</tr>
<tr>
<td>Compass</td>
<td>#2</td>
</tr>
<tr>
<td>Excel</td>
<td>#2</td>
</tr>
<tr>
<td>GPS Receiver</td>
<td>#2</td>
</tr>
<tr>
<td>Tripod</td>
<td>#2</td>
</tr>
</tbody>
</table>

Monocular #3
Densitometer #3
DTape #3
Hypsometer #3
Calipers #4
Industrial laser (red beam) #4
iPhone with apps #4
CruzAll #4
Transit #4

My categories are as follows:

#1 are the minimal needed to measure trees, plus the camera is needed for documentation of individual trees.

#2 are what are needed once you become serious about the process.

#3 are all things I don't have. The one worth noting is the monocular. It is needed to do remote girth measurements and will likely be my next purchase. Bob's forays into photo measurement may let me avoid this purchase.

The densitometer is a useful tool and would be worthwhile for canopy density measurements. There is a hand card that can be printed out that will let you estimate densities based upon matching a series of examples. It is not as accurate, but can be experimented with prior to the purchase of an electronic densitometer.

I see the D-tape as mostly unneeded, but they are not expensive. The hypsometer is something convenient, but the lower end ones like the Forestry 550 is actually a downgrade in measurement quality from the Nikon 440 and clinometer.

#4 are things that are for special purposes, or with the industrial laser when there is a need for extreme accuracy. There are many other items that could be added to this listing.

These are my thoughts on Bob's list.

Edward Frank
Moosewood Bill Harlow

☆by Tom Kimmerer » Wed Mar 20, 2013 10:24 pm

Cross-posted at Trees in the Anthropocene

Many of us are familiar with the books by William Harlow, including the classic Textbook of Dendrology (Harlow and Harrar), Fruit Key and Twig Key and other forestry books. This reminiscence is sparked by several pictures from one of Harlow's books posted on Facebook by Chris Budesa.

When I was an undergrad at Syracuse (1972-1975), Harlow had already retired as Professor of Forestry. He was renowned as a dendrology teacher although by academic training he was a wood technologist. Ed Ketchledge studied dendrology with Harlow; I studied dendrology with Ketchledge, and I taught dendrology for 18 years at Kentucky. So Harlow is my academic grandfather.

Harlow was still very much a presence on the Syracuse campus, and I had many opportunities to talk with him. He knew my love of the Adirondacks, particularly of tramping around Five Ponds when I was at Cranberry Lake. He shared with me many stories of weekend adventures dating back to the late 1920s when he was a student. The great conservationist Bob Marshall was also one of those who tramped around Cranberry Lake on weekends while at summer camp.

Harlow was known throughout upstate New York and the Adirondacks as Moosewood Bill. He was widely admired for his woods lore and worked with boy scouts and other groups on getting around in the woods. Among his many books was "Ways of the Woods: A Guide to the Skills and Spirit of the Woodland Experience" and "Songs of the Forester."

One day, I was wearing my usual outfit - Pendleton shirt, khakis and hiking boots. He drew me aside and berated me for wearing Vibram-soled hiking boots. "Do you have any idea what those damned things do to the soil and the roots?" he asked me. "You want to tear apart the soil, you wear those. You might as well go out with a bulldozer." Then he hiked up his pant leg and showed me his boots: 16" high Bean's Boots, the classic wetlands boot of the northeast. He extolled the virtues of Bean's boots with their soft rubber sole with chain tread, as he lectured me about proper care of the woods. Of course, I had a pair of Bean's boots, still have the same pair because they are immortal.

And that was the story Moosewood told me. You see, every time you wear out the bottoms of your Bean's boots, you just send them back to LL Bean. They clean up the leather and stitch on new rubber bottoms. Moosewood had worn nothing but 16" Bean's boots his whole career, sending them back every year or two for new bottoms. One day, after he had sent off the boots for yet another repair, he got a
letter from Bean's. It seems that Moosewood's boots were the oldest Bean's boots still in service. Bean's very generously offered him a new pair so they could put the old ones in their museum. Moosewood very politely responded "please repair these boots as requested. You may have them when I'm dead."

Although he lived for many years after that, I have always assumed that Bean's eventually received Moosewood's boots when he no longer needed them.

And today, whenever I lace up my Bean's boots, which are a mere 12" high, I remember Moosewood. My boots are now about 43 years old, but I have a long way to go before mine retire.

Like many foresters, I keep Harlow and Harrar, Fruit Key and Twig Key and other books by Bill Harlow on my shelf and use them often.

---

**Chile Trip Part 3: Parque Nacional Alerce Andino**

*by Josh Kelly* - Fri Mar 22, 2013 12:39 am

Chile Trip: Part 3 Parque Nacional Alerce Andino

After returning from Lago Todos Los Santos on March 3rd, I checked the weather. The prognosis was for one more day of sun, followed by a week of rain. Our plan had been to spend March 5-9 in the spectacular scenery of the Cochamo Valley. Becky and I made the decision to alter our plans, since backpacking for five days in heavy rain didn’t seem that appealing, though I regret this because it really does look like a beautiful area, and there are two Alerce stands to check out ([http://www.cochamo.com](http://www.cochamo.com)). I also fear that Cochamo will become an absolute tourist zoo in the next few years because of all the publicity its getting and the already heavy traffic of tourists.
Our alternate plan included renting a car for two days so that we could more easily visit Parque Nacional Alerce Andino, Chile’s first park dedicated to the preservation of alerce (Fitzroya cupressoides), the largest and longest lived tree in the Valdivian Rainforest. After the two day trip to Alerce Andino, we planned to take a bus north to Parque Nacional Huerquehue to experience auracaria forests first hand.

Alerce Andino

Alerce is a member of the cypress family and resembles bald cypress to some extent, though alerces are evergreen and grow on upland as well as wetland sites. Alerces are rumored to have once reached heights of 80 meters and diameters of five meters or more. These claims are hard to evaluate because alerce forests have been so decimated by logging of its valuable, rot resistant wood and even more so by repeated fires in the colonial era. Many older buildings in Southern Chile, some impressively large, are shingled and roofed with alerce wood. [http://www.flickr.com/photos/niallcorbet/451467781/](http://www.flickr.com/photos/niallcorbet/451467781/)

After exploring southern Chile, I believe that the best Alerce sites were long ago logged and burned, and most of them were converted to agriculture. Most of the remaining Alerce stands are above 600 meters, but there is historical evidence for large trees at much lower elevation. I saw young trees as low as 80 meters in elevation, which leads me to believe that there were once lowland alerce forests and that these may have grown larger specimens than the sites where old-growth alerce still exist today. Alerce is probably most famous for being the second oldest documented tree species, with one cross-dated individual confirmed at over 3,600 years old.
Parque Nacional Andino Alerce was created in 1975 out of the larger Reserva Nacional Llanquihue. National Reserves in Chile are analogous to National Forests in the U.S. and do not afford full protection to forests, and because it was acknowledged in the 1970s that alerces were already quite rare, Andino Alerce National Park was formed. Today, Andino Alerce is one of the best known places to see old-growth forest and alerces in Chile. The area receives more than 2,000 mm of rain annually and is within 30 km of the Pacific Ocean. Elevations range from 600-1600 meters. Tree line occurs above 1400 meters.

A chunky Podocarpus nubigena

The hike to the most impressive grove of Alerces is 9 km, one way, and we had planned to backpack in 4 km to a campsite to lessen the roundtrip the next day. We found out at the park entrance that camping was no longer allowed in the park due to fears of wildfire. In 2010, thousands of hectares of forest had burned Torres del Paine National Park due to an untended
campfire. The ecosystems and rainfall in the two parks are totally different, but I can understand the concern and protective feelings for Chile’s best public preserve of alerce. Luckily, there is an affordable, rustic cabin that runs 5,000 pesos/person at the park entrance that is a reasonable option for visitors the park.

Laguna Saragosa

We didn’t have too much daylight on our first day so we went for a short walk to the Alerce Rodal trail, which exhibits a pure stand of straight, young looking, by alerce standards, trees. The CONAF (National Forestry Corporation) officials I had spoken with, and many sources on the internet, boast of Alerces over 60 meters. An otherwise quite knowledgeable CONAF forester told me that “nearly all” of the alerces at Andino Alerce were over 60 meters tall. I began to seriously doubt this when we entered the forest an every species there was much shorter than at Parque Nacional Vicente Perez Rosales. Nothofagus dombeyi didn’t even exceed 40 meters. Sure enough, upon reaching the Alerce Rodal and measuring the tallest and largest trees I could find the biggest individual measured 1.53 meters (5’) dbh and 36.9 (121’) meters tall. The tallest tree was 39.3 meters (128.9’) tall.

1.53 meter dbh x 36.9 meter alerce - yes, that is midslope dbh
A thrifty young stand of alerces

I wasn’t that surprised by the small stature of these trees. First, the soils at Andino Alerce were noticeably less productive than other areas I had visited in Chile. The bedrock is granite with evidence of recent glacial activity, and the soil was very rocky – not deep volcanic soil. Other species were quite short, and the shrub layer was dense and ubiquitously covered by native bamboo. This led me to consider whether the dense shrub layer was an indicator of more acidic and nutrient-poor soil, as it is in the Southern Appalachians. I don’t know the answer to that, but I suspect a correlation.

Bamboo in the Alerce Catedral

The composition of the forest was distinctive. Manio (Podocarpus nubigena) was abundant. Alerce occurred in pure stands in places, but was more often part of a mixture including Nothofagus dombeyi, P. nubigena, Weinmania trichosperma, Laureliopsis philipiana, and Eucryphia cordifolia. As I mentioned, bamboo dominated the shrub layer, making off-trail exploration quite intimidating.

After an early night we woke at dawn to hike to the Alerce Catedral, the grove in Andino Alerce with the largest trees. Unfortunately, shortly after breakfast Becky’s boot came apart and we spent valuable minutes on an impromptu glue job to put the boot back together. The weather was overcast and the forecast called for rain starting in the afternoon. Luckily the glue job worked, and we were off on the 18 km (11.25 mile) round trip to the Alerce Catedral.
"Alerce of approximately 2500 years"

About 3 km in, we crossed a ridge with scattered, very impressive Alerce. These were old beasts, for sure, with signs by the park service boasting of their age. I measured the largest of these trees, which had a sign claiming more than 3,000 years of age. The size stats on this tree are as follows: dbh - 2.45 meters (8.04’); height to first branch – 22.7 m (73.5’); height 34.1 meters (111.8’). The taper of the trunk was slow, and the diameter may actually have been larger at 22 meters than at breast height. The height was rather unremarkable and reinforced my notions of exaggeration of alerce heights in folk lore.
2.45 meter dbh x 34.1 meter tall alerce
2.45 meter dbh x 34.1 meter tall alerce

On the subject of age, it is a common theme in literature about alerce that it has a constant, slow growth rate and that age can be extrapolated by size. I’m sure most of you reading this post are skeptical of that notion, and you should be. The trail cut alerces that I saw had slow, but highly variable growth rates. Notably, trail cut Podocarpus also had very tight rings and slow growth, and I believe Podocarpus nubigena could also reach great ages. It’s co-occurrence with longer lived Fitzroya probably makes it obsolete for dendrochronology purposes, though.

A large snail

After hiking through some beautiful scenery and seeing some interesting wildlife, we arrived at the Alerce Catedral. It is a very special place. A sense of quite pervades the place. Like many rainforests, all sounds seem muted. I found myself talking in hushed tones and feeling quite humble in the presence of larger and more ancient beings.
The Alerce Catedral

The Catedral consists of a grove of several dozen alerces over 1.5 meters in diameter, many over 2 meters in diameter. The grove extends from the terrace above a stream, up a gentle slope for more than 100 meters in elevation. I began prospecting for heights, and was disappointed not to find any trees exceeding 37 meters. I then focused on diameters. The largest diameter I found was 2.71 (8.8’) meters, but this tree tapered quickly. What appeared to be the largest volume tree I found was 2.49 meters dbh and around 37 meters tall. Getting an accurate height measurement on trees in evergreen forests is pretty difficult, so I proceeded up slope to attempt a better measurement, but was quickly distracted by a quartet of tallish looking trees.
I began measuring this quartet and immediately the laser indicated that the nearest tree was significantly taller than any I had measured in Chile. It had both the longest distance and the highest angle of the three trees, and its base was well below my vantage point. After working diligently on this tree from two different locations in order to have a view of the top and the base, which was obscured from most locations by bamboo, I came up with a height of 54.1 meters (177.4’) tall. I declined to fight through the undergrowth and measure the diameter, which I estimate to be between 1.5 and 1.8 meters. Shortly after I measured this tree, the rain started, and we began our long, wet hike back to the trailhead.

The top of the 54.1 meter tall alerce

Alerce Andino National Park was the only location, out of three on my itinerary, where I was able to see alerces. While this location is highly regarded in Chile, I doubt this is where remnant alerce trees reach their maximum size. My guess is that, like Nothofagus dombeyi, they reach their largest size on deep volcanic soils with high precipitation. Some areas that seem promising to me are Vicente Rosales National Park, Pumalin Park (http://www.parquepumalin.cl/content/index.htm, Doug Tompkins’ 600,000 ha private park), and Hornopirien National Park, near where there is what appears to be a legitimate four meter in diameter tree (seehttp://andespataagonia.cl/ “alerce cathedral”), though I doubt it is very tall.

I think there is still very much to be learned about Alerce. One thing that is certain is that any tangent measured height or estimated height for alerce is in serious doubt. If any NTS or other tree lovers visit
southern Chile, bring a laser range finder and clinometer!

Cauliflower top alerce

Re: Chile Trip Part 3: Parque Nacional Alerce Andino

by KoutaR » Fri Mar 22, 2013 8:32 am

Josh,

The report was so exciting that I read the strategic places by scrolling text up line by line! I admit that I am a bit surprised that the trees were not taller.

I compared Chile's rainforests with Tasmania. One difference is that there are no bamboos in Tasmania's rainforests. (But there are other things that make off-trail hiking rather difficult.)

Is Cochamo Valley in a national park or is it otherwise protected?

Re: Chile Trip Part 3: Parque Nacional Alerce Andino

by Josh Kelly » Fri Mar 22, 2013 10:21 am

Kouta,

As far as I know, the land in Cochamo Valley is not protected. The only real protection is that there are no roads into the valley. There are a number of dam proposals, including a 2000 km transmission line that threatens a large area of Patagonia and the Lakes District, including Rio Puelo and Rio Cochamo. There would be massive road construction as part of these proposals that would add more threats to the forests of the region. As J.R. Smith is fond of saying: see it while you can.

Josh Kelly

Alerce Catedral
Re: Chile Trip Part 3: Parque Nacional Alerce Andino

by Jess Riddle » Fri Mar 22, 2013 2:54 pm

Josh, Another great report. Given their location in the mountain groves and on the east side of the Pacific, I had thought of alerce as something of a South American sequoia or redwood. However, the trees in your photos remind me kauri and western red cedar. The "spike topped alerce" in particular reminds me of the champion red cedar at Quinault Lake.

Podocarpus nubigena could still wind up being a valuable species for dendrochronology. Dendrochronologists are increasingly realizing the valuable of using multiple species in their climate reconstructions, and of course, cores from P. nubigena would provide information on that species. From a practical standpoint, P. nubigena might be easier too. If managers are very protective of the alerce, they might be more amenable to researchers coring the P. nubigena. It’s also a lot easier to core a 1 m dbh tree than a 2 m dbh tree.

I’m glad Becky’s boot held together.

Jess

Re: Chile Trip Part 3: Parque Nacional Alerce Andino

by Bart Bouricius » Fri Mar 22, 2013 6:00 pm

Another fantastic report. It's nice to have someone provide a report that actually gives you an accurate sense of the environment that the trees grow in along with images of the trees that are comprehensive and show tops bottoms and the whole tree as well as people next to some trees for a feeling of the size, especially with a species that is steeped in mythology and hyperbole that has tended to cloud the reality.

Link Between Japanese Barberry and Lyme Disease

by edfrank » Fri Mar 22, 2013 10:11 am

Ed: This is a recent research article about the relationship between Japanese barberry and Lyme disease. I wanted to pass this information along in hopes it might save someone in ENTS from getting Lyme.

Sincerely,

Russ Richardson

Subject: Native Plants and Wildlife Gardens - More Findings on the Link Between Japanese Barberry and Lyme Disease

Japanese Barberry infestation. photo by Edward Forrest Frank
More Findings on the Link Between Japanese Barberry and Lyme Disease
by Debbie Roberts, Native Plants and Wildlife Gardens
March 20, 2013.

http://nativeplantwildlifegarden.com/mo ... e-disease/

Recently, I attended a symposium where current research findings on the link between Japanese barberry (Berberis thunbergii) and Lyme disease http://gardenofpossibilities.com/2009/1 ... -barberry/ were presented. Over the past few years we’ve learned that this highly invasive non-native shrub is not only impacting our regional ecosystems, it’s also indirectly affecting our public health. While Japanese barberry is considered invasive in at least 20 states and the District of Columbiahttp://www.nps.gov/plants/alien/fact/beth1.htm, it is also still available for sale in many nurseries across the US. According to recent studies by scientists Jeffrey Ward and Scott Williams at the Connecticut Agriculture and Experiment Station (CAES) eliminating stands of Japanese barberry from forested areas can reduce the number of Lyme disease-infected ticks on the property by 80%.

I don't like Japanese barberry either but I think people do a great disservice by stretching a little bit of information way too far.

Doug Bidlack

Re: Measuring Odd Tree Forms
by edfrank » Fri Mar 08, 2013 12:44 pm

Bob, Bart,

I am contemplating the questions being ask by American Forests as part of their project to update or revise their measurement guidelines. These are some comments from their Measurement Guidelines Working Group:

- Determining when a tree with multiple trunks should be considered a single tree or multiple trees. This includes reviewing photos submitted by state programs as case studies.

- Determining where to measure the circumference of multiple-stemmed trees when the trunk forks at or below diameter breast height.

- Developing measuring guidelines for tropical tree species with unique form.

I have been thinking about how it would be possible to rank these forms and how they should be measured. Consider some of the tropical forms with
blade-like buttresses at their base. A cross section at breast height would yield a starfish-like plan.

Bart, you talked about measuring the girths above the basal flare. This would be above where these fins merged into the trunk? If not where exactly do you think they should be measured? How high would these fins extend? Would you say that measuring above these basal fins is the way to go? Is there any value to measuring at breast height, or is it so variable that it is useless? One of your fellows would climb and measure the girth, would it be amenable to measurement with a reticled monocular or perhaps one of Bob’s photo methods? I suppose measuring the area occupied by the tree and fins at ground level could be measured, but does that gain you anything?

The second form is some of the strangler figs.
These figs grow around a support tree and eventually will kill it. What is unusual about their form is that they grow to form a latticework of trunks that fuse together multiple times. So in the early stages of the lattice you would not be really measuring the diameter of the fig vine, but the diameter of the tree it is growing upon. But then the individual vines of the fig fuse together so frequently that a girth for them is almost meaningless. They should not be dismissed as vines as the grow to tree size that are self supporting, and even form self supporting columns. So I guess the next way to measure would be to treat these lattices as if they are actually trees? measure the lattice girth at breast height? etc... How else could the situation be approached?
"Upside down tree" Urostigma subgenus

I would guess the girth of these trees need to be measured above the aerial roots? They don’t appear to actually even have a distinct trunk at ground level or at breast height. The area occupied by the aerial roots could also be measured?

Mangroves would have the same problem but in their patches which roots belong to which tree would be hard to sort out.
We have talked about measurements of these banyan type forests where aerial roots form secondary trunks. How would you rank these types of trees or tree groups as it relates to size? The only way I see that would be practical would be the area occupied by their canopy. I think canopy area would be better than area defined by taping around the trunks. Also canopy could be measured on air photos.

Jess and Kouta, I am not dismissing your ideas, just fishing for others and looking at the options available. I think that measuring stems over a certain diameter would work, but am concerned that not all would be accessible and the labor intensiveness of the process for it to be a standard feature of measurement for the tree form.

Similarly what about clonal colonies growing by root sprouting such as the Pando aspen? How would we rank them?

The largest individual trunk/tree could be measured. We could count or estimate the number of stems. The other option would again be area occupied by the clonal colony. I think the last is the best option for ranking, but both should be attempted. There are other species that form clonal colonies that could be considered also - sumac for one. It would be consistent with what I was saying about the banyans and these two types are similar concepts – one multiple stems growing down from branches and multiple stems growing up from roots.

That is how some of the old box huckleberry colonies are often described – in terms of acreage of the colony, plus the age extrapolations.

A relict species nearly exterminated by the last ice age, box huckleberry is self-sterile, and is found in isolated colonies which reproduce clonally by extending roots. One colony in Pennsylvania was once estimated to be as many as 13,000 years old; more recent estimates have an upper bound of about 8,000 years, which would make it the oldest woody plant east of the Rocky Mountains. Another colony in Pennsylvania, about 1,300 years old, has been protected by the Hoverter and Sholl Box Huckleberry Natural Area.
Actually part of the above statement doesn’t say is that a big chunk of the oldest colony was destroyed by road building in the 1960’s and is on private property and not protected at all.

Edward Frank

---

**Re: Measuring Odd Tree Forms**  
by [Joe](#) » Fri Mar 08, 2013 2:58 pm

wow, nice collection of photos, those tropical examples really excite me, artistically... nature really is the greatest artist...

Joe

---

**Re: Measuring Odd Tree Forms**  
by [Larry Tucei](#) » Fri Mar 08, 2013 4:26 pm

All- I have measured numerous Live Oaks with multiple trunks, piths, crowns etc. Some have been difficult to measure. One for example the E.O Hunt Live Oak in Long Beach Ms fits nicely into this category. I had to measure the circumference at 24” above ground. The Hunt Oak is multi-trunked, multi-crowned tree with a very wide spread. Cir- @24” 34.3”, Height-45’ and max Crown Spread-177’. The longest limb was 89’ and it ran just above ground for about 25 feet or so then lay on the ground as did huge limbs around the whole tree. I'll see if I can dig up some more photos showing the limbs and its wide crown. This is one of the most unusual forms of Live Oaks that I have measured out of 214 trees. Larry

---

**Re: Measuring Odd Tree Forms**  
by [KoutaR](#) » Sat Mar 09, 2013 3:17 am

Height is the only well-defined measure.

Kouta

---

**Re: Measuring Odd Tree Forms**  
by [Don](#) » Sat Mar 09, 2013 9:11 pm

Larry- While this Live Oak may be difficult to fit into the current American Forests mode, should the AF measurement guides change to:

1)single list, with any non-single stem champs getting an asterisk (or alternatively a footnote) explaining that it appeared to be a triple, and/or:

2)a standard DBH/CBH measurement, with any non-standard diameter/circumference height measurement getting an asterisk (or alternatively a footnote) explaining that it was taken at 24” (or ?), this leaves the list with the least amount of clutter, in my
opinion. What's your thinking here?

Don Bertolette

Re: Measuring Odd Tree Forms
by Bart Bouricius » Sun Mar 10, 2013 10:27 am

Don,

My perspective on this is that, as the majority of NTS members are from North America, we tend to be both North America centric and temperatecentric. We think of the trees we see when we look out the window or drive along the highway as "normal", however, consider that our geographically constrained species may range somewhere between 700 and 1000 species, depending on where we think of drawing the line. In Panama for example there are over 2,300 identified species, and In South America we have in excess of 20,000 species and many of them are "odd forms" as a matter of fact, there may possibly be more species globally with "odd forms" than with "normal" (temperate) forms. This does not mean to say than in the diversity of tropical species there are not large numbers of "normal form" species as well, however buttresses are exceedingly common among flood plain trees, especially those that grow to notable dimensions that people might find worth measuring. Buttresses are also common on upland trees, though less so. Multiple stems are quite common among the figs in flood plain forests and the ficos genus makes up a disproportionately large percentage of large trees, virtually all of which would be classified as "odd forms". Anyway, the folks in South America would probably suggest that the magazine might be more appropriately called North American Forests as that is what is represented. Considering the focus of the magazine, these odd forms are common in Florida and parts of Texas and scattered in the Southern part of the US, though they may not as rare as we may think, just rarely measured in a comprehensive way. Sorry for my digression, but I am trying to point out that these forms may be quite significant in the overall scheme of things. (See Richard Condit, kK Perez and Daguerre Trees of Panama and Costa Rica for source of species numbers).

Bart Bouricius

Re: Measuring Odd Tree Forms
by Bart Bouricius » Sun Mar 10, 2013 2:04 pm

Re-reading my last post it sounds unintentionally harsh which I really did not mean. Clearly many of these tropical forms are unusual and some, if you do not live in the rural tropics, would seem downright bizarre to most people. I am thinking we might classify these forms as "measurement challenged". There is no question in my mind that we need to focus on something other than the DBH for one or more of these sub groups. I think it behooves us to, as Kouta suggests, have height as the universal comparison measurement while we should focus on crown spread or area with several species, and with a separate group that simply have large buttresses, we should simply measure the DAB (diameter above buttresses). In the case of multistemmed trees like banyans, the areas encompassed by 1. crown and 2. stems would provide an interesting comparative number within this group.

I do not think we have such a problem with aspens, as they present as individual trees regardless of their DNA, but I think mangrove species are perhaps the messiest and most unruly group, as they, in some ways resemble aspens, in that they can sprout from underwater or under mud roots but appear somewhat like the more unruly figs in their form. One other group which is easier to deal with is simple stilt trees such as several palm species (walking palms) and many others like Cecropia trees that also perch on stilts. This group, like buttressed trees can use the same DAB girth measurement or in this case DAS (diameter above stilts) along with height. The real question is how many groups should we have in order not to be comparing apples to oranges in our measurement criteria. There is one other problem represented by the first two Ceiba images that Ed
posted, which is that in the first image has no trunk, in that the buttresses actually reach down from the lowest branches. My view on this is that you cannot measure a trunk where none exists, at least as it is normally defined. This situation, however, is a peculiar anomaly resulting from growing a forest tree on a lawn and having it react in a most extreme way. As it did not have to grow up to get sun, it simply spread out without really producing a trunk, just buttresses and branches. It certainly would not be fair to pretend that there is a trunk here that can be compared to other trunks in a competitive manner, in other words I contend that this is an apples to oranges situation.

Bart Bouricius

Re: Measuring Odd Tree Forms

by Joe » Sun Mar 10, 2013 5:41 pm

edfrank wrote: Larry, The AF is setting up a committee to review measurement guidelines. But what exactly to tell them? They want measurement specifications rather than an approach to the problem. How do you change a general approach to one that has specifics and at the same time get it accepted?

me thinks that they fail to understand that the approach to the problem is the path to the measurement specifications and they simply must be given the message....

Joe

Re: Measuring Odd Tree Forms

by Bart Bouricius » Wed Mar 13, 2013 12:40 pm

Regarding my mention of Mangroves sprouting from roots of adjacent tree, I seem to remember this from trips to the Mangrove swamp near Belize City, Belize, however the 3 species found in Florida reproduce by dispersing embryos called propagules rather than regular seeds, thus they seem not to be clonal in nature, however I can find little immediately on reproduction of the many species outside of the US, some of which get quite large and have no stilt like roots. The following is a description of mangrove reproduction:

Reproductive Strategies of Mangroves

Mangroves have one of the most unique reproductive strategies in the plant world. Like most mammals, mangroves are viviparous (bringing forth live young), rather than producing dormant resting seeds like most flowering plants. Mangroves disperse propagules via water with varying degrees of vivipary or embryonic development while the propagule is attached to the parent tree.

This description of only the 3 species found in the US is from this site:

http://www.nhmi.org/mangroves/rep.htm

Bart Bouricius

Re: Measuring Odd Tree Forms

by edfrank » Sun Mar 24, 2013 10:02 am

KoutaR wrote: Height is the only well-defined measure.

I really like this comment. It is true and helps me (and all of us likely) keep our eye on the prize. You can always measure height and it can be the anchoring measurement in whatever measurement protocol or champion criteria that are determined. A tall tree list that includes nothing but height criteria is something I always find interesting and seems popular among the general public.

When looking at the idea of champion trees I find it intertwined with the idea of bigness. A champion tree should be one that best expresses the characteristics that we feel define bigness for that species. The American Forest champion formula is one attempt to express that feeling. Some people have suggested it tends to favor open grown trees over forest grown trees. Out own TDI (Tree
Dimension Index) formula is more neutral in terms of favoring one measurement over another, but still in an individual tree it is often just one characteristic that contributes the most to the feeling of "bigness." In Larry Tucei's live oak documentation efforts it is clearly the crown spread and trunk girth that exemplify the feelings of size. In some of the western trees, like Douglas fir, the girth is important, the crown spread not so much, but the height jumps out the most as these tall specimens reach for the sky. So for these it is girth and height.

In these odd forms rather than rely on formulaic standard measurements, we should be looking at not only what characteristics we can measure, but what characteristics epitomize the feeling of bigness. How can we define that characteristic for comparison purposes? For some, like the banyon, the defining characteristic of bigness is really the area occupied by the crown or multiple trunks. For clonal colonies, it is the area occupied by the colonies. For these trees with the fin-like roots, or those with large aerial roots growing out from the trunk, or even for some of the giant buttressed bald cypress trees, maybe we need to look at some other measurement to characterize this feeling of bigness? Maybe one of the measurements should be area occupied by the roots, or the base of the tree, rather than just girth at breast height? This would be defined as the area occupied by the roots or base of the tree as measured by a tape wrapped around their extremities - not effective cross-sectional area established by mapping the shape of the root mass. All of the other standard measurements would be taken as they can, this would just be an additional measure taken for certain types of trees. Discuss...

Edward Forrest Frank

Re: Site Index

just a note- but foresters use the term "site index" which gives the height at 50 years of age (at least in the NE)- it's useful to compare different sites and is a good, general index of the site's forest productivity because the height growth is more related to the site than it is to how dense the forest is-- if you thin the forest or not, the trees will grow about the same height each year, only if it remains dense, the diameter growth will be less on some of the very best sites found by ENTs folks, I would find it interesting to see what local foresters are using for the site index on that land and, if ENTs folks could come up with a better site index, then the true special value of the site would be more exciting to the foresters who focus on growing wood- I suspect the foresters are underestimating the site index on the best sites so, this is one of the plusses of doing this sort of work- to show that some forests are more "productive" than otherwise thought to be... not that those sites ought to be managed, but there may be many managed forests on such sites which aren't being managed as intelligently as they could be- if the true potential was understood, blah, blah....

nah, probably wouldn't make any difference, they'll just be hammered and clearcut like most forests..... with the usual stupid rationale...

Joe
Re: Site Index
by Joe » Sun Mar 24, 2013 11:45 am

Bob, certainly the private sector forestry people have a much shorter time frame for "management". If a landowner calls them to discuss logging their land- if the timber is not fully mature by any definition of maturity- but if they can make a buck doing the harvest, they will- given the fact that it's difficult to survive in private sector forestry. The motivation to grow the trees to "financial security" is only in the interest of the owner- the industry has zero interest, but of course they'll give the owner what Karl Davies called "the 3-5% scam", implying that because the diameter is only growing that fast, that the value of the tree is only growing that fast, which is false since the volume and value may be growing much faster than the rate of the diameter growth. Many industry people tell landowners, "cut the timber and put your mney in the stock market".

Even on industry owned lands, they don't take the long view- not because they don't know any better but because of immediate financial needs preclude managing the trees for true financial maturity (when the rate of growth of value of the tree drops below the "alternative rate of return" available in other financial investments). Look at what's happening in the north country- the big timber guys clearcut most of it, now they're selling it off.

But.... government agencies have no excuse for this sort of "forestry"- they don't really have an "alternative rate of return" or, it's extremely low- so they should be managing timber to true financial maturity, which is NOT 50 years for good trees on good sites, though it may be true for poor quality trees, which can be harvested to keep the best trees growing much longer. And, of course, financial maturity of the timber isn't the only consideration government agencies should be thinking about- though the private sector thinks little of ecosystem services and values, government ought to be doing so- and documenting it and showing the private sector- while, finding ways to have ecosystem services turn into real money for the private sector--- if governments can offer tens of billions to energy firms to build wind and solar farms- they should be able in a 16 trillion dollar economy, find ways to monetize those ecosystem services.

Getting back to measuring tree heights.... the more we know about this, and the more word gets around-- it can help enlighten the rest of the world- to realize cutting trees at 50 years of age is really stupid- like mindlessly dumping pollutants into the air and water- bad management of forests is a form of pollution, so far, unrecognized by the nation- it will have to be eventually if society and the economy are ever to stabilize and remain sustainable.

Joe Zorzin

Evidence of very large Eastern White Cedars
by ronbertbean » Sun Mar 17, 2013 9:20 pm

I'm new to this website and this is my first post. While tracing a stream in the extreme south of Norfolk County, Ontario we came across an area with numerous nurse stumps of eastern white cedar that were in excess of 3 feet in diameter. The trees growing over the stumps looked to be at least 20 years old if not much more. We came across 2 trees that clearly had not been logged - one had uprooted, obviously long ago and was probably 3.5' at the base - another had died more recently and was broken off at about 20' up. So these two trees lead me to speculate on whether the large stumps had been logged or had died of natural causes. I found this NTS site looking while looking for information. I would estimate we saw in excess of 20 stumps of eastern white cedar >3' in diameter in an area of a few acres. I am hesitant to specify the exact location both because I'm not sure of the protocol on this site and because I am not 100% clear on the land ownership (my best guess is Long Point Conservation Authority). I am posting because I was thrilled to find this area and to see evidence of cedars much bigger than I have ever seen in this area and am wondering if anyone would care to comment.

Ron
Re: evidence of very large Eastern White Cedars
by bbeduhn » Mon Mar 18, 2013 1:15 pm

Ron,
Do you have any photos of these stumps that you can share? Are these nurse stumps perhaps another species with white cedars growing from them or are they definitely white cedars? Check out the massive report on old growth in the Niagara Region. White cedars grow to an incredible age there.

If a site is on private land, you are right to divulge only a general location unless you have permission to give more info. We usually confine exact locations to private messages. On off trail public sites, exact locations are kept out of public records. General locations work well enough for the message board. Welcome to the site.
Brian

Re: evidence of very large Eastern White Cedars
by DougBidlack » Mon Mar 18, 2013 8:53 pm

Ron,
those are certainly very nice cedars. NTS have measured this species to 186” in girth at 4.5’ on South Manitou Island in Lake Michigan...so that's 4.9' in diameter. I recently found a record of 220" in girth (5.8' in diameter) for Ontario on the internet and I believe this was probably measured at 1.5m. I'm sorry I don't recall the internet site or actual location within Ontario at the moment but I'm sure it would be relatively easy to find.

Is there any chance you might be able to find some live trees of this size or did you explore the entire area?
Doug

Re: evidence of very large Eastern White Cedars
by ronbertbean » Mon Mar 18, 2013 11:05 pm

Hi,
I did not explore the whole area but did not observe any live white cedars greater than 1 ft in diameter. There were a few significant live white pines at least 100 years old and 2 ft in diameter. Here is the dead cedar that was uprooted. I will return and get more photos if I can get there before the frost leaves the ground otherwise it may have to wait until summer as it looks like a very swampy location. I'll take a tape measure with me as well.

Ron

Re: evidence of very large Eastern White Cedars
by csadsamsrep » Sun Mar 24, 2013 1:14 pm

That is a large cedar for sure. There is an old one called the fallen giant in the Upper Peninsula, near Copper Harbor that is dead now, but measures in the range of 5 feet in diameter or so...not at breast height, but at its girdle, just above the estimate of the former soil line. It was not a real tall tree, but very thick, and was next to a small river. We have several white
eastern cedar on our farm next to a large river in the 3 foot diameter range, but not at breast height. They are large like this closer to the ground, and some of them split into two sections, and are very irregular or gnarly. I will post some photos soon, so be on the lookout for these live ones.

Cedar photo- Stone Mountain, GA
by edfrank » Sun Mar 24, 2013 11:19 am

Clayton Adams to Native Tree Society
An ancient split trunk Southern red cedar tree drinks rain water from a granite pool on Stone Mountain. Juniperus Virginiana.

Re: Cedar photo- Stone Mountain, GA
by csadsamsrep » Sun Mar 24, 2013 1:35 pm

This red cedar tree has such an irregular trunk shape that it is an interesting project to try to score it in some way for its size. Its widest or thickest aspect within the first few feet of its trunk is about 18 inches or so. This tree is growing out of basically granite rock substrate pockets of decomposed foliage where other plants and tree material are caught. The rainwater pool very rarely dries up to the point of having no reserve in it, but I have seen it happen once during prolonged southern drought in Georgia in the last 5-6 years. Even though it has the water resource, the soil and nutrient resources here are quite nominal at best, and it is very amazing this tree grew to be this size, and it is amazing it is so gnarly in its form. It is very old, I believe.

I am adding another photo of the tree as shown from the side, and this perspective sort of projects the idea of the title, "Old Man Cedar". Now with the big head of Juniperus foliage, which could look like a full head of hair, it could be called, "Old Woman Cedar", but I must say that despite this head of hair the tree looks more masculine in its form with the gnarly and thick trunk etc. After all, men can have "big hair" too.

Old Man Cedar, Juniperus Virginiana, Stone Mountain, GA

New Member Introduction
by csadsamsrep » Sun Mar 24, 2013 12:42 pm

Hello Ed, and other fellow NTS members. It is great to have a forum for people who are interested in trees, and native ones in particular. I will be posting some photos and stories about cedar trees of two different types in the future, both white and red cedars. If any of you have experience in "coring" trees, and or know of articles or sources of information on this subject, please comment in this regard. Thanks,

Clayton Adams
Late Winter CONG Trip

by Tyler » Sun Mar 24, 2013 3:39 pm

NTS,

I recently made one more trip to Congaree before the measuring season comes to a close. Spring is not nearly as early as last year, but signs are here and there mainly in the elms and maples budding out first. The park has already experienced a couple of big floods this year and water levels were still receding on this trip. It was good to see that the water had gotten so high as some recent years have been dry.

For this trip, my main goal was to relocate a large sweetgum found a few years ago as a potential replacement for the national champion sweetgum whose crown had been blown out a year or two ago. After a couple of hours searching I found it, or what's left of it. Most of the crown had been blown out by a storm.

![Broken Sweetgum](image)

Girth measured 16'5" and adding the broken section to the standing section gave a total height of 135'. Diameter of the broken section measured 3' 4" which would have been 56' above the ground.

![Floodwaters receding](image)
After this I measured a few more trees including the national champion laurel oak. It now stands 130.5’.

Persimmon  6’10”  106.8’
Loblolly Pine  12’ 3.5”  159.7’  Another similar sized tree nearby
Laurel Oak  129.6’
Water Oak  130.6’  Dead top

One last surprise. As I was walking I noticed a large bird flying low over the treetops. I saw it land and noticed it was a bald eagle. It then flew a short distance to a pine tree where I saw a large nest.

Park staff told me that this is a new nest to them. None were previously known in the area.

Tyler
**Introducing myself - Kentucky**  
**by Tom Kimmerer**  
Mon Mar 18, 2013 11:51 am

Hello! I am a forest scientist (PhD in tree physiology and biochemistry) living in Kentucky. Formerly a forestry professor (teaching dendrology), I now make my living as a renewable energy consultant. I tell my friends that I used to study trees, now I just burn them! I am doing this work because I believe that a market for sustainably produce low-grade wood is the key to improving forest management, especially in hardwood forests.

---

**Re: Introducing myself - Kentucky**  
**by pitsandmounds**  
Mon Mar 18, 2013 10:51 pm

Welcome aboard! This is definitely the place to be to talk trees.

I have great respect for the field of Dendrology and the hardwood forests of KY are the perfect place for that expertise. I work in Northern Kentucky and there are plenty of places I’d like to get out and measure.

-Matt

---

**Re: Introducing myself - Kentucky**  
**by Tom Kimmerer**  
Tue Mar 19, 2013 6:09 pm

Joe Zorzin wrote: *Tom, do you include in that potential market for low grade wood- biomass for electricity and thermal? Are there any such biomass facilities in KY?*

Joe - Yes, most of my projects are biomass for electricity and thermal, although I expect the emphasis to move toward liquid fuels. I just completed the conversion of a coal-fired steam boiler in Louisville, KY to waste wood. The plant runs on 100,000 green tons of wood a year and provides process and heating steam to three chemical plants. The source of the wood is primarily urban, including street and yard trees, parks, and distribution-line clearance. Some wood also comes from primary sawmills. We are not only consuming a carbon-neutral fuel, but diverting wood from the landfills (where it makes methane).

This is my 12th biomass project, but my first to go to completion in Kentucky. I am now working on other biomass projects in Kentucky. There is an immense amount of waste wood, and we can have a significant positive impact on forest health by creating markets for low-grade wood.

As you know, Kentucky is a coal state, and there have been considerable headwinds against biomass projects, but as the coal industry declines, the biomass industry appears to be gaining steam.

---

**Re: Introducing myself - Kentucky**  
**by Joe**  
Wed Mar 20, 2013 6:39 am

Tom, as you may know, we in Mass. had a war over biomass-- when some biomass plants were going to be built, opposition arose- then the state hired the Manomet Institute which produced the infamous Manomet Report, which proclaimed the world that burning wood is NOT carbon neutral- hence, the state killed off biomass- at least it decided it won't offer RECs, without which the biomass industry won't happen. At first, though I've been a forester for 40 years, I was skeptical of biomass, listening real hard to the opposition- but after I saw the nice work being done by biomass harvesters, I changed my mind. I still appreciate Manomet's suggestion that burning wood is not carbon neutral, at least in the short term- but the silvicultre that can be done when the logger WANTS to cut all the "junk" wood- is really amazing. In Mass., like much of the country, we've had the problem of no market for low value wood- further north, there was a pulp market, but that's dying off. We do have a single small biomass power
plant in north central Mass. built 20 years ago.

The state instead is now pushing solar and wind - but it's being wrong - most of the solar is solar "farms" which are hideous, but I won't get into that at this time.

Joe

**Re: Introducing myself - Kentucky**

*by dbhguru » Wed Mar 20, 2013 9:47 am*

Tom,

Welcome to NTS. We are always very pleased to have professionals such as yourself join the ranks. We have people of every background on board and take pride in our inclusiveness. I'm particularly pleased that my friend Joe Zorzin has someone with experience to talk to about biomass, although as I'm sure you recognize that we're basically into non-economic tree interests. That said, there are plenty of foresters, forest ecologists, arborists, etc. who are members. We look forward to your participation. Again, welcome aboard.

Robert T. Leverett

**Re: Introducing myself - Kentucky**

*by Tom Kimmerer » Sun Mar 24, 2013 8:48 pm*

Thanks, Bob and Joe. Joe, this is outside the scope of this site, but I will just quickly say that 1) the Manomet study was deeply flawed (I did a detailed analysis for a client); and 2) Biomass harvesting, by placing a price on low-grade logs, could be the best thing to happen to forest health here in Kentucky. Right now, you can't sell a log smaller than about 14", and with rare exceptions, all the logging in this region is high-grading. I hope that we can use biomass harvests to greatly improve forest management.

**Nemophilist**

*by edfrank » Sun Mar 24, 2013 10:44 am*

Nemophilist

*(n.) a haunter of the woods; one who loves the forest and its beauty and solitude*

Ne-moph'i-ly noun [ Greek ne'mos wooded pasture, glade + filei^n to love.] Fondness for forest scenery; love of the woods. [ R.]

Found op [http://www.encyclo.co.uk/webster/N/13](http://www.encyclo.co.uk/webster/N/13)
Town Creek, GA

by Jess Riddle » Sun Mar 24, 2013 1:10 am

Ents,

Hikers along the Appalachian Trail in north Georgia briefly walk along the edge of the Town Creek watershed. From rock outcrops on Cowrock Mountain, where they first encounter the watershed, they can look south down the watershed, out of the mountains, and into the Piedmont. Hikers can also veer off the Appalachian Trail, and walk down the watershed on the old Logan Turnpike Trail. The turnpike, a major toll route from the Piedmont into the mountains in the 1800’s, ran up the Town Creek valley and through the deep gap at the head of the valley that separates Cow Rock from Wildcat Mountain.

The watershed caught my attention, because the LiDAR data for the area showed a curious pattern; the forests on south facing slopes are taller than those on north facing slopes throughout the watershed. In the northern hemisphere, the greater shade on north facing slopes causes them to retain more moisture, so they typically support taller forest. Hence, the pattern in Town Creek seemed strange. I decided to investigate the two tallest stands in the watershed in hopes that they would support unusual herbs and uncommon trees.
View from Cowrock looking across the Town Creek watershed

To access the first stand, a southeast facing ravine, I went out over the rock outcrops on Cowrock and noted several nutrient demanding plants in the area along with some of the rare plants that make outcrops a botanical destination. After dropping a thousand feet in elevation and navigating around a trickling waterfall and associated cliffs, I found myself in a sheltered, nutrient rich forest. The thick layer of spicebush in the understory and abundance of green violet (uncommon in GA) in the sparse fall herb layer suggested the richness of the soil. Above them, tuliprees dominated with few individuals of other species, and they reached just over 150’ tall. No other trees of note or rare herbs grew in the stand, at least not in the fall, but curiously, all of the tall tuliprees grew on the south facing side of the cove while oaks, hickories, and less mesophytic species dominated the east facing slope.
Coralberry (*Symphoricarpos orbiculatus*) among the rock outcrops

Wet weather waterfall
I continued down to Town Creek, but when I first saw the damage from the previous year’s tornado, I thought the trail had been abandoned. In fact, maintenance crews had cut their way through about half a mile of flattened forest to reopen the trail.
The tornado also felled the tallest LiDAR hit in the second stand, but most of the stand was intact. In terms of composition and height, this stand in a narrow west facing cove resembled the first stand, though green violet was lacking. Where the productive forest extended out of the cove and onto a southwest facing slope below some steeply sloped rock outcrops, a few more oaks mixed in with the tuliptrees. Across the cove, the northwest facing slope was chestnut oak dominated with a mountain laurel understory indicating drier and poorer soil.

I’m still not sure how to explain the occurrence of tall forest on south and even southwest facing slopes without corresponding tall forest on north facing slopes. Most of the rock outcrops also occur on the south side of ridges, so perhaps water, soil, and nutrients are washing off of them and collecting below.
Maple-leaved viburnum

Jess

**Hapgood Wright white pine remeasured 3/22/13**

by Andrew Joslin » Sat Mar 23, 2013 6:43 pm

I revisited the Hapgood Wright white pine on Friday 3/22/13. I made two measurements from roughly opposite sides and got the following:

1. 131.6'
2. 131.1'

I think the slightly taller measurement is good, maybe Doug Bidlack can revisit and see what he gets.

For CBH I got 12.8'.

Measurements from April 11, 2010:

12.69' girth
130.16' tall

After an excellent lunch of fish tacos in Concord center I returned to the tree and put a line in to go up and take a look around. What's impressive is there was no major crown damage from the series of severe storms that have hit the area in the last 3 years since Doug and I measured it. The tree is a beast! It stands alone above everything else on the site, takes what nature gives it and shrugs. There is a tree covered ridge just to the south which no doubt has helped this tree maintain its height. At the top of the tallest leader the trunk is quite substantial, not the graceful tapering spires you'll see in the tallest western Massachusetts white pine. It's clear the top has broken many times over the years, the topmost trunk changes to a 45 degree angle very similar to Thoreau in Monroe State Forest. I was happy NOT to be doing a tape drop measurement, the wind was up enough that there was quite a bit of movement, I did not want to explore the last 15-20' to the very top.
The impressive trunk flare is concealed by snow

Mighty trunk
Great crown spread near the top, the center leader is the tallest.
Tied in on the last 15’ or so to the top
View from the top looking north over mostly red maple in a wetland
All the photos from the visit

Andrew Joslin
Jamaica Plain, Massachusetts

Re: Concord Mass. 130' white pine 4/11/10
by dbh guru » Sat Mar 23, 2013 6:52 pm

Andrew, Congratulations! That is a really big white pine. The 131.6-foot height is very respectable. I hope you can document more great whites in the eastern part of the state that exceed 130 feet.

Maybe one weekend you can come over here and you and Bart can climb the big double up Broad Brook. BTW, I'm up to 19 pines over 130 feet growing along the Broad Brook corridor.

Robert T. Leverett
Re: Concord Mass. 130' white pine 4/11/10

by AndrewJoslin » Sun Mar 24, 2013 9:33 pm

Joe Zorzin wrote: presumably that tree was the victim of the white pine weevil? Or is it old enough that the damage happened before the weevil? I have no idea when the weevil first arrived or has it always been here?

Pissodes strobi (White Pine Weevil) was described in 1817 by William Dandridge Peck, professor of natural history and botany at Harvard University. It is found in Europe, Asia and North America, I can't find any information about whether it is introduced or native to North America.

White Pine Weevil is native. This paper addresses why WPW is successful in some white pine and not in others.

http://www.na.fs.fed.us/spfo/pubs/fidls/wp_weevil/wp_weevil.htm

White pine in mixed hardwood stands is much less susceptible to WPW. Open grown young white pine especially following clearcut or severe burn or other major clearing is very susceptible to WPW.

There's a large and youngish (maybe 35-40 year-old) stand of white pine on conservation land in Northborough, Mass. 100% of the pine in the stand are heavily multi-leader trees, most of the leader division is very close to the ground. I imagine the land was completely cleared, it is mono-culture white pine. In an adjacent dominant red oak mixed stand there are several very straight single stem white pine with no signs of weevil damage. It appears that mono-culture white pine stands have to be carefully managed from the ground up to prevent weevil attack. In more "natural" scenarios, ie: mixed stands weevil seems to be much less of a problem. The paper has more interesting info, for example white pine in any kind of shaded habitat are less susceptible to weevil attack, the WPW likes elevated temperatures at the terminal buds to lay eggs. Additionally the adult weevils are stimulated by UV light to fly to find new host trees, in a habitat shaded by hardwoods or large white pine the weevil breeding flights are suppressed because they don't get that UV stimulation.

Based on the limited research I've done on the subject, it appears that WPW is a problem because of human land use and logging practices. In an "unmediated" landscape the weevil is just another cog in the ecological machine, not a problem.

The paper also mentions the unfortunate negative confluence of the introduced white pine blister rust with white pine weevil. If it was just the weevil attacking white pine it would be much less of a problem.

-AJ

More Troubling News about Neonicotinoid Insecticides

by Josh Kelly » Mon Mar 25, 2013 1:48 pm

Check out this article by the American Bird Conservancy. Apparently, it's not enough to test chemical toxicity on bobwhite quail and mallard ducks, alone. Claims of toxicity to songbirds are supported by a 200 page report. I haven't had time to wade through this, but the evidence does seem to be mounting that agricultural use of neonicotinoids is a toxic practice. I continue to be troubled that the most effective tool for saving trees from non-native insect pests has so many downsides to it.

http://www.abcbirds.org/newsandreports/releases/130319.html
Re: More Troubling News about Neonicotinoid Insecticides
□by Jamesrobertsmith » Mon Mar 25, 2013 3:02 pm

It's looking bad for that most effective of tools. Of course the best tool for many pests was DDT and society had to face the fact that it was dangerous and had horrid effects for the various ecosystems into which it was introduced. The same could be said for the Neonicotinoids.

Re: More Troubling News about Neonicotinoid Insecticides
□by Will Blozan » Mon Mar 25, 2013 6:39 pm

Josh,

I do hope that the "powers that be" who ultimately decide the restrictions for use of neonicotinoids will realize that the work to save hemlock and ash is an infinitesimal fraction of the worldwide and domestic US use of the products. Furthermore, the use of birds of those species is likely minimal and the benefits of a healthy hemlock forest would far outweigh any possible negligible impact on birds.

Will

Giant Sequoias Face Looming Threat from Shifting Climate
□by Joe » Fri Mar 22, 2013 7:52 am

"Giant Sequoias Face Looming Threat from Shifting Climate"

http://e360.yale.edu/feature/giant_sequoias_face_looming_threat_from_shifting_climate/2631/

Re: More Troubling News about Neonicotinoid Insecticides
□by Andrew Joslin » Mon Mar 25, 2013 9:01 pm

Yep, it's too bad that the stuff is so heavily overused in agriculture, doesn't help the highly targeted use on hemlock. Nobody in politics or public policy likes subtlety and gray areas.

With hemlocks going out of the ecosystem I worry about the bird species that depend on them. In winter black-capped chickadee does a lot of foraging on hemlock cones. On the ground ruffed grouse takes shelter under hemlocks when snow cover is deep and they feed on cones/seed on the ground. In eastern Massachusetts black-throated warbler nests primarily in eastern hemlock. Last 5 years BT warbler is pretty much gone from my local woods as the hemlocks severely declined. Never mind all the other ways hemlocks help the local ecosystems, for one keeping small brooks and streams shaded and cool, makes the trout and other stream inhabitants happy.

There could be issues with any of these co-related birds and fish being effected by treatments for adelgids. It's a wash anyway since the hemlock as a viable ecosystem component is on the way out. Their "dependents" will suffer much more from the loss.

-AJ

Re: Giant Sequoias Face Looming Threat from Shifting Climate
□by Don » Sat Mar 23, 2013 4:37 pm

Joe-

Good article, with citations I'm familiar with and have used in the past (including one of our newest members, Craig Allen!). I think in general their comments are carefully crafted and solid. However, you'll notice that they refer to human observations,
naturally measured in hundreds of years, and the "tree observations" which are measured in thousands of years...a difficult concept for most of us to wrap our head around.

For me in studying the ponderosa pine forest ecosystems of the Southwest, an epiphany was that in the first decade after 1900, a series of climate changes occurred in what amounted to a "perfect storm". What I mean to say is that a sequence of ground warming, well-timed and burgeoning moisture events combined to provide excellent seed viability and growth, and was followed by optimum climatic conditions for growth for 7 or 8 decades. For foresters (and others!), that was a good thing.

The bad spin on this was that the public, and their servants the USFS, BLM, NPS at the same time began a fire suppression policy (however right-hearted, it was wrong-minded at the time) that furthered the nursery-like conditions, eventually leading to a surge that led to "dog-haired forest regeneration", resulting in unnaturally high stand densities. Worse, the lower canopy of regeneration provided a fuel ladder which allowed the frequent lightning strikes to lead to crown fires, which in the presence of the monsoonal pattern of mid-summer lightning/precipitation (or not) events. This led to increasingly catastrophic fires, that are perhaps further influenced by the current change in climate.

All this to say, it's good to be thinking about what we might do to in some way mitigate changes that are inevitable, but we need to be able to step back and take the long view.

Or to encourage continued comments, hey the redwoods and the bristlecones are millenial specimens, and they HAVE seen the current changes and worse...they are likely (anybody wanta take odds) to pursue another millennia. Or two...-Don

Just one of many bristlecones exhibiting their own version of 'conservatism'...

Don Bertolette

Ancient Giant Trees Found Petrified in Thailand

by edfrank » Sun Mar 24, 2013 10:50 am

Ancient Giant Trees Found Petrified in Thailand
Mar 20, 2013 06:26 AM ET // by Larry O'Hanlon

Narareet Boonchai just wrote that these incredible fossil trees in northern Thailand are still in need of protection - they are world's longest continuous fossil trunks ..... and they are legumes, not conifers.

Does anyone have any suggestions for how best to conserve this site -- does anyone have experience with establishing Geoparks? which conservation organizations might be appealed to?

Edward Frank
Re: Ancient Giant Trees Found Petrified in Thailand

by Jess Riddle » Sun Mar 24, 2013 12:52 pm

Ed, Interesting article. It’s always nice to have a little more information of where trees reach extreme heights. I’m curious about the climate of the area at the time the trees grew since it could be significantly different from today’s.

If there were as much interest in tree height and preservation 100 years ago as there is today, we might still have Koompassia’s that tall. Roman Dial documented Koompassia nearly that tall in Borneo, and all the best lowland sites there have been converted to agriculture.

I believe Koompassia excelsa is the tallest deciduous species in the world (Shorea faguetiana is evergreen, right?), so it’s always surprised me that Koompassia haven’t received more attention for their height. “Deciduous tree” seems like a broad enough and important enough category to catch people’s attention.

Thanks for posting.

Jess Riddle

Re: Ancient Giant Trees Found Petrified in Thailand

by edfrank » Sun Mar 24, 2013 3:05 pm


In a series of expeditions beginning in 2005, Brett Mifsud, Tom Greenwood, Roman Dial and local guides Rosli/zan and Siudi collectively rewrote the record book for tallest tropical trees. Mifsud apparently was the first to find and point a laser at 88.32m (290 ft) "Poko gergasi", a Shorea faguetiana, which is a member of the diptocarp family.

Re: Ancient Giant Trees Found Petrified in Thailand

According to a book I have on Danum Valley, the record height for a Koompassia excelsa is stated as 89 meters tall (Richards, 1996). I don't know how true/accurate this record is, but this would make it the tallest tropical tree in the world, slightly surpassing the 88.32 record set by the Shorea faguetiana.

Directly quoting from the book:

Giant trees recorded in Sabah include an 89-m-tall Koompassia excelsa (Bean family, Leguminosae; Richards, 1996), another huge specimen 88 m tall and 2.7 m in diameter, and a colossal specimen of Shorea superba (Dipterocarpaceae), with a total height of 75 m, a clear bole of 27 m, and a girth of 9.5 m at 4 m above ground (equivalent to 3 m diameter) (Ashton, 1982). It is because of surpassing...
timber volumes that the forests of Malesia have suffered from the most logging impacts in the whole of Asia.

Since practically the whole of Borneo has been turned into a giant timber yard, and now, an enormous oil palm plantation, we will never know just how tall they could grow, given the right conditions. If action was taken 50 years ago, we might still be able to save significant tracts. The best area for these giants was eastern Sabah, with volcanic basalt soil, now mostly turned into oil palm (and logged beforehand).

Darrin Wu

Re: Ancient Giant Trees Found Petrified in Thailand
by edfrank » Mon Mar 25, 2013 2:29 am

Darrin,

The Tropical Rain Forest An Ecological Study, 2nd Edition
P. W. Richards, University of Wales, Bangor

"The first edition of The Tropical Rain Forest is firmly established as one of the classics of botanical literature. In this new and completely revised edition, Professor Richards provides a personal view of the field, based on over sixty years involvement in rain forest ecology. Climatic changes and human pressures have a major impact on the rain forests and it is now possible to see the possibility of their complete destruction. This book represents an important record of the rain forest in the twentieth century." http://www.cambridge.org/gb/knowledge/i... cale=en_GB

Here is an excerpt from the Richards Book containing the table of tall trees:

[richards1996_excerpt.pdf]


http://www.wondermondo.com/Countries/Au/Papua/Morobe/BuloloKlinki.htm

It is not known whether currently there exists 88.9 m tall (or taller) Klinki pine - but it existed in 1941. Back then such a tree was measured and later mentioned in a classical ecology book by Paul W.Richards "The Tropical Rain Forest: An Ecological Study" which was issued in 1952. Since then the fact that such a tall araucaria might exist in Papua New Guinea has been repeated in many scientific works, notably in article by Gray B. (Size composition and regeneration of Araucaria stands in New Guinea) in 1975. There is little doubt that klinki pine is the tallest of all araucarias. This tree grows in Madang, Morobe and Eastern Highlands Provinces of Papua New Guinea, in mountain sides and ridges. The wood of klinki has outstanding qualities and this beautiful araucaria is widely exploited, it is cut also by slash&burn agriculture. As a result this tree is becoming more rare and nowadays natural stands can be found in more remote areas. These trees are very impressive. Average diameter of klinki in oldgrowth stands is 200cm and more! Trees in such stand are at least 55m tall, often exceeding 70m height. The fantastic 89.9m tree was measured near Bulolo. Currently in Bulolo has been established an important forestry industry with large plantations of
klinki pine. Happily natural stands of this tree are not too rare. Wondermondo has marked a beautiful stand of klinki pine in Wau Gorge some 15km from Bulolo. No one knows whether there are 90m tall trees - but it is definitely worth to check it out!

Edward Frank

Re: Ancient Giant Trees Found Petrified in Thailand

I'm interested in the geology of the site- is that really bedrock or a hard packed alluvial deposit? If the latter, then how can the trees be petrified? If the former, that's a huge job digging out something that huge. And, how did they discover that the site had these trees buried? I'm going to remain a bit skeptical until I can read a scientific report on this discovery. If they really are fossilized - I wouldn't think they'd need much protection from the weather, the way an archeological site does- after all, it's stone- just a fence around it should do the trick.

Joe Zorzin

Re: Ancient Giant Trees Found Petrified in Thailand

Most petrified wood is formed in deposits of volcanic ash and/or alluvial deposits. Mineral laden water replaces the the wood with precipitates from the solution. The decay itself creates an anoxic that will cause some minerals to drop out of the solution as precipitates, most notably silica as both gels and crystals. The other petrified wood often found is actually preserved real wood that has been buried in a swamp in clay sized sediment. There is some mineral replacement, but actual pieces of the original wood material may remain. The process that forms the petrified wood is very similar to that which caused concretions to from around many plant or animal fossils. The decay of the organic matter causes a reducing environment in the immediate vicinity of the fossil itself leading to the precipitation of silica and often ferrous and opposed to ferric iron minerals. As for compacted alluvium of bedrock, the distinction between the two is variable and often depends on the use being made of the material.

Edward Frank

Cloud Mapping of the LaPine Ponderosa Pine, OR

I just processed the point cloud from recent pictures taken by Ascending the Giant and Terry Asker. From 37 images I get a good lower bole point cloud included the sign. When you look down the barrel you can clearly see LaPine was two trees that fused a long time ago. This cross-section has the classic "heart shaped lobes". Just like Drury Tree. See attached JPG images of Meshlab point cloud. You can download meshlab at http://meshlab.sourceforge.net/

This is the best open source and free 3D graphic view by far that I know about.

Michael Taylor

WNTS VP
http://www.landmarktrees.net
American Forests Big Trees Coordinator For California

la pine meshlab. Need to download meshlab to view this

(l584.42 KiB) Downloaded 1 time
trunk side view point cloud with sign

lapine giant looking down bole with Meshlab
Re: Cloud Mapping of the LaPine Ponderosa Pine, OR

by Rand » Tue Mar 26, 2013 9:31 pm

Here's an overall picture I took while visiting in 2010. Big tree.


Re: Ramsey Cascades, GSMNP

by Rand » Tue Mar 26, 2013 10:07 pm

With just a bit of adventurosome clambering about on the rocks below the falls one can get decent pictures:
The other visitor was probably put off by the sign with a running tally of how many people have died trying to climb on the falls (It’d be such a nuisance to change the sign)

Anyway a few other pictures of the hike:
Wood Science 101 (8) - Wood Species Identification and Microphotography
by Chuck Ray
http://gowood.blogspot.com/2013/03/wood-science-101-8-wood-species.html

...This was all brought back to me by the following series of videos. A distinguished member of the International Wood Collectors Society, that very same group I visited last month at their Florida convention, has posted these videos demonstrating a technique he has developed for preparing and photographing wood samples under magnification. His name is Jean-Claude Cerre, and his photographs are stunning. The videos are freshly uploaded, and according to YouTube, have only been viewed by a couple of hundred folks. So you, Go Wood reader, are among the very first in the world to see these wonderful images.

Macrophotos of cross section of Woods by Jean-Claude CERRE part one
http://www.youtube.com/watch?v=CuFCfzm5BdU

Since the samples are all identified in the video by their scientific names, I thought you would like an easy way to reference them to their common names. Here is a list of the samples in the order they are shown, with their common names.

Re: Wood Species Identification and Microphotography
by Joe » Wed Mar 27, 2013 6:51 am

such micro photos of wood are not new- I took a course in "wood technology" in the late '60s- our textbook has hundreds of such photos but in black and white and without the music the whole purpose of the course was to study the cellular structure and chemistry of wood- to better understand the use of wood. Joe Zorzin
St. Joseph Plantation Live Oaks
Vachriere Louisiana

by Larry Tucei » Sat Mar 23, 2013 4:48 pm

NTS- St. Joseph Plantation In addition to the Manor Home, we have numerous outbuildings for you to explore. These include original slave cabins, detached kitchen, blacksmith’s shop, carpenter’s shed, and schoolhouse. Several buildings have been moved to their present location from another part of the property, but most remain exactly where they were built. Composed of 2500 acres (including our “sister” plantation, Felicity), our property stretches back from the Mississippi River as far as the eye can see - and beyond! is one of the few fully intact sugar cane plantations in the River Parishes. St. Joseph Plantation has several large Live Oaks in the 150-200 year old class. I had made arrangements to come down and help them Document the trees growing there. I had previously documented their other Mansion- Felicity, a few weeks ago and all eleven of the Live Oaks that I measured at the properties are around the same ages. The Mansion was built in 1830 and I would estimate the trees would have been planted about that time, making them somewhere around 183 years old. I measured six Live Oaks at St. Joseph and five at Felicity. All eleven Oaks are registered on the Louisiana Live Oak Society listing and all are named. One more tree making the listing twelve broke in half a few years ago and has been cut to ground level. It most likely was a hollowed multi-trunk tree looking at the stump. The growth rates were hard to read somewhere near .125-.25 radial per year and I collected a small piece of trunk to get a better estimation, more on that later. http://www.stjosephplantation.com/ The names of the Oaks are as follows, Stan Jr., Joseph Waguespack, St. Joe Oak, Simon, Jean Baptiste, Theodore, Emile, Omer, Saturnin, Felicity, Waguespack, and Stan Sr. They are numbered 3839 through 3868 on the Louisiana Live Oak Society listing and I will be helping them figure out which tree is what name in a future project, the locations have been misplaced when re-opened to tours a few years ago. I’ll call them Oak 1-6 for now starting with #1, CBH- 22’ 5”, Height- 63.5’ and Crown Spread-137.5’ x 148’. This Oak is really a fine specimen growing west and north from the Mansion about 200 yards. Oak #2 CBH-20’ 4”, Height-61.5’ and Spread-101.5’ x 114’ Oak #3 CBH- 21’ 9”, Height-70.5’ and Spread- 126’ x 123’ Oak #4 CBH-20’ 3”, Height-63.5’ and Spread-131.5’ x 136.5’, Oak #5 CBH-20’ 1”, Height- 49.5’ and Spread-84’ x 90’, Oak #6 CBH-22’ 6”, Height-61.5’ and Spread-106.5’ x 135’. The Live Oak retains its leaves throughout winter then in early spring they shed the old leaves and regenerate new ones as in all the photographs, thus the name Live Oak. I look forward to returning to south Louisiana and the St. Joseph area later in the spring for many more Live Oak discoveries. Larry St. Joseph Mansion
Oak 2

Oaks 2 & 3 and I'm standing under 3
Oak 4

Oak 4
Oak 5

Oak 5
Oak 6

Oak 6
Re: St. Joseph Plantation Live Oaks Vachiere Louisiana
by dbhguru » Sat Mar 23, 2013 6:58 pm

Larry,

I just ran a photo measurement of you and Oak #4.

<table>
<thead>
<tr>
<th>Oak #</th>
<th>Ref</th>
<th>Act/Measured</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.26</td>
<td>0.04</td>
</tr>
<tr>
<td>Target</td>
<td>0.2</td>
<td>2.4</td>
</tr>
</tbody>
</table>

Re: St. Joseph Plantation Live Oaks Vachiere Louisiana
by Larry Tucei » Sat Mar 23, 2013 8:44 pm

Thanks Bob- Your photographic measurements are becoming so accurate soon I won't have to measure them anymore. Hahahaha! Amazing formula! The listing is now at 220 Live Oaks with a CBH of 19' or greater. Louisiana has the most at 94, with Ms. at 84, Ala. 25, S.C. 8, Fla. 8 and Georgia 1. The trees in S.C. and Ga. were measured by other NTS members mostly Eli Dickerson. I have added many Live Oaks to the listing lately and have an appointment in the next couple of weeks with the owners of Evergreen Plantation in Edgard La. that will produce several new members. Louisiana by far will have the largest and most Live Oaks in the country. I'm almost positive that the number of 19-20' CBH or greater from Louisiana will someday reach 150-200. Ms will have a few more as well as Ala., Ga., S.C., and Florida should have many. I high-lighted the latest trees added to the listing from St. Joseph Plantation.

Larry

[View this file: Copy_of_Copy_of_Live_Oak_Project_20070524.xlsx]

Detailed Listing

[View this file: Live_Oak_Project.xlsx]

Live Oak Listing
Re: St. Joseph Plantation Live Oaks Vachiere Louisiana

by Jess Riddle » Mon Mar 25, 2013 5:57 pm

Larry, Thanks for posting the spreadsheet with all the live oak measurements. It's really helpful to have them all compiled like that and to see which ones are single versus multi-stem.

You used to list a tree from Audubon Park as the largest single stemmed live oak, 35'2" cbh. I don't see that tree in the latest listing. Did something happen to it?

Jess Riddle

Re: St. Joseph Plantation Live Oaks Vachiere Louisiana

by Larry Tucei » Tue Mar 26, 2013 2:02 pm

Hi Jess- That Live Oak at Audubon Park was on Dr. Stephens original 1935 Live Oak Listing of 43 and is the largest Live Oak there. Originally named Etienne de Bore Oak it is now called the Tree of Life. When I first measured it back in 07, at 4' 6" there was a buttress, so later I went back re-measured it in 08 and got 30' under the buttress. I updated the list to reflect that different measurement, it's # 10. It may have a long limb but I don't recall what the length was. The next time I go back down to Audubon I'll re-measure it.

Larry

Re: St. Joseph Plantation Live Oaks Vachiere Louisiana

by Jess Riddle » Wed Mar 27, 2013 2:57 pm

Hi Larry, Thanks for the info. So the Walkaih Bluff Oak is now the largest diameter single-stemmed live oak?

I've attached a reorganized version of your spreadsheet. I wasn't planning to reformat it, but I needed to for a new ranking system I'm toying with. I changed all the measurements to numbers rather than text, so that they can now be used in calculations.

Jess

Live_Oak_Project_20070524_JRed.xlsx

Trees I've Loved, Trees I've Lost

by edfrank » Wed Mar 27, 2013 4:56 pm

First published: Thursday 14 March 2013

Almost everyone can remember their favourite tree—one they climbed in childhood, or which stood for generations in a nearby park or forest. Producer Gretchen Miller is preparing a special ABC RN radio documentary exploring our relationship with trees, and has been collecting stories from ABC listeners about trees they've loved, and sometimes lost. She is accepting submissions through ABC Pool until May 17. http://pool.abc.net.au/projects/trees-ive-loved-lost
Boy Scout Tree, Jedediah Smith
Redwoods State Park

by Rand » Tue Mar 26, 2013 10:54 pm

The hike to the Boy Scout tree is a nice 5.2 mile out and back hike:

Right away the Trailhead on Howland Hill Road is surrounded by car sized trees:
The whole hike is pretty epic, with this scene being typical along the trail:

After much hiking, if you are careful, you'll notice a huge crown looming above the trail, even though the tree itself is hidden by brush and intervening trees:
Finally the Boy Scout tree Itself
Re: Boy Scout Tree, Jedediah Smith Redwoods State Park

Joe wrote: I hiked on the Boy Scout Trail (?) back in '92. I didn't realize that at the end was the Boy Scout Tree. My photos came out a bit dark too - the trees are just so big and dense - it's really dark on the ground. Next time, I'll bring along some powerful lights for better photography. At one spot I hiked off the road a few hundred feet and almost felt lost - the duff was extremely thick, I was afraid of alling through - must be thousands of years of organic matter on the ground - I presume when a fire burns that off, the ecology become drastically different. I wonder if any studies of this have been made?

Joe

Re: Boy Scout Tree, Jedediah Smith Redwoods State Park

There's a spot in Jed Smith west of Boy Scout tree trail that's evident of a more recent fire, within, say, maybe 150 years. Maybe 10 acres of area. But it's pretty interesting, and still pretty open on the ground, almost Avenue-of-the-Giants like. Not sure if you need lights. How about a light tripod and a good lens?

@ Rand ... Attached is a shot I took last trip. Someone's lost glasses at Boy Scout Tree trail.

M. D. Vaden of Oregon

Re: Boy Scout Tree, Jedediah Smith Redwoods State Park

To actually get to the base of the tree you have to take a unofficial looking cowpath off the main trail. Since the tree is invisible from the main trail it is easy to dismiss it and keep on walking, like I did. That long ago the cowpath might not have existed.

The biggest problem I have with taking pictures under trees is the range of light to dark between the sky and the ground. The best tactic is to take pictures in the morning/evening when the sky isn't so bright (It's why my 5th shot looks a little funky). Alternatively one can take multiple exposures and composite them digitally. Indeed some of the newer cameras have an 'HDR' mode that will do this automatically in camera.

One of the stories in John Preston's 'The Wild Trees' tells the story of someone falling out of a redwood and literally punching a crater into the duff. He describes how a cloud of water droplets or dust shot out, like the unfortunate climbers spirit leaving his body. Luckily the fall was relatively short and the guy was fine.

Rand Brown
Aerial Surveying For Tall Trees With UAVs

by M.W.Taylor » Mon Mar 25, 2013 11:11 pm

Mike Hanuschik and I just returned from the Fetzer Ranch (home of the tallest valley oak) testing glorified RC planes with full auto-pilot control.

I have found the delta wing to be the most efficient of all the micro UAV platforms. With my 1.6m delta wing I can easily achieve flight times of 1 and 1/2 hours with a 5,000mah battery. Range is 30+ miles conservatively speaking for the 1.6m delta wing. The auto-pilot board has a 3D axis accelerometer, compass, barometric pressure sensor and a GPS embedded into the board. The flight path is programmed prior to each mission, or during flight using a telemetry module and 3DR serial data radio.

Another version I have almost finished building will go 60 miles on a single battery pack. This opens up the ability to explore any remote forest quickly and efficiently. The planes so far have proven reliable. Their brushless DC motors do not get tired. The controls are relatively simple and robust. The most likely failure point is servo horn breakage, sudden severe weather, operator error by planning the mission with an obstacle in-between waypoints such as radio tower etc. You must either fly over or go around.

Canopy height models are obtained by the following process.

1) find tall remote forest that can't be accessed
2) pre-plan mission using Google Earth and waypoints with altitude for each. Make sure to verify altitude and ground level between waypoints with automated verify height tool. Use coring approach to climb and descend out of tight canyon areas.
3) launch RC plane with auto-pilot initialized and ready. Once RC plane is safely in air after manual launch and above stall speed, the autopilot switch is flipped. Plane then abruptly changes direction and throttle for best path to first programmed waypoint. It will fly through these way point with high degree of accuracy. The tolerance can be set for how close the waypoint must be flown by. The GPS I am using now is accurate to +,- 2.5m. If the plane gets bumped off course by wind or solar flare GPS disruption and is unable to make the makepoint within the tolerance, it circles around and returns until it achieves the waypoint flyby within the pre-selected tolerance.
4) trigger downward pointing camera photoburst at desired waypoint areas and times of suspected tall trees (the camera is stabilized and always points straight down and has GPS data embedded)
5) use these photo bundles of canopies to generate point clouds (I use Photosynth. A free service)
6) determine scale of raw point cloud using photometry and rescale point cloud to reality
7) remove parasite pixels from point cloud
8) convert raw point cloud to DEM (digital elevation model)
9) pick out the tallest trees on the DEM. They should be within 5-10 feet of actual height if the point cloud and ground interface is properly calibrated.
10) go in there and measure them if tall trees are found on the DEM. Otherwise dismiss the area.

After the mission is flown the UAV will either return to the launch site and circle around at a preselected altitude (waiting to be switched to manual mode and landed) or can land by itself with a pre-selected landing path. The auto-land feature can place the UAV in any remote open field for crash free retrieval.

Warning to those who might build and fly these. You need an FAA license to fly these over 400 feet above the ground or any RC plane over 66 lbs.

Michael Taylor
WNTS VP
American Forests Big Trees Coordinator
http://www.landmarktrees.net
multi waypoint mission with altitude above ground fixed at 100m

Ben Launching the Stratos Twin Engine. Long range and fast speed for a little plane.

1.6m delta wing being retrieved after a long flight

the Delta Wing has no landing gear. It is hand launched

the 1.6m delta wing has no landing gear. Must be hand launched. This thing stays up in the air for a ridiculous amount of time!

Delta Wing with AutoPilot module inside canopy
Phoenix Launch. This thing leaps right out of my hand with its 600 watt brushless motor and 10x6 propeller.

100+ mph fly-by of the Phoenix at 4m above ground. See white blurr at left top? I think this plane can reach a 10 mile away waypoint in about 5-6 minutes.

Ben with the Phoenix 1.6m. It has been retrofitted with a monstrously oversized motor with so much power you can fly side-ways using the rudder to elevate and elevator to steer. (a "knife maneuver")

pre-flight mission planning
Re: Aerial Surveying For Tall Trees With UAVs

by Bart Bouricius » Tue Mar 26, 2013 9:42 am

Michael, this could be a very cool tool in the Amazon basin. I don't know what sort of regulatory requirements would be needed, but I am thinking I know some interesting places to check it out both in flood plain and ravines. When can you go?

Seriously, this is an astounding tool which is one way to survey promising locations without having to depend on random LIDaR surveys etc., at least in small areas.

Bart Bouricius

Re: Aerial Surveying For Tall Trees With UAVs

by M.W.Taylor » Tue Mar 26, 2013 2:46 pm

Bart Bouricius wrote: Seriously, this is an astounding tool which is one way to survey promising locations without having to depend on random LIDaR surveys etc., at least in small areas.

Bart, I believe this tool is everything you are hoping for. You can easily use these in stealth without garnering attention. Just launch and fly a normal looking RC plane. Then just flip a switch. You can walk away at that point. The computer is now in control of the plane. It will keep a tight path if you use a good GPS module. I use the GlobalSat Siirf Chip, same as that which is used for the latest Garmin GPS. You can make the UAV fly right up canyons and core out or core in basins (spiral pattern) You can have the UAV return to your launch or auto-land at a remote location for recovery of media. Just make sure your plane is above the tallest tree top otherwise your plane will crash. It does not have forward distance scanning. Not yet anyways.

These are just RC planes as long as you fly under 400 feet and keep weight under 66lbs. Some countries do not allow flying blind with autopilot or you must be in eyesight or telemetry link distance. Also certain frequencies are restricted per country and continent. For the most part however there are no restrictions (USA included) except the telemetry frequency for the 3DR radio, 433 mhz Europe/Africa/Australia/Asia and 915 mhz USA, Canada, Mexico, South America. New laws are now being drawn up to restrict usage in the USA. There is a window to operate now with few restrictions. I would not for instance fly over a military base or private property without the owner's permission.

I can find no regulations for use in national forest lands except to keep the UAV under 400 feet and under 66lbs. Forest rangers might insist you get a permit should they see you flying one of these. You know those guys, they like to be in control. They don't like renegades in the forest freely mapping without supervision. That would be just too empowering for one individual for them to tolerate.

I have replicated the Ebee, but with longer range. My software is the same Google Earth interface. My UAVs are much larger so they go further and carry heavier cameras and more batteries.

http://www.sensefly.com/products/ebee

Whatever you do, please for God's sake DO NOT pay $12,000 for that thing ! I can build you one for under $2,000 that has 2x the range and 3x payload. Better mission planner software package too. The Ebee can't point cloud map outside telemetry range (1.5km) and the software locks out the feature where you can fly full autopilot outside a radio link. My UAVs can point cloud map without a telemetry link and can be programmed to fly beyond the link range 100% autonomously.

If you are interested in this technology email me your phone # and we can talk further. I can either train you on the use and lease or sell a few of these, or come out there and map with you. Do you have RC flying experience ? Sounds very interesting.

Michael Taylor
Re: Aerial Surveying For Tall Trees With UAVs

Re: Aerial Surveying For Tall Trees With UAVs

by M.W.Taylor » Tue Mar 26, 2013 3:00 pm

Ed, Here is my plan: At the Atlanta conference I will build one of these from top to bottom and then demonstrate its use outside. After the UAV workshop I will donate the UAV built there to ENTS for exploration purposes. You guys will soon have a Drone of Your Own to play with. You'll also know how to build them. Hopefully you can share the one UAV I am going to donate until you build your own.

dbhguru wrote: Michael, We all stand in awe of what you are accomplishing. This is just what Bart needs to survey the Amazon. If National Geographic was on the ball, they'd fund some of your research.

Bob, Thanks for your vote of confidence. Original thinkers generally don't get grant money. Because of my personality I don't get grants or attract the attention of those who give grants for research.

So with that being said I have been forced to be a do-it-yourselfer.

Michael Taylor

New Here- Hello!

New Here- Hello!

by Arla » Tue Mar 26, 2013 10:44 pm

Hello! I am new to this group and to exploring Native Trees in general, but I am very thirsty for knowledge! My interests include Native Medicine as well as modern Ethnobotany- Allelochemicals, bioplanning, folklore and druidism. Early education programs in state parks and botanic gardens are also something I take an interest in. I'm also interested in learning how to climb trees. I'm interested in everything! Looking forward to conversing with everyone!!

Thanks!

Arla

Tree Friends

Tree Friends

by Devin Bily » Sun Mar 24, 2013 6:06 pm

Hello everyone it feels good to be part of such a remarkable organization that is welcomes any being who is interested in native trees. Traveling around the country sometimes it can be hard finding people who are really conscious and passionate about trees and ecology in general; this site makes me feel like I have hundreds of tree friends from all around the world!

I am a 28 year-old student of life with a strong passion towards forest ecology and horticulture. I have been living in northern California for the past two years working for Redwood National Park as a forest technician monitoring Sudden Oak Death (Phytophthora ramorum). This year I am fortunate enough to be working in the Great Smoky Mountains National Park fighting the hemlock woolly adelgid. I have worked in numerous nurseries and have...
personally grown thousands of native trees propagated personally from seed/cuttings I have collected from the wild.

Some of the photos yall have been posting are really beautiful. I really enjoy them. I look forward to talkin tree talk with any of you fine folk or if you are in the Gatlinburg TN area I would always love company botanizing in the woods.

Devin Bily

**Tree climbing photo panorama**

*by pdbrandt » Wed Mar 27, 2013 7:34 pm*

I've been experimenting with the free Photosynth iPad/iPhone app which allows you to create a real time, interactive, 360 degree panoramic picture. Until yesterday all my panoramas where from the ground looking up at tall trees (see for example this post [http://www.ents-bbs.org/viewtopic.php?f=106&t=5023&p=21916](http://www.ents-bbs.org/viewtopic.php?f=106&t=5023&p=21916)).

Yesterday I climbed 65 feet up a 107 foot tall, 10’, 7” circumference American Sycamore and took a true 360 degree panorama - up down and all around in the canopy. It's hard to get all the branches and trunk segments to line up exactly since each panorama, or synth as Microsoft calls them, is composed of 18-22 pictures. This is especially true for the limbs and trunk segments closest to you. My next attempt will be to create a synth hanging from a point closer to the edge of the canopy.

You can see my best of about 5 synths here: [http://photosynth.net/view.aspx?cid=4842a585-8dfd-434f-bcf9-a867059dca12](http://photosynth.net/view.aspx?cid=4842a585-8dfd-434f-bcf9-a867059dca12). When I arrived I found a stand completely dominated by two species: tuliptree and loblolly pine. Loblolly pine is not native to the area. The area is slightly too far inland and high elevation for the species to maintain itself. However, many stands have been planted on forest service land in the area. Most

**Re: Tree climbing photo panorama**

*by pitsandmounds » Wed Mar 27, 2013 9:23 pm*

Patrick, That is a wonderful idea. It transports me there much better than a photo, and gives the freedom to explore unlike a video.

After your original post about using apps to do a panorama, I played around a little bit and did this one of a 47m Serpent Effigy/Winter Solstice Marker built by the Fort Ancient Peoples approximately 800 years ago. The panorama gives a better sense of the place than previous photos I had taken.


I know what you mean on the difficulty of getting the photos to line up perfectly. I tried to do a 360 degree of some massive Sweetgums in front of a building and ended up with some nice abstract art :) - Matt

**Horse Creek, GA**

*by Jess Riddle » Wed Mar 27, 2013 6:20 pm*

Ents, Yesterday I checked out a site that was disappointing in some ways but an interesting surprise in others. I thought I had found a nice stand of shortleaf pine on LiDAR in the foothills of the mountains in northeast Georgia. Shortleaf pine are generally difficult to pick out on LiDAR, because they are consistently shorter than tuliptree and white pine. But the topography, abundance of shortleaf pine in the general area, and aerial photos all pointed to one stand of isolated tall trees as being shortleaf pine.

When I arrived I found a stand completely dominated by two species: tuliptree and loblolly pine. Loblolly pine is not native to the area. The area is slightly too far inland and high elevation for the species to maintain itself. However, many stands have been planted on forest service land in the area. Most
stands are young, on poor sites, or ravaged by pine beetle, but on this site they formed a dense stand of straight, mature trees.

Loblolly pine on lower slopes

Loblolly pine grows as pure stands on the gentle slopes of the south facing watershed. Approaching the stream, loblolly gives way to tulipree, and tuliptree is the main canopy species along the small stream. The lack of other associates in the overstory is unusual for the Southern Appalachains. The next generation of overstory trees waits in the understory and midstory. Most of them are white oaks, but tuliptree, red maple, and a mix of other oaks also grow in the thin shade. Sourwood and flowering dogwood are also common in the understory. The shrub layer consists primarily of dog hobble on the stream banks, Appalachian cane on the lower slopes, and scattered saplings elsewhere.

<table>
<thead>
<tr>
<th>Species</th>
<th>Species</th>
<th>Cbh (in)</th>
<th>Height (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cornus florida</td>
<td>Dogwood, flowering</td>
<td>26</td>
<td>62.0</td>
</tr>
<tr>
<td>Liriodendron tulipifera</td>
<td>Tuliptree</td>
<td>139.4</td>
<td></td>
</tr>
<tr>
<td>Pinus taeda</td>
<td>Pine, loblolly</td>
<td>64</td>
<td>128.8</td>
</tr>
<tr>
<td>Pinus taeda</td>
<td>Pine, loblolly</td>
<td>132.5</td>
<td></td>
</tr>
<tr>
<td>Pinus virginiana</td>
<td>Pine, Virginia</td>
<td>73</td>
<td>102.3</td>
</tr>
<tr>
<td>Quercus montana</td>
<td>Oak, chestnut</td>
<td>58</td>
<td>132.9</td>
</tr>
</tbody>
</table>

HorseCreekMeasurements.

The heights of the loblollies seem impressive given their age and that they are growing in a colder climate with a shorter growing season than native populations, and several other trees were comparable in height to the two I measured. Since they were planted, they are at most 75 years old, and may be substantially younger. The tuliptree heights, while not exceptional for the species, also seem impressive for the conditions. They appear to be the same age as the pines, and have the rounded, uniform crowns of trees still adding height quickly. Tall tuliptrees in Georgia grow either in nutrient rich cove forests in the mountains, or within a narrow band of nutrient rich soils in the piedmont. This site appears more sandy and acidic, but the trees will likely still exceed 150’ by the time their 100 years old. The Virginia pine was spotted from a nearby road. The dogwood is the second tallest known in GA, and the chestnut oak the third tallest.

Jess Riddle
Illustrations of Common Eastern United States Trees

by edfrank » Thu Mar 28, 2013 10:50 am

Illustrations of Common Eastern United States Trees - Charles Sprague Sargent
Botanist Charles Sprague Sargent's Tree Plates

By Steve Nix, About.com Guide
http://forestry.about.com/od/treeidentification/jg/Common-Trees-United-States/

More Broad Brook, MA

by dhhguru » Mon Mar 25, 2013 5:22 pm

NTS, Today my long time friend Ray Asselin and I walked up Broad Brook. I wanted to share little Broad Brook's tree treasures with Ray. Here is the first scene that merited a photo.

The big trees in the vicinity of Porky's den provide lots of cover.

Edward Frank
We confirmed another 130-foot white pine. I named it for Ray. It becomes #20 along the corridor. Here's a couple of looks at Ray's pine.

I have to constantly remind myself that these woods are behind our house.

Robert T. Leverett

And finally, a couple of nice forest scenes.
Re: More Broad Brook

by AndrewJoslin » Mon Mar 25, 2013 9:39 pm

Did porky make all those tidy dung bits around the den opening? Very productive! I had a nice meeting with a porcupine in the middle of the night walking through the big meadow below the Trees of Peace grove in Mohawk a few years back. I got down on my hands and knees and we had a little eye-2-eye hello. Such a gentle creature. Nice woods you have Bob!

-AJ

Re: More Broad Brook

by dbhguru » Wed Mar 27, 2013 3:41 pm

Andrew, Yes, Porky has been highly productive. He/she ambled slowly away after giving us a good looking at. Indeed, the woods are very nice. The abundance of mature trees is very surprising.

Joe, Here are more images from Broad Brook taken a couple of hours ago.
Re: Norway spruces in Buckland
by johnofthetrees » Tue Mar 26, 2013 12:28 pm

Stacy wrote: John - or anyone - Who knows when the large oak tree at/near Buckland State Forest split in half? Looks recent. Sorry I didn't have my camera to take a pic of the damage yesterday. I'll see if I can get the pics off my husband's phone. Stacy

HI Stacy, That was this winter. There was a picture in the Recorder or the Independent, showing most of the main trunks on the ground. I haven't been up there yet to see it.

The tree was solid and 30' around at 5' above the ground, and consisted of about 5 main trunks, the last time I measured it. It would be interesting to see how old it was, if you can tell from the trunk.

John

Re: Norway spruces in Buckland
by swampdancer » Tue Mar 26, 2013 12:34 pm

It's pretty shattered/twisted so a ring count would not be possible unless someone cut a good, straight line through one of the trunks. Must have been the Recorder b/c I did not see in the Independent. Do you know when/what storm? When was it in the paper, I wonder?

Re: Norway spruces in Buckland
by johnofthetrees » Fri Mar 29, 2013 12:36 am

I am not sure when it was. Here are a few photos from yesterday.

For those who don't know, the oak is just a few hundred yard from the Norway spruces.
Tree fairies live here

The tree complex was 30’ around before. I didn’t measure it this time.

John

Pinus monophylla wood burn

Thought someone might enjoy my latest wood burn. Its a single-leaf pinyon pine (Pinus monophylla) that I picked up while I was traveling through the Great Basin in Nevada. The wood its burned on is western juniper (Juniperus occidentalis).

Re: Pinus monophylla wood burn

Thanks for the complements. Wood burning is a technique where one has a "pen" that burns really hot and where you can use it like a pencil, but instead of graphite or ink, it actually burns into the wood itself. It was really big in the 70's maaaaaaan. Some of the best wood to use is basswood and diffuse-porous species in general, as ring-porous trees and most conifers don't burn as well. I first start by cutting and sanding the piece of wood to the desired shape. Then I simply sketch the object on the wood with a pencil. Once my sketch is complete I burn over it using a special wood burning pen. This is super tedious, because once you have goofed, you can't erase it! Afterwards I usually shellac it or protect it with a finish. Thanks for all the comments, I hope everyone enjoyed it.

Devin
Update of the 130 List

by dbhguru » Fri Mar 29, 2013 8:40 am

Yesterday, I took a solo trip to Buckland and MTSF. In Mohawk, the snow was deep. I sunk up between 4 and 6 inches on every step. So after battling the drifts, I returned to the road network. I did measure a white pine near Cabin 6, which I had previously measured in 2010. I had its height listed as 145.7 feet. However, it is one of there trees that cannot be measured from level ground. So yesterday, I climbed the ridge across the dirt road from the cabin and found vantage points. Here are the measurements of the top taken from 5 different locations: 148.5, 148.5, 148.2, 148.4, 148.2. The distances to the crown varied from 64 to 71 yards. I’m being conservative and listing the height as 148.2 feet. The tree is 9.4 feet in girth. Here are two images.
I named the tree Elisa's Tree after a lady who meditates at the tree. The tree is close to Cabin 6. Many people stay at Cabin 6, sleeping under the high canopy of the pines. Few have even an inkling of how special the trees are in the vicinity of the cabin. Perhaps that is for the best. The trees provide their protection from above anonymously and are spared excessive attention. Not a bad arrangement.

On the way to Mohawk, I stopped at Buckland's little riverside park just off Route 112. A group of pines at the entrance always attract my attention, but I've never measured any. Yesterday, I stopped and measured several. Most are in the low 120s, but one makes it to 131.5 feet. The site becomes a new one sporting 130-footers and brings my estimated count of 130-foot tall trees in Massachusetts to 715. Here is the current list.

One reason I compile and maintain these kinds of lists is to reveal the abundance or scarcity of some class of trees. Usually, there is an underlying message, such as what we may be in danger of losing, a comparison between past and present, the
degradation of a landscape under everyone’s noses with few taking notice, etc. The 130-footer list actually celebrates the return of stately trees to southern New England. Had someone undertaken such a list in the 1950s, it would have been extraordinarily short. But tall trees are returning albeit as individuals and scattered sites. At least we have them. There is a school of thought that teaches that trees should not be allowed to grow so tall, least another epic hurricane come along and blow them all down. This school is content with shrubbery in lieu of real, honest, card-carrying trees. The vocal advocates of ‘early successional habitat’ belong to this school. Their idea of attractive woodlands bores the living hell out of me.

Robert Leverett
Limb Length Using 3D coordinates

The length of a limb segment can be determined by measuring the position of the end points of the branch in 3-dimensional space from an external reference position. The length is then calculated by applying Pythagorean’s Theorem. The following diagram illustrates the process.

1) The horizontal distance $d_1$ from the initial reference point $O$ to a target point $P_1$ is computed as $d_1 = L_1 \sin V_1$
2) The value of $x$ at the first point is: $x_1 = \sin(\text{azimuth}) \times d_1 \sin A_1$
3) The value of $y$ at the first point is: $y_1 = \cos(\text{azimuth}) \times d_1 \cos A_1$
4) The value of $z$ at the first point is: $z_1 = L_1 \sin V_1$

This sequence is carried out as follows:

For $P_2$:
1) The horizontal distance $d_2$ from the initial reference point $O$ to a target point $P_2$ is computed as $d_2 = L_2 \sin V_2$
2) The value of $x$ at the second point is: $x_2 = \sin(\text{azimuth}) \times d_2 \sin A_2$
3) The value of $y$ at the second point is: $y_2 = \cos(\text{azimuth}) \times d_2 \cos A_2$
4) The value of $z$ at the second point is: $z_2 = L_2 \sin V_2$

The final step is to compute the distance from $P_1$ to $P_2$ ($L$) using the following formula.

$L = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2 + (z_2 - z_1)^2}$

Note that we are squaring the changes in the $x$, $y$, and $z$ values, adding these squares together and taking the square root of the sum.

Limb Length Using Monocular w/reticle and Rangefinder

The length of a limb can be measured using a monocular w/reticle and a Laser Rangefinder. The length of a limb is measured using a monocular w/reticle aligned along the orientation of the limb, the distance to either end of the limb segment, and a calculated scaling factor to determine limb length.

Essentially the apparent length of the limb at each end as using the distance to that point and the scaling factor for that distance as if the limb were perpendicular to the observer. These lengths are considered to be the top and base of a regular trapezoid with a height equal to the difference in the distance between the two points. The true length of the limb can then be calculated by treating it as a diagonal of the trapezoid.
Determine length of diagonal of a regular trapezoid

1. Common side length is 1
2. H is height of trapezoid
3. D₁ and D₂ are the bases

Derivation

\[ d = \frac{D_2 - D_1}{2} \]

\[ h = \sqrt{L^2 - d_2} \]

\[ W = \sqrt{(D_2 - d)^2 + h^2} \]
Compute limb or limb segment length using reticle and laser rangefinder

NOTES:

1. Assumption is that measurer cannot always get oriented 90 degrees to the axis of the limb.

2. From position of measurement \((P_0)\), measurer shoots distance to the ends of the limb, \(P_1\) and \(P_2\). These distances are the variables \(L_1\) and \(L_2\).

3. \(M\) is the reticle reading for the limb or limb segment.

4. \(F\) is the reticle factor.

5. The equations shown below are used to compute \(W\), the length we want.

6. Note that \(L_1\) is used as an approximation of the distance of the solid brown line.

7. \(L_2\) is used to approximate the length of the solid and dashed brown line total.

8. If the ratio of the distance to the target to the length of the limb or limb segment is 9 or greater the distance error will be small.

9. Limbs over 20 feet should be divided into segments.

10. The table above implements the process.

ReticleBasedLimbLengthMeasurement.xlsx

Trapezoid-Reticule Method for Limb Measurement

by dbhguru » Sun Mar 31, 2013 2:16 pm

NTS, I've been working on improvements to the reticle-based measurement of the length of limb segments. I think I'm there. The idea is to be able to measure a limb that slants toward or away from the measurer and is level, vertical or sloped. I had mentioned to Ed that I was working on a more advanced solution to the problem for possible inclusion in the Wikipedia articles that he has taken the lead on.

The attachment shows the measurements that need to be taken on the Calculations worksheet and the Trapezoid Worksheet shows the full development of the process. I am obtaining measurement accuracies to within an inch for the targets I've been using. I'll continue testing, but this is a process that can deliver really good results and with a monocular like the Vortex mounted on a tripod, you can easily orient the reticle scale to lie on top of the target regardless of its orientation. Sweet!

TrapezoidReticuleProcess.xlsx

Robert T. Leverett

Re: Trapezoid-Reticule Method for Limb Measurement

by dbhguru » Sun Mar 31, 2013 8:12 pm

NTS,

Here is a screen shot of the Excel spreadsheet that I previously posted with some more tests.
The trapezoid-reticle method definitely has a place in our bag of measuring tricks. The accuracy that I’m obtaining is eye-popping. You may wonder about the distance measurements. They are being done with a Bosch GLR825 red beam laser which has an accuracy of around one millimeter. In order to test the efficacy of the new method, I have to be able to keep out distance errors.

Robert T. Leverett

Long time listener, first time caller – east NC

by hellbendy » Fri Mar 29, 2013 2:37 pm

Been following ENTS forum happenings for 3 or so years now, always wanted to contribute.. but didn’t seem to have much to say.

I’m lived throughout these states, but call eastNC home now. I’m an ecologist and student of the natural world, always inspired by the living treasures of the world. My research focuses largely on wildlife movement ecology and foraging/predatory behavior, but champion trees of size, age, and even shape captivate me. I’m heading out to seek some >1000 yo cypresses and the state’s champion tupelo gum tree next weekend at Merchant’s Millpond. Any suggestions on other trees in that area worth seeking are welcome! Eventually, I will beef up my tree climbing skills (climbed a handful of times) in the neighboring Croatan NF.

Looking forward to finding ways I can contribute, and learn in the meantime.

Tall Freeman maple, OH

by Steve Galehouse » Sat Mar 30, 2013 11:00 pm

NTS- I first reported on this tree in 2011, and returned today to remeasure. The Freeman maple in the Rocky River floodplain now is 135.7’ in height, which I think might be one of the tallest recorded maples of any species in the Eastern U.S.
Max Height List - Tree of the Week: Pinus strobus

by pitsandmounds » Sun Mar 31, 2013 10:08 pm

Goal: To document the tallest living example of particular tree species, focusing on one species per week.

Rules

1) You must be an NTS member to submit a tree for inclusion on the spreadsheet.

2) You must have either personally measured the tree per the standards of the document "Tree Measuring Guidelines of the Eastern Native Tree Society" or have knowledge of the NTS Member that has accurately measured the tree. Older measurements are accepted, but newer measurements are preferred and take precedence.

3) If you have knowledge that another person "discovered" the tree and accurately measured it in the past, please mention that person in the notes.

4) You may submit a tree if the species is currently or has previously been featured as the "Tree of the Week." If the species that you want to submit has never been the "Tree of the Week," please nominate that species for a future week.

5) To submit a tree, please reply to this NTS BBS post using the following format. All fields are not required. I will enter the tallest tree into the spreadsheet at the end of the week and can include new columns as necessary.

Country:
State or Province:
County or Township:
Hi All,

I just read this entire thread and it's one of the most captivating that I've seen on the BBS. It all happened during 11 days in December 2010. The thread develops into a discussion on how to attract new members, and the sheer passion of why everyone does what they do was readily apparent. I especially liked the comments that motivation comes from within and the importance and enjoyment of carving out a niche.

I thought it was worth commenting on to bubble it back to the top of the Active List to share with newer members.

Thanks,

Matt

Re: Looking back over 2010

Hi All,

I just read this entire thread and it's one of the most captivating that I've seen on the BBS. It all happened during 11 days in December 2010. The thread develops into a discussion on how to attract new members, and the sheer passion of why everyone does what they do was readily apparent. I especially liked the comments that motivation comes from within and the importance and enjoyment of carving out a niche.

I thought it was worth commenting on to bubble it back to the top of the Active List to share with newer members.

Thanks very much for reintroducing the thread. Thanks to you and our other new members, NTS has never been better. Nothing like fresh blood with fresh perspectives and an infusion of energy and passion. I especially liked your mentioned the enjoyment that comes from carving out a new niche. When one of us introduces a new place and takes ownership, revisiting it many times, it becomes alive in a way that I think we all come to appreciate.

Tomorrow, Monica and I are taking a couple of friends on a walk up the small stream flowing behind our house. They are in for a treat.

Robert Leverett
Welcome to the Eastern Native Tree Society! ... 26
 Robert Leverett, Founder, Eastern Native Tree Society
 INSTRUCTIONS FOR CONTRIBUTORS ... 29

VOLUME 1, ISSUE 2 Bulletin of the Eastern Native Tree Society FALL 2006
http://www.nativetreesociety.org/bulletin_v1_02.pdf

TABLE OF CONTENTS
A Special Thank-You From the Editor. ... 1
 Don C. Bragg, Research Forester, USDA Forest Service
ANNOUNCEMENTS AND SOCIETY ACTIONS
Tsuga Search Funding Mechanism Announced ... 2
ENTS Has a New Website ... 2
OLDLIST Database v1.0 Now Online ... 2
World’s Tallest Trees Discovered…Again and Again! ... 3
2006 ENTS Rendezvous and 4th Holyoke Community College Forest Summit, October 27-29, 2006 ... 4
FEATURE ARTICLES
Tsuga Search: Spring 2006 Progress Report ... 7
Will Blozan and Jess Riddle, Eastern Native Tree Society
FIELD REPORTS
Meeman-Shelby Forest State Park, Tennessee: March 2006 ... 16
Jess Riddle and Will Blozan, Eastern Native Tree Society
Lower Jerry Run Natural Area, Pennsylvania: May 2006 ... 20
Edward Frank, Eastern Native Tree Society
SPECIAL BIG TREES AND FORESTS
The Walsh Pine ... 23
Don C. Bragg, USDA Forest Service
POEMS, STORIES, AND MUSINGS
The Last Snow of Winter ... . 21
Ed Frank, ENTS Webmaster
The Wondrous 3-D Full-Spectrum Laser Climbometer ... 23
Pamela Briggs, Author and Humorist
Poetic Contributions and Digital Ramblings ... 25
BOOK REVIEWS AND NEW READINGS ... 25
FOUNDER’S CORNER

VOLUME 1, ISSUE 1 Bulletin of the Eastern Native Tree Society SUMMER 2006
http://www.nativetreesociety.org/bulletin_v1_01.htm

Bulletin of the Eastern Native Tree Society
SUMMER 2006
TABLE OF CONTENTS
ANNOUNCEMENTS AND SOCIETY ACTIONS
Introducing the Bulletin of the Eastern Native Tree Society ... 1
Don C. Bragg, Research Forester, USDA Forest Service
2006 ENTS Rendezvous ... 2
October 26-29, 2006
FEATURE ARTICLES
Tree Measuring Guidelines of the Eastern Native Tree Society ... 3
Will Blozan, President, Eastern Native Tree Society
FIELD REPORTS
Tamassee Knob, South Carolina ... 11
Jess Riddle, Eastern Native Tree Society
Savage Gulf, Tennessee ... 13
Michael Davie and Jess Riddle, Eastern Native Tree Society
Levi Wilcoxon Demonstration Forest, Arkansas ... 16
Don C. Bragg, Research Forester, USDA Forest Service
SPECIAL BIG TREES AND FORESTS
Webster Springs Sycamore ... 18
Will Blozan, President, Eastern Native Tree Society
The Morris Pine ... 20
Don C. Bragg, Research Forester, USDA Forest Service
POEMS, STORIES, AND MUSINGS
The Last Snow of Winter ... . 21
Ed Frank, ENTS Webmaster
The Wondrous 3-D Full-Spectrum Laser Climbometer ... 23
Pamela Briggs, Author and Humorist
Poetic Contributions and Digital Ramblings ... 25
BOOK REVIEWS AND NEW READINGS ... 25
FOUNDER’S CORNER

edfrank » Tue Mar 05, 2013 4:58 pm

VOLUME 3, NUMBER 03, MARCH 2013

Bulletin of the ENTS - Index from all issues
TABLE OF CONTENTS
A Change in ENTS Author Contracts ... 1
Don C. Bragg, Research Forester, USDA Forest Service
ANNOUNCEMENTS AND SOCIETY ACTIONS
A Reminder: Please Help Support the Tsuga Search—ENTS Has a New Website ... 2
Planning Underway for ENTS Events in 2007 ... 2
Correction ... 2
FEATURE ARTICLES
A Recap of the 2006 Forest Summit and ENTS Rendezvous ... 3
Robert T. Leverett, Don C. Bragg, Edward Frank, and Will Blozan, Eastern Native Tree Society
Looking at the Forest From the Top Down ... 10
Robert T. Leverett and Will Blozan, Eastern Native Tree Society
FIELD REPORTS
Falls Creek Falls State Resort Park, Tennessee: July 2006 ... 16
Jess Riddle and Will Blozan, Eastern Native Tree Society
Tall Trees of Chase Creek Woods, Maryland: July 2003 ... 19
Colby B. Rucker (deceased), Eastern Native Tree Society
SPECIAL BIG TREES AND FORESTS
The Thomasville “Big Oak” ... 23
Don C. Bragg, Research Forester, USDA Forest Service
POEMS, STORIES, AND MUSINGS
Beyond Measure ... 24
Pamela Briggs, Author and Humorist
FOUNDER’S CORNER
Behind the Scenes ... 25
Robert T. Leverett, Eastern Native Tree Society
INSTRUCTIONS FOR CONTRIBUTORS ... 26

TABLE OF CONTENTS
New Features of the Bulletin ... 1
Don C. Bragg, Research Forester, USDA Forest Service
ANNOUNCEMENTS AND SOCIETY ACTIONS
More Tropical Hardwood Giants Found in Borneo ... 2
2006 Tsuga Search Annual Summary Released. ... 2
A Reminder: Please Help Support the Tsuga Search ... 2
Kentucky Old-Growth Society Formed ... 2
Cook Forest Big Tree Extravaganza ... 2
FEATURE ARTICLES
Rucker Indexing Analysis—A System for Determining Maximum Species Dimensions and Site Potential ... 3
Robert Leverett and Will Blozan, Eastern Native Tree Society
A Comparison of Baseline-Tangent Tree Height Measurements to the Sine Method ... 9
Thomas P. Diggins, Department of Biology, Youngstown State University
FIELD REPORTS
The Usis Hemlock Climb: February 2007 ... 13
Will Blozan, Eastern Native Tree Society
Cook Forest State Park, Pennsylvania: July 2003 ... 16
Dale Luthringer, Cook Forest State Park and Colby Rucker (deceased), Eastern Native Tree Society
SPECIAL BIG TREES AND FORESTS
Some Shortleaf “Yellow” Pine Timber of the Louisiana Lumber Company ... 20
Don C. Bragg, Research Forester, USDA Forest Service
NATURAL CURIOSITIES
Giant Hollow Tupelo Gum From the White River National Wildlife Refuge ... 21
Don C. Bragg, Research Forester, USDA Forest Service
FOUNDER’S CORNER
Similar Triangles: The Siren Song of a Potential Tool ... 22
Robert T. Leverett, Eastern Native Tree Society
INSTRUCTIONS FOR CONTRIBUTORS ... 23
http://www.nativetreesociety.org/bulletin/v02_03.pdf

TABLE OF CONTENTS
The Live Oak Project—a Vital Part of the ENTS Mission ... 1
Don C. Bragg, Research Forester, USDA Forest Service
ANNOUNCEMENTS AND SOCIETY ACTIONS
Fifth Holyoke Community College Forest Summit and Fall 2007 ENTS Rendezvous ... 2
ENTS Bookstore Now Open! ... 2
Bruce Kershner Memorial Tree Dedicated ... 2
Congratulations and Thanks to Dale and Neil! ... 2
FEATURE ARTICLES
Rucker Indexing Analysis—A Case Study in the Mohawk Trail State Forest, Massachusetts ... 3
Robert T. Leverett and Will Blozan, Eastern Native Tree Society
A Survey of Core-based Species Maximum Age Estimates in the Zoar Valley, Western New York State ... 14
Thomas P. Diggins, Department of Biological Sciences, Youngstown State University
FIELD REPORTS
The Live Oak Project ... 19
Larry Tucei, Eastern Native Tree Society
NOTABLE TREES AND FORESTS
“The Live Oak at Drayton Manor”—originally from the June 12, 1895, issue of Garden and Forest ... 25
Don C. Bragg, USDA Forest Service, Southern Research Station
“Walnut Timber From Arkansas”—originally from the July 24, 1880, issue of Scientific American ... 26
Don C. Bragg, USDA Forest Service, Southern Research Station
FOUNDER’S CORNER
Fanfare for the Jake Swamp Pine—Why Does it Matter? ... 27
Robert T. Leverett, Eastern Native Tree Society
INSTRUCTIONS FOR CONTRIBUTORS ... 28

VOLUME 2, ISSUE 4 Bulletin of the Eastern Native Tree Society FALL 2007
http://www.nativetreesociety.org/bulletin/v02_04.pdf

TABLE OF CONTENTS
Preparing the Next Generation ... 1
Don C. Bragg, Research Forester, USDA Forest Service
ANNOUNCEMENTS AND SOCIETY ACTIONS
ENTS Online Discussion Group Has Moved to Google ... 2
Long-Time Old-Growth Advocate Dr. Robert Zahner Passes Away ... 2
Vandals Torch the Insides of the Webster Springs Sycamore ... 2
Announcing the 5th Holyoke Community College Forest Summit ... 2
FEATURE ARTICLES
Joining ENTS: A Beginner’s Guide ... 3
Edward Frank, Eastern Native Tree Society
A New Look at Tree Trunk Modeling: Old Formulae and New ... 5
Robert T. Leverett, Eastern Native Tree Society
Rucker Indexing Analysis: Some Conclusions ... 12
Robert T. Leverett and Will Blozan, Eastern Native Tree Society
FOUNDER’S CORNER
Forest Health—Scientific Concept or Political Gimmick? ... 16
Robert T. Leverett, Eastern Native Tree Society
INSTRUCTIONS FOR CONTRIBUTORS ... 17

VOLUME 3, ISSUE 1 Bulletin of the Eastern Native Tree Society WINTER 2008
http://www.nativetreesociety.org/bulletin/03_01a.pdf

TABLE OF CONTENTS
A Plea for New Contributions ... 1
Don C. Bragg, Research Forester, USDA Forest Service
ANNOUNCEMENTS AND SOCIETY ACTIONS
Southern Appalachian ENTS Gathering Scheduled for April 18-20, 2008 ... 2
ENTS and the Vanishing Hemlock Documentary. ... 2
Remember—the ENTS Online Discussion Group Has Moved to Google ... 2
FIELD REPORTS
Sky Lake Wildlife Management Area, Belzoni, Mississippi, December 2007 ... 3
Don C. Bragg, Research Forester, USDA Forest Service
POEMS, STORIES, AND MUSINGS
Those Fabulously Fascinating Forest Fragments! ... 6
Ernie Ostumo, Eastern Native Tree Society
My Search for a State Champion Tree ... 9
Beth Koebel, Eastern Native Tree Society
The Pinchot Sycamore and Granby Oak ... 11
Monica Jakuc Leverett, Smith College
Some Celtic Folklore on Trees and Forests ... 12
James Parton, Eastern Native Tree Society
NATURAL CURIOSITIES
Kissing Trees ... 15
Will Blozan, Eastern Native Tree Society
FOUNDER’S CORNER
New Year’s Resolutions ... 17
Robert T. Leverett, Eastern Native Tree Society
INSTRUCTIONS FOR CONTRIBUTORS ... 18

http://www.nativetreesociety.org/bullet ... v03_02.pdf

TABLE OF CONTENTS
AHHH, SPRINGTIME! ... 1
Don C. Bragg, Research Forester, USDA Forest Service
ANNOUNCEMENTS AND SOCIETY ACTIONS
2008 Tri-State Forest Stewardship Conference, commentary contributed by Beth Koebel ... 2
FEATURE ARTICLE
Modeling Tree Trunks: Approaches and Formulae ... 3
Robert T. Leverett, Eastern Native Tree Society; Will Blozan, President, Eastern Native Tree Society; and Gary A. Beluzo, Professor of Environmental Science, Holyoke Community College
POEMS, STORIES, AND MUSINGS
Fire, Stone, and Forest ... 14
Don Bertolette, Restoration Forester (retired), Grand Canyon National Park
NATURAL CURIOSITIES
Curiosities of the Cross Timbers, Volume 1 ... 18
Don C. Bragg, Research Forester, USDA Forest Service
FOUNDER’S CORNER
Native American Views on Nature ... 21
Robert T. Leverett, Eastern Native Tree Society
INSTRUCTIONS FOR CONTRIBUTORS ... 22

http://www.nativetreesociety.org/bullet ... v03_03.pdf

TABLE OF CONTENTS
More Excuses... ... 1
Don C. Bragg, Research Forester, USDA Forest Service
ANNOUNCEMENTS AND SOCIETY ACTIONS
Saving our Hemlocks from the HWA—An Urgent Call for Action ... 2
2008 ENTS Fall Rendezvous Set ... 2
2009 ENTS Height Measuring Blitz at the Congaree Swamp National Park? ... 2
Erratum ... 2
FIELD REPORTS
The Senator Cypress is Re-elected to Top Position in Eastern Forests: May 2006 ... 3
Will Blozan, President, Eastern Native Tree Society
Adirondack High Peaks: August 2008 ... 5
Jess Riddle, Eastern Native Tree Society
POEMS, STORIES, AND MUSINGS
Old-Growth Values ... 10
Robert T. Leverett, Founder, Eastern Native Tree Society
NATURAL CURIOSITIES
Perched Yellow Birch ... 13
Don C. Bragg, Research Forester, USDA Forest Service
FOUNDER’S CORNER
A Day in Bryant Woods ... 15
Robert T. Leverett, Eastern Native Tree Society
INSTRUCTIONS FOR CONTRIBUTORS ... 16
TABLE OF CONTENTS

COLBY WAS A FRIEND OF MINE, BUT I DID NOT KNOW HIM WELL ... 1

Edward Forrest Frank, Associate Editor of the Bulletin and Eastern Native Tree Society

ANNOUNCEMENTS AND SOCIETY ACTIONS

Tentative Date for ENTS Congaree Big Tree Blitz Set... ... 2

New York Passes Heritage Tree Act Honoring Bruce Kershner ... 2

Kentucky Benefit to Help Raise Awareness of Adelgid Threat to Eastern Hemlocks ... 2

World’s Tallest Eucalypt Measured ... 2

ENTS 2008 Rendezvous a Success ... 2

FEATURE ARTICLES

Colby Buxton Rucker: In Memoriam ... 3

Jennifer Troy, Eastern Native Tree Society

Great Eastern Trees, Past and Present ... 6

Colby Rucker (deceased), Eastern Native Tree Society

Maryland’s Tallest Tree Species ... 41

Colby Rucker (deceased), Eastern Native Tree Society

The Rucker Index ... 44

Edward Forrest Frank, Associate Editor of the Bulletin and Eastern Native Tree Society

POEMS, STORIES, AND MUSINGS

Essays on Trees ... 46

Colby Rucker (deceased), Eastern Native Tree Society

“A Forest Perspective” and Other Poems ... 53

Colby Rucker (deceased), Eastern Native Tree Society

Splitting Firewood and Other Musings ... 56

Colby Rucker (deceased), Eastern Native Tree Society

Tree Measurement ... 60

Colby Rucker (deceased), Eastern Native Tree Society

SPECIAL BIG TREES

The Rucker Tuliptree ... 63

Will Blozan, President, Eastern Native Tree Society

EDITORIALS

In Remembrance of Colby ... 64

Robert T. Leverett, Eastern Native Tree Society

INSTRUCTIONS FOR CONTRIBUTORS ... 66

Colby B. Rucker Additional Reports and Writings.

http://www.nativetreesociety.org/corner...tional.pdf

Colby B. Rucker

Additional Reports and Writings

Belt Woods, MD: Tree Heights and Forest Structure in the South Woods ... 2

Tall Trees of Carter’s Grove, VA ... 12

Corcoran Woods, MD: Tree Heights and Forest Structure ... 14

Correspondences ... 21

Top Ten Stuff ... 21

Charter Oak, Connecticut ... 21

130 foot Club ... 22

Gnarled Trees 23

Forest Structure and Old Growth Definitions ... 24

Weathersfield Elm ... 25

Habitat ... 26

Thresholds for Sport and Science ... 27

Total Volume Estimates ... 28

Nix on Peace Park ... 29

Associations, Associations, Associations ... 30

Killer Trees ... 31

Big Creek Soils ... 32

Sassafras Habitat ... 33

Determining the Age of Street Trees ... 34

Thoreau and Ecology ... 34

Essays on Nature ... 36

Woodland Appreciation ... 36

How Trees Affect the Inner Self ... 36

VOLUME 4, ISSUE 1 Bulletin of the Eastern Native Tree Society WINTER 2009

http://www.nativetreesociety.org/bulletin...v04_01.pdf

TABLE OF CONTENTS

Change—Let’s Hope for the Better! ... 1

Don C. Bragg, Research Forester, USDA Forest Service
ANNOUNCEMENTS AND SOCIETY ACTIONS
ENTS Measuring Blitz on the Congaree Scheduled ... 1
ENTS Rendezvous at Cook Forest Set ... 2
Other Events of Possible Interest to Ents ... 2

FEATURE ARTICLES
Eastern White Pine Profiles: A Survey of the Stature of Pinus strobus in Massachusetts in Terms of ... 3
Volumes, Heights, and Girths
Robert T. Leverett, Eastern Native Tree Society

FIELD REPORTS
Old Trees in the Inner Bluegrass Region of Kentucky: November 2008 ... 9
Neil Pederson, Eastern Kentucky University
Gettysburg National Military Park, Pennsylvania: April/May 2008 ... 11
Dale Luthringer, Cook Forest State Park
The Tall Trees of Carter’s Grove, Virginia: July 2002 ... 15
Colby Rucker (deceased), Eastern Native Tree Society

SPECIAL BIG TREES
The Bible Tree ... 17
Edward Frank, Eastern Native Tree Society

FOUNDER’S CORNER
Make a Deposit in the Bank of Solved Problems ... 19
Robert T. Leverett, Eastern Native Tree Society

INSTRUCTIONS FOR CONTRIBUTORS ... 20

VOLUME 4, ISSUE 2 Bulletin of the Eastern Native Tree Society SPRING 2009
http://www.nativetreesociety.org/bullet ... v04_02.pdf

TABLE OF CONTENTS
Congaree National Park ... 1
Don C. Bragg, Research Forester, USDA Forest Service

ANNOUNCEMENTS AND SOCIETY ACTIONS
ENTS Rendezvous at Cook Forest Set ... 2
Ninth Old-Growth Forest Conference to be Held in October ... 2
Errata ... 2
Beth Koebel’s 2009 Tri-State Forest Stewardship Conference Report ... 3

FEATURE ARTICLES
Derivation of Key Cone and Paraboloid Formulae and a General Taper Equation ... 5
Robert T. Leverett, Eastern Native Tree Society, Will Blozan, Eastern Native Tree Society, and Gary A. Beluzo, Holyoke Community College
The Live Oak Project: An Update ... 9
Larry Tucei, Eastern Native Tree Society

FIELD REPORTS
Hyatt’s Woods, Drew County, Arkansas: February 2009 ... 14
Scenarios ... 3
Robert T. Leverett, Eastern Native Tree Society

FIELD REPORTS
Northern Lake States Old-Growth Visits: July 2010 ... 13
Don C. Bragg, Research Forester, USDA Forest Service

NOTABLE TREES AND FORESTS
The Giant Cypress of Sky Lake WMA, Mississippi: An Update, October 2010 ... 18
Don C. Bragg, Research Forester, USDA Forest Service
Ole Lake, Mississippi: October 2010 ... 23
Don C. Bragg, Research Forester, USDA Forest Service

FOUNDER’S CORNER
The Healing Effects of Forests ... 26
Robert T. Leverett, Eastern Native Tree Society

INSTRUCTIONS FOR CONTRIBUTORS ... 27

VOLUME 6, ISSUE 1 Bulletin of the Eastern Native Tree Society WINTER 2011
http://www.nativetreesociety.org/bulletin_v06_01.pdf

TABLE OF CONTENTS
Whose Woods These Are ... 1
Don C. Bragg, Research Forester, USDA Forest Service

ANNOUNCEMENTS AND SOCIETY ACTIONS
Seventh Forest Summit To Be Held in October 2011 ... 2
Fall 2011 ENTS Rendezvous Also in October ... 2
Answer to Last Issue’s “Puzzler” Tree Species ... 2

FEATURE ARTICLES
External Baseline Method for Measuring Tree Height ... 3
Robert T. Leverett, Founder, Eastern Native Tree Society

POEMS, STORIES, AND MUSINGS
Altai Mountain Trek in Russia. ... 9
Fred Paillet, Adjunct Professor, Department of Geosciences, University of Arkansas

FOUNDER’S CORNER
Looking Backward, Marching On ... 20
Robert T. Leverett, Founder, Eastern Native Tree Society

INSTRUCTIONS FOR CONTRIBUTORS ... 21

VOLUME 6, ISSUE 4 Bulletin of the Eastern Native Tree Society FALL 2011
http://www.nativetreesociety.org/bulletin_v06_04.pdf

TABLE OF CONTENTS
2012—End Times or New Times? ... 1
Don C. Bragg, Research Forester, USDA Forest Service

ANNOUNCEMENTS AND SOCIETY ACTIONS
A New “Puzzler” Tree Species ... 2
FEATURE ARTICLES
Pockets Full of Forest: Locating, Investigating, and Documenting Remnants of Old-Growth Forests and Pockets of Otherwise Rare or Unusual Forests in Pennsylvania ... 3
Edward Forrest Frank, Eastern Native Tree Society

FIELD REPORTS
Ancient Cypress of the Carolina Coastal Plain ... 17
Kathryn P. Wolff, David W. Stahle, and Dan Griffin, Tree-Ring Laboratory, Department of Geosciences, University of Arkansas

A Visit to Sigurd, Grandfather, and Thoreau ... 20
Robert T. Leverett, Founder, Eastern Native Tree Society

FOUNDER’S CORNER
Updates in Dendromorphometry ... 28
Robert T. Leverett, Founder, Eastern Native Tree Society

INSTRUCTIONS FOR CONTRIBUTORS ... 29

VOLUME 7, ISSUE 1 Bulletin of the Eastern Native Tree Society WINTER 2012
http://www.nativetreesociety.org/bulletin/v07_01.pdf

TABLE OF CONTENTS
Familiar Trees Show Up in the Darndest Places! ... 1
Don C. Bragg, Research Forester, USDA Forest Service

ANNOUNCEMENTS AND SOCIETY ACTIONS
eNTS Magazine Receives Library of Congress ISSN Number ... 2
22nd Annual North American Dendroecological Fieldweek (NADEF) ... 2
Advanced Tree Measuring Workshop at Cook Forest State Park ... 3
Answer to Last Month’s “Puzzler” Tree Species! ... 4

FEATURE ARTICLES
Lessons From Cook Forest: Part I ... 4
Robert T. Leverett, Founder, Eastern Native Tree Society

POEMS, STORIES, AND MUSINGS
What Can Timber Professionals Learn From The Native Tree Society? ... 10
Robert T. Leverett, Founder, Eastern Native Tree Society

FIELD REPORTS
Tahquamenon Falls State Park, Michigan: June 2012 ... 12
Don C. Bragg, Research Forester, USDA Forest Service

FOUNDER’S CORNER
Seven Wishes ... 16
Robert T. Leverett, Founder, Eastern Native Tree Society

INSTRUCTIONS FOR CONTRIBUTORS ... 18
External Links:

What is a “bonsai tree”?
Posted on February 22, 2013 by adamaskwhy
https://adamaskwhy.wordpress.com/2013/02/22/what-is-a-bonsai-tree/?goback=.gde_2696676_member_218463315

Biology Hacklabs
Fueled by donations, sweat, and occasional dumpster diving, community laboratories for DIY biologists are cropping up around the country.
By Megan Scudellari | March 1, 2013

Greening the Desert with Geoff Lawton, Original and Update: 1 of 4
http://www.youtube.com/watch?v=xzTHjueqFI

Festive flowers to supplant trees
Global Times | 2013-3-11 23:48:01
By Zhang Zihan
http://www.globaltimes.cn/content/767405.shtml#.UXe1FfJKSo

How do Trees Survive Winter Cold?
Northern Woodlands
by Michael Snyder | December 28th 2012
http://northernwoodlands.org/outside_story/article/trees-survive-winter-cold

Five national monuments, including one in Delaware, the only state without a National Park System presence, are expected to be designated next week by President Obama.
http://www.nationalparkstraveler.com/2013/03/five-national-monuments-expected-be-added-national-park-system-next-week22960

Long-Exposure Infrared Photos of Trees
Michael Zhang · Feb 27, 2013

Ancient Giant Trees Found Petrified in Thailand
Mar 20, 2013 06:26 AM ET // by Larry O’Hanlon

Kentucky legislature passes industrial hemp bill.
http://www.paul.senate.gov/?p=press_release&id=760

More Links from the Facebook Native Tree Society Page:

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

How trees 35 and 18 could enable fight back against ash dieback

Dr. Lowman to be Key Speaker at Wildlife Conservation Awareness Day in Persada, Johor Bahru, Malaysia
http://treefoundation.org/2013/03/30/dr-lowman-to-be-key-speaker-at-wildlife-conservation-awareness-day-in-persada-johor-bahru-malaysia/

In Kerala (India), when the laborers are setting up a new establishment, they never chop down the trees that stand on the property. Instead, they dig a hole around the tree and push it aside along with its roots.

FAWN: The Official Newsletter of Friends of Allegheny Wilderness, Volume 13, Number 1, March, 2013.
http://www.pawild.org/fawn/faw_v13no1.pdf

A Georgia woman has been reunited with her camera and photos after the camera she lost during a 2007 trip to Hawaii washed ashore in Taiwan.
All but 23 of 10,000 bats in Durham bat mine have died

Grand Prairie Publication Updated and Reprinted

Virginia scientists search for northernmost realm of Spanish moss

extinction witness: Re-membering Big Trees
http://extinctionwitness.blogspot.com/2013/02/re-membering-big-trees.html

Late Cretaceous Woods of North America

TREES I'VE LOVED, TREES I'VE LOST, First published:Thursday 14 March 2013 4:21PM
By:Gretchen Miller
http://www.abc.net.au/radionational/programs/360/trees-i27ve-loved/4565322

Ecuador auctions off Amazon to Chinese oil firms
Indigenous groups claim they have not consented to oil projects, as politicians visit Beijing to publicise bidding process. The Guardian, Tuesday 26 March 2013 13.16 EDT.
http://www.guardian.co.uk/world/2013/mar/26/ecuador-chinese-oil-bids-amazon

Black poplar trees found in Denbighshire lay-by 'unique' 26 March 2013.
http://www.bbc.co.uk/news/uk-wales-north-east-wales-21943819

International Wood Collectors Society
http://www.woodcollectors.org/index.htm

Our view: A monumental reason to celebrate.
Monday, March 25, 2013 10:15 pm.
http://www.santafenewmexican.com/opinion/editoria

Wood Species Identification and Microphotography
http://gowood.blogspot.com/2013/03/wood-science-101-8-wood-species.html

Twisted trees tell stories of Ontario’s past.
Hamilton man says First Nation people modified trees to mark trail, burial sites

"Trees of Uganda" see
http://www.press.uchicago.edu/ucp/books/book/distributed/C/bo12390555.html and for information about the authors and the project go to www.kew.org/science-research-data/directory/projects/ConsCheck/TreesUgand.htm

Caring for God’s trees
http://wtcampaigns.wordpress.com/2013/03/25/caring-for-gods-trees/

Snowy Breakfast in Breen Oakwood, Co. Antrim.
http://www.youtube.com/watch?v=tdpwC6ohiyC


Hidden Heritage Project
https://www.facebook.com/HiddenHeritageProject

Maliau Basin - A Jewel in Borneo's Natural Heritage (Part 1)
http://www.youtube.com/watch?v=1BYXvC-jnw&feature=youtube_gdata_player

A Silent Forest - The Growing Threat, Genetically Engineered Trees - Agenda 21
https://www.youtube.com/watch?v=NUUYaTz0Brg

Connecticut's Notable Trees. Check out this 10-part (so far) series of short videos about the Charter Oak and its descendants.

Chainsaws and Stethoscopes: Kinari Webb at TEDxJakSel
http://www.youtube.com/watch?v=0eOspm19pgY

Pictures: Saving and Studying Tasmania's Giant Trees

How do Brazilian firefighters tackle blazes in the vastness of the Amazon rain forest?
http://www.bbc.co.uk/news/world-21843106

Citizen Scientists Step in to Keep the Plight of Sweden’s Forests in the Public Eye BY ERIK HOFFNER – MARCH 18, 2013

Is Indian storytelling a dying art?  Storytelling has been an integral part of Indian culture for generations
The traditional Indian custom of passing down epics and village folklore from one generation to the next through storytelling is slowly dying with increasing globalisation and the all-pervasive media. Pia Chandavarkar reports from Thanjavur in the southern state of Tamil Nadu. 22 March 2013
http://www.bbc.co.uk/news/world-asia-india-21651933

International Tree Foundation
http://internationaltreefoundation.org/

Five National Monuments Expected To Be Added To National Park System Next Week Submitted by NPT Staff on March 22, 2013 - 8:23am
http://www.nationalparkstraveler.com/2013/03/five-
national-monuments-expected-be-added-national-park-system-next-week22960

Know before you go...scouting out tropical trees for dendro. While there are over 70 species of tropical trees amenable to dendrochronology, there are certainly more. Some herbariums and corporations keep collections of wood blocks. If you’re interested in which tropical trees have rings and which don’t, try looking through one of these collections (herbarium locations here http://sweetgum.nybg.org/ih/ihmapsearch.php ) before you head out to the field.

The most comprehensive list of wood collections is Index Xylariorum - compiled by Anna Lynch and Peter Gasson of kew Gardens - http://www.kew.org/collections/wood-index/Index_Xylariorum4.htm


International Day of Forests 2013
http://www.youtube.com/watch?v=1_kYSjnCsqY

The Oldest Known Longleaf Pine
http://www.blevinsphoto.com/blog/archives/238

Forest Metrix Timber Cruise Demo
http://www.youtube.com/watch?v=545DHbdd66s&feature=youtu.be

Thin Sections of Sugar Maple - History of Forestry
- The American Woods: exhibited by actual specimens and with copious explanatory
www.lib.ncsu.edu many more can be seen at:
http://www.lib.ncsu.edu/specialcollections/forestry/rough/index.html

Giants of our forests  March 16, 2013 11:50PM by TOM VENESKY (Pennsylvania)
Peruvian night monkey threatened by vanishing forests, lost corridors. The Peruvian night monkey has never before been studied in the wild. But new research shows that protecting forests – even small fragments – is vital to the species' survival. Jeremy Hance for mongabay.com, part of the Guardian Environment Network. guardian.co.uk, Tuesday 19 March 2013
http://www.guardian.co.uk/environment/2013/mar/19/peruvian-night-monkey-threatened

Mari Kimura / Michael Gatonska: "Shin-rin Yoku" (Forest bathing) creative process
http://www.youtube.com/watch?v=mlsFi-zLxMs
Gatonska's "Shin-rin Yoku" (Forest bathing) is written for violinist Mari Kimura, and this video shows how Kimura and Gatonska put together an interactive composition in collaboration. "Shin-rin Yoku" (Forest bathing) will receive it's world premiere on April 10th at 8pm, at Roulette in Brooklyn. http://roulette.org/events/mari-kimura-kyoko-kitamura-poly-monologue/

Willie Smits: How to restore a rainforest
http://www.ted.com/talks/willie_smits_restores_a_rainforest.html

Splendid Visions, Orion Magazine – March 04, 2013. By William Giraldi
http://www.childrenandnature.org/news/detail/splendid_visions/

Live Eagle Cam
http://outdoorchannel.com/eaglecam

Bristlecone Pines Mount Moriah, NV,
http://www.ii.uib.no/~petter/mountains/3000mtn/moriah.html

The Hemlock Legacy Project (HeLP)
http://www.geo.wvu.edu/hemlocklegacy/

Coast Redwood Climb. Andrew Joslin. This is part 1 of 3 videos showing the details of a Coast Redwood climb. The climb is accomplished using "soft" rope and harness technique that is not damaging to the tree. The climb is dedicated to the memory of my sister Dorothy who visited this location with me in years past. Dorothy died a year ago to the week of the climb. Any struggle or moments of bravery that occur during a challenging tree climb are nothing compared to the courage and tenacity that Dorothy showed throughout her life. Part 1:
http://vimeo.com/62000188 Part 2 here:
http://vimeo.com/61998176 Part 3 here:
http://vimeo.com/61989724

'Ailing' ancient tree to get restoration injection by Vishal Joshi, April 2013.

KKL-JNF preserves Jerusalem's most amazing trees By MELANIE LIDMAN 12/19/2012 23:26.
Tree historian Yaacov Shkolnik invites 'The Jerusalem Post' to visit some of the capital's most amazing trees. http://www.jpost.com/Sci-Tech/Article.aspx?id=296642

Forest Year from motionkicker This time-lapse film was distilled from 40,000 still photographs taken over 16 months, from the front window of my home in an Indiana (USA) forest. A camera on a fixed tripod looked out a window towards the northeast, and during key times of the year (snow, ice, wind, springtime, autumn) it automatically took a photo once a minute. I added the natural sounds (many recorded in the same woods) as a way to further the experience of being in the forest.
http://vimeo.com/60612070

The amazing story of Ranch San Bernadino and Wildlands Network's John Davis's visit with its forward-thinking owners. Imagine turning a dry, over-grazed patch of land into a riparian oasis in the desert. Imagine this can be accomplished by building check-dams made of rocks to catch silt and keep the heavy rains from running off the land as fast as they fall. http://bit.ly/12TjCdh

The first ever seamless photograph of an entire redwood tree.
quSound Garden: Can Plants Actually Talk and Hear?  
Becky Oskin, OurAmazingPlanet Staff  
Writer - Mar 11, 2013 02:58 PM ET.  

‘Guardians of existing large canopy trees in urban areas can help by increasing the priority given to conserving those trees in their care’ latest guidance from Forestry Commission "Air temperature regulation by urban trees and green infrastructure" So why do so many mature trees in urban areas get the chop?  
http://www.forestry.gov.uk/PDF/FCRN012.pdf/

Japan Erects Massive Sculpture of the Last Standing Tree from a Forest Destroyed by the 2011 Tsunami  

Growing is Forever from Jesse Rosten. I have a deep affection for the Redwood forests of Northern California. This is my best attempt to capture the reverence I feel when in the presence of these giants. A film by Jesse Rosten - twitter.com/JesseRosten  
Words by Kallie Markle - twitter.com/lightningvsbug  
Music - "Window" The Album Leaf  
http://vimeo.com/18305022

Bat-killing syndrome spreads south.  
Dan Vergano, USA TODAY 1:39p.m. EDT March 12, 2013. First seen in an upstate New York cave in 2006, white nose syndrome spreads among closely-clustered hibernating bats, killing more than 90% of them in some afflicted caves.  
http://www.usatoday.com/story/tech/sciencefair/2013/03/12/white-nose-georgia/1982075/

Biology Hacklabs | The Scientist Magazine®  

Beloved tree scrutinized yearly for signs of growth.  
March 12, 2013 12:00 am  
Doug Kreutz  
Arizona Daily Star.  
James Madison, the fourth president of the United States, was in office and Congress was authorizing the use of steamboats to transport mail when the Great Mesquite Tree was taking root. It is still standing and budding out now with a few spring leaves - not yet ready to give up the ghost.  

Climate: Southwest tree rings show historic monsoon droughts.  
Posted on March 12, 2013 by Bob Berwyn.  
http://summitcountyvoice.com/2013/03/12/climate-southwest-tree-rings-show-historic-monsoon-droughts/

Cites meeting: Ebony beats ivory in conservation stakes.  
http://www.bbc.co.uk/news/science-21759988

Ted Green talks about the amazing aerial roots on this astonishing beech tree in Cumbria.  
Rickerby Park Carlisle June 2012.  
http://www.youtube.com/watch?v=nOo3XvsPYFY&feature=youtu.be

Royal Botanic Gardens, Kew.  
http://www.kew.org/about-kew/index.htm

Ancient underwater forest off Alabama is much older than scientists thought. By Ben Raines, March 07, 2013.  
http://blog.al.com/wire/2013/03/ancient_underwater_forest_off.html#incart_maj-story-1

Our ancient woodlands that could be lost to the bulldozer.  
Ancient woodlands covering an area larger than 12,700 football pitches are threatened with destruction to make way for new building developments and the controversial high-speed rail link. Richard Gray and Stephanie Kitching7:15AM GMT 10 Mar 2013.  
http://www.telegraph.co.uk/earth/greenpolitics/planning/9919768/Our-ancient-woodlands-that-could-be-lost-to-the-bulldozer.html
The Living Deadwood, Duration: 22 minutes, First broadcast: Sunday 02 December 2012. All trees, even ornamental species, at the end of their life are great providers of dead and decaying wood, whether they are in recognised woodlands, or as single specimens in our parklands. However far from being the end of life this provision of dead and decaying timber provides the beginning of life for rare invertebrate and fungal species. From a biodiversity point of view the conservation of this deadwood in woodlands is of critical value as many species are associated with specific species of deadwood, or certain trees.

http://www.bbc.co.uk/programmes/b01p30f3

Save the Tarkine  http://tarkine.org/

Fish live in trees too. Posted on March 5, 2013, by Kaye Brennan.
http://wtcampaigns.wordpress.com/2013/03/05/fish-live-in-trees-too/


Romanian Pole Lathe Flask Turner
http://www.youtube.com/watch?v=XEibt31OiCA

U.S. bat epidemic spreads to 20th state. White-nose syndrome has been confirmed in Illinois, state officials announced this week, marking the 20th state affected by the deadly, fast-moving bat disease. Fri, Mar 01 2013 at 3:57 PM http://www.mnn.com/earth-matters/animals/blogs/us-bat-epidemic-spreads-to-20th-state

Welsh charity saves an area of rainforest the size of Wales A charity in Wales, long used as a shorthand measure for rainforest loss, has turned the tables in time for St David's day. Adam Vaughan, guardian.co.uk, Friday 1 March 2013 01.00 EST. http://www.guardian.co.uk/environment/2013/mar/01/charity-saves-rainforest-size-of-wales

Around the largest tree of Europe (HD)
http://www.youtube.com/watch?v=jPPM013khiQ

Heath Tunnels.
http://tilthelasthemlockdies.blogspot.com/2013/02/heath-tunnels.html
Back Issues of eNTS: The Magazine of the Native Tree Society
2013

eNTS Magazine January 2013  27 MB
Broken into Four Parts:  A, B, C, D

eNTS Magazine February 2013  15 MB
Broken into Four Parts:  A, B, C
About: eNTS: The Magazine of the Native Tree Society

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

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

Edward Frank – Editor-in-Chief