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.

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COVER: Sugar Maple, Dawes Arboretum, Ohio – photo by Rand Brown.

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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

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Editor’s Corner
By Edward Frank

Webmaster, BBS Administrator,
eNTS Magazine Editor-in-Chief

edfrank@nativetreesociety.org
**A notable tree holiday**

by fooman » Sun May 29, 2016 4:44 am

Hi All, This will be a series of postings on some of the recognized notable trees of New Zealand that I somehow managed to convince my wife and son to include in a oft-delayed summer holiday in April this year.

A number of the trees were included in a 1984 publication "The Great Trees of New Zealand", a summary of thousands of notable and historic trees curated by S.W. "Bob" Burstall. Most of those trees are currently on the New Zealand Tree Register [http://register.notabletrees.org.nz/](http://register.notabletrees.org.nz/), a joint project between the Royal New Zealand Institute of Horticulture and New Zealand Arboricultural Association, and I used the opportunity to fill in some of the gaps.

Cheers,
Matt

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**Re: A notable tree holiday - Pureora and Whakarewarewa**

by fooman » Sun May 29, 2016 6:05 am

Pureora Forest is on the western ranges above Lake Taupo, in the centre of North Island. Protected since the late 1970's, the forest (spread over a number of discontinuous reserves) is possibly the greatest Podocarpaceae-rich forest in the world. I had a quick detour to the Waihora Lagoon track in the forest on the drive north from Wellington. I had been on this short half-mile track before, but the lagoon was dry and I wanted to get a photo of a lagoon, not a clearing! There are some large rimu (Dacrydium cupressinum) on the track, around 2.4 m/8 ft dbh, but are all multi-stemmed. The trees surrounding the lagoon are around 40 m/130 ft tall. Not too many photos, as the light was receding and I had to drive to Rotorua.

---

*Great Trees of NZ, 1984*

*Waihora Lagoon.*
In the morning at Rotorua, I had a quick wander around the Redwood Memorial Grove at Whakarewarea Forest, on the southern outskirts of the city. The redwood (Sequoia sempervirens) grove was a trial planting in 1901, along with other exotic conifer species. The New Zealand Forest Service Research Institute, now Scion Research borders the forest and includes a number of specimen plantings. The redwood grove contains the tallest of the species outside its native range. I've measured one tree at 71.4 m, another tree has been tape-dropped at 72 m. Chris Earle (http://www.conifers.org) considers these trees to be the tallest known horticultural conifers in the world, ahead of an 1859 planting of Douglas Fir near Geraldine, in South Island, measured by Bob Van Pelt at 69 m tall in 2013.

Cadwallader also measured a 51.3 m (168 ft) Montezuma pine at the back entrance to the old research institute, near the grove carpark. I found the Montezuma pine just outside the gate, and got 51 m, or thereabouts with my Nikon 550. Inside the gate were some pine trees, with the typical form of tall Torrey pines along with the silvery needles. Scanning through the branches of the P. montezumae pine resulted in a maximum of height 49.2 m (161 ft). Brad later confirmed they were Torrey pines from some old planting records. According to Chris Earle's record the 43 m tree at Whakarewarewa (apparently since removed due to a large split in the trunk) was the tallest known. The 49 m tree was probably hiding behind that one, not able to be easily measured.
Re: A notable tree holiday -
Tauranga

by fooman » Mon May 30, 2016 4:51 am

Tauranga is the largest city in North Island's Bay of Plenty, a warm and fertile region. A number of NZ's notable trees are in and around the city. Yatton Park includes a arboretum planted in the 1870's. The plantings include some of the largest and tallest Araucaria species in the country. The tallest known (until recently) Norfolk Island pine (A. heterophylla) in NZ was in the park. I had measured this at 51.3 m (169 ft) during a previous visit. However a recent storm had damaged the top, and this had been removed before this visit.

There is a magnificent grouping of trees in the centre of the park, including a 41 m (135 ft) Japanese cedar, a 43.8 m (144 ft) Hoop pine (Araucaria cunninghamii), the largest Bunya pine (A. bidwilli) in NZ, the largest Queensland kauri (Agathis robusta) in New Zealand, and another 4 Norfolk Island pines. I had recently measured a 52.1 m (171 ft) Norfolk Island pine in Auckland, the tallest known in the world (the previous record holder was a 51.8 m (170 ft) tree at Tedeschi Winery, Maui, Hawaii measured in 2003 by Bob Van Pelt - it may be taller now, but no recent measurement is known to me).

Tall Hoop pine - tallest in NZ, second tallest known measurement in the world.

I knew from my previous visit that there were a group of tall Norfolk Island pines in the centre of the pack - a quick scan with the 550 showed heights of around 49 m in 2013. Three years later, I had a bit more time to spend measuring the trees. The three tallest trees in the grouping turned out to have heights of 49.4, 50.2 and 52.6 m (162, 165 and 173 ft). Not too bad. Looking at the photos later, at least two of those trees still had vigorous leaders - there is the potential for further growth.
Tall grouping. The tree centre left is 49.4 m, the tree centre right is 52.6 m tall.

There are other NZ champions in the park, including a Bhutan cypress, a Chir pine and a double stem Canary Island pine, the tallest in the country at 47 m (154 ft).

On the out of the city I rather deliberately drove past the Bethlehem Macrocarpa, the tallest known Monterey Cypress (Cupressus macrocarpa) in the world. Bob Van Pelt measured the tree at 50.9 m (167 ft) in 2002. I got 50.4 m (165 ft) from the roadside.

The Bethlehem Mac, Tauranga

Cheers,
Matt

Re: A notable tree holiday - Coromandel
by fooman » Tue May 31, 2016 5:28 am

The Coromandel is a rugged, eroded volcanic peninsula north of Tauranga, and east of Auckland, across the Hauraki Gulf. Coromandel was the scene of a gold rush in the 1850's which tapered into hard rock mining that continues on a smaller scale today. The gold rush was followed by a timber rush, as the region was rich in kauri forest, the last trees being felled in 1971, but most before 1920. There
are a few remaining stands of kauri remaining there, those big trees escaped felling because they were inaccessible, high up in the valleys.

Mercury Bay, on the east coast of the peninsula was the site of one of the largest kauri trees ever known. There are three accounts of measuring the tree: Dr John Jolliffe of H.M.S. Pandora found the tree dead some time in the early 1850’s from a lightning strike, 75 feet in girth and 70 ft to the first branch. One fallen branch measured 35 ft in circumference. A second hand account was of a Mr Reeve measuring the dead tree around 1870: "as high as he could reach with a tape and it was 78 ft in circumference". The account given the most credence of that of Thomas Laslett, a timber surveyor engaged by the British Admiralty during timber cruises in the 1840’s. He measured the tree at 72 ft in girth and 80 ft to the first branch.


In some of the literature mentioning the tree, it was said the dead tree was cut down in the 1880’s and the stump used as a stage. At least one tree near Mercury Bay with a 50 ft girth was extant in 1923, but no tree of that size is known on the peninsula these days. There is a volunteer organisation, Kauri2000, which has an excellent webpage describing the history of the kauri in the Coromandel [http://www.kauri2000.co.nz/]. They also publish a 2002 list of the largest trees in the region, at [http://www.kauri2000.co.nz/Kauri-Book2.pdf].

One of the trees that escaped the axe was the Square Kauri. This is the most accessible of the largest trees in Coromandel, only 200 ft from a winding, unsealed road crossing the spine of the peninsula. Officially it is the 21st largest tree in the region (ranked by stem volume). The apparent reason it was saved during the road construction in the 1890’s was the unusual "square" bole, due to an optical illusion from flanges of compression timber below the first branches. Not a giant of the species, only a little over 9 ft in diameter, and a shade less than 2500 cubic feet in the stem, it has a fantastic crown that is almost 2/3 the height of the tree (44 m or 144 ft), and around 100 ft across. The NZ Tree Register entry is at [http://register.notabletrees.org.nz/tree/view/1364].

I didn’t measure the girth for three reasons: Kauri have very sensitive feeding roots that can be damaged from compaction and affect the health of the tree. There is also a phytopthora taxon agathis (PTA) that causes die back and tree death. One vector is infected soil on footwear. Finally, there is a rather significant fall risk on one side of the tree. The diameter measurement quoted, 2.79 m (9 ft), was taken in 1975. The tree may have grown 0.2 m in diameter since then, given typical kauri growth rates (average ring growth is between 3 to 5 mm per year).
A big loop around the peninsula took me to the "309 Road", a very tight and twisty dirt road re-crossing the forested ranges to the west coast of the peninsula. Heavy rainfall the night before had caused a slip to block off the main road (a highway in name only) between the east and west coasts in the north of the peninsula, meaning the 309 goat track, er road, was quite busy. Near the western end of the road is the Waiau Kauri Grove, about a 3/4 mile walk from the road. This stand of trees was, apparently, never officially assessed for timber content by the forestry service or timber assessors going through forests in the late 19th and early 20th century. The trees are not especially large, the largest maybe 2.2 m dbh (approximately 7 ft). I did tape one tree as a board walk enabled access to the tree without trampling the roots - 1.98 m/6.5 ft dbh. That tree was 39.8 m (131 ft) tall, with an average spread of 36 m/118 ft (spoke method) despite being in the middle of the stand - the branches somewhat interwove between trees. The tallest tree I could measure was around 44.4 m tall, or a little over 145 ft, with 47 ft to the first branches.
Interleaving (ha!) branches

Re: A notable tree holiday - Auckland (1)

After leaving the Waiau grove at dusk, a long drive to Auckland followed. Not much in the way of tree viewing in the dark. The following morning found me in Takapuna, on the North Shore of the Waitemata harbor. The North Shore is to Auckland what New Jersey is to New York, or Oakland is to San Francisco; the other place across the bridge. Development is relatively recent there, so there are no old homesteads with old
plantings. Rather, gullies and streams have been reserved in a partially natural state. In amongst the various parks (many preserving some of the 50+ cones and craters in Auckland - it lies on a monogenetic basaltic volcanic field) is Smith’s Bush (“bush” is a widely used synonym for a native forest here). Right next to the State Highway 1 motorway, the reserve is mostly regenerating 50 to 80 year old kahikatea (Dacrycarpus dacrydioides) forest, with a few remnants of old growth puriri (Vitex lucens) towards the centre. The reserve has been recently fenced and the undergrowth is starting to recover, but it is still fairly open under the canopy.

A view past some old puriri trees towards young kahikatea trees. Nikau palms are starting to gain height from the forest floor.

One of two old growth Kahikatea trees in Smith’s Bush. The tree is around 36 m (110 ft high) and about 4 ft in diameter: not a particularly large example but typical instead.
After wandering around Smith's Bush, I headed north to Leigh Reserve, in suburban Glenfield. This small reserve on the banks of a stream contains the largest Kauri tree in the North Shore. Literally just down from a neighbouring back yard (they have a bench seat facing the tree), the tree is old, missing a major leader, but is still soldiering on with a height of 29 m (95 ft) and an average spread of 23 m (75 ft). Again, I did not wrap for girth to avoid trampling the roots, but it certainly met and maybe exceeded the stated 2 m (6.5 ft) diameter.

The old kauri in Leigh Reserve

The base of the Leigh Kauri. It is 15 ft from the base of the tree to the rather informative sign.

Cheers,
Matt
Re: A notable tree holiday - Cascades and Pah Homestead

by fooman » Sun Jun 05, 2016 7:48 pm

The Waitakare Ranges rise over the west of Auckland city. A remnant of a long-gone volcano, it was cloaked in a kauri forest that was cut down in order to build the city's houses during the late 19th and early 20th centuries. There are remnants of the kauri forest, the largest being the Cascades. Part of Waitakere Ranges Regional Park, the kauri stand at the Cascades (named after a small hidden waterfall) was left because of issues with access, and was then reserved before the trees could be felled.

Access is not so much of an issue these days. The park is reached driving through a golf course to a well maintained entrance. A number of the tracks have been recently closed to protect the trees from the phytophthora taxon, but a few are still open. I found myself following the Upper Kauri Track that led to the ridge line and down into a shady gully. I was in a bit of a hurry as I still had to meet my wife and son at the airport, 45 mins drive away in a couple of hours.

A panorama of the view from the Cascades trail head. The large tree on the ridge, centre left, is approximately 30 m (100 ft) tall.

The tallest tree in the gully behind the ridge, ~ 40 m (131 ft) total height.

A bit of an aside on kauri heights: The original records of kauri were concerned with the merchantable timber content. This relied on two things: the centre girth (estimated from CBH and taper) and height to the first branches, measured with an Abney level. There are many records of trees with lengths of 36 m (120 ft) to the first branches - there is one record where a single spar from a tree had to cut at 98 ft from a total unbranched length of 150 ft in order to fit on the boat that would carry it. These were not the total heights of the tree, rather the length of the useful timber. The crown was often left to rot. More recent records of trees from the latter half of the 20th century included total height. These measurements suffered from tangent errors (±9 m is known for some trees) due to vast spreading crowns of the trees. Only recently have reliable laser based
measurements (with the odd tape drop) been made. As a rule of thumb, the crowns of large mature kauri trees are between 24 to 30 m tall above the first branches - I did a quick analysis: Laser based crown heights are average of 28 m, SD 2.1 m. Older measurements have average crown heights of 30 m, SD 6 m. These results (although limited samples) show that crown heights are reasonably consistent for the larger trees. The variable that most affects the total height is the height of the bole, or the distance to the first branch. For the 40 m tree above, it had a bole of 18 m (60 ft) - quite tall. Interations of the trunk (called top logs by the foresters of the time) above the first branch can be seen - these are present on some trees. The average bole for a mature kauri, purely based on experience, is around 12 m (40 ft). Most of the taller trees tend to have taller boles.

Hot and sweaty from the unexpectedly vigorous trek, I zoomed off to the airport. On the way from the airport to our accommodation, we stopped by Pah Homestead at Monte Cecila Park in Hillsborough. One of the old Auckland homesteads, Pah has an interesting history as a farm, a grand mansion, a nunnery, a boarding house and is currently houses an art collection. The grounds were planted in a number of exotic trees before the house was built in the late 1870's, including a number of Australian figs.

The trees include the largest Moreton Bay Fig in New Zealand. One of Burstsall's great trees, it has an immense multi-stemmed trunk, and a spread in one direction of 182 ft (average of 170 ft). Details of the tree can be seen at http://register.notabletrees.org.nz/tree/view/783.

The largest of the many fig trees at Monte Cecilia Park.

Cheers,
Matt

Re: A notable tree holiday - in and around Auckland

by fooman » Wed Jun 08, 2016 4:43 am

Auckland, the largest city in New Zealand is both a young and old city. Due to the volcanic ash and climate it was fertile and there were many villages spread around the isthmus. There were around 20,000 people living in Tāmaki Makaurau before the Europeans came and started the Auckland settlement there in 1840. We went for a walk around the older central part of Auckland. The city was the capital of the colony between 1841 and 1865. The old government house is now part of Auckland university. A large Erythrina caffra, coral tree, was one of Burstall's trees (http://register.notabletrees.org.nz/tree/view/581). Nearby is a nice Norfolk Island pine planted in 1869 by some duke.
Coral tree and 44 m Norfolk Island Pine in front of Old Government House.

Nearby Albert Park is an old formal garden, with a number of nice exotic species. A large ombu tree is well known ([http://register.notabletrees.org.nz/tree/view/1259](http://register.notabletrees.org.nz/tree/view/1259)), due to its massive spreading roots. It lost a few leaders over 40 years ago but has recovered well. There are also many fig trees that have grown quite large over the years. A couple of figs, one each of F. macrophylla and F. obliqua had germinated as small epiphytes on the same old Cupressus macrocarpa. Will be an interesting tree(s) in a few decades if left to grow.

Nice buttresses on one of the fig trees (probably F. macrophylla)

We walked from there to the Auckland Domain, the 2nd largest park in the region, located in a flattened volcanic crater. The Auckland War Memorial Museum is perched on one side of the crater rim. One of the items was a section from a rimu tree felled for timber in the early 20th century. Approximately 2.5 m across, as big as any standing tree today, there are 815 growth rings.

Section from rimu log. 815 growth rings have been counted.

Cheers,
Matt
Re: A notable tree holiday -
Auckland (2)

by fooman » Fri Jun 10, 2016 10:07 pm

We went to Dove-Myer Robinson Park, known as the Parnell Rose Garden. I didn't stop to smell the roses, but instead wandered to the magnificent pohutukawa, reported to be the largest in Auckland City. Pohutukawa (Metrosideros excelsa), informally known as the NZ Christmas Tree (it flowers in late December), is native to the top half of the North Island, north from about 39°S. It is a relative of the ohia tree from Hawaii. It is a tough, gnarly coastal tree and can take a number of forms. It is usually a multi-stem tree, sometimes with masses of aerial roots. Rarely it can grow as a hemi-epiphyte, like the related rata (M. robusta). There is one region of pohutukawa that colonised inland after a volcanic eruption in 1886. Those trees are tall and single stemmed. One of the common forms is a massive, sprawling growth, and the Parnell tree is one of those.

The tree is again on the site of an old Auckland home, but there is some debate if the tree was planted, or was a remnant of the original ground cover. It has a magnificent spread, 47 m (154 ft) in one direction, average of 43.5 m (143 ft), and has a ground level girth of 32.5 ft, across 5 stems. The largest branch extends for more than 25 m (82 ft), touching the ground in four places. The largest known pohutukawa tree is south of Auckland, on the Awhitu peninsula with a spread of 53 m (174 ft) and a ground level girth of close to 15 m (50 ft) in 2003 - however that tree had suffered badly from livestock grazing, and the current status is unknown (see http://bts.nzpcn.org.nz/bts_pdf/ABJ58%281%29-2003-55-56-Awhitu.pdf).
A panorama along the longest branch.

The tree from the outside.

Pohutukawa is a great coloniser on bare, rough rock. Rangitoto Island in the Hauraki Gulf, the icon of Auckland geography, is a young basaltic shield volcano - it's name means "Bloody Sky", and last erupted about 500 years ago. It is covered with the largest pohutukawa forest in the world, as the trees grew on the rough bare lava.
Rangitoto Island, about 850 ft tall, cloaked in pohutukawa.

Cheers,
Matt

Re: A notable tree holiday
by fooman » Thu Jun 16, 2016 6:45 am

Thanks Larry! Sometimes pohutukawa does look like live oak, but other forms can be more straggley or bushy compared to what I’ve seen of your Live Oak reports.

Eventually we left Auckland. About an hours drive north is the Parry Kauri Park near Warkworth. The park contains two nice sized trees and some managed regrowth. The park was created by Harry Parry, who purchased the land that was farmed by the McKinney then Simpson families in order to preserve the two large trees there. The trees are again a nice size, not giants, but are very accessible, only a few miles from the main highway north from Auckland. Records are at http://register.notabletrees.org.nz/tree/view/1245 and http://register.notabletrees.org.nz/tree/view/1246.

The McKinney and Simpson Kauris at Parry Kauri Park, Warkworth. Young kahikatea are between the two large kauri.
The trunk of the McKinney Kauri. This is one of the most photographed trees in NZ, based on ease of access size. It’s around 11 ft dbh (just above platform), but does taper above this.

Young kauri (known as rickers) in the park. A more classical conifer shape than the mature trees, they take around 100 to 200 years to start to branch out to the mature form.

After that we spent the night in Tutukaka, a popular fishing diving resort. Really nice coastal pohutukawa and the odd old puriri trees clambered over the rocky cliffs. We only spent a night there, could have spent much more. There is a large kauri tree nearby that was officially named in 2008 as Tane Moana. It was claimed to be the largest tree on the east coast of Northland (not hard, as most of the kauri had been cut down), and I had always wanted to check this. The tree has a magnificent crown extending over what I would consider to be re-growing native forest. The reason for its survival is obvious - it has a stumpy, tapering oval scarred trunk - poor timber quality. It was measured at 36 ft girth at 3 ft above grade - this includes a large basal flare. Continuing
my policy of not taping the trees to avoid damage and risk of infection, I later did some quick digital analysis which suggests an average girth of 32.5 ft at 6 ft above ground (level with the fence rail). The record is at http://register.notabletrees.org.nz/tree/view/1366.

Tutukaka harbour at dusk.

Tane Moana. The trunk tapers to a short height before branching and contains two large scars on opposite sides.

Re: A notable tree holiday - Ruapekapeka and Pahia
by fooman » Mon Jun 20, 2016 5:27 am

After leaving Tutukaka, we stopped for a quick walk around Whangarei Falls. This is a small reserve near the city of Whangarei, that contains, yes, a nice small waterfall. There is a nice track that leads from the falls downstream, eventually ending up at the A.H. Reed Memorial Kauri Park - Alfred Reed was an notable author and publisher in NZ. He grew up in Whangarei in the late 1800's and among other ventures was a gum-digger (a fossicker for kauri
resin, used in varnishes, linoleum manufacture etc. before replacement by hydrocarbon derived materials) before setting up a publishing empire, and writing books well into the 1960’s. He wrote some of the first popular accounts of the kauri timber and gum industry. We didn’t go to the kauri park, just wandered through the waterfall track. The forest gave the impression of being only a hundred years or so old - some nice maturing trees, but no real old growth.

Looking back down from the top. The forest is mainly tōtara, with some kauri rickers and the odd puriri tree, with other hardwoods. There are only a couple of NZ trees that are deciduous, so this view will not change over the year.

On the way to Pahia is Ruapekapeka Pā. A pā is essentially a fort. Ruapekapeka was the site of a battle between Ngāpuhi (the local iwi, or tribe) and British troops (and British allied Ngāpuhi as well) in 1845. This was the last battle of the "War of the North", an uprising due to local discontent about the biased governance of the recent colonial government over land appropriation. The end was an effective stalemate, with the British government and Ngāpuhi negotiating an end to hostilities after the battle. There is a small reserve at the back of the pā that has a fine example of a puriri tree. Puriri (Vitex lucens) is a favourite tree of mine. It has a similar distribution to pohutukawa, the top half of the North Island. Puriri has really tough and heavy timber, but is often riddled with holes due to the grub of the puriri moth, NZ’s largest moth. This tree is of a pretty good size for the species, but what was quite remarkable was one branch, extending more than 25 m (82 ft) - halfway along a small kohekohoe (Dysoxylum spectabile) tree had grown up under the branch and was now supporting it like a crutch.
The trunk of the puriri - around 7 ft dbh.

How about that branch!

There are some photos of the largest known puriri trees here:

http://www.hundertwasser.com/gallery/view-129 - a bit of forced perspective, but an impressive size, this tree is on private property not far from Ruapekapeka. No official measurement.
http://register.notabletrees.org.nz/imagestore/a3f390d88e4c41f2747bfa2f1b5f87db.large.jpg - this is probably the largest tree, but not measured yet.

Cheers,
Matt

Re: A notable tree holiday

by fooman » Tue Jun 21, 2016 4:49 am

Actually that branch is quite interesting. Brad Cadwallader, with his experienced arborist's eye, noted the reaction wood along the neutral axis of the branch adjacent the support tree as indication of a crack due to the maximum shear stress that is present at the neutral axis under bending.

I think because of the lack of a nearby trunk to form reaction wood to reduce the bending stresses (and hence the secondary shear stresses that cause the crack and reaction wood), the support tree has actually induced that damage - that is speaking as a materials engineer, rather than an arborist however!
Feel free to correct me if needed. See below for a close up. As mentioned, puriri wood is strong, dense (ranges from 900 kg/m$^3$ to 1200 kg/m$^3$ apparently) and tough - quite hard to work because of intertwining fibres. You do see some quite gnarly old trees of the species, not giving up on not falling down.

Cheers,
Matt

The intersection. Note reaction wood extending rather linearly along the neutral axis of the branch.

Re: A notable tree holiday - Waimate North and Omahuta

This will be a bit of a large posting, so lets get on with it.

The Waimate North Mission, or Te Waimate, was one of the first British outposts in NZ. Inland from the Bay of Islands, land was purchased from the local Ngāpuhi people in 1830. The mission house and church was used to reasonably successfully convert the locals to Christianity. However the mission was used as a garrison in the War of the North in the 1840's, resulting in a loss of mana, or prestige/authority, and gradually the mission fell into disrepute over the decades. It is now restored and administered as a heritage site. The plantings there are some of the oldest ornamental in NZ. The oldest known oak (Q. robur) in NZ was planted around 1831, after transplanting as a 6 or 7 year old seedling from the Bay of Islands. It apparently caught fire soon after, but was saved by smothering the flames with a blanket. It may have lost a top as well. There is a magnificent photograph of it in a 2011 publications ("Trees of New Zealand" by Jassen & Hollman), but something has happened since and it is literally half dead.

The oldest oak in NZ, but not for too much longer. Approx 6 ft dbh, and 60 ft to the highest, dead, top.

The plantings in front of the mission house include a large tōtara, 7.5 ft dbh (branching at ground level), the largest ornamental of its species, some Bunya pines and two Norfolk Island Pines which are probably among the oldest plantings of the species in NZ.
The front view towards Te Waimate mission. Some of the oldest exotic and native ornamentals in NZ.

The base of the large tōtara, looking towards the mission house. 2.3 m diameter at around 0.7 m. It just might be single stemmed an mm or two above ground.

There is, or was, a large puriri tree just south of the mission (there are actually hundreds of large puriri trees in the area, but this was notably so, at 89” dbh in 1970. A picture of it is at http://deniswilford.com/album/okaihau2/puririlarge.php, describing it as near the road (not what particular road however). I couldn’t see it from the road we drove down, so we went on our way to Omahuta Forest. Omahuta, contiguous with Puketi Forest to the south, was logged from the 1880’s up until around 1959 (some windthrown trees were taken out at that time).

The “Omahuta Giant”. This kauri was one of the largest to be felled, photo by the Northwood Brothers, circa 1910. It was around 36 ft centre girth, 70 ft to the first branch. It contained 78000 board feet of timber, 68000 in the main stem. If still standing today, it would be the ranked the fourth largest kauri tree, by merchantable volume.

In 1951, a small reserve was created, containing a number of exceptional kauri trees. The largest was "Kopi", named after the local forest ranger, a Mr Corby. It was around 13’ 9” in diameter, 186 ft tall (although likely with a significant tangent error), and rated at 89000 board feet/7500 cubic feet in merchantable volume. It fell in 1973, revealing it to be hollow. A colony of rare native bats was found inside the fallen trunk, and a previously unknown species of bat fly with them. A nice photo of the tree before it fell is at http://www.aucklandcity.govt.nz/dbtw-wpd/HeritageImages/images/photos/Acc1207f/1207_1570.jpg, and an account of a visit to the recently

On the way in is a stump of a tree that was taken from the forest during the logging. I did a rough tape around the sloping circumference - 18.1 m or 59 ft in circumference, between 1 and 4 ft above ground level.

The stump of a tree cut out of Omahuta, around 100 years ago.

A little bit further down the forestry road is the sanctuary reserve proper. It is small, around 6 ha, and the loop track heading around is only a half mile or so in length.

The remaining Ngatuahine (sister) tree, with the recently fallen second sister in front. The standing tree is around 150 to 160 ft in height (base was obscured). There were originally three, with one falling some time before 1970.

The fallen "Sister" tree had cleared vegetation in front of Rakanui, the second largest remaining tree in the sanctuary, giving a fine view, but exposing that tree to greater risk of windfall. "Rakau" means tree, or stick, and "nui" means big. The name therefore is supposed to mean "big tree", but Rakaunui actually translates to "full moon" in Te Reo. I think "Big Stick" is appropriate - it has one of the tallest trunks of the remaining big kauri trees in the whole country. Die back in the crown suggests that the tree is on the decline. It is right against the trail, with no protection from trampling on one side. See http://register.notabletrees.org.nz/tree/view/1365 for further information on the tree.
Re: A notable tree holiday - Omahuta continued

by fooman » Thu Jul 28, 2016 4:22 am

Real life gets in the way, but now I can continue with the travelogue.

Still on the short loop track around the Omahuta sanctuary, hidden behind 40+ years of regrowth, the fallen log of the Kopi tree looks like a bank against the path leading to the Hokianga tree.

The fallen Kopi tree. I was looking out for it, but I needed a second pass to recognise the fallen log.

Hokianga is the largest tree remaining in the sanctuary. Originally measured at around 53 m tall, it was lasered by BVP at ~ 47 m (155 ft). The original measurement was probably a tangent error due to the broad spreading crown of the kauri. It's around 10.5 ft dbh and has a clear bole to 68 ft. The record of the tree can be found at: [http://register.notabletrees.org.nz/tree/view/803](http://register.notabletrees.org.nz/tree/view/803).

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**Rakaunui, the second largest tree in the sanctuary. It is 28'3" cbh, 72 ft to the first branch, and 161 ft to a dead leader.**

(to be continued...)

Matt
We finished the walk, and headed back to Pahia, via Kerikeri. This town (rather larger than when I was here last around 25 years ago) has NZ's oldest European building, and the oldest stone building in the country. Nearby is a pear tree, planted around 1819, one of the oldest, if not oldest, surviving exotic (non-native) trees in the country.

Looking up at the Hokianga tree.

Cheers,
Matt

Re: A notable tree holiday - Waipoua - Tane Mahuta

After a few days of relaxing we travelled from Pahia to Waipoua via the Hokianga Harbour. We stopped off to walk around a couple of tracks in Puketi Forest, but the highlight of the day, and indeed the trip was visiting NZ's largest known trees in Waipoua. First up was Tane Mahuta. The name translates as "Lord of the Forest". All large kauri names were in fact given to them by the forestry service - the only tree
with a traditional name is Te Tangi o te Tui (the lament of the tui - a type of bird) in Puketi Forest. I've done a bit of research, and Tane Mahuta was found (by the settlers anyway) in the late 1920's when the road through forest was laid. Some early references to a "Joe Tredwell" tree of the same size at the same location may be an early attempt by someone to name the tree after themselves. Anyway, Tane Mahuta is the largest known existing kauri tree by merchantable volume. The official NZ Forestry Service (now disbanded) measurements from 1971 assigned a stem volume of 244 m$^3$, or around 8600 ft$^3$.

Bob Van Pelt remeasured the tree in 2002, using considerably more accurate methods, and came up with a stem volume of 255 m$^3$, or 9000 ft$^3$. Taking the massive crown into account more than doubles that figure to a total wood volume of 516.7 m$^3$ or around 18250 ft$^3$. From this, BVP ranked the Kauri 3rd behind the redwoods, and just ahead of western red cedar, in the ranks of largest trees (by single stem wood volume) - He must have discounted the El Árbol del Tule tree as being a multi-stem fusion to reach this ranking.

BVP measured the dbh of Tane Mahuta at 4.91 m (16.1 ft), which includes some buttressing. The 1971 NZFS measurement for diameter was actually 5 m (16.4 ft) above grade, at 4.35 m wide (14.3 ft). The spread averages 38.4 m (126 ft) and is 45.2 m tall (148 ft), and around 17.8 m (58 ft) to the first branches. I have seen one of BVP's drawings of the tree (to be found in an upcoming book perhaps?) during a presentation on kauri - the presenter also noted that two of the large branches in crown have fused to form an incredibly strong brace.

The start of the massive crown that contains around 9000 cubic feet of wood.
The view of the tree from the more distant of two viewing platforms. The closest is still around 30 ft from the trunk, to protect the tree from trampling.

A fine early photograph of the tree, from the 1930's showing the full length of the stem, the base is now hidden by undergrowth.

Cheers,
Matt

Re: A notable tree holiday - Waipoua - Te Matua Ngahere
by fooman » Sat Aug 13, 2016 6:27 pm

Te Matua Ngahere (The Father of the Forest) is the largest existing kauri tree by girth, and the largest single stem tree by girth in NZ. It was seen by Nick Yakas, a Dalmatian (part of modern day Croatia) immigrant who work as a kauri gum collector from the 1920's onward. He collected kauri gum from trees in Waipoua forest, and made note of large trees he came across (and climbed to reach the gum found
in the nooks and crannies of the their crowns). He saw the tree around 1928, when he was working on the road that went through the forest, but the tree was not widely publicised until the 1930's. The tree was hard to access, until logging (nominally for the war effort) was carried out in the early 1940's, and the access tracks for the forestry machinery used were eventually turned into an access track to the tree. The start of the track is only a few hundred metres down the road from Tane Mahuta.

Te Matua Ngahere is a short stumpy tree, with a dbh of 5.33 m (17.5 ft). The trunk actually becomes wider until forming large leaders at 10 m (33 ft). The original, "official" height of 29.9 m (98 ft) was a significant underestimate, as BVP lasered the height at 37.4 m (123 ft) in 2002 again most likely a tangent error. I don't know of any accurate crown measurements, especially since the tree was severely damaged in a storm in 2007 that took down one of the main leaders, and a number of epiphytic trees that had made the tree their home. I did a quick scan with my Nikon 550, and the height was still approximately 37 m - a small branch well behind the centre of the tree from the viewing platform reached this height. Apparently, a large branch that came off in the storm was found to have 1700 growth rings (but kauri do have false rings, so that count most likely does not represent the true age of the branch).

Te Matua Ngahere from its viewing platform. The storm damage is obvious.

Looking at the damage. The high top I measured is seen travelling away and up in the gap centre left.

Cheers,
Matt
Re: A notable tree holiday - Waipoua - Yakas Tree
by fooman » Sat Aug 20, 2016 4:51 am

The Yakas Kauri is the 3rd large tree with easy access in Waipoua. It is named after Nick Yakas, who re-discovered the tree in 1966, after first seeing the tree 40 years earlier when he was scouring the forest for kauri gum. Officially, it is ranked 7th by merchantable volume. By AFP points it is almost equal with Tane Mahuta. The tree is around 40 minutes walk south of the Te Matua Ngahere track, and has a boardwalk right up against the trunk. BVP measured a dbh just shy of 16 ft (includes some basal flare), a lasered height of 136 ft, and an impressive crown, averaging 161 ft across.

The Yakas tree, the less photographed side.

The side most people photograph, as they can be right next to the tree.
A hint of the tree’s massive crown can be seen above the canopy.

After I got back home I was reviewing my photographs, and suddenly realised that the Yakas tree was in fact photographed by Leonard Cockyane (one of NZ’s eminent early botanists) in late 1907 or early 1908 during a botanical survey he took of the forest. His report included a photograph of a large kauri, with burls identical to the Yakas tree. I sent an email off to a member of the Waipoua Forest Trust and he confirmed that the Yakas Tree is indeed the same tree on Cockyane’s report, although this is not widely known. The re-discovery of the Yakas tree sparked off hunts for another large tree, known as the Phantom Kauri, seen in the early 1960’s, that was incorrectly supposed to be the large tree in Cockyane’s report. A number of trees were found, but none matching the description of the Phantom Tree until that was finally located in 1990 and found to be second equal in terms of merchantable volume. That tree is kept from public view to protect it - when Tane Mahuta, old and hollow, falls, the Phantom Kauri will likely be the largest tree remaining in New Zealand.

Cheers,
Matt
Alley Pond Park and the Queens Giant

by Erik Danielsen » Wed Aug 24, 2016 11:03 am

Sunday 8/21 Connecticut ENT Ryan LeClair was kind enough to meet up with me at Alley Pond Park in the borough of Queens to finally remeasure the fabled Queens Giant Tuliptree. In the time since Bob and Bruce measured this tree for the New York Times article “A Rendezvous with Two Giants,” content-recycling news websites have put out articles every few years describing this tree as NYC’s oldest and tallest living thing, often referencing as well its Staten Island rival- typically describing the former as "just" 119' tall and ~21'cbh. As we have seen, in actuality the Staten Island tree now exceeds 127' in height and 23.5' in circumference. On top of that, the Queens Giant's 133.8' height in 2000 we now know is a far cry from the city's tallest (151+ in Inwood!). Nonetheless, the Queens Giant undoubtedly remains one of the city's most charismatic trees and certainly high on the list of potentially oldest. With its cylindrical bole ascending to a high crown it's also still quite possibly got the highest stem volume (to be determined once I eventually get a reticle). After 16 years, it was finally time to update its known dimensions- 133.8' and 18.6'cbh in 2000.

From a viewpoint where I can be reasonably sure I hit the top, the Queens Giant comes in at 132.7' tall in 2016. For this tree's age and gnarl factor it's impressive that it hasn't lost much height at all. A couple large neighboring trees have come down in recent years- whether the exposure is making the giant more vulnerable to wind or blessing it with extra sunlight (or both) is an open question. The girth now comes to 19.8' cbh. It's quite a tree!
The hollow inside the base is enormous and charred

The thick-limbed crown of the Queens Giant

The side-trail to the Giant is quite hidden by overgrowth and we initially continued quite a ways past it on the paved trail, measuring trees as we went. Numerous tulips, oaks, beech, and hickories are in excellent form along the trail. Ryan measured a Black oak to 12'9" cbh (~95' tall) and numerous tulips exceeded 3'dbh. Tulip heights here ranged from 115-130', though heights of other species were more modest. One tulip on a slope exceeded 5'dbh and 110' tall, though the exact numbers are unknown; unfortunately after quite a bit of searching I’ve determined that I must have left my notebook on the bus, so most of these numbers are now lost. Luckily the numbers on the most exciting trees are still crisp in memory (and reported above).

In another section of the park, south of the expressway, very old second-growth hardwoods form
a very pleasing forest that hosts some impressive trees as well. Ryan wanted to show me several exceptional oaks that he had hiked down to while waiting for me to arrive, and the largest of these came to 13'2" cbh (maybe Ryan remembers the number) and 106.7' in height. A slightly thinner red oak a little ways up the trail was a touch taller, though the exact number is lost to me. This forest would be worth some measurement after leafdrop as well. The growth displayed here also makes me excited to check out the old white pine stand in Forest Park, on similar soils nearby.

\[ \text{Re: Very Large Rock Elm (Ulmus thomasii) in Merrickville} \]

by wrecsvp » Sun Sep 04, 2016 6:50 pm

As with the Hartington Rock Elm, I also checked on the huge Merrickville Rock Elm yesterday on the way home from a roadtrip. Happily, found it too to be still in excellent health in a hot/dry summer with many elms dropping from Dutch Elm Disease.

\[ \text{The big red oak. Others had impressive burls} \]

After this we visited Shu Swamp, which I've posted the numbers from in that thread. Thanks to Ryan for driving down and I look forward to future excursions!
mid-crown zoom

Harpers Ferry

by Mark Collins » Mon Sep 05, 2016 11:34 am

NTS,
I spent part of the day yesterday in Harpers Ferry and measured a couple of my favorite trees in town. I'm still working on my species identification so any assistance is most welcome. The first tree is what I think is an Ash tree of some type. I measured the tree to a height of 95.52 ft. with a cbh of 12 feet, 6 inches.

The second tree is what I believe to be a locust, but I am not sure if it's the honey or the black. It has a height of 86.2 feet. It grows next to John Brown's Fort, a structure where John Brown and a few of his followers barricaded themselves during the arsenal raid of 1859. It was also the only armory building to escape destruction during the Civil War. The building rests about 150 feet from its original location.

[Editor's Note: Images are visible on the website]

Re: White Pine Growth Rates Newcomb, NY

by ElijahW » Sun Jul 17, 2016 1:29 am

NTS,
I nailed down the height of the previously measured Tamarack yesterday. Its official dimensions are 129.0' x 64" CBH. I found two more tamaracks above 110' nearby, but nowhere near the height of this guy. A couple pictures of the tree and Huntington Forest in general below:

Tallest known Tamarack. Orange vest for scale.
On the sunny very warm (77 F Long Lake), Sunday Sept. 4, 2016, Elijah Whitcomb and I had an excellent trip to the Adirondacks. Our objective was the tall White Pine plantation managed by SUNY ESF near Newcomb on NY 28N in the central Adirondacks. It is at this site that Elijah measured planted White Pines to over 140 ft., and a Tamarack to a record-breaking 129 ft.

We parked at the lot for the trail to the top of nearby Goodnow Mountain. At one end of the parking lot is a White Pine over 130 ft. tall – it looks shorter. At the other end is a trail into 2nd growth hardwood forest of Yellow Birch, Beech, Red Maple, Sugar Maple, Striped Maple (we would see many Striped Maples in the pine plantation ahead, and many of these Striped Maples are big), Ash, Balsam Fir, Red Spruce. This trail leads into the pine plantation.

We came to the tall White Pines. These magnificent trees were planted in 1916, and I have never seen
such young trees so tall. The White Pines rise straight into sky-piercing heights, mighty towering columns in massed ranks. This is one of the most cathedral-like stands I have ever seen. These White Pines are just starting to get older, rough bark. On this warm sun-filled day the air was wondrously fresh and pine-scented. It’s hard to believe that such tall trees are only 100 years old. The highest points of these trees were hard to see due to the density of the canopy. Heights listed here are usually lower than the actual heights, as we could not often see the highest points. All measurements were done with the standard NTS Sine Method.

One of the largest White Pines is 32.9” dbh (8.6’ cbh).
Typical of bigger White Pines – 26.8” dbh (7’ cbh)
Big spreading Striped Maple – 2.8” dbh (0.73’ cbh)

Trees measured:

**White Pine**
130.5+ (not top)
127.7+ (not top, side branch, nothing higher visible)
144.3+ (not top, tallest tree measured on this outing)
133.6 (slender tree)
133+ (straight up shot from about 3 ft. away from base)
137.8 (slender tree)
130.1 (slender tree)
139.7 (slender tree)
134.9
130.8 (slender tree)
132.8+ (slender tree, not top)
128.4
138.5

Average height of White Pines measured on this outing in this stand (13 trees):
134 ft.

On an earlier outing this summer Elijah measured a White Pine to over 146 ft. in this stand.

Elijah showed me the tallest Tamarack, a double-trunked tree that lifts its light feathery crown high into the White Pine canopy. We tried to duplicate his record 129 ft. measurement, but we were not able to do so, but we did get to over 125 ft. From where we stood we probably could not see the highest point in the dense canopy. It is incredibly tall for a Tamarack.

**Tamarack**
125.9 (Elijah got 129 ft. earlier this year.)
113.3 (neighboring tree – Elijah got 115 ft. earlier this year.)

Tom Howard

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Algonquin Provincial Park ON
by tomhoward » Wed Sep 07, 2016 3:09 pm

NTS,

Jack Howard, some other family members, and I stayed at a cottage resort east of the East Gate of Algonquin Provincial Park Aug. 23-25. This area is near the southern edge of the great Boreal Forest that covers most of Canada. This is part of the vast Canadian Shield, a rocky, hilly region of conifer forests, and countless lakes and rivers. The forest is mostly 2nd growth White Spruce, Balsam Fir, Quaking Aspen, with plentiful Black Spruce, Balsam Fir, and Tamarack in frequent bogs. White Pines are common in many areas, towering above all other trees. Balsam Poplar and Paper Birch are also common in some areas. There are scattered groups of Red Pine and Jack Pine, and some Hemlocks. Red Maple is also common.

On Aug. 23 Jack Howard and I took Algonquin’s Spruce Bog Boardwalk, a delightful easy trail through a bog and fragrant 2nd growth forest of White Pine, Red Pine, Black Spruce, Balsam Fir, Tamarack, Paper Birch, Red Maple, Striped Maple, young Red Oak, and tall (70-80 ft.?) Quaking Aspen. Bunchberry Dogwood is common on the ground. Black Spruce forms a nearly pure stand in the bog. A shrub in the bog with alternate compound leaves and red stems could be Poison Sumach.

On Aug. 24, Jack Howard, and family (including my brother’s 2-year-old grandson Dylan), and I took the first part of Algonquin’s rugged Big Pines Trail. It
was a glorious outing, with everyone (including Dylan) fascinated by the forest. It was a warm sunny day (82F).

Bob and Monica Leverett took this trail a few years ago.

The forest is 2nd growth Boreal with many scattered towering old growth White Pines (220-225 years old, dating from 1790 forest fire). These White Pines are the tallest, most impressive trees I’ve ever seen in eastern Canada. Unfortunately, I did not have my height measuring equipment with me, but I did have my “D” tape. This forest is wondrously fragrant.

Trees seen on Big Pines Trail:
Dominant: Balsam Fir, White Spruce, Quaking Aspen (some large and old looking), Paper Birch, Sugar Maple (small), Red Maple (small).
Associate: White Pine (scattered groups awesomely large and tall, biggest, tallest, oldest trees on trail, a group of 5 White Pines at Post 2 of trail guide, tallest of all, easily over 130 ft. tall and possibly over 140 ft. tall – these are among the tallest trees in Ontario), White Cedar, Striped Maple, Mountain Maple, Beech, Yellow Birch, Black Cherry(?). The tallest White Pines are lofty, ethereal, timeless, seeming to touch the top of the sky. Clubmosses form part of the groundcover.

Big White Pine with leaning lower trunk at Post 1 – 35.9” dbh
At Post 2, one of the 5 towering White Pines – 34.1” dbh.

At Post 3, we came to the biggest tree of all, a giant White Pine with a boardwalk around its base. I measured its dbh as 48.8” (12.8 ft. cbh). It is the largest tree on the trail, the largest pine I’ve ever seen in Canada. Bob Leverett measured this tree to a height of 120.4 ft.

At this point we turned back, returned to our cars.

Tom Howard

Brock Monument Grove,
Queenston ON

by tomhoward » Wed Sep 07, 2016 3:03 pm

NTS,

Brock Monument Grove is a small old growth oak grove at the west end of the park dedicated to Sir Isaac Brock in Queenston, ON. A tall stone monument marks the site of the Battle of Queenston Heights in Oct. 1812 in which British commander General Brock was killed.

On Aug. 21, 2016 Jack Howard and I explored this old growth oak grove in which Canada’s famous Bruce Trail begins. The grove is easily seen from the main highway ON 405. The grove was described by Bruce Kershner in his surveys of the Niagara Peninsula.

The trees do not seem to be very tall, should be under 100 ft., due to the grove’s position on the wind-swept northern edge of the Niagara Escarpment. Some of the oaks look old and gnarly, but not as much as in the old growth North Syracuse Cemetery Oak Grove.

The Brock Monument Grove is diverse with 6 species of oak.

Dominant trees include White Oak, Red Oak (largest trees), Scarlet Oak (looks like neither Red Oak nor Black Oak, but this identification is not positive; leaves are glossy and smaller than Red Oak leaves, and bark is more like Red Oak than Black Oak – Bruce Kershner said that this is the first site in which Scarlet Oak has been identified in Canada), and Sugar Maple.

Associate trees include Black Oak, Bur Oak, Chestnut Oak, Sassafras (plentiful on roadside, some large, none tall), Red Maple, Black Maple, Black Walnut, Butternut, Beech, Black Cherry, Mulberry, Hop Hornbeam, Horsechestnut, dying White Ash.

I counted 160 rings on a 10” radius old oak stump, and 160 rings on a 14” radius old oak stump. I counted about 225 rings on a 9” radius old oak stump.
Possible Scarlet Oak 29” dbh
Big oak – either Red or Scarlet 31” dbh
Red Oak 40” dbh (10.5 ft. cbh), not very old looking, largest tree seen.

Tom Howard

Wizard of Oz Oak Grove Feb. 2016
by tomhoward » Sun Feb 21, 2016 2:36 pm

NTS, On Sunday, Feb. 7, 2016, Elijah Whitcomb and I measured trees at the Wizard of Oz Memorial Oak Grove. The weather was sunny and with temperature about 45 F, not at all like February, but a perfect day for exploring this magnificent old growth forest. The air felt fresh, and was fragrant with fallen leaves. There was no snow on the ground. the western part of the grove, which is exposed to winds, looks battered, because of a large number of dead Oaks as a result of a Forest Tent Caterpillar outbreak a few years ago. Some of these dead trees have fallen recently, including a dead White Oak that has fallen across the trail into the Forest Cathedral in the north central part of the grove. We measured many trees, updating the grove’s height measurements.

I measured the large Harriet Tubman Black Oak in the northwest part of the grove to 103.6 ft., a new maximum height for Black Oak in this grove.

I measured White Oak #23 (cored tree #23, dating to about 1855), a small White Oak next to the much larger and younger Baum Red Oak in the northwest, to 102.8 ft.

Elijah measured a Beech in the northern part of the grove to 93 ft., and an American Chestnut in the northwest to 57.1 ft. tall and 1.5 ft. cbh. This is the tallest Chestnut I know of in North Syracuse.

I measured a Beech at the north end of the Forest Cathedral to 93.4 ft., the maximum height for Beech in this grove. I measured a slender White Oak in the northeastern part of the Forest Cathedral to 107.5 ft., and I measured its larger neighbor, White Oak #15 (cored tree #15, dating to about 1860) to 110.7 ft.

Near these trees just east of the Forest Cathedral, are the shattered remains of the huge JFK Red Maple, one of the largest Red Maples in central NY. This tree was close to 3 ft. dbh, and over 106 ft. tall. It was dying, and fell in the windstorm of Jan. 10, 2016.

By the trail in the southeast part of the Forest Cathedral stands one of the grove’s most picturesque trees, an old shaggy, spiral-grain Red Maple that could be called the “Magic Maple” of this grove. On Feb. 7 Elijah measured this tree to a height of 119.1 ft., making this the tallest tree in the grove and in North Syracuse. The highest point in this tree’s dense, complex crown is very difficult to find. It twisting trunk is about 27 in. dbh.

The Forest Cathedral was especially magnificent on a day like this, with dense ranks of old White Oaks and Red Maples lifting their crooked crowns high into the crystal blue sky.

I measured the 9/11 White Oak, one of the greatest White Oaks in the Forest Cathedral, to a height of 112 ft., now the maximum for White Oak in this grove. This tree is called the 9/11 White Oak because it used to have a plaque dedicated to the 9/11 Rescuers. This plaque, like so many dedicatory plaques in this grove, has fallen.

Elijah measured the Anne Frank Black Gum, an old tree (est. over 240 years old) with a complex reiterated crown, to a height of 94.9 ft. One other part of the crown is 94.8 ft. In 2009, Robert Henry measured this tree to 94.5 ft. As far as I know, this is the tallest Black Gum in New York State. Its dbh is a little over 20 in.

At the edge of the second growth forest that separates the grove from Lonergan Park, is a prominent White Pine that is difficult to measure because of multiple tops. On Feb. 7, Elijah measured this tree to 112 ft. As of now, this is the tallest White Pine in North Syracuse.

I counted about 100 rings on a 3.5 in. radius cross-section of a Red Maple branch, 54 ft. above the tree’s
uprooted base. This Red Maple seems to have lived about 150-200 years, a typical age for Red Maple in this grove.

I got a straight up shot of 90.5 ft.+ on a Beech in the southern part of the grove. In the southeast part of the grove, Elijah measured the grove’s tallest Black Cherry to 97.7 ft., and a tall Black Oak in the grove’s southeast corner to 102.1 ft.

In the field south of the grove, Dandelions were in bloom, incredible for this time of year around here. A week later (Feb. 14), it would be -23 Fahrenheit here, the coldest temperature in over 20 years here, and coldest in Feb. since 1979.

Elijah and I next surveyed Oakwood Cemetery in Syracuse.

Trees measured:

- Harriet Tubman Black Oak 103.6
- Black Oak in Grove
- White Oak #23 102.8
- Beech 93
- American Chestnut 57.1
- Chestnut in Grove
- Beech 93.4
- Beech in Grove
- White Oak 107.5
- White Oak #15 110.7
- Red Maple 119.1
- SE Forest Cathedral, tallest tree in Grove, and in North Syracuse
- 9/11 White Oak 112
- White Oak in Grove
- Anne Frank Black Gum 94.9
- Black Gum in NY
- White Pine 112 near Lonergan Park, tallest White Pine North Syracuse
- Beech 90.5+ straight up shot
- Black Cherry 97.7
- Black Cherry in Grove
- Black Oak 102.1


by Matt Markworth » Tue Sep 13, 2016 9:28 pm

Tom, All,

On my way back home from the Northeast I found myself heading south on I-81 towards North Syracuse. Thoughts of The Wizard of Oz Grove crept into my mind and I realized this would be the perfect opportunity to see this magical forest that I’ve heard so much about.

I left the vehicle and the road behind in Lonergan Park and approached the forest. A small pathway appeared and upon entering, the miles behind and the thought of the miles ahead melted away.

I strolled the main path and saw some of these great trees that Tom has so eloquently reported on.

Toll roads, construction zones, accident warnings, and the necessity of getting up early the next morning forced an all too brief visit.

I had no plans of measuring any trees, although I did measure the circumference of one tree. I'm sorry to report that one of the big northern red oaks has come crashing down and significantly impacted a mid-sized sugar maple. I'm sure that Tom has measured this tree before, but for documentation purposes and before it's potentially taken all the way down, I wanted to make sure to get a current CBH, which was 11.15'. One side of the tree was in very bad shape as one of the photos below will show, so I suppose it was just a matter of time.

Such is the nature of a very old forest, as sunlight pours in from above - a skylight into this majestic cathedral - those that have been patiently waiting seize the opportunity and lift their arms, ever reaching for the sky.
Trunk in very bad shape:

The impacted sugar maple:
A new canopy opening:

Matt Markworth

**Wood Stabalizer Question**

Submitted by Iowa Big Tree Guy » Wed Sep 14, 2016 4:27 pm

Recently, the second largest remaining American elm in Iowa was cut after sustaining storm damage. It was a beautiful tree with a circumference of 16'1", a height of over 80' and a crown spread of 115'. Slices of the trunk were saved for the Iowa Arborist Association and for the Science Center of Iowa, where I work. I'm wondering if it would be best to use Polyethylene Glycol (PEG) or Pentacryl/ Wood Juice to stabilize the wood.

In 1983 I salvaged a cross section from the state champion bitternut hickory that was cut after it lost a limb. I contacted several saw mills to see if they would be willing to give the section a precise, straight cut. They all turned me down because it was a city tree and there could be metal hidden within the wood. I ended up making a frame around the section that was laying flat. Then using a circular saw, I cut a 1/16" swath at a time until I covered the whole surface of the 40" slice! I used PEG to stabilize the wood and it worked very well. The only problem with PEG is that it stays wet and some of the chemical will actually exude from the wood at times. This is part of the reason you are very limited with what you can use as a finish.

A few years ago, I used a product similar to Pentacryl called Wood Juice in an attempt to stabilize a couple of cross sections from the trunk of an Iowa white oak over 400 years old. Because the outside layer of the trunk was soft, I used product called Polycryl on the soft wood to try and firm it up. I didn't want the section to check during this process so I was also brushing Wood Juice on the rest of the slice at the same time which is not recommended. To ensure maximum penetration of the chemicals, I was applying the Wood Juice and Polycryl to both sides which meant constantly flipping the 6" thick by 45" cross sections!

I did this through the fall and winter before the slices were completely saturated. After about two years of slow drying the results were less than satisfactory. Both sections suffered considerable checking. One checked so severely I considered it unsuitable for display. Because one was slated for the Iowa DNR, I decided to cut the better section in two to get another slice. That proved to be a poor decision because even after two years of drying the wood was not yet dry. Cutting the better slice into two, made each slice thinner and more prone to checking. One of the newly cut sections actually separated into two pieces! I had envisioned what the finished slices would look like and they turned out so poorly, I lost all of my enthusiasm for the project.

If I had just submerged the sections would that have made a difference? The sections were wrapped in cardboard and left in an unheated building for drying. Unfortunately the were leaned against a south wall which probably fluctuated in temperature. Sudden changes in temperature are probably very bad for trying to stabilize drying wood. White oak is very dense, could that be part of the reason for the lack of success?
After the experience with the White oak, I'm leaning towards the PEG but I would appreciate comments from anyone who has had some experience in stabilizing large cross sections.

Mark

Re: Wood Stabalizer Question
by RayA » Wed Sep 14, 2016 6:31 pm

Mark,

Two years ago we treated a 7" thick cookie of hemlock 42" in diameter with Pentacryl. The disc was from the New England champion hemlock, which came down during a winter storm. We wanted to preserve a cookie of it and display it in the visitors center of the state park in which it grew. We contacted Preservation Solutions, the maker of Pentacryl, for advice. They were very helpful and gave us exact directions on how to treat the disc. The center 10 or 12" of the disc was rotted, but most of the material was still there, though much of it was essentially like sawdust. We ended up diluting a gallon of white wood glue with water and flooding the rotted area with that. Once it hardened, we treated the rest of the cookie with Pentacryl. We placed the cookie on sticks over plastic sheet, and applied flooding coats on it, over a period of days, until the wood seemed to be saturated. Pentacryl will seep down into the wet wood and do the job; it should come out of the wood on the bottom side at some point. I think we did flip the cookie at least once to apply it to the bottom side as I recall, but that may not be necessary in all cases. The maker recommended covering both sides of the cookie with cardboard discs once it's saturated, to prevent rapid surface drying, and setting it aside to dry for several months. They said we could apply Lysol to the wood first to prevent mold; we didn't do that though.

We only covered the disc with plastic once it was saturated, and stored it outside out of direct sun. Once we judged the disc surface to be sufficiently dry, we brought it to a mill that had a huge capacity horizontal bandsaw (made by Woodmizer, but BIG!), and they took a thin slice off both top and bottom sides of the cookie, giving us a nicely smooth pair of parallel surfaces. We then sanded both sides with a belt sander, and applied a few coats of polyurethane varnish to both sides. It's been on display for two years, and came out great. A few shallow hairline surface cracks appeared, but no other defects at all. It worked beautifully. Other wood species may differ due to different porosities and densities.

My suggestion to you is to contact Preservation Solutions and talk with them. They will give you good advice based on your particular cookie. They also have online info, and a calculator to determine how much Pentacryl you'll need. Don't allow the cookie to dry out at all before being treated, or it will crack. Once dried, the Pentacryl treated wood is not wet like PEG treated wood. Most any finish can be applied over it. I highly recommend it, but do get advice from the maker for best results. They'll be helpful. Good luck!

Ray

Re: Wood Stabalizer Question
by Don » Thu Sep 15, 2016 1:09 pm

Of course the desired end product matters! My friend wished to have workable wood after the preservation treatment, and he chose the PEG treatment. He had a dozen 4' cookies from the interface of black and English walnut grafts (trees bordered an agricultural area, and were taken out for more acreage...) He had members of his parish who were having to discard 500 gallon stainless steel tanks (vineyard) and managed to obtain several. As I recall, he submerged them for 6 months at a time, and turned them over for the second 6 months.

He really liked the treatment...left the wood, not so much moist, but, uhh, waxy? Once he had the shape he wanted, it was a burred straight edge that put on the final "finish"...none of his woodwork required ANY finish, and the grain was awesome. Water would run off of it like mercury...

His was a nearly industrial undertaking (in his garage!), I recall that the PEG came in about 1 foot cubes, and weighed more than steel.
one last visit to the great oak (NJ)

by tclikesbigtrees » Fri Aug 05, 2016 2:14 pm

Someone had posted a link to an article that the Basking Ridge Presbyterian oak was dying. I had been to see the great oak a few times. Since it was reported that it was dying, I wanted to see it one more time before it was gone forever. Yesterday my son and I went to see it. It was worse than I had thought. It looks about 2/3 or more dead. I would think that maybe in about a year, it will be completely dead. Who knows? I know that trees die, but that one just seems special. The church without the great oak won't be the same. It is part of its history. The cemetery looks cool with the tree in it also. I attached some photos to see what it looks like now.

Tom
Kapok Tree Key West

by Larry Tucei » Tue Jul 26, 2016 8:48 am

All- While in Key West last week I had limited time to measure trees but I did find a nice Kapok tree at the City Tax Assessor’s office. The tree was planted in 1905 making it 111 years young. Bart I thought of you while I measured it and how large they can become in certain locations. CBH- 17’ at 9’ above ground over the root flare, Height-51.5’ and Crown Spread North-S 90’ x East-W 83.3’. Some images of the first Kapok I’ve ever seen. Larry
Re: Kapok Tree Fort Meyers FL

by bbeduhn » Fri Sep 23, 2016 10:19 am

The Kapok Tree in Ft. Myers is quite impressive.

87.6' tall
55' spread
4' diameter

Cooperstown NY area

by tomhoward » Wed Sep 21, 2016 7:35 pm

NTS,

On this mostly sunny warm, humid (81 F) Sunday (Sept. 18, 2016), Elijah Whitcomb and I explored the Cooperstown, NY area.

We took the Thruway and NY 28 to Cooperstown. NY 28 goes by Canaderago Lake, with beautiful tall (possibly 110-120 ft. tall) White Pines along the shore. NY 28 south from there goes by boggy valleys with lots of Balsam Fir, some Tamarack, White Pine, Balsam Poplar.

We entered Cooperstown through a 2nd growth
White Pine and hardwood forest. Cooperstown is a lovely old town with many big 19th century houses and big trees (especially Sugar Maples) in lawns. We saw 2 big Cucumber Magnolias in one of these lawns. The hills around Cooperstown are forested with tall White Pines and hardwoods.

We crossed the bridge over the beginning of the Susquehanna River (which flows out of Otsego Lake; Cooperstown is at the south end of Otsego Lake, and the Susquehanna River goes all the way to Chesapeake Bay).

We took Otsego County Rt. 31 along the east shore of Otsego Lake, by the Farmer’s Museum (White Pines on steep hills above the museum). We continued north along the east shore of the lake through a 2nd growth forest of Red Oak, Ash, Basswood, Shagbark Hickory, other trees, with scattered White Pines towering above all other trees. We stopped at Glimmerglass State Park.

At Glimmerglass State Park we visited the oldest covered bridge in the USA (built 1825), over a small stream in an open area with Basswood and bigger Shagbark Hickories. It is a small bridge, which Elijah says was mostly built of Hemlock with some Pine.

We drove to Hyde Hall, a c.1820 mansion overlooking Otsego Lake. Forested hills crowned with tall White Pines rise above this area.

We took part of the park’s main hiking trail into a very interesting forest. After the trail veered off steeply uphill, we continued along a dirt road through forest above the lakeshore. The route we took is an unpaved road and power line shown on the trail map just past Hyde Hall.

The forest at the beginning of the trail is mostly Shagbark Hickory (many of them in lawn around Hyde Hall), White Oak, White Ash, and White Pine.

White Pines are the only trees we measured over 100 ft. tall, but White Ash may also reach 100 ft. White Pines are still the tallest trees on this site and in the entire Cooperstown area. Trees in the forest in Glimmerglass State Park (at least in the section we explored):

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**Dominant:** White Pine (in some sections, tallest trees seen), White Oak (oldest trees seen), Red Oak, White Ash, Bigtooth Aspen (in some sections, large with gray rough bark).

**Associate:** Hemlock, Shagbark Hickory, Pignut Hickory, Basswood, Sugar Maple, Red Maple, Striped Maple, Black Cherry, Sweet Cherry, Shadbush, Hornbeam, Hop Hornbeam, Gray Birch (largest and tallest seen of this species), Flowering Dogwood, Sassafras (small, but one large fallen tree), American Chestnut (one of biggest of this species seen), Beech (none large, Beech Bark Disease present), Black Ash, Elm, Witchhazel.

I measured a White Pine at the beginning of the trail to 122 ft., and Elijah measured another White Pine in the same area to 121 ft. I measured a White Pine near the trailhead to 122 ft. Elijah got 107 ft. on another White Pine. These White Pines at and near the beginning of the trail are the tallest trees we would measure.

I measured a White Oak to 97.8 ft., and Elijah got 88 ft. on another White Oak. We came to a small White Oak with lots of balding bark.

Although this is not a very old forest, some of the White Oaks are very old trees from the original forest. Most trees are young, with old White Oaks and old-looking Red Oaks and old-looking White Pines scattered throughout. It looks like the forest was thinned from the 19th to mid-20th centuries with original trees left behind.

I counted 296 rings on the 13” radius of a White Oak cross-section. The rings were uniform in width, and extremely tight throughout. The cross-section was from high up in a tree that had fallen – we saw its shattered stump down a slope toward the lake. This White Oak could have been close to 350 years old when it fell.

We stopped at a bench overlooking Otsego Lake. It is a beautiful spot, the lake hemmed in by high forested hills, with Cooperstown a small town at the base of the hills at the south end of the lake. This is the “Glimmerglass” of James Fenimore Cooper’s
Leatherstocking Tales, the first significant American novels, with America’s first important literary hero, Natty Bumppo or Leatherstocking as the main character. The most famous of these books is The Last of the Mohicans. This is a storied, timeless landscape, and Otsego Lake in this pine-scented setting looks almost as primeval as in Cooper’s day in the early 19th century.

Many of the White Pines in this area are quite small, but they have rough bark, and are likely to be older than they look. The abundant Red Oaks (most common trees) also could be older than they look, although they are not very large. These Red Oaks have old-looking blocky bark. This whole forest looks, feels, and smells like the old 2nd growth forests of New England. It seems to be a poor growth site, which lets trees get old, but keeps them small.

There are several large Grapevines in the forest.

We saw an Osprey flying overhead.

We came to a big American Chestnut. I noticed the long leaves and twisted spiral grain trunk, and pointed it out to Elijah. This is the largest American Chestnut he’s seen, 16.5” dbh (4.3 ft. cbh). This tree has burs in its dead top. Elijah measured the Chestnut to a height of 74 ft. This was a big highlight of this survey.

We found a Sassafras log with sprouts coming up. Growth rings on the stump are wide, so this tree should have been under 100 years old. We would see only small Sassafras trees.

We would soon see many large Bigtooth Aspens, some of the finest (if not the finest) I’ve ever seen. I measured a typical Bigtooth Aspen to 78 ft.

In the same area Elijah counted possibly over 200 tight, hard to count, rings on an old 9” radius White Oak stump.

I measured a White Pine by the dirt road to 106.5 ft., the tallest tree in this section.

We found a Birch tree, with bark lighter than Yellow Birch, but darker than Gray Birch usually is. This is still a Gray Birch, with the typical triangular leaves; I measured this tree to 68 ft., as far as I know, the tallest Gray Birch measured by NTS.

I measured another Gray Birch with the typical whitish bark to 66 ft. This tree stands among White Pines, in a place where Elijah found Bear and Deer scat. There are several fine whitish barked Gray Birches in this section.

Elijah counted over 190 rings on the cross-section of an uprooted White Oak.

Elijah measured a White Pine to 112 ft.

There are many big Bigtooth Aspens in this section. A typical one is 21.5” dbh. I measured another Bigtooth Aspen to 80.4 ft., and a slender Bigtooth Aspen to 84.6 ft. Elijah counted a little less than 100 unclear rings on a Bigtooth Aspen cross-section. I got a straight up shot of 88.6+ ft. on a nearly 2 ft. dbh Bigtooth Aspen. A Grapevine climbs at least 65 ft. into the crown of a Bigtooth Aspen over 80 ft. tall; the same Grapevine covers the top of a small White Pine. I measured another Bigtooth Aspen to 79.4 ft. The biggest Bigtooth Aspen has a wide, partly dead crown. The trunk is 25.5” dbh (6.7 ft. cbh). Elijah measured this tree to 91.5 ft., the tallest of these magnificent Bigtooth Aspens that we would measure. I measured a nearby smaller Bigtooth Aspen to 80.7 ft.

The air was fresh and pine-scented in this section due to large numbers of White Pines.

We returned to the parking lot near Hyde Hall. Elijah measured one of the tall White Pines on the ridge above to over 122 ft. He could not see the base, but the base is about 2 ft. below his lowest measurement point, so this tree could be about 124 ft. tall.

We headed back to Cooperstown on County Rt. 31, stopped at a parking lot in an area of towering fragrant White Pines. They are beautiful trees, rising over a much lower 2nd growth forest of Hemlock, White Ash, Red Maple, Striped Maple, small Black Birch. This site also has a historic marker sign about Cooper’s fictional character Natty Bumppo. It was here, that in Cooper’s stories, Chingachgook, the last
of the Mohicans, died.

I measured one of the tall White Pines by this parking lot to 117.6 ft., and Elijah measured a White Pine near it to 123.5 ft. Elijah measured 2 Blue Spruces in a nearby cemetery to about 100 ft. These could be the tallest Blue Spruces yet measured in NY.

We drove through Cooperstown by beautiful tall (could be 120 ft.) rough-barked White Pines by an adult home in a 19th century mansion.

We took NY 28 back to Herkimer, and then back to North Syracuse. I saw a huge open-grown Cucumber Magnolia in a lawn by NY 5 west of Herkimer.

Trees Measured with Elijah Whitcomb Sept. 18, 2016:

Glimmerglass State Park NY:

**White Pine**

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<th>Height (feet)</th>
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<tbody>
<tr>
<td>122</td>
<td>117.6</td>
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<tr>
<td>121</td>
<td>123.5</td>
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<tr>
<td>122</td>
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<td>107</td>
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<td>106.5</td>
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<td>112</td>
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<tr>
<td>122-124 (Elijah - possibly 124, base est. 2’ below lowest point visible)</td>
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**White Oak**

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**American Chestnut**

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<tr>
<td>74 16.5” dbh (dead top) (Elijah – biggest Chestnut he’s seen on any outing)</td>
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**Bigtooth Aspen**

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<tr>
<td>91.5 25.5” dbh</td>
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<td>80.7</td>
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**Gray Birch**

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<th>Diameter (inches)</th>
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<td>68 (tallest measured by NTS)</td>
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<td>66</td>
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**Otsego County Rt. 31 north of Cooperstown, NY:**

(by parking lot with “Natty Bumppo” sign)

**White Pine**

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<thead>
<tr>
<th>Diameter (inches)</th>
<th>Height (feet)</th>
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<tbody>
<tr>
<td>117.6</td>
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<tr>
<td>123.5</td>
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**Blue Spruce** (Elijah in cemetery nearby)

2 trees, both about 100 (possibly tallest NY)

Tom Howard

**Large American Chestnut NY**

NTS, Last weekend, after getting directions to the large American Chestnut from Allen Nichols, President of TACF in NY, I was able to check up on his tree. Here it is:
This chestnut has no obvious sign of the blight, and appears very healthy. The amount of burrs on and around the tree was impressive. After some careful measuring, the chestnut's dimensions are the following: 87.0’ x 5’ CBH x 33’ Average crown spread (5 spoke measurements averaged *2). This is a very impressive tree and I'm thankful to have the privilege of visiting it.

Elijah
Nice Swamp White Oak at Rest Area

by Matt Markworth » Mon Oct 10, 2016 5:36 pm

NTS,

I stumbled upon this swamp white oak at the Lizton Rest Area Westbound on I-74, west of Indianapolis. The measurements were 16.6' x 75'. It's the second largest swamp white oak that I've measured, with the largest being 17.16' x 82.9' x 90' (http://www.ents-bbs.org/viewtopic.php?f=111&t=5924&p=26720).

Seeing a tree like this was a very nice break from the road. Anyone know of other superlative trees at rest areas?

Matt Markworth
Purgatory Gulch, Encampment River Wilderness, WY
by Matt Markworth » Mon Oct 10, 2016 9:39 pm

NTS, Recently I spent a night in the Medicine Bow Mountains of Wyoming and got up the next morning with a plan to measure some trees. I chose Purgatory Gulch based on it having a lower elevation than much of the Medicine Bow National Forest and I thought it would have a better chance of having tall trees.

The grove of Engelmann spruce that I measured was at about 8,400’ elevation. Subalpine fir and quaking aspen were also abundant.

Engelmann spruce:

7.96' x 135'
6.4' x 131.9'
6.9' x 131.8'
7.93' x 130'
8.72' x 121'

It was a very enjoyable day exploring and measuring trees, especially watching the herd of pronghorn above me on the slope.

Does anyone know if we've measured anything in Wyoming above 140' or have thoughts on the potential heights in the state?

Crossing over Snowy Range Pass in the snow:

Looking down into Purgatory Gulch:
Re: Purgatory Gulch, Encampment River Wilderness, WY

by Don » Tue Oct 11, 2016 5:44 pm

Having spent a brief interlude in Great Basin National Park last month, the breadth and consistency of the great basin vegetation communities is amazing to me. And what a great time Fall is to be in it...the range of temperatures, humidities vary the aromas and alas, allergens to an amazing degree! Nice Engelmann spruce grove...care to make any guesses of how that grove came to be, there?

-Don

PS: Attaching a photo taken from campsite at Wheeler Peak Campground (elevation 10,000+) on September 22, 2016.

Beginning of a 2" an hour snow fall...

Re: Purgatory Gulch, Encampment River Wilderness, WY

by Matt Markworth » Tue Oct 11, 2016 7:35 pm

Don, I think the tallest ones have access to a little bit of additional water coming from the side gulch on the left side of this photo.

Lots of dead lodgepole pines can also be seen with this particular angle.
Hartwick Pines State Park, MI
by DougBidlack » Mon May 30, 2016 2:37 pm

NTS,

a couple of weekends ago I was able to measure some trees in Hartwick Pines SP in MI which is something that I've wanted to do for many years but I kept getting thwarted. Other NTS have been more fortunate and I'll recount what I know of their exploits first and hopefully they can make corrections and/or additions. The first NTS measuring trip that I'm aware of was by Bob Leverett and Will Blozan in August of 2000 and they measured a white pine to 6.5' x 157.0' which became the tallest accurately measured tree in Michigan. They also measured a red pine to 6' 5" x 143.6' which I believe was the tallest for any red pine anywhere. Don Bragg visited the park in December of 2006 and he measured:

- White Pine 106" (8.8') x 147'
- 92" (7.7') x 151.5'
- Red Pine ca. 125'
- Hemlock ca. 95'
- Sugar Maple 85-90'
- Beech 85-90'

Early last year (or maybe a little earlier), Mark Rouw told me that he had measured even taller pines. I can't remember why he didn't post them but I think he said he was a little unsure of the numbers. In any case we were all set to go measure them in April of 2015 with Dan Morris but in the end neither of them could make it and my trip was a failure due to problems with my equipment. I did, however, get one measurement that I thought confirmed one of Mark's white pines and that was enough to entice me back for a quick visit back this year. Mark said that he measured one white pine to 8' 9" x 161' and another to 8' 11.5" x 162'. He also said that he measured a red pine to 5' 8" x 147'. I found the first white pine because he GPS'd that tree but not the others. I also got around 161' for that white pine but I didn't trust my numbers either. So now it was time to revisit this site. Unfortunately I don't recall when Mark made his measurements but I believe it wasn't that long ago.

So I drove all night after work on Thursday the 12th of May to Hartwick Pines and I slept for three hours in my car 'til 8AM in the parking lot. Then I got to measure some trees! I did a quick shot of a hemlock and got about 95' which was the same as Don, while walking towards the white pine that might be 161' tall. Saw some nice, old-growth red maples with their shaggy bark. Here are a couple pictures.

Soon enough I came to the white pine and I measured it to 8.86' x 162' 2" with my TruPulse 200X. This is
now the tallest known tree in Michigan thanks to Mark! Here is a close-up with my wife Ellen from last year in April.

And here is a full shot of the tree with Ellen from April 2015.

I started trying to find tall red pines and the first I measured was 138' 8” and I soon found that 130' red pines were quite common here. I headed down towards the wetland area where Bob and Mark both indicated that most of the tall trees were to be found. I noticed an awful lot of dead trees including two red pines that were both just over 140' but luckily I saw a live red pine that looked taller. It was. I measured it to 5.62’ x 151' 10”. I believe this is now the tallest known red pine. It may be the same one that Mark measured but I’m not sure because there were other red pines here that had recently died that were nearly as tall. Here is a shot of this tree near the center of the picture. It is partially blocked lower down by a tall but dead red pine.
In this next picture you can see a log on the ground starting at the lower right and if you follow this log towards the center of the picture you’ll see a skinny hemlock with dark gray bark. This hemlock is growing just in front of the tall red pine.

Here is an even closer picture showing just how close the hemlock and tall red pine are to one another. It should be easy for future measurers to identify this tree.
In this area I looked for the other tall white pine but I couldn't see any over 160' tall. I did measure a hemlock taller than the 95' tree that Don Bragg had measured though. Not far from the tall red pine stood a hemlock that I measured to 6.01' x 112' 7". This is the tallest accurately measured hemlock in Michigan to my knowledge. For some reason they don't seem to be as large as those farther East. Here is a bad picture of this tree.

This was the end of my accurate measurements for this trip but I wanted to share some pictures from last year when I also visited Red Pine Natural Area in Roscommon County not too far South of Hartwick Pines SP. This area has old growth red pines that are not as tall as in Hartwick Pines but they are larger in girth and in volume and quite beautiful. I posted one picture from this place earlier but here are a few more. Old growth red pines and path.
Red pines with my wife, Ellen and my mom, Gabriele.

Close-up of red pines.

Close-up of red pines with white pine in the middle.
Red pines with white pines in the background.

I didn't want to make this post without at least showing some pictures of Michigan's third native pine; jack pine. Here are some young ones from 2015 in the Red Pine Natural Area outside of the old-growth.

This year I noticed some areas marked as old-growth jack pine in Hartwick Pines SP. I took some pictures of one tree in this area that was just under 80' in height. The first shot is a close-up of the bark.
Now a wider shot showing more of the trunk.

And lastly, a picture of the whole tree.
I'm hoping to eventually go back to this region to measure the shorter but larger red pines as well as possibly some jack pines and maybe some other trees too.

Doug

Re: Hanlon Creek Heritage Maple Grove, ONT - NTS SP #16

Hi I don’t think I sent the information to you that the city of Guelph and developers cored 3 of the maple trees in the grove the oldest was found to be 260 years old and this did not take into account the hollow core. they were unable to estimate the age of the iron wood as it was found to be almost completely hollow.

The city after the OMB the city purchased the grove. We are now pursuing heritage status for the grove to protect it perpetuity. As it is still potentially under threat from any potential future road widening etc.

Thanks so much for publishing Bruce's report. Doug Larson spoke to me after the maples were cored and he is still unconvinced of the age of the maple trees in the grove. It is unfortunate that a scientist will not support the tree coring results done by experts. In fact Bruce actually underestimated the age of the oldest sugar maple cored. He told me at the time that it was better to underestimate the age rather than identifying a tree as older than it is. If you would like to have the tree report with the core results I can send it to you. Best regards Laura

Re: 259' - New California Height Champion For Ponderosa

Update: I recently visited and re-measured this tree with John Montague and his TrupulseX. Our new height estimate is 260.5 feet. Later that day we found a douglas fir over 9’ in diameter.

260.5 foot ponderosa pine in Trinity Alps
Mianus River Gorge, NY
by Erik Danielsen » Mon Oct 17, 2016 5:27 pm

On Sunday 10/16 around 9:30am I left Landis Arboretum near Schenectady with a short list of interesting-sounding sites in Westchester county I hoped to visit and scout for tall tree potential. Unfortunately the navigation software I was using significantly underestimated the drive time, and I left a little later than planned as it was- so I decided to narrow it down to just the Mianus River Gorge Preserve, an acknowledged old-growth site in Bedford NY that's discussed in Ancient Forests of the Northeast. Driving down routes 22 and 121 through Dutchess and Westchester counties I passed many enticing tall trees, including white pines and norway spruces that my eye asserted must be at least 120' tall with regularity. I am convinced that this is an underexplored big tree area, and I aim to really put it on the map this year to whatever extent I can. I stopped at the edge of a reservoir, just outside Ward Pound Ridge reservation, and measured the two pines closest to the road at 121' and 123'- just like that. There are hundreds just like them.

As it was I didn't get into the parking lot for Mianus until around 3pm. I was hoping to run into the research director who had said he might be in that day, but I was probably too late. The parking lot closing at 5pm is strictly observed (it is a private preserve), so I decided to get right down to measuring.

The trails initially lead through old farmland, laced with old stone fences and covered in very vigorous regrowth. There's a good bit of white pine as well as hemlock, red and sugar maples, black birch, white, red, and black oak, white ash, tuliptree, and shagbark and pignut hickories (and more, I'm sure). Considering that most leaves are still on and this was a hurried sampling, I consider the hardwood heights in this section to be pretty promising. Most stems were in the 18-24”dbh range, with some tulips, pines and oaks a bit thicker.

**The tall pine at the parking lot**

**White Pine**
116.6 (right behind the privvy at the parking lot)
115
106.8

**Eastern Hemlock**
102.2
99.8
95.2

**Pignut Hickory**
98.1
95.5

**Shagbark Hickory**
110.7
103
93.5

**White Ash**
112
105.1
The red trail then crosses a path of stones at the head of a wetland depression where the first big, old hemlocks appear. At least two big hemlocks exceeding 3’dbh stand at the edge of the wetland and have large, thick crowns, with some very large hardwoods just above them in the forest and continuing, mixed with less imposing hemlocks, as the trail curves to follow the rim of the gorge. Dropping down along the gorge slope you walk beneath several tall tulips and pass one of the most gorgeous sugar maples I’ve ever seen, leaning out over the gorge from just below the trail.

The stout hemlocks along the small depression

The large trunk stretching diagonally across the photo is the big sugar maple. In the background are a few tall tulips.

Eastern Hemlock big wetland trees
111.3
97.4
Black Birch
93.8
Tuliptree
127.8
126.9
119.6
109.6
Sugar Maple
108.3

Just past this the trail rises abruptly again to enter the Hemlock Cathedral, a truly imposing grove of hemlocks both up on the rim and growing from further down on the slope, including one with a sinuous trunk rooted low on the slope that would be
the tallest hemlock I measured on this visit. Large, old hardwood trees punctuate this section.

A large red oak in the Hemlock Cathedral. I couldn't find any tall oaks, but I suspect this has more to do with leaves obscuring the high points in their crowns.

The Hemlock Cathedral looms over a tulip rooted deeper in the gorge. The tallest hemlock I measured is barely visible in the right half of this frame but mostly obscured. Distorted by iphone panorama mode.

<table>
<thead>
<tr>
<th>Tree Type</th>
<th>Height (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Hemlock</td>
<td>120.7</td>
</tr>
<tr>
<td></td>
<td>109.1</td>
</tr>
<tr>
<td></td>
<td>106.3</td>
</tr>
<tr>
<td>Tuliptree</td>
<td>118.9</td>
</tr>
</tbody>
</table>

This preserve is an incredible place and I look forward to returning. I have no doubt that I've barely begun to document this site's superlatives.
AF Cadre Workshop - Landis Arboretum

by Erik Danielsen » Mon Oct 17, 2016 3:00 pm

On Saturday October 15th Fred Breglia at the Landis Arboretum in Esperance, NY (near Schenectady) welcomed Bob, Elijah, NYS big tree coordinator Erin Brady, the NYS Region 4 DEC forester (unfortunately I'm blanking on his name) and myself to hold a Cadre-level measurement standards workshop. All in all I'd say everything went very well and positive connections were forged with the NYS big tree program which hold a lot of promise for the future. Following the presentation we headed up the hill to the famous white oak whose silhouette forms the arboretum's logo. Unfortunately this venerable tree was badly damaged by hurricane Irene and succumbed to its injuries, but what's left of its form is still impressive and beautiful to behold. The tree exceeds 5'dbh and in life must have been at least 65-75' tall; my rough reading of its current height (missing most of its crown) was 56.9'. (all my photos in this post are from my phone, unfortunately my camera had a memory card issue)

The measuring demonstration at the great oak

Fred was kind enough to let me stay the night on the grounds, which was very helpful as I had plans to check out other tree sites on the way back down to NYC on Sunday. I managed to get a quick hike in before dark, down to the old-growth ravine that Landis preserves. Due to climate, soils, and topography the area Landis encompasses is not really "big tree" territory but I made some height measurements as I went. On a personal note, this little hike was especially meaningful to me due to the fact that I have not been in a hemlock forest in over 13 months. I'm sure I'm not alone here in finding a special sort of solace under a hemlock canopy; unfortunately the woolly adelgid has done a very thorough job within NYC and the immediately surrounding area.

The Great Oak at sunset

The measuring demonstration at the great oak
Great old sugar maple in the old-growth ravine

Some height measurements from the old-growth slope area:

- Red Oak
  - 80.9
- Sugar Maple
  - 89.4
  - 87.6
- American Beech
  - 77.3
- Basswood
  - 97.5
- Eastern Hemlock
  - 104.4
  - 92.5
  - 90.1
  - 88.8

The tallest hemlock I measured is in the center of this photo behind the foreground trees, its tip just visible in one of the gaps.

I don’t imagine I found the tallest specimens of each species, but I suspect these are still pretty close to the best heights produced on this site. What this forest lacks in height it makes up for in beauty. One point of interest was that paper birch and bigtooth aspen, which I would both associate more with forests in early succession, were often present and in very mature form within the old growth. Perhaps the harsh climate, steep slope and proximity to earlier-succession forests give these species more opportunities to establish within the older forest. To see yellow birch, black birch, and paper birch all growing together was certainly novel.

In the morning before I left I went across the street to the Choice Conifers section of the Arboretum to have a look around. I measured the height of the Dawn Redwood overlooking the parking lot; this is the sole survivor of several seeds Landis received from that
The same initial collection of Dawn Redwood seeds that also includes the trees I measured at Bailey Arboretum at up to 127’ tall last spring. The specimen at Landis has a much bushier form and manages 64’ in height. I suspect the climate at Landis is nearing the edge of the species’ hardiness.

The Dawn Redwood

There are many other beautiful trees in the conifer section, including some new to me such as Ernest Fir, Rocky Mt. Fir, proper Siberian Larch, and Oriental Spruce. I measured the Ernest Fir to 78.5’ tall and the Oriental Spruce to 65.8.

The farmhouse at the arboretum

Landis Arboretum is definitely a peaceful, beautiful place to visit and I look forward to returning in the future. Thanks again to Fred and his family for their hospitality.

More notable sugar pines to report

by M.W.Taylor » Mon Oct 17, 2016 9:49 pm

Recently I went big tree hunting with friends Maria Mircheva, director of the Sugar Pine Foundation and Ben Fetzer.

On day 1 we located a 266’ sugar pine in northern Yosemite National Park, about 1.5 miles from the nearest trail. This towering tree is only about 7’ dbh but it is the second tallest living sugar pine known today. This tree was exceptionally high to the first branch, approximately 150’ above the ground, and it was tapping a creek. Unofficial name is "Creek Tapper".

On day 2 we found a serious monster of a sugar pine in Stanislaus National Forest further north. This tree is 223’ tall, 9.5’ dbh and scores 598 champion tree points, a close second to the Calaveras King that Carl Casey found a few years ago in the same general area. I did not get a volume measurement that day but my initial eye estimate is about 6,000 cubic feet. It is almost certainly bigger than the Black Fox sugar pine and also "most likely" bigger than the Calaveras King by volume. The large root swell of the Calaveras
King does give it more AFA points however.

I plan to measure the volume of "Roadside Warrior" before the end of the year and will update this report when I do.

A living 10'+ dbh sugar pine still eludes us, despite serious effort to find one the last few years.

Michael Taylor

eye estimated 6,000 cubic feet of volume

second tallest known sugar pine with a clean barrel for over 150'

It was hot that day
Re: The Leverett White Fir

On 10/4/16 I visited the mighty Leverett White Fir with the mission of getting a spread measurement and remeasuring height and girth.

Now that I have the spread I can go ahead and submit the tree to the Colorado Champion Tree List and it will assume the #3 spot on the list with 287 points. Colorado has a robust list with multiple trees listed for many species. The next day I visited the tree that currently has the #3 spot with 283 points, only to find that the tree has been cut down (it appears to have been just barely on private land). I'll inform the state coordinator of the loss, and at least we have a replacement with this tree that is by far the tallest white fir on the list.

**Updated Measurements**
- Girth: 99''
- Height: 163.5' (Sine method using Trupulse 200X and Trupulse 200)
- Spread: 27' (Spoke method using 8 spokes, the 2-Axis method resulted in a very close 27.75' (34' x 21.5'))

**Updated Rucker Index for Colorado**
- 180.6' - Colorado blue spruce
- 169' - Rocky Mountain Douglas fir
- 165.3' - Rocky Mountain ponderosa pine
- 163.5' - white fir
- 152.5' - Engelmann spruce
- 133' - subalpine fir
- 128.1' - southwestern white pine
- 117' - narrowleaf cottonwood
- 115' - quaking aspen
- 112' - Rio Grande cottonwood
- 143.6'

Midslope of the Leverett White Fir:
Re: Tallest Tree South Of SF Bay Confirmed
□by yofoghorn » Wed Sep 07, 2016 5:41 pm

An update to this forum: the tallest tree south of San Francisco is now no longer the tree mentioned here. There is a new grove that I discovered and it single-handedly doubles the number of tall trees (over 90 m-295') in the Santa Cruz Mountains. This grove contains the new record and was found via LiDAR. Stay tuned over the next few years—it's going to take many visits to measure the entire grove and get accurate numbers on everything. So now, obviously, there are at least two trees over 100 m in the Santa Cruz Mountains. This grove is collectively the tallest remaining south of Mendocino Co.

Zane J. Moore

Re: Tallest Tree South Of SF Bay Confirmed
□by yofoghorn » Fri Oct 28, 2016 12:05 am

Tallest Trees South of SF -> 333', 332', 328', 326', 322'. The 328' and 326' were the trees found during the original posting. The rest of the trees posted here are new (I discovered them a few months ago). The grove is on public land and is protected.

Also, by the way, I’m investigating some LiDAR finds in Big Sur. There appears to be a tree or two that reach 90m+! I hope to go in there this winter with lasers to get an official measurement.

Zane J. Moore

3 year Chestnut blight survivor
□by Rand » Sat Oct 29, 2016 8:07 pm

I have been watching over some chestnut sprouts in various clearcuts in Tar Hollow State Forest for the last 10 years or so. It was fun to watch them grow, and no so fun to watch them fail as the blight settled in on them. In general, it seems to take ~ 3 years for the blight to kill a small tree, say 3"-5" dbh, once it gets established. Curiously, it does seem like a small tree can handle a single canker, walling it off with fresh callous once it gets the size of your fist or so. However, once a single canker gets established, it soon spawns numerous secondary cankers all over the trunk and nearby branches. It does seem like the sheer number of cankers is what dooms the tree, as if it has only so much fungi fighting ability that is exhausted when attacked in numerous locations. It's pretty common to see a smallish canker start to burl up with callous and stabilize for a season or two. Inevitably though, the fungus reasserts itself and breaks out of the callous to girdle and kill the tree.

Anyway in one clearcut I've watch a half dozen or so sprouts die off back to the roots. However, there is one survivor of the group that has survived 3 years under heavy attack, more or less intact.

Pictures from Sept 2013:
Compared to Oct 2016:
It's lost a few branches in the crown, but somehow it is still hanging tough:

I picked 16 nuts off of it this year.

**Staten Island Greenbelt**

by Erik Danielsen  » Sun Feb 21, 2016 11:38 pm

The Staten Island Greenbelt is a (mostly contiguous) system of public parkland and natural areas that sprawls right in the center of Staten Island, creating NY City's second-largest park (after Pelham Bay Park in the Bronx). The idea of collecting and preserving the parcels of land that comprise the greenbelt has a history that goes back to Olmsted and Thoreau in the 19th century, but it wasn't until Robert Moses proposed destroying most of it to build a highway in the 60s that an incredible largely-grassroots campaign rose in opposition and succeeded in preserving these beautiful places for posterity. Included in the Greenbelt are various swamps, serpentine barrens, glacial kettle ponds, deep ravines, and forests that in some cases have been in regrowth for well over 200 years, though it's unlikely any vestiges of primary forest remain. Its geographic core is High Rock Park, which is fortunately just about 15 minutes from my home on foot. The Island's tallest measured tuliptree and NY's tallest measured sweetgum are just inside.

*A detailed map of the Greenbelt.*

Given the size, diversity and accessibility of this park this thread will be more like a whole series of site reports collected under the umbrella of one politically-defined park. Sites within the greenbelt like Egbertville Ravine and the St. Francis Woodlands offer deep, rich ravines, while High Rock and Heyerdahl Hill are dryer upland forests.
Willowbrook Park offers one of Staten Island’s only mature mesic flatland forests, while Reed’s Basket Willow Swamp, Great Swamp, and Pouch Camp feature a mixture of wetlands and uplands. Other ecotypes and particular tree populations will be highlighted in more detailed posts.

I’ll regularly update this header post with Rucker Indexes for the listed sub-sites and an overall species list.

**Species List (in progress)**
- Tuliptree
- Northern Red Oak
- Black Oak
- Pin Oak
- Scarlet Oak
- Willow Oak
- Scrub Oak
- White Oak
- Swamp White Oak
- Chestnut Oak
- Post Oak
- Bur Oak
- American Beech
- European Beech
- American Chestnut
- Ironwood
- Northern Hackberry
- Osage Orange
- Devil’s Walking-Stick
- Sweetgum
- Red Maple
- Sugar Maple
- White Ash
- Green Ash
- Sassafrass
- Black Locust
- Persimmon
- Black Birch
- River Birch
- European White Birch
- Gray Birch
- Trembling Aspen
- Bigtooth Aspen
- Cottonwood
- Black Willow
- White Pine
- Eastern Hemlock
- Northern White Cedar
- Eastern Red Cedar
- English Yew
- American Holly
- Black Walnut
- Black Cherry
- American Elm
- Bitternut Hickory
- Shagbark Hickory
- Paulownia
- Norway Maple

**Re: Staten Island Greenbelt**  
by Erik Danielsen » Sun Feb 21, 2016 11:56 pm

The Greenbelt is home to at least two small groves of American Persimmons, Bruce Kershner’s book "Secret Places of Staten Island" notes these as some of the northernmost natural persimmon groves in North America. The rangemaps I see now indicate other populations elsewhere in southern NY and long island, as well as a small population in Connecticut, but it remains that Persimmon is a rather unusual species for NY state.

Referencing the map in the original post, the first grove is of perhaps a dozen individuals along the Yellow Trail near Manor Road in the southwest corner of High Rock Park. I measured 3 Persimmons here that appeared tallest in the group on that absurdly cold saturday february 13th. Girth on these spindly trees is pretty uniform, so I only measured one.

64.1’
64’
61.9'/2.7'cbh

The second and slightly larger grove, exceeding 20 individuals, lines the white trail as it runs south of Buck’s Hollow, on the bank of a pond south of the trail. Girth is similar for these individuals but some reach a bit taller.

69.6’
69.6’
69’
67.2’
In both cases I may get taller full heights after leaf-out, since the very highest twigs typically would not read. Heights slightly over 70' are likely. At the moment, these are as far as I know NY state's tallest accurately measured persimmons, with the caveat that measured persimmons in NY state are even rarer than the trees themselves!

Re: Staten Island Greenbelt
by Erik Danielsen » Mon Feb 22, 2016 12:24 am

Leaving aside the Persimmon grove, High Rock Park's most impressive trees grow on its south facing slope. This is conveniently near to my home, so as the daylight grows longer I should be able to much more thoroughly measure this forest. Red and White oaks seem co-dominant with Sweetgum in the canopy, with Tuliptree common as an emergent and Black Oak, Chestnut Oak, White Ash, hickories (will work to ID previously measured trees), American Elm, Black Birch and Red Maple as associate species. So far the sweetgum I've measured here is NY state's tallest, generally in competition with taller tulips. As for what I've measured so far:

**Tuliptree**
- 133.5'/12.6' cbh
- 128.7'
- 128.2'/13' cbh
- 123.5'
- 122.9'/8.8' cbh
- 120.7'/11.2' cbh
- 118.3
- 116.5'/10.8' cbh

**Sweetgum**
- 116.6'/7.4' cbh
- 115.4'/6.9' cbh
- 114.2'
- 109.6'

**Northern Red Oak**
- 110.2'/8.4' cbh
- 105.1'
- 103.8'

**Black Oak**
- 105'/8.7' cbh
- 99'/6.2' cbh

Re: Staten Island Greenbelt
by Erik Danielsen » Mon Feb 22, 2016 9:37 pm

On Saturday 2/20 I traversed the White Trail from its northern starting point at the top of Willowbrook Park, down into Great Swamp and to Heyerdahl Hill,
where I connected to the Blue Trail to end up in Bloodroot Valley.

Willowbrook Park's central forest is atypical of Staten Island's remaining old forests in that it grows on a flat mesic site, while the rest occupy hillier and dryer woods or steep ravines. That central forest is complemented by several other forest types of various ages. The trail begins, however, with a ballfield, at the north end of which I measured three prominent trees.

Green Ash
104.4\(\frac{3}{7}\) 'cbh

Pin Oak
103.8\(\frac{10}{10}\) 'cbh

100.4' very thick but a smaller secondary trunk precluded satisfying measurement

Past the ballfield the trail enters a young, wet forest, which I explored a little. The species association here shows up in a number of other wet forests on Staten Island, in which Pin Oak, Swamp White Oak, Red Maple and Sweetgum all seem equally dominant in the canopy. Other species are scarce- an elm here, a young tulip there. Many trees are in early maturity but at least one additional generation seems to be represented, maintaining a pretty similar species composition. Canopy is roughly 90-100' with some pin oak and sweetgum reaching a little higher. CBHs range from 4-7', with some older sweetgum near the south end getting a little thicker.

Red Maple
97.5'

Sweetgum
108'
98.9'
94.2'

Swamp White Oak
91.5\(\frac{7}{7.2}\) 'cbh
90.5'

Pin Oak
106.6'
103.5'
97.9'

This section of forest ends at a road running east-west between a parking lot and a restroom building. The white trail runs south past these structures and quickly enters a forest of very different composition and greater age. Red and white oaks share the canopy with sweetgum while tuliptrees rise emergent. A diversity of other species, including black and scarlet oak, beech, bitternut and probably other hickories, red maple, elm, and black birch are fairly abundant. Canopy height is a little harder to characterize here, as there is significant gapping, but for the most part heights seem similar to what the same species achieve elsewhere on the island. I only sampled a small portion of forest near the trail due to time constraints and something about the site inclines me to suspect that there's a strong potential for outliers to turn up with more thorough searching. I also didn't devote much time to seeking high points in the complex crowns of most of the tuliptrees.

Red Maple
92.6' large buttressed specimen

Bitternut Hickory
98.7'

American Beech
92.7'
91.7'

Sweetgum
104.6'
104.4'
99.9'
98.8'

Tuliptree
130.7/13.1'cbh
117.5'
110.8'

White Oak
100.1'
92.4'

Northern Red Oak
105'
104.9'
103'
98'

Black Oak
96.4'

As the trail exits this mature forest it enters another young wet forest, very heavily dominated by young sweetgum in the 5-6'cbh range with red oak, red maple, and tuliptree of similar age and girth adding some variety. Sampling a series of trees right along
the trail suggests that this is a very vigorous stand of trees I'll have to spend more time with.

**Sweetgum**
115.4'
109.8'
109.6'
108.3'
106.9'

**Northern Red Oak**
115.6'

South of this the trail enters a more typical section of dry mature hardwoods, with older red oak and tulip prominent. At this point I was jogging, so the details are sparse. This transitions after a while into a sparser and more disturbed forest in which there are the ruins of a very old stone structure. The species present in the rich flatland forest are all present here but thinner and more spread out along with pin and chestnut oaks, shagbark hickory, green ash, and some exotics. In the narrow southern sliver of park the forest is even more heavily disturbed, and for a while is mostly poplar colonies with green ash, black cherry, sassafrass, and a couple prominent swamp white oaks. Finally the trail reaches Forest Hill Road, southern terminus of Willowbrook Park.

**Re: Staten Island Greenbelt**

Bob, black birches from sections I have done some measuring in but have yet to write up-90.2' in Bloodroot Valley
85.9' in St. Francis Woodlands
85.3' on the other side of high rock, where there are several others with old bark that I will measure soon.
85' on Heyerdahl Hill

**Re: Staten Island Greenbelt**

Due to accuracy issues with the rangefinder I was testing when I wrote this post, I've deleted most of the original post and discarded the measurements in question. I am in the process of revisiting these trees to obtain accurate measurements. I'm leaving this bit of description, as it remains accurate and descriptive:

The bulk of the greenbelt is dry upland forest in regrowth on thin, reddish serpentine-influenced soils. On these soils tuliptrees tend to top out around 120', red oaks and sweetgum between 95-105' and black and white oaks slightly lower, with black birch from 70-80. Within this there are multiple ravines, glacial kettles and slopes with deep wet, rich black soil with thick leaf duff. On these soils tuliptree exceeds 130, and red oaks and sweetgum assume very competitive growth forms with some trees reaching from 110-120' and black birch exceeds 90'. The south slopes and kettles of High Rock Park are home to these soils and seem to have been in regrowth longer than other rich soil areas in the greenbelt, but others like the St. Francis Woods and Egbertville Ravine produce competitive heights.

**Re: Staten Island Greenbelt**

With the measurements I made with the problematic Uineye rangefinder out of the way, today I began remeasuring with the new Bushnell unit that just arrived in the mail. I'm glad to report this unit addresses the major shortcoming of my older Bushnell- it reads bare twigs! Even the high twigs of white ash, which the older Bushnell seems entirely blind to, read reliably with this newer model (Scout DX 1000). Some of the Uineye measurements proved to be quite erroneous, including the tall birch and tallest tulip. The State Max sweetgum, surprisingly, lost very little- the jump with the Uineye was as much due to a better line of sight into the crown as anything, apparently. The existing reliable measurements for High Rock Park, both from today and from older Bushnell measurements, are as follows (for species with many individuals measured only the top few are listed).

**Tuliptree**
133.5/12.6’cbh
128.7
128.2/13’cbh
The Sweetgum and American Holly currently stand as state height maximums, and the Elm is tied with one Elijah and Tom have in Smith Woods. I measured a few spicebush but all were under 15’. Red Maple and American Beech are present but without any accurate measurements so far. Scarlet oak is present based on leaves and acorns but I can’t differentiate it by bark yet.

**Re: Staten Island Greenbelt**

by Erik Danielsen » Fri Apr 08, 2016 11:35 pm

In my first post about Willowbrook park I described the first section of woodland as one moves south from the ballfield as a rather uninteresting young wet forest consisting of a handful of species and not much else. Wednesday 4/6 I returned to Willowbrook when I had a spare couple hours. On a whim I first moved east in that first stand instead of south to the area I was planning to measure, and ended up devoting the rest of my measuring time to what I found. Stand age and diversity increase significantly just past the screen of thin red maple and sweetgum. I mistook the first thick, nearly 3’dbh trunk I met for a red oak with odd bark before realizing that this was in fact what old pin oaks look like.
Large, mature pin oaks share this eastern portion with mature specimens of sweetgum, red oak, red maple, and green ash, a few large emergent tuliptrees, and some younger beech, hickories, and black birch. Heights here are typical to somewhat taller than typical for these species on Staten Island, though rich wet sites like this are scarce to compare to. Red Oak seems especially favored by this site. Craggy crowns on many specimens results in a very pleasing aesthetic to this forest. The tallest pin oak stood as the new state max at the time. Stems between 2-3” dbh are common, with significant buttressing in many species due to the very wet soils. Also present and unexpected was a single odd tree whose bark looked most like white oak, except that there were no white oak leaves—there were leaves that looked like chestnut oak, but no chestnut oak stems... finally, the first mature Swamp Chestnut Oak I’ve encountered on Staten Island! Old sources refer to their being a minor presence in some of the oak barrens elsewhere on the island, but most of those sites have long since been developed. The numbers—

<table>
<thead>
<tr>
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<th>Average Height</th>
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<tbody>
<tr>
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<td>American Beech</td>
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<td>Tuliptree</td>
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<td>Swamp Chestnut Oak</td>
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<td>104.2</td>
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<td></td>
<td>105.6</td>
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<td></td>
<td>102.8</td>
</tr>
</tbody>
</table>

Trout Lilies are blooming!

Re: Staten Island Greenbelt

Re: by Erik Danielsen » Tue Oct 25, 2016 4:24 pm

Last Friday I had the pleasure of receiving a lightly used Trupulse 200B from an ebay reseller. Some quick tests compared to my tape show it spot-on; now I just need all these leaves to finish dropping! A windy weekend thinned the canopy a little, at least. I had monday off so I took a hike to scout out some parts of the Greenbelt in and around High Rock Park.
For casual measuring it's nice to finally be able to see vertical distance figures in feet in real time.

There's a narrow, steep section of forest without any trails sandwiched between a golf course and a cemetery that I was informed may have some tall trees. It's hard to navigate the underbrush in parts, but the high canopy of Tuliptree, Red Oak and sweetgum was not disappointing. There are a few steep glacial kettles, including one in which I found several exceptional heights. For context, I have measured only one red oak over 115' on all of Staten Island, and breaking 110' is uncommon enough. The two tallest Red Oaks were both in this kettle, as well as the tallest Tulip I measured in this section. Heights:

Northern Red Oak
119'  8.9'cbh  With leaves off this one probably breaks 120'. There are only two other non-tulip individual trees exceeding 120' in Staten so far.
115'
111'
108.5'
107.5'
Sweetgum
108'
Japanese Pagoda Tree
93.5'
Black Birch
93'
Tuliptree
125'  8.3'cbh
121'  11'cbh
115.5'
125' Tuliptree

From here I followed the woods a little ways over the border into the cemetery property (also open to the public, but it was nice that there was a hole in the fence so I didn't have to walk all the way around to the gate). There's a nice cluster of about a dozen tall, columnar tuliptrees in this little remnant peninsula of forest. They seem fairly old.

Tuliptree
123’  11.5’cbh
121.5’  10.9’cbh
120’  10.6’cbh

Heading back, I ended up down in the kettle in High Rock Park where the NYS max height Sweetgum is located (124.9’). Approaching from a different angle than usual I passed under a very gnarly old beech before measuring a few tall trees a bit downhill from the Sweetgum.

Northern Red Oak
102.5’
Pin Oak
105.5’
105’

Tuliptree
124.5’

All this bodes well for the season to turn up plenty more here on Staten Island.
Ute Council Tree

by Matt Markworth » Tue Oct 11, 2016 2:50 pm

NTS,

Heading south on US 50 through Delta, CO, I noticed a sign on the side of the road pointing the direction to the Ute Council Tree. That was all the convincing that I needed to turn around and see what the sign was all about.

With the car door open and motor running, I jumped out for a quick early morning measurement of the big cottonwood. I believe this is a Rio Grande cottonwood - based on gummy buds, range maps, and that my measurements roughly match a Rio Grande cottonwood in Delta, CO that is on the CO champion list. I measured the tree as 24.2' x 90'.

Matt Markworth
Blue Spruce around Telluride

by Matt Markworth • Sat Oct 15, 2016 6:01 pm

NTS,

At ~8,750’ in elevation Telluride is a bit lofty for really tall blue spruce, but farther down the valley there are some nice trees. I generally think of 7,000’ - 8,000’ elevation as the best zone for tall blue spruce. Despite the lack of big/tall trees, Telluride is simply magical. I spent a week there hiking the trails and staring at the mountains and slopes painted in aspens (it never gets old).

First up is a tree near Sawpit that was recently added as a national co-champion. The tree was found/taped/dropped by a local arborist a couple years ago and the girth and height measurements from then are very close to what I got this year.

Blue spruce: 12.6’ x 153.5’
Elevation: ~7,900'

Next up are two trees near Fall Creek, which flows into the San Miguel River approximately 13 miles west of Telluride.

Blue spruce: 9.73’ x 145.5’
Elevation: ~8,050’
Lastly is a tree at higher elevation in a different valley, along the Dolores River between Ophir and Rico. This blue spruce is significant for being more than 12’ in girth at an elevation above 9,000’. It's short and has a lot of taper, but still very impressive for this elevation.

Blue spruce: 12.23’ x 80’
Elevation: ~9,150’

Matt Markworth

### Metasequoia at Smith College

I know that Bob Leverett and others have posted threads about the fine trees at Smith College in Northampton, MA but for the life of me I can’t figure out the search tool for this BBS, despite being an advanced computer nerd. I was looking for those older threads.

Anyway, I spent the day in Northampton, wandering around my usual haunts including walking the Smith College campus, which is an amazing arboretum. The first photo is of me in front of a Metasequoia. No doubt Bob and others have measured this tree. Bob? It can’t be very old- probably one of the first to be
brought to America, I think in the 1940s. Bob, do you have measurements for this tree? How does it compare to other Metasequoia in the states?

The other photo is of an albino squirrel I saw elsewhere in town.

I later went to the small, but nice Smith College museum. And the campus has a very nice greenhouse with tropical and desert plants. For anyone not familiar with Northampton, if you’re travelling in Mass., be sure to visit it!

Joe

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**Adirondack Outing Oct. 19, 2016**

by tomhoward » Mon Oct 31, 2016 11:08 am

NTS,

On Wed. Oct. 19, 2016, Elijah Whitcomb and I went to Paul Smith’s College in the northern Adirondacks. We left North Syracuse after 7 AM, took I-81 north to Watertown, US 11 northeast through farm country to Potsdam, NY 11B east to Nicholville (in this area saw 2 corky Rock Elms in field among Amish farms), NY 458 into the Adirondack Park (through Santa Clara Experimental Forest – all 2nd growth) to NY 30, NY 30 south to Paul Smith’s College. It was a beautiful cool day, more sun than clouds with temperatures from 60 to 64 F. Most of the forest we traveled through is lovely 2nd growth with lots of White Pine (towering above all other trees), Balsam Fir, Red Spruce, Aspen, Yellow Birch, some Jack Pine, Hemlock, White Cedar, Sugar Maple, Red Maple, Beech, Paper Birch, Black Cherry. In the frequent swampy and boggy areas were plenty of White Pine (tallest tree), Balsam Fir, Black Spruce, Tamarack (starting to turn gold), some White Cedar. Maples were mostly past peak, but Aspens (Quaking and Bigtooth) were at peak, with mostly yellow and gold, some orange.

At the Paul Smith’s College VIC (Visitor Interpretive Center, a large outdoor area with many trails), Elijah and I met Rob Leverett and Betty Austin, and then Rob’s father Bob Leverett and Bob’s wife Monica.
We walked along a beautiful easy nature trail through a lovely 2nd growth forest dominated by fragrant Balsam Fir, White Pine (the trees we came to see – lovely, fragrant, the largest and tallest trees, but not nearly as tall as expected), Yellow Birch (oldest trees, ancient, gnarly, with lots of character – especially one by bridge over stream – Bob Leverett said these picturesque Yellow Birches could easily be about 250 years old – the only old trees in this forest). Associate trees include Red Spruce (should be there, but I did not note it during the visit), Paper Birch, Bigtooth Aspen (some big), Hemlock (some big), Beech, Sugar Maple, Red Maple, Striped Maple, Black Cherry (some big).

The big White Pines should be 100-150 years old; one of the biggest is 35.8” dbh (9.4 ft. cbh) – Bob Leverett measured this tree to 108 ft. All these White Pines looked taller than they turned out to be.

Bob Leverett and I measured a typical Balsam Fir to 81 ft.

One of the biggest White Pines (10 ft., 7” cbh, 40.4” dbh) was measured by Bob Leverett to 113.5 ft. This is the tallest tree we would measure at this site. The tallest White Pines at this site could be about 120 ft. I measured a flat-topped White Pine to about 110 ft. above eye level.

The area where the big White Pines grow is at the edge of a marsh, and strong winds limit their height. It was still absolutely glorious to be among them, and the wind through the pines made a wonderful sound.

I measured a Bigtooth Aspen to 64.4 ft.

Rob Leverett talked enthusiastically about bigger and older trees near Cherry Patch Pond to the east (beyond Lake Placid), and he wanted to show them to us, so we went there next.

Bob Leverett said he measured a Balsam Poplar to 92 ft.+ by the motel in Keene Valley, NY where he and Monica were staying. He asked me if I had much information about Balsam Poplar heights. I said I only knew of one Balsam Poplar in British Columbia at 91 ft. – Bob was pleasantly surprised that the tree he measured could be the tallest known of that species.

Bob Leverett told us of a Quaking Aspen he measured near Stockbridge, MA to 108 ft. – this could be the Eastern height record; he measured a taller Quaking Aspen in Colorado.

We followed Rob Leverett to Cherry Patch Pond through beautiful country, with White Pines everywhere along the roads, on NY 86 through Saranac Lake, with White Pines lining lakeshores, with awesome views of the High Peaks (possibly including NY’s highest point, Mt. Marcy, at 5344 ft.), and to northeast other high mountains, including Whiteface, which reached into the clouds.

We took a back road, which bypassed the center of Lake Placid, a road which took us past the Olympic Training Center and by the towering Olympic Ski Jumps. There were many big Aspens among the White Pines. We drove through a forest with plenty of White Spruce, the most of that species I’ve ever seen in NY.

We stopped on NY 86 at the small parking lot at the beginning of the Cherry Patch Pond Trail, in a beautiful setting of high hills topped by White Pines over 120 ft. tall, and a marsh backed by a high ridge that seems to be covered with old growth White Pine-Hardwood forest.

The trail through the Cherry Patch Pond forest was rugged, narrow, rocky, with steep ups and downs. The trail goes through a beautiful old growth forest dominated by Red Spruce, Balsam Fir, Yellow Birch, and eventually near the end of our walk, White Pine. The air was fresh and fragrant with Balsam Fir. Associate trees include White Cedar, Sugar Maple, Red Maple, Striped Maple, Beech, Black Cherry. Groundcover includes Bunchberry Dogwood and Clubmosses.

Rob Leverett said he counted 250 rings on many stumps and cross-sections in this stand.

This forest has many young trees, and in many places the old trees are widely scattered, so there may have been some logging. Downed timber is fairly plentiful, and pit and mound topography is abundant, so wind
is a major disturbance. These trees seem to be older than they look. The Red Spruces are exceptionally large.

Elijah measured a 6 ft. 9” cbh (25.8” dbh) Red Spruce to over 96 ft. tall.

Elijah measured a large White Cedar to 74 ft.

We came to a huge Red Spruce, the biggest Red Spruce I’ve ever seen. Bob Leverett thinks this rugged old Red Spruce could be 350 years old. This Red Spruce is 7 ft. 5” cbh (28.3” dbh), and 101 ft. 4” tall, as measured by Elijah.

We came to the edge of the big White Pines, but we were too exhausted, and a lot of time had gone by, so we decided to turn back. Before we turned back, I got a height above eye level of 132.8 ft. on one of the tall-looking White Pines; since the base of this tree is very likely above eye level, this White Pine may not be as tall as that.

A small Red Spruce cross-section had what looked like about 200 tight rings. Rob Leverett has counted 140 rings on a Balsam Fir cross-section in this area, an exceptional age for Balsam Fir.

We returned to our cars, said good-by at the end of this splendid get-together, and Elijah and I continued northeast on NY 86 into the spectacular Wilmington Notch, with old growth White Pines on cliff faces, awesome views of towering Whiteface Mountain (4865 ft.), Little Whiteface Mountain (3660 ft., with a chairlift to the top), fantastic fall colors on steep gorge slopes, old Red Pines atop cliffs, White Cedars on cliff sides, Hemlocks in the gorge.

Elijah and I turned around at Wilmington, took NY 86 back by Cherry Patch Pond, and into the lovely village of Lake Placid, with its Olympic venues, big fancy hotels, lovely Mirror Lake, big White Pines. We continued on NY 86 west to Saranac Lake, and then NY 3 west to Tupper Lake, through 2nd growth forests in swampy areas with rugged White Pines towering over Balsam Firs, Black Spruces, Tamaracks, White Cedars, Hemlocks. We took NY 3 west across the lower, swampy western Adirondacks, to the Watertown area. There were many White Pines, Sugar Maples with gold, orange, and red leaves illuminated by the setting sun, golden-leafed Aspens, some big Black Cherries. On NY 3A we went by the area where Elijah measured a 93 ft. Jack Pine. We took I-81 back to North Syracuse. The outing took nearly 13 hours from after 7 AM to 8 PM.

Trees Measured by Bob Leverett, Elijah Whitcomb, and Tom Howard
Oct. 19, 2016:

Paul Smith’s College VIC Nature Trail:

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<tr>
<th>Tree</th>
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<th>CBH</th>
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<tr>
<td>White Pine</td>
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<tr>
<td>Balsam Fir</td>
<td>81</td>
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<tr>
<td>Bigtooth Aspen</td>
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Cherry Patch Pond:

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<th>CBH</th>
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</thead>
<tbody>
<tr>
<td>White Pine</td>
<td>132.8</td>
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<tr>
<td>Red Spruce</td>
<td>96+</td>
<td>101'4”</td>
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<tr>
<td>White Cedar</td>
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Tom Howard Oct. 20, 2016
Updated maximum dimensions for West Virginia

by tsharp » Mon Nov 09, 2015 6:54 am

NTS:
Attached is a list of 24 trees that set new maximum sizes for the species in West Virginia. The list is current for measurements made up to 5/2/2015. All the new measurements have been entered into the “Trees Database”. Bold type in the list indicates a new maximum for the state. Two figures in the crown spread column indicates maximum and average crown spreads, single figure indicates average crown spread.

Pignut Hickory, Lewis County

11.4’ x 138’ x 90’ (average crown spread)
Photos by Dan Cooley

Scarlet Oak, Berkeley County

11.9’ x 122.2’ x 79.5’ average crown spread
Photo by Ben Kunze
Last Spring I went to measure a large Scarlet Oak in Jackson County. It was on the ground in several pieces. Only about three inches of sound wood on the outside. The last time I measured it was in 2009 and was 17.6' x 110.2' x 84'. It had resided in the West Virginia Big Tree Register since 1977. Also it was included in Jess Riddle's Eastern Maximum List.

ATTACHMENTS

[2015 maximum dimension update.xlsx]

Along the New River Gorge

I spent a full day along the New River Gorge area on 11/1/2016. First stop was at a private residence at the intersection of Gatewood Road and Cunard Road near Fayetteville, WV. I had spotted some sizable Catalpa yard trees sometime ago and today I found someone home.

Southern Catalpa (Catalpa bignonoides) 71.8' x 174.4"(14.5') x 66.8' CS – two axis method. The house and tree is located on plateau above the gorge at an elevation of 1950'. The property is presently used as an equestrian center and offers horseback rides throughout the gorge.

Next effort was a hike back to the Stonecliff Old Growth Stand. This site is on National Park Service Land was dedicated into the Old Growth Forest Network last spring. The site is a 2.7 mile hike upriver along the Stonecliff Trail which heads up at the Stonecliff River Access site which is on river left (descending) near Thurmond, WV.

Largest of trees measured included:

Yellow-poplar (Liriodendron tulipifera) 128.7'
Northern Red Oak (Quercus rubra var. rubra) 107.3'
Chinkapin Oak (Quercus muehlenbergii) 92.2'
Bitternut Hickory (Carya cordiformis) 90.5'
Black Maple (Acer nigrum) 86.9'

All trees measured were entered in the Trees Database.

The site is 12 acres+, East facing at 1300’ – 1500’ elevation with slopes to 110%

The hike is easy in dry weather even though there are still a few mushy areas even in the present dry regime. In wet weather I have had to cross side streams calf deep.

It was not good conditions to measure tree heights. The oaks were still in full foliage, somewhat windy, and the millions of gnats were annoying with the less numerous black flies still hungry. The only tree heights measured were ones of convenience due to visibility. The steep slope and hard dry ground with some leaves and acorns made footing a challenge. A two person crew would be better for measuring circumference, especially if they had some billy goat abilities.

Bigger trees were observed and this site deserves a more thorough visit. The existence of Chinkapin Oak indicates limestone which must be upslope. I did not observe any while hiking.

Erie Big Tree Tour

On Veteran's Day, Erie big tree legend, Ken Fromknecht, took me on a whirl-wind tour of several large N. red oaks in Erie County, PA. The largest of the day we measured to 20.8ft CBH. It is at least the 6th largest documented in PA (as per Scott Wade's-PA's big tree coordinator, PA Forestry Association big tree website). I'd argue the 1st is a double, and the 3rd blew over about 15 years ago:

http://www.pabigtrees.com/view_tree.aspx

Here's the day's tally:

Weeping Willow on West Gore Rd, Erie, PA
20.6ft CBH (single) x 71.7ft high

N. red oak on RT474 Wattsburg, PA
18.6ft CBH
19.7ft CBH x 100.5ft longest spread x 73.3ft high
335 AF points

N. red oak Harborcreek, PA
20.8ft CBH x 136.5ft longest spread x 93.6ft high
377 AF points
This 20.8ft CBH red oak is the largest I've personally measured. What a monster, and in great shape!

Best Regards,

Dale
**Rochester, NY Area Oct. 30, 2016**

On Sunday Oct. 30, 2016, Elijah Whitcomb and I explored Abraham Lincoln Park (formerly Irondequoit Bay Park East) on the east shore of Irondequoit Bay east of Rochester, NY. The park is covered with tall 2nd growth forest, and contains the tallest Sassafras trees yet seen in NY, and possibly the Northeast. The forest is dominated by Oaks, especially Red and Black Oaks. The weather turned nasty, with a cold, steady rain starting when we were at the farthest point of our hike, near the tall Sassafras trees. This bad weather, and the wet, muddy, steep, mostly unmaintained trail, made it difficult to concentrate on trees. The upper part of the forest is filled with invasive plants; much further down the steep ravines are many tall native trees, especially the grove of tall Sassafras trees, densely clustered together on a steep hill. The tree were still mostly green, still in leaf, incredible for this time of year this far north.

Trees seen at Abraham Lincoln Park include Red Oak, Black Oak, White Oak (few), Basswood, Red Maple, Sugar Maple, Beech, Sassafras (common), Tuliptree, Cottonwood, Bigtooth Aspen, Black Birch, Yellow Birch, White Ash, Pignut Hickory, Willow, Hophornbeam, possible European Elm species (leaf like Elm or Hophornbeam, bark like rougher Shadbush, but not as smooth as Hornbeam, small trees), Butternut, Ailanthus (tall), White Pine (few), Hemlock (few), Norway Spruce (plantation near top of hill).

It rained all the rest of the time when we were in the Rochester area, so we drove around and through parks, including Lucien Morin Park, Irondequoit Bay Park West, Seneca Park in Rochester, and Powder Mills Park in Pittsford (hills covered with what could be old growth Oak forest).

Trees Measured with Elijah Whitcomb Rochester, NY Area Oct. 30, 2016:

- **Cottonwood**
  - 128+ straight up shot (tree over 130 ft. tall – Elijah)

- **Sassafras**
  - 120 tallest NY, possibly tallest Northeast
  - 96.1
  - 110.5
  - 105.5
  - 101.5
  - 100.6

- **White Oak**
  - 84.9

Seneca Park, Rochester:

- **Persimmon**
  - 73.5 6’1” cbh (23.2” dbh) tallest NY (Elijah), possible NY champion, corresponds to tree on NY champion list

Trees at Seneca Park not measured for height:

- **Sassafras**
  - 9’4” cbh (35.6” dbh), battered tree, low broken top

- **Table Mountain Pine**
  - small tree with spiky cones, possible NY champion, corresponds to tree on NY champion list

- **Turkish Oak** *(Quercus cerris)*
  - small leaves, big open-grown tree

Powder Mills Park, Pittsford:

- **Shagbark Hickory**
  - 99.8

Tom Howard
by ElijahW » Sun Nov 06, 2016 10:36 pm

Tom,

Thanks for your write-up. We'll get back there eventually, and with better weather conditions.

Mark,

I don't know to what extent the Powder Mills property is protected, but Monroe County in general seems to have done an exceptional job of acquiring tracts with attractive mature forests, and I assume this was done purposefully. The Irondequoit Bay-area county parks are surrounded by upper- and middle-class neighborhoods, as is Powder Mills, and I think the public has a good idea of the value of leaving these parks in their current wooded state. Rochester seems to be very tree- and nature-friendly, so I think Powder Mills will be safe for the time being. I can't say this for sure, but I think it's a reasonable assumption.

I've attached some pictures of the tree Tom and I were puzzling about below, as well as another unidentified tree from Irondequoit Park West:

The leaf base is not unequal like an elm, but even like hophornbeam; however, the bark isn't shaggy like hophornbeam, and is a darker shade of brown.

Some poor pictures of the top of the tall Sassafras (in center, red leaves):
Irondequoit Bay Park West mystery tree:

This appears to be a linden of some sort, but the leaves are much smaller than Tilia americana, and thinner and more delicate than cordata. Any help with the ID would be welcome.

By the end of the year, I hope to have a thorough tree survey of the three Irondequoit Bay parks completed. I believe it's between five and six hundred acres of hills and ravines, and with the leaves on, locating true tree tops has been difficult. As of today, here are some highlights:

- All three parks have trees exceeding 144' (all Tuliptrees over 140')
- 7 species exceed 130' (Tuliptree, White ash, White pine, Northern red oak, Eastern cottonwood, Pignut and Bitternut hickory)
- Most of the tall stuff is relatively young (>150 years). The only old trees seem to be scattered White and Black oaks, White pines, and a couple of
Hemlocks.

Current Maximum Height for the three parks:

Tuliptree: 152.9'
White ash: 137.7'
Pignut hickory: 135.2'
Eastern white pine: 134.7'
Northern red oak: 131.9'
Bitternut hickory: 131.5'
Eastern cottonwood: 131'
Black cherry: 129'
Eastern hemlock: 125.1'
Black walnut: 121.3'
American Beech: 120'
Sassafras: 118.2' (same tree as Tom mentioned above; difference in height due to different instruments used)
Red maple: 115.7'
Sugar maple: 114.6'
American basswood: 107.6'
Black birch: 106.2'
American chestnut: 62.2'

Current Rucker 10 Index: 133.0'

Elijah

**Costa Rica, Tallest tree I have measured yet**

by Bart Bouricius » Fri Nov 18, 2016 7:55 pm

Connie and I are back in Costa Rica and I keep gaining more mobility after a protracted recovery from Guillan - Barre Syndrome ( not a tropical disease), which hit me a couple of weeks after Will Blozan, Jess Riddle and I returned from an amazing expedition to Northern Panama. Anyway, let me discuss yesterday’s solo visit to Carara National Park, about a 45 minute drive from our house, where I remeasured a Probado tree *Pterygota excelsa.*
Here a large male common basilisk basking on a log spanning the river. It is one of 3 basilisk species in Costa Rica, all of which can run across the surface of the water, earning them the name “Jesus lizards”. Try saying basking basilisk 3 times fast.

Arizona, September 2016

by tsharp » Mon Nov 21, 2016 1:13 pm

Nts:
I hiked into the headwaters of Barbershop Canyon on 9/21/2016. This is located on the Coconino National Forest, Rim Ranger District, Coconino County. It is somewhat near the cross-road town of Happy Jack (Clints Well). It is very near to the Mogollon Rim but the drainage flows northward away from the Rim and goes into Clear Creek and the Little Colorado near Winslow. Access is via FS Trail 91 which intersects with FS Road 139. Elevation is 7700’ at the road and 7400’ at the spring. The Canyon this far up is not very rugged and I had an easy hike down to a meadow where the Barbershop Spring is located. Supposedly the name stuck after a sheep herder would give haircuts to fellow herders near here. With sheep shears?

The largest trees of seven species measured along a two mile section of trail include:

Ponderosa Pine (Pinus ponderosa) 10.0’ x 138.9’

Rocky Mountain Douglas-fir (Pseudotsuga menziesii var. glauca) 9.4’ x 125.0’

Corkbark Fir (Abies lasiocarpa var. arizonica) 9.6’ x 123.0’

Southwestern White Pine (Pinus strobiformis) 12.5’ x 114.9’

Trembling Aspen (Populus tremuloides) 6.6’ x 93.6’

Gambel Oak (Quercus gambelii) 6.4’ x 63.7’

Big-tooth Maple (Acer grandidentatum) 2.6’ x 54.5’

The colors of the aspens and maples added to the scenery and while I was relaxing on the hillside above the meadow a herd of ten elk strolled past me with the majestic bull sporting a 7 x 7? rack.

If ever in the area I recommend a drive on the Rim Road (FS 300). It gives one a good understanding of the impressive geologic feature known as the Mogollon Rim.

Next stop on 9/23/2016 was Tonto Natural Bridge State Park located near Pine, Gila County Arizona. Trees were measured at an elevation of 4500’. The lack of circumference for some species meant I lost my nerve when getting to close to the 200’ drop off that Pine Creek caused when carving the canyon and natural bridge. This travertine bridge clears the creek by 180 feet.

At this elevation one encounters Sonoran Desert plant communities.

The largest of ten species measured included the following:

Arizona Cypress (Hesperocyparis arizonica) 10.4’ x 63.8’

Arizona White Oak (Quercus arizonica) 7.7’ x 55.0’

Single Needle Pinyon (Pinus monophylla) ### x 45.9’

Alligator Juniper (Juniperus deppeana) 5.3’ x 42.9’

Netleaf Hackberry (Celtis laevigata var. reticula) ### x 29.2’

Redberry Juniper (Juniperus arizonica) ### x 27.7’

Cashew (Anacardium occidentale) 2.3’ @ 3 1/2’ x 25.4’

One Seeded Juniper (Juniperus monosperma) ### x 19.6’

Western Soapberry (Sapindus sapornaria var. drummondi) ### x 18.2’, 1.8’ @ 1.3/4’ x 15.9’

Sonoran Scrub Oak (Quercus turbinella) 1.8’ x 14.2’

The cashew is a planted exotic, the rest are native.

All Trees measured were entered into the Trees Database.
For additional information about the park see:
http://azstateparks.com/Parks/TONA/

Earlier in the month I measured some trees along a trail in the Snow Bowl area in the San Francisco Mountains north of Flagstaff.
See: https://treesdb.azurewebsites.net/Browse/Sites/38330/Details
Some were remeasured from my first visit in 2012. Since I was first there the Anasazi Trail is now the Kachina Trail. This if probably An example of political correctness between the Forest Service and various Indian nations.

Arizona, September 2016
by Don » Tue Nov 22, 2016 11:41 am

Turner-
An excellent report!
From a couple of very nice niches around the Mogollon Rim. Known as the geography that features the largest ponderosa pine forest, it is but a survivor of once huge pine forests in the descriptions of the early settlers, were large park-like settings that several wagons could ride through side by side. Of course this reflected the fire-adapted species with its general paucity of undergrowth outside of grasses, that carried the frequent but low intensity fires. Since then right-hearted but wrong-minded land managers suppressed wildfires as soon as they were ignited (lightning downstrikes here are of the highest frequencies recorded). A century or more of such suppression has led to Rim-wide dog-hair thickets of dense regeneration. This abundance of growth, though seemingly lush and attractive to the passers by, provides fuel ladders that takes ground fires into the crown, and with the continuing drought here, leads to catastrophically large wildfires (500,000 plus acres each, most every year), particularly in the late summer and fall with the advent of monsoonal weather patterns (lightning, thunder storms, winds and rain out of the southeast). Efforts have been underway for a decade or more to thin (by controlled fire, or mechanical thinning) these forests, but there's a lot there, and the thinning operations have little commercial marketing to drive it. Several times a year, when the timing's right for fuel moisture levels and weather components, the USFS has control burns that they undertake, and large plumes of smoke appear on our horizons, most of the time disappearing into remote unpopulated areas. Most of the time! Earlier this year, smoke became so thick along Interstate 40 that there was a multiple car pileup. Despite signs up warning of the possibility. But we travelers are in such a hurry...

Don Bertolette

Hermosa Creek Trail 2015 Part II
Swampy Creek
by Larry Tucei » Thu Jul 23, 2015 1:49 pm

NTS- On Thursday June 25 Will, Matt and I did a hike at the upslope of Swampy Creek and the downslope looking for some tall trees. The upslope had not been explored before. Matt had been on the downslope of Swampy and it warranted some further exploration.

Swampy Upslope

We started up the 200’ climb at Swampy and immediately found some tall Ponderosa and Doug Fir. Will and Matt went up an along at a faster pace than me so dropped back and measured some Ponderosa.
But before they got to far I took a measurement and a couple of photos of a nice Ponderosa with Will standing by it on the north side of just past where water was coming out of the ground looking like some of the headwaters of Swampy. That was the tallest Ponderosa of the day at 151’ with a Dia. of 43.1”.

Most of the Pines in this area were in the high 140’s with CBH of 12’ 3”, 11’ 8”.
Will is just left of center in this photo of him headed up Swampy with the big Ponderosa's in the background. We also measured a nice Doug Fir to 153.3’ with a CBH of 11’ 5.5”. After a brief rest I caught up to the guys we headed over the ridge then back around to Hermosa Creek Trail and down into western Swampy to an area where Matt had measured some really tall Blue Spruce. Down near the end of the Valley is a beautiful small Meadow loaded with wildflowers and really tall Blue Spruce. We measured several trees on the southwestern side of the Meadow. Heights that I wrote down were 150.5’, 11’ 11”, 153.6’, 6’ 6”, 155.1’, 9’ 2”, 159’, 9’ 2”. It was amazing to see so many tall Spruces in one small area. Will and Matt measured several others and teamed up on a 163’ tree while I went to the end of the small Valley where I could see Hermosa Creek. Well I thought I could—wrong, it was still 100’ straight down to the Creek. I then decided to make the arduous climb back up the northwest finger out to Hermosa Creek Trail which was about 500’ up the 30 degree angle through dense Oak brush. I stopped several times on the way up to catch my breath. While on the way out I let Will and Matt know I was headed up via Walkie Talkie. About half way up the finger I spied a large Juniper on the edge of one side and since it was the second largest I had ever seen I had to measure it.

Wow glad I found it the Height was 35’, CBH-7’ 11” and Crown Spread 15’ x 18.5. From the conference we had in Durango last year I learned that a tree like this could be 500 years old. I finally reconnected with Will and Matt after my climb and we headed back to the car with great satisfaction from a good day of tree hunting and Denbroship. Larry
Re: Hermosa Creek Trail 2015
Part II Swampy Creek
by Matt Markworth » Thu Nov 24, 2016 5:40 pm

Larry, Will, All,

On 10/4/16 I went farther up Swampy, up a little side creek, and there was a nice Rocky Mountain Douglas fir. I think it becomes the second largest known Doug fir at Hermosa behind the huge outlier near Dutch Creek.

The measurements are 12’ x 156.2’. Elevation is about 8,200’. I’ve seen a few Doug firs at Hermosa about this same size, but they’ve all been on the ground, usually across one of the main side creeks to Hermosa Creek.

Re: Piedra River Archuleta Co., Colorado
by Matt Markworth » Thu Nov 24, 2016 6:59 pm

Larry, Chris, Mark, All,

On 10/5/16 I went to the end of the road like we did in 2014, and this time I headed northwest up First Fork to check on a tree for the Colorado Big Tree Coordinator and then veered north up Coldwater Creek.

The area is still very far behind Hermosa in terms of big and tall trees, but there were a few bright spots.

Rocky Mountain ponderosa pine on First Fork, 12.41’ x 137’ x 35’;
Here's a skinny blue spruce on Coldwater Creek that's 6.35' x 144.8'. There's also a 9.15' x 149.6' ponderosa pine on Coldwater Creek.

Matt Markworth

**Re: White Fir**
by Matt Markworth » Thu Nov 24, 2016 7:14 pm

All,

I've conversed with Bob and Mark about this tree, and also just wanted to share the info here.

I'm happy to report that this tree is doing well. There are two dead branches at the top that are very, very close in height so we probably won't see much height growth in the coming years unless one of the other
leaders shoots up. It was especially nice to see the tree with aspens changing colors nearby.

Here are my measurements, which are very close to Mark’s and Bob’s measurements in the past:
Girth: 163.5”
Height: 144.3’
Spread: 30’ (getting spread was tricky because of the other two white firs that are so close to the tree)

Matt Markworth

Re: A visit to the Leolyn Grove at Lilydale

by Erik Danielsen » Thu Nov 24, 2016 5:47 pm

Over the past several days I’ve been home in WNY and have visited some exciting sites; while I'll have to put off full reports on those for when I'm at a computer, I'd like to share some updates on the Leolyn Grove. I stopped by on Wednesday 11/23 and sought to check in on some of the known superlatives and fill in a couple gaps in terms of measured species.

The great white Pine has either grown a bit or I may have found a previously unseen top, as I measured from a different direction than I have in the past. It now measures 145.2 feet tall, with no change to girth
that I could measure. The half-debarked 125'ish white Pine that was on it way out is now lying on the ground, snapped off at about 30' up.

Near that fallen Pine I measured three nice yellow birch, all fairly tall for the species/latitude: 97.5'/6.7'cbh, 94.8'/5.8'cbh, and 92.1'/6.7'cbh. I searched for the thicker one in the core of the stand but was unable to find it. Near these was another old-growth cucumber magnolia I had not noticed, a hunched tree I didn't measure but certainly appreciated.

Next to this was a second shagbark hickory, thin but tall at 114.3'/6.5'cbh. When I remeasured the other shagbark I had reported before I was unable to exceed 114', though that was when I dropped by very briefly on Sunday, just before dark in high winds. Based on my straight-up shot from last year I think there's a good chance that I missed the top due to the unfavorable conditions. The other hickory in the interior is definitely Pignut and measured to 104.4'/7.2'cbh.

I approached the former state champion Cucumber Magnolia from a different direction than usual and got a height of 115.2', a nice little bump. I did try to find a tall basswood but the best I could do was 103.2'. This stem (part of a cluster) looked to be around 6'cbh but was surrounded by the mess of another tree's fallen crown. I also measured a beech to 113.7'/8.8'cbh, a little taller than previously measured there. A red maple nearby put up 116.4'/9.4'cbh, which would have seemed exciting when I visited with Tom a couple years ago but, well, the number of sites around here with red maples in the ballpark of 120' just keeps growing...

The RH10 for this site stands at 122.3 incorporating this visit's updates.

A couple photos from Wednesday to accompany the measurements.
2016 updated maximum dimension list for West Virginia

NTS:
Attached is a list of 20 trees that set new maximum dimensions for their species in West Virginia. The list is current for all measurements made up to 5/14/2016. Numbers in bold indicate a new maximum for that dimension.

2916 Maximum Dimension updates.xlsx

Pockets of lakeshore forest in the area of Dunkirk, NY

While visiting my home region of WNY for the thanksgiving holiday I was invited by my friend Jon Titus (also involved in the SUNY Fredonia Woodlot report thread) to visit a patch of nice forest right along the lake's edge in the city of Dunkirk to measure a big oak. A winding path took us through brushy forest along the top of the shale cliffs that characterize this part of lake erie's shoreline. As a botanist, my friend pointed out an interesting native honeysuckle that's nearly impossible to tell from the invasive eurasian honeysuckle except in flower, among other interesting members of the lakeside flora. Right at the cliff's edge, we found the wind-beaten Red Oak.

The red oak on the clifftop- 55.5' tall, 11.6' cbh, 56.5' average crown spread. A modest tree but with lots of character and imposing within its setting.
After measuring this tree we continued on a bit, through a forest of mostly other red oaks, though none quite so large, with a stunning carpet of moss covering the ground- and stumbled upon a patch of forest just slightly further back from the cliff's edge where there was a collection of surprisingly old-seeming trees. None were particularly tall but the big Red Oak here and some of the sugar maples in particular showed signs of many years of weathering. This is probably pretty old regrowth that had some seed continuity with the primary forest at one point, as the species mix (climax northern hardwoods) is to my observations pretty uncommon in the younger regrowth of the surrounding area. Perhaps a patch that was fully or partially cleared early on, but never plowed or cultivated, and maintained as a woodlot. I only measured a few trees but very much appreciated the beauty of the site.

A broader view of the big Red Oak.

The big Red Oak with Jon.
The measured sugar maple- check out the gnarl factor.

The cliff’s edge just a few hundred feet away.

Sugar Maple
84.9'9.5'dbh
American Beech
84.9'
Black Cherry
79.8'/4.4'dbh
Northern Red Oak
81.9'/14.4'dbh

I also visited a small beach up the shore a ways in Sheridan, where I took some photos but didn’t measure any trees. One thing that strikes me about the many red oaks all along the clifftops of this shoreline is that they tend to have exceptionally dark gray bark that stays very smooth in large sections, and what fissures do form are even darker. Whether this is a variation specific to the shore environment or a product of the harsh clifftop growing conditions I don't know, but it's always been very distinct to me. The leaves, buds and acorns are classic rubra. I hope the photographs included here sufficiently convey the intense, but quite exhilarating, shoulder season conditions of heavy winds and constant spray that these trees thrive in.
Re: The Tallest Trees in Africa
by KoutaR » Tue Nov 29, 2016 4:06 am

Africa’s new tallest tree is indigenous 81.5-meter Entandrophragma excelsum on Kilimanjaro. https://www.newscientist.com/article/2114073-africas-tallest-tree-measuring-81m-found-on-mount-kilimanjaro/

They keep on growing
by dbhguru » Thu Nov 24, 2016 8:37 pm

Ents,

I haven’t posted on Mohawk Trail State Forest in many moons. I thought I’d give the place a rest. However, the Mohawk's pines haven't been resting. Today Monica and I went to Mohawk. I wanted to re-measure the Tuscarora pine located across the road from Cabin 6. See below.

<table>
<thead>
<tr>
<th>Cm-ft</th>
<th>Rgt-ft</th>
<th>Area-ft²</th>
<th>Form Fac</th>
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<tbody>
<tr>
<td>8.9</td>
<td>152</td>
<td>6.30</td>
<td>0.40</td>
</tr>
<tr>
<td>9.255</td>
<td>156</td>
<td>6.82</td>
<td>0.40</td>
</tr>
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</table>

In March 2010, the Tuscarora pine was 152 feet tall and 8.9 feet in circumference. Now it is 9.255 feet around an 156.1 feet tall. That represents 8 inches of new growth per year, about average for Mohawk. Radial growth has averaged 0.095 inches per year, or

Cliffside red oaks. See the upper trunk and limbs up close for what I'm talking about regarding the particular bark.

A black locust that's grown "legs" as the waves undermine the short cliff it grew on top of.
just shy of 0.1 inches per year. This means that the Tuscarora pine is presently adding an inch of radius every 10 years. That's pretty fast growth for these pines.

Based on a ring count of a pine about 60 feet away, I think this pine is probably 135 years old. If it survives the needle cast fungus, it will unquestionably reach 160 feet in 5 or 6 years. The radial growth will probably slow to half the current rate in another 30 years. But presently, the tree is adding volume at the rate of about 7 ft\(^3\) per year. By my estimates, when this tree was about 5 feet in circumference and growing at a faster radial rate and height, the annual volume would have been increasing at about 6 ft\(^3\) per year. I expect that at that size, it would have been around years old. If these estimates are correct, the pine has been maintaining its annual volume growth for 55 years - actually slightly increasing it.

There is another way to look at volume growth, perhaps more conventional. Volume increase expressed as a percentage yields 7% per year when the tree was 80 years old. That rate has dropped to 1.8% presently. As the tree gets even larger, the percentage increase will continue to drop, but I expect that the absolute increase will stay in the 7 ft\(^3\) for another 30 years or more.

Robert T. Leverett

Re: They keep on growing

by dbhguru » Mon Dec 05, 2016 3:35 pm

Ents,

My latest re-measurements are:

Saheda: Girth = 12 feet, height = 171 feet.

Lee Frelich: Girth = 9.2 feet, height = 167.4 feet

Based on my latest measurements, the top of New England is:

<table>
<thead>
<tr>
<th>Name</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jake Swamp</td>
<td>174.0 ft</td>
</tr>
<tr>
<td>Saheda</td>
<td>171.0 ft</td>
</tr>
<tr>
<td>Joe Norton</td>
<td>168.0 ft</td>
</tr>
<tr>
<td>Lee Frelich</td>
<td>167.4 ft</td>
</tr>
<tr>
<td>Tecumseh</td>
<td>166.8 ft</td>
</tr>
<tr>
<td>Frank Decontie</td>
<td>164.7 ft</td>
</tr>
<tr>
<td>Michael Taylor</td>
<td>163.9 ft</td>
</tr>
<tr>
<td>L. Frank Decontie</td>
<td>163.0 ft</td>
</tr>
<tr>
<td>John Brown</td>
<td>161.8 ft</td>
</tr>
<tr>
<td>Cabin</td>
<td>161.0 ft</td>
</tr>
</tbody>
</table>

Average 166.2 feet

I expect that the Frank Decontie tree is now over 165, but I am unsure of the 161 for the Cabin pine. The RHTTI is not less than 166.1 (RHITT = Rucker Height Index Top Ten).

I'm not sure how many people we've reached with respect to these splendid trees. The key seems to be to form good partnerships, and I think I've just formed a new one. Kevin Podowka is the DCR management forester for the northern Berkshires. He is genuinely interested in the big trees. A native of upstate NY, he worked in the U.S. Forest Service for 20 years and has been a state forester in Florida. I have hopes of him being able to get a number of important DCR foresters interested in the Mohawk pines. By rights, they should be interested in them.

It just takes one good person on the inside and the right strategy.

Robert T. Leverett
**Re: Top ten tallest by state**

by sradivoy » Thu Mar 24, 2016 12:21 pm

**Matt Markworth wrote:** Bob, I would want Steve to spot check this to make sure it's accurate, but here's what I gathered from the Trees database. Let me know if you'd like to have it in an Excel file.

If I'm not mistaken the top two on that list are two different sprigs of the same tree. Here's a more current list of Ohio's top ten from what I can gather:

1) 171' tulip Sand Run  Galehouse 2013
2) 170' tulip Hocking Hills  Markworth 2015
3) 165.5' tulip Hocking Hills  Markworth 2015
4) 163.2' tulip Clearfork gorge  Galehouse/Brown 2011
5) 163' tulip Hocking Hills  Markworth 2015
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10) 158.3' tulip O'Neil Woods  Galehouse 2011

I suspect that the 2011 measured trees are all 160’ plus trees by now. Good chance that the Clearfork tulip is a 165’ class tree as well.

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**Re: Top ten tallest by state**

by dbhguru » Fri Mar 25, 2016 6:35 pm

Stefan et. al.,

Here is the counterpart list to Ohio's top 10 - the Massachusetts 10 tallest.

1) MTSF WP 173.0
2) MTSF WP 170.0
3) MTSF WP 167.1
4) MTSF WP 166.8
5) MTSF WP 166.0
6) MTSF WP 164.7
7) MTSF WP 163.0
8) MTSF WP 161.1
9) MTSF WP 161.0
10) MTSF WP 160.2

Avg 165.3 ft

Interesting that Ohio's top 10 are all tulip trees and Massachusetts top ten are all white pines. This is the classic tall tree dual in most of the East.

Robert T. Leverett

---

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3) MTSF WP 167.1
4) MTSF WP 166.8
5) MTSF WP 166.0
6) MTSF WP 164.7
7) MTSF WP 163.0
8) MTSF WP 161.1
9) MTSF WP 161.0
10) MTSF WP 160.2

Avg 165.3 ft

Interesting that Ohio's top 10 are all tulip trees and Massachusetts top ten are all white pines. This is the classic tall tree dual in most of the East.

Robert T. Leverett
between a dozen and a dozen and a half over 115. This is as good as New England from the Massachusetts border north can do.

There is no doubt in my mind that Ohio outperforms Massachusetts in all most all ways. I wonder about Indiana and Illinois. These are such fertile regions. However, the big sleeper in the Midwest and Northeast is still New York. Elijah and Erik are performing yeoman service in finding and measuring New York's best, and from what they've found already, it is apparent to me that we have a long, long way to go. Exciting possibilities.

Robert T. Leverett

**Re: Top ten tallest by state**

*by ElijahW » Sat Apr 16, 2016 2:26 pm*

NTS, NY's top ten height list, as far as I know:

Tuliptree 157.8' Zoar Valley
American Sycamore 156.9' Zoar Valley
Eastern White Pine 154.8' Elders Grove (Paul Smiths)
American Sycamore 154.5' Zoar Valley
American Sycamore 152.8' Zoar Valley
Eastern White Pine 152.6' Elders Grove (Paul Smiths)
American Sycamore 151.7' Zoar Valley
Tuliptree 151.6' Zoar Valley
Tuliptree 151.2' Inwood Park
Tuliptree 151.1' Zoar Valley

As Erik noted earlier, Zoar dominates our current list. We have no known trees over 160', but I believe we'll lose that distinction soon, for both Tuliptree and White Pine. Like I've written before, 160' for Sycamore is also likely, especially since the 154' tree in Zoar had a broken top when measured last year. Currently, I'm measuring trees in the general Catskills area, and I should have more good news in the months to come. Peace,

Elijah

**Re: Top ten tallest by state**

*by sradivoy » Wed Dec 07, 2016 10:02 am*

NY's top ten height list, as far as I know:

Hope you folks don't mind if an out-of-stater takes the liberty to update your state max list. Feel free to make any corrections or omissions that I might have missed. Big fan of the tremendous work that you two have done in your state.

Tuliptree 158.9' Zoar Valley
Sycamore 157.7' Zoar Valley
Tuliptree 157.3' Shu Swamp Preserve
Tuliptree 157' Shu Swamp Preserve

White pine 155.6' Pack Forest (EDIT)

Tuliptree 156.3' Shu Swamp Preserve
Tuliptree 155.5' Welwyn Preserve
White pine 154.8' Elder's Grove
Sycamore 154.5' Zoar Valley
Tuliptree 154.4' Shu Swamp Preserve
Tuliptree 154 Shu Swamp Preserve

**Letchworth State Park**

*by ElijahW » Mon Nov 28, 2016 11:13 pm*

NTS, On my way home from Zoar Valley today, I spent an hour or so walking through the 1912-1914 plantations at Letchworth State Park. I was able to confirm heights on several trees I spotted earlier this year. The following trees are current NY height champions:

Honeylocust (thornless): 105.9' x 5'11"
Cucumber magnolia: 119.3' x 5'7"
Rocky Mountain Douglas fir: 123.7' x 5'7"

I also measured a Norway Spruce to 129'+ and a White Pine outside the plantation to 132'. Letchworth has a number of impressive plantation species, including Noble Fir, Ponderosa Pine, and White Spruce. The canyon view isn't bad, either.

Elijah
Re: Letchworth State Park
by sradivoy » Thu Dec 08, 2016 1:01 pm

I was there briefly last year and was impressed with the place. I measured two roadside trees that caught my eye - a 130' white pine and a 137' white pine.

ATTACHMENTS

tall white pines far below

130' white pine

137' white pine
Re: Adirondacks and Lake Champlain
by ElijahW » Thu Dec 08, 2016 9:51 pm

Bob,

I was able make the trek out to Crane Pond this morning, taking the week off from work. I've wanted to see your big tree ever since you first mentioned it. After a long walk through the snow, I identified several likely candidates, but was unable to track it down for sure. I should have re-read your post before making the trip, but I didn't. I was hoping find something you'd missed, but few pines exceeded 140'. Your description of most pines being in the 115-125' range is dead-on. I did however, see some nice second-growth Red Spruce on the trail to nearby Goose Pond, as well as a giant flared-root Yellow birch that measured 9'2” at breast height. In the woods next to the Crane Pond trailhead parking area, I also found a young Red Spruce that came in at 108.5’ x 4’5”, a personal best for me with one of my favorite trees.

From Crane Pond, I drove North and then East on Rt. 74 and checked out the beginnings of the Blue Hill trail to Crane Pond. Greenent mentioned this trail in a previous post. After just a few steps in, the pines went from attractive second-growth to several massive trees in the 200 year range. Descending an east-facing slope, probably three or four of about a dozen White pines exceed 140'. What I believe are the two tallest stand near or on the trail, and measure, respectively, 154'7" x 11'2" and 150'6" x 13'3". These trees grow in the Pharaoh Lake Wilderness Area, giving it now three pines known to exceed 150' in height and 11' in circumference.

Elijah

Re: Zoar Valley Update
by Erik Danielsen » Wed Nov 30, 2016 2:11 pm

NTS,

In the days surrounding this year's Thanksgiving, Elijah Whitcomb and I were able to continue exploring and resampling Zoar Valley's superlatives. This post will be the first of several reporting our findings. Tuesday 11/22 I visited Alexander Preserve, several miles upstream from the Zoar Valley MUA. Because the ownership and management of this site (a preserve maintained by the Nature Sanctuary Society of Western New York) is quite different from that of the MUA I have previously reported on it separately, but in terms of geography and ecology it is properly a component of the Zoar canyon complex. The area in between is just gentle enough, topographically, to have enabled clearing and farming of the land, Alexander marks the point where the canyon resumes its steep and challenging nature, and I suspect that private lands continuing upstream would offer still more terraces with exceptional trees. Perhaps in the future opportunities to explore those can be opened up through contact with landowners.

Alexander Preserve circled in orange, East of the MUA.

When I previously reported on Alexander Preserve I was still a very "green" ENT and I managed to miss the vast majority of the good stuff at this site. This led me to believe that all of Zoar Valley's good stuff was restricted to the portion of the canyon immediately surrounding the confluence with the south branch, leaving Alexander as a less interesting
appendix of sorts to the main story. As mentioned before, Alexander consists of a high plateau that the Cattaraugus wraps around in a nearly full loop.

From the location where you pull off to park, one can either follow the ridgeline up to the plateau or traverse the "sliding forest," an unstable section of land hanging above the river where two types of dissimilar clay (or a clay over some kind of rock?) are gradually sliding over each other, creating an odd topography where trees sometimes split at their base. The forest here is a mix of hemlock-northern hardwoods and a bit of floodplain stuff, mostly not too large due to the instability and relative exposure— a doubletrunked cottonwood at 118.5' is an exception, approximately point (1) on the map.

Descending a short slope from the western end of the sliding forest brings you down to the upstream terrace (2). This is dominated by white ash, bitternut hickory, and basswood, with sugar maple more numerous in the younger generation of trees, and some slippery elm. The forest diversifies as you move downstream, with some large sycamores appearing. The plateau reaches a narrow point at its western end that descends in a steep ridgeline to the terrace at point (3). Here the slope-base topography, floodplain forest meeting upland forest, and protection from wind due to curvature of the opposite wall create a nexus of particularly tall trees, with Sugar Maple, Bitternut Hickory, and Red Oak, and Beech, and moving down to point (4) and beyond Black Cherry, Red Maple and Sycamore all reaching their greatest heights at the site. A beautiful gnarled old Cucumber Magnolia looms on the slope above,
along with the site’s tallest Hemlock. The single great red oak is a particularly massive tree, lording over even the dominant sugar maples (the best in the Zoar complex as far as I can tell), and the tall bitternut is immediately beside and competing with it.

Location (2) with the tall slippery elm shown, the high-split tree in foreground right.

Me in the orange hat down at the bottom of the giant red oak at point (3).

Ascending to the plateau enters older upland hemlock-beech-maple old growth less tall but with thicker trees than the terrace forest, stretching along the southern portion of the plateau (5), which grades into old hardwood regrowth on the northern and western parts of the plateau, which is mostly dominated by sugar maple, until the youngest section around (7) which is mainly red oak, bigtooth aspen, bitternut hickory, a scattering of black walnut and a stand of Tuliptrees. Following the southern rim of the plateau down to (6) which is where the previously noted healthy American Chestnut is located, white pine and white oak, along with bigtooth aspen, share the canopy with younger hemlocks. Some of the trees here seem fairly old but are more often stout than tall. I was not able to visit the small downstream terrace (8) on this occasion but from my recollection it may
have some decent red oak and chestnut oak. Part of that terrace and the western plateau is DEC land, which appears to mostly be younger forest descending north and west to the road.

<table>
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<tr>
<th>Tree Type</th>
<th>Diameter</th>
<th>Height</th>
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<tbody>
<tr>
<td>Eastern Cottonwood</td>
<td>118.5'</td>
<td>(1)</td>
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<tr>
<td>White Ash</td>
<td>124.2'/6.7'cbh</td>
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<td></td>
<td>120.3'/9.1'cbh</td>
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<td></td>
<td>107.1'/6.7'cbh</td>
<td>(2)</td>
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<td>Bitternut Hickory</td>
<td>132.3'/7.1'cbh</td>
<td>(3)</td>
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<td></td>
<td>116.1'/6'cbh</td>
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<td></td>
<td>108.9'</td>
<td>(7)</td>
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<tr>
<td>Sugar Maple</td>
<td>130.2'/8.7'cbh</td>
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<td>115.8'</td>
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<td>113.7'/8.4'cbh</td>
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<td>112.8'</td>
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<td>Basswood</td>
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<td>Black Cherry</td>
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<td>111.3'/6.2'cbh</td>
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<td>Northern Red Oak</td>
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<td>Red Maple</td>
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<td>107.7'/6.6'cbh</td>
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<td>American Beech</td>
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<td>Cucumber Magnolia</td>
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<td>101.1'</td>
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<tr>
<td>White Oak</td>
<td>91.8'/6.6'cbh</td>
<td>(5)</td>
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<tr>
<td>White Pine</td>
<td>114.6'/9.6'cbh</td>
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<td></td>
<td>102.9'</td>
<td>(5)</td>
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*The tall Red Oak (L) and Beech (R) from section (5).*

Trees measured, with number locations keyed to the map:
American Chestnut
69.6'/3.9'cbh (6)

Tuliptree
119.7' (double) (7)
116.7'/5.1'cbh (7)
112.5'/6.9'cbh (7)
111.6'/8.2'cbh (7)
109.5'/4.8'cbh (7)

Black Walnut
104.4'/5.9'cbh (7)
102.6'/7'cbh (7)
101.7'/7.1'cbh (7)

The subsite RHI10 for Alexander Preserve is 124.8, which I consider especially impressive when considering that the tallest tree present is just 132.3'. This bodes well for additional Zoar Valley subsites outside of the MUA (Deerlick Preserve on the south branch, for instance).

Re: Zoar Valley Update
by Erik Danielsen » Sun Dec 04, 2016 2:18 pm

On Friday 11/25, anticipating Elijah's showing up on Saturday to get back into the really tall spots in the main canyon, I spent some time surveying less-documented portions of the main gorge's north rim. I was particularly interested in locating and measuring species less impressive than the canopy hardwoods down in the canyon and consequently without any height data for Zoar, including certain species mentioned in a paper by Diggins about a decade ago such as Black Tupelo, pin oak and scarlet oak, as well as hoping to locate the Sassafras population noted in an old ENTS post. The north rim hosts a variety of additional habitats including wetlands, post-agricultural regrowth, conifer and hardwood plantations, and some upland old-growth that would qualify as an impressive NY state site for an ENTS report on its own were it not overshadowed by the unparalleled canopy down in the canyon.

Location Overview
I parked at the Vail Road parking lot next to the experimental Chestnut plantation, where I had previously measured a standout Sumac to ~40' tall, and regret not taking the time on this occasion to more definitively remeasure it. It'll wait for another time, I hope. Heading east between the chestnuts (not in great shape) and the larch plantation (nice trees seeming to average around 100' tall) I passed beneath a nice old, somewhat open-grown black birch but passed it up with the expectation of visiting some of the forest-grown specimens in the gorge-edge forest. A beautiful trail takes you down through the larch plantation and then the spruce plantation, with intact low boughs creating a forest-tunnel effect, before bringing you to a pond. Skirting the north edge of the pond I entered a section of young hardwoods, plenty of tulip, bitternut, red maple etc. (Location (1)) Here I measured a pin cherry. This species is common enough in the area but has a very patchy distribution, mostly as an early succession species, and in this stand there were more specimens rotting on the ground than left standing- fading out of the species mix as the canopy matures. Moving south the forest became gradually more mature, and I measured a young black birch under some taller tulips at the edge of a boggy wetland patch between the natural swamp and the man-made or -altered pond. Right on the edge of the boggy patch was a small, shrubby tree that I just could not make sense of. After reviewing the many photos I took I believe it's just a very young black tupelo but some parts still seem incongruous, so the ID is tentative.
South of the boggy patch the forest phases into an old upland forest that seems likely to have had some early disturbance, but to what extent is unclear- it's quite possible only selected desirable trees were removed and the rest was left, resulting in a maple-basswood forest with tuliptree, white ash, hemlock, and black cherry in the mix. The further south you get in this section (section labeled (6)) the older/more intact and more diverse it gets, and when I hiked through that part on my way back later on I casually scanned a few hemlocks into the 120s and tulips in the 130s. I would imagine there are some tulips that top 140' in here but I don't think new maximums are likely to turn up for any canopy species in this section. In the northern portion, however, aside from a 137.4’ tulip at point (2) most trees were well under 120’ tall, and I concentrated on the ample population of Striped Maple. It looked as though a 16.5’ tall 0.4’cbh specimen was the largest of the bunch (with many coming close) until, near the trail just below the east end of the swamp I found an older specimen to 27.3' tall and 1.1’cbh, at point (3).
The tallest tulip measured is the tree with the kink seen here, point (2).

Continuing east to Holcomb pond I checked the heights of the white pines there. These seemed to be under 120’ so I continued back into the forest heading south the the rim of the gorge, following the stream that flows south from the pond. The canopy here is largely hemlock, red maple, and beech (an imposing double-trunked red maple came to 112.8/11.6’cbh). Around point (4) on the map a tree near the stream with odd bark caught my eye, resembling the flaking of young black tupelo- sure enough, its crown peeking up through the hemlocks was the classic rat's-nest of black tupelo twigs, and leaves on the ground sealed the ID. 82.5’ tall and 3.1’cbh left me feeling satisfied, though I’m sure there are others scattered throughout and intend to seek out more in the future.

Climbing the other bank of the stream I stopped to measure a hornbeam and then an adjacent hophornbeam. Descending the slope to the edge of the gorge a nice Slippery Elm, Bigtooth Aspen and Hemlock also caught my eye (growing with many tall tulips and a mix of other hardwoods), and near the edge I also measured the tallest Chestnut Oak I could find. The stream becomes a waterfall where it meets the gorge rim, and beside it is a ridge populated mainly by stunted chestnut oak that’s just gentle enough to descend with assistance from tree-trunks and roots. Interestingly while there are many fern species distributed throughout the canyon, Rock Polypody occurs strictly on the steep slopes, never on the uplands or down on the terraces. It even grows epiphytically on the leaning trunks of some of the chestnut oaks.

Rock Polypody growing on a Chestnut Oak trunk on the ridge.
This ridge meets a small terrace labeled (5) with little level ground at the base of the waterfall. White ash, tuliptree, sugar maple, and red oak populate the canopy but the topography of this terrace is not as conducive to super-tall trees as some of the others. A nice surprise, though, was a shagbark hickory that becomes the tallest measured in Zoar so far, and not far off the state max.

Trees measured on the terrace:

- **White Ash**
  - 126.9'/8.4'cbh
  - 121.2'
- **Tuliptree**
  - 126.3'
- **Shagbark Hickory**
  - 120.3'/5.9'cbh

That was all I had time for on Friday but there's quite a lot yet to check out on the north rim.

**An interesting moss growing on the tallest white ash’s trunk at (5). Parts of Zoar certainly evoke temperate rainforest.**

Trees measured on the uplands:

- **Pin Cherry**
  - 62.1'/2.8'cbh
- **Black Birch**
  - 90.3'/3.2'cbh
- **Tuliptree**
  - 137.4'/10.8'cbh
  - 117'/10.7'cbh
  - 113.7'/7.2'cbh
- **Striped Maple**
  - 27.3'/1.1'cbh
  - 16.5'/0.4'cbh
- **Red Maple**
  - 112.8'/11.6'cbh (double)
- **Black Tupelo**
  - 82.5'/3.1'cbh
  - 14.7'/0.5'cbh (uncertain identity)
- **Hornbeam**
  - 34.5'/1.5'cbh
- **Hop hornbeam**
  - 49.8'/1.4'cbh
- **Slippery Elm**
  - 102.9'/3.3'cbh
- **Bigtooth Aspen**
  - 108'/5.8'cbh
- **Eastern Hemlock**
  - 114.6'
- **Chestnut Oak**
  - 90.6'/4'cbh

Re: Zoar Valley Update

□ by ElijahW » Sun Dec 04, 2016 10:06 pm

NTS,

On Monday, 11/28, I walked the edge of Zoar's North Rim and descended to the terrace on the north side of the confluence. This terrace has been reported on lightly in years' past by Tom Diggins, and contains
one of Zoar’s most interesting trees, a very old American elm. Besides the Elm, this terrace contains a number of older Sugar Maples and other northern hardwoods, as well as a couple of relatively young Chestnut oaks at the base of the slope. A medium-sized American chestnut producing burrs grows about halfway up the slope.

This summer, I checked on the Elm during a period of low water, and it showed no sign of disease or crown die-back, which was quite a relief. This tree is magnificent to behold in its summer glory, but also impossible to measure accurately due to the closed canopy. On Monday I spent a while with the Elm and its measurements are the following:

Height: 125’2”
CBH: 10’1”
Average Crown Spread: 100’ (Average of 10 spokes)

Some pictures of the Elm:
I'm 33 years old and have seen a few American elms that are large and a few that appear old, but none has made an impression on me like this one.

Marker is 61" above ground level

A few additional amateur shots from the North Rim:
Elijah:

Great job on all the work you've done on updating the Zoar Valley stats. It truly is a very special place not only for New York state, but the entire Northeastern U.S. The diversity for that hardwood forest's height is spectacular. It's had a lot of exploration by various Ents over the years, but we've never seen it all. You've picked up Zoar Valley's torch for the rest of us that started the initial work there, that by far the work of Dr. Tom Diggins.

I have many fond memories of Zoar Valley, one that centered around Skinny Dip Flats when I was out measuring trees with my wife. You're probably too young to remember this, but if you were to hear Ray Steven's old song, The Streak, you'd catch my drift. While measuring trees and telling my wife about the local "wildlife" that frequents this particular area, sure enough, several fat nude guys came strolling up the path. I yelled out, "DON'T LOOK ETHYL!" but it was too late...

https://www.youtube.com/watch?v=XtzoUu7w-YM

Re: Zoar Valley Update
by Erik Danielsen » Tue Dec 06, 2016 10:30 am

Saturday and Sunday 11/26-27 Elijah and I made our way to the canyon's epicenters of tall tree growth, as revisited and expanded on by Elijah last year in this topic's original post, in pursuit of new growth and new trees that might finally allow us to realize that holy grail of a RHI10 over 140 for a northeastern site.

Arriving at the Point Peter parking lot Saturday morning we descended to Valentine Flats and headed downstream to the sycamores standing just below the Point Peter lookout. No new trees of exceptional height appeared, and the 3 I recorded were a Tuliptree at 142.5'/6.6'cbh and two Sycamores at 142.8'/6.8'cbh and 134.7'/6.1'cbh. The water level of the Cattaraugus precluded any possibility of crossing to terraces across the stream, so from there we hiked down the bank of the south branch to the terrace with the exceptional cottonwood, referenced in Elijah's original post as "East Side of South Branch." There I remeasured the stems of the tallest doubletrunked Sycamore, and Elijah thoroughly remeasured the big Cottonwood. Unfortunately this tree seems to be losing parts of its crown, but the tallest top appears to be intact. Together we explored additional new trees growing higher up on the slope leading down to the terrace, which yielded some new tallest specimens for various species and a new Tulip to add to the 150' club. Some older-looking bitternut hickories on the flat were also measured, and some ratty-looking white pines were taller than they looked.
The two-trunked Sycamore with Elijah at the base.

Maidenhair Fern still green!
The big Cottonwood looms over everything else as Elijah gathers spokes for the average crown spread.

**East Side of the South Branch**

- **Sycamore**
  - 153'8.4'cbh (double, with the following tree)
  - 151.8'7.9'cbh (fused at the base with above tree)
  - 143.1'/8'cbh
- **Bitternut Hickory**
  - 128.1'/8.2'cbh
  - 121.5'/9.3'cbh
  - 116.4'
- **Eastern Cottonwood**
  - 140/14.7'cbh 75' Average Crown Spread
- **Eastern Hemlock**
  - 130.8'/7.8'cbh

120.6'/7.3'cbh
- **Tuliptree**
  - 152.4'/10.9'cbh
  - 147.6'/9.5'cbh
- **Black Cherry**
  - 125.5'/8.6'cbh
- **Northern Red Oak**
  - 117.3'/9.4'cbh
- **White Pine**
  - 124'/7.6'cbh
- **Cucumber Magnolia**
  - 110.3'

From there we drove around to the Vail Road parking lot to descend from the north rim to Knife Edge Terrace, hoping to relocate the previous tallest sugar maple and check around for other trees, including the tall black walnut Elijah had measured from across the stream last year. From the edge of the terrace Elijah was able to get a good view of the tallest Sycamore in the canyon across the river, now 157.7' (listed later with that terrace).

**Knife-Edge Terrace**

- **Sugar Maple**
  - 124.2'/6.3'cbh
  - 120.9'/8.9'cbh
- **Tuliptree**
  - 145'/11.3'cbh
  - 142.2'/9.7'cbh
- **Basswood**
  - 123.6'/8.5'cbh
- **Black Walnut**
  - 122'/9.6'cbh
- **Northern Red Oak**
  - 119.4'/10.6'cbh
- **Chestnut Oak**
  - 96'/5.7'cbh

*The trail looking down the Knife-Edge Ridge into the canyon.*
The following day we drove to the end of the other portion of old Forty Road to park there, in order to descend from the south rim of the main branch to Skinny Dip Terrace and hopefully the next terrace west of it. The uplands above the canyon have an interesting mix of postdisturbance forests, with some areas appearing likely to have seen selective and possibly intensive harvesting, and other sections likely cleared and grazed, all in various states of regrowth. Descending to Skinny Dip terrace, we focused our efforts on remeasuring some of the known tallest trees. From a point looking up from the slope I was able to identify a new top on the tallest Tuliptree, raising the height of NYS’s tallest known tree by about a foot. A few of the slippery elms were dead and down, but those still standing were remeasured.

The tallest Tuliptree!

The new highest twig of the tallest tree is circled here in red.

The former champion Black Walnut lies prostrate across this frame, and its mostly-intact form still measures 134’ from tip to base.

Skinny Dip Terrace

Tuliptree
158.9/11’cbh
Bitternut Hickory
After climbing back up we were glad to find that there was indeed a viable route to descend to the next terrace west of Skinny Dip. Here, again, is the canyon's tallest sycamore, and a new tall white ash benefited the Rucker Index. Also very interesting were a single large Green Ash and two Black Ash— one a standing snag, the other a somewhat smaller young tree.

One of the most exciting finds of the day, though, was from the rim of the gorge as we walked between our ascent from Skinny dip to the descent point for the next terrace west—rooted far below on a steep slope was a beautiful white pine raising its slender crown over the deepest part of the gorge. Elijah took the height and I did my best to get the diameter at cbh using a vortex reticle scope. Also on the uplands in this section were some very nice hophornbeams and a large multistem serviceberry.
The large multistem Serviceberry.

**Uplands Above the Confluence**

**White Pine**
135.5'/

**Hophornbeam**
76/3.1’cbh
68/3.5’cbh
67.2/2.2’cbh

**Chestnut Oak**
90.5’

**Serviceberry**
52.5/2.8’cbh  thickest stem measured 3.7’cbh

That White Pine turned out to be key to the triumph of November 2016’s efforts: Zoar Valley’s RHI10 now stands at 141.0. The RHI20 is at 129.7, and would definitely exceed 130 with just a little bit more as well.

**Rucker Height Index:**

Tuliptree 158.9
American sycamore 157.7
Bitternut hickory 144.6
Northern red oak 143.3
Eastern cottonwood 140.0
White ash 139.1
Eastern white pine 135.3
Eastern hemlock 130.8
American basswood 130.7
Sugar maple 130.2

**Average Top Ten: 141.0**

Black cherry 126.0
Black walnut 125.4
American elm 125.2
American beech 122.6
Red maple 120.6
Shagbark hickory 120.3
Slippery elm 119.0 (South branch tree-last year’s measurement)
Bigtooth aspen 113.2
Cucumber magnolia 110.3
Green ash 101.5

**Average Top Twenty: 129.7**

Gorge-ous light seen from the terrace to the west of Skinny Dip.
**Re: Zoar Valley Update**

by ElijahW » Tue Dec 06, 2016 6:29 pm

Dale, NTS,

Thank you. Living much closer to Zoar, Erik has put in a lot of work the past couple of years. He definitely out-paced me in our two days together.

Other than the canyon rims and some of the slope area, we made no ventures into new territory on this visit. Before I figured I'd explored about 1/3 of Zoar's forest area, but now I'd say it's more like 20%. I made a crude map using Google earth to show what progress we've made so far, but I'm having difficulty uploading it, so I'll give a rough description of what's left to look at. The Main branch has been covered around the first bend west of Point Peter to Knife Edge terrace, plus Erik has looked at some forest upstream from there. Roughly half of the Main branch remains unexplored beyond what Tom Diggins researched about a decade ago, including the forested slopes and rim. The South branch has been explored about a mile upstream from the confluence; this is just terraces, lower slopes, and none of the rims. Beyond the abandoned bridge on what was Forty Rd., as far as I know, the rims and slopes have never been carefully looked at and the terraces have seen no measuring since Diggins. Supposedly much of the South branch is privately held, as well, making access difficult.

The discovery of a tall White pine makes me pretty certain that others exist like it, and the same goes for Erik's slope-dwelling 130'+ Hemlock. I do not think Zoar holds a taller Tulip, Sycamore, Bitternut, Red oak, or Cottonwood, but the rest of the top ten is vulnerable. A taller White ash, White pine, and Hemlock is very likely. I believe the Skinny Dip Tulip is continuing to grow, albeit at a slow rate, and still would not be surprised if a Sycamore catches it eventually. The tallest Skinny Dip Red oak I believe is a foot or two taller than I could measure with the laser, and should be a threat to exceed 150' in the next decade or so, if that's possible. We'll have to wait and see.

Elijah

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**Re: Zoar Valley Update**

by ElijahW » Fri Dec 09, 2016 7:23 pm

Dale, NTS,

I managed to upload my crude map image:

Areas circled in Blue I've explored; areas circled in Yellow I've not

Zoar Place Map

Elijah
Crown Hill North Woods
by Matt Markworth » Wed Nov 23, 2016 10:21 pm

I've been following the news stories about this forest and here's a short article I wrote after visiting the great trees in the Crown Hill North Woods, with a petition link and photos at the end.


Matt Markworth

Re: Crown Hill North Woods
by Matt Markworth » Sat Dec 03, 2016 4:32 pm

Here's a ~9 minute walk through with some of the most significant trees at the Crown Hill North Woods. Switch the setting to 1080p for the best quality:

https://www.youtube.com/watch?v=xpjElrUOiz4

Matt Markworth

Re: Crown Hill North Woods
by Matt Markworth » Sun Dec 04, 2016 6:17 pm

Erik, It's interesting that you mention that because I actually thought the same thing when I measured the white oak as 13.8', and also when I saw the photo. It may have a slight oval shape to it, or it's possible I'm not standing in the middle of tree. For the sake of perspective, I usually try to stand halfway between the front and the back of the tree (from the camera's angle), but maybe I'm slightly farther back.

Here's a photo of the 14.6' bur oak with me in it for scale. I didn't put this one into the article because I thought the photo looking up the tree showed much more of the character of the tree.

I'm not sure why certain trees have ribbons tied around them. They could be marked as trees not to cut as part of the VA plan or they may have been placed by locals.
308.7' (94.1m) tree identified in Borneo
by M.W.Taylor » Sat Nov 12, 2016 1:40 pm

They just keep getting taller.

http://www.ibtimes.co.uk/worlds-tallest-tropical-tree-high-three-blue-whales-stacked-end-end-1591069

Re: 308.7' (94.1m) tree identified in Borneo
by KoutaR » Sun Nov 13, 2016 6:33 am

There is another news article about the find: http://news.nationalgeographic.com/2016 ... ser-study/

Thus, it is a LiDAR measurement. I find it a bit strange that they publish an exact height (94.1m) without measuring it accurately. So we still have to wait for precise heights. Still great discovery.

Re: 308.7' (94.1m) tree identified in Borneo
by Shorea » Sat Nov 12, 2016

I guess the 90 m mark has been broken finally. Fantastic news. But that tree is located on secondary logged forest, as you can tell from the overgrown logging trails (from the photo). Maybe that is why they didn't want to give out the location, because it probably has little touristic value...i.e - not in a virgin, undisturbed tract of rainforest...untouched by man. Once the rainforest is disturbed/logged, it turns into what some of us call, a "green hell"....very unpleasant to trek through.

There is now only little doubt in my mind that in the past, there have been giant trees that towered perhaps 100 meters tall (maybe more?!), because these rainforests cloaked the country from coast to coast, it's mind boggling how many trees there are in such dense forests, and old logger's tales tell of very tall trees that they chopped down without knowing or caring how tall they were. Today, vast areas have already been cleared/logged....so much has been lost already.

It's only today, with better technology that we can finally discover them. I hope that they can find an equally tall, if not a taller tree within the protected areas. Now that would be nice..

Here's a better article on it.

https://news.mongabay.com/2016/11/world ... -breakers/

Looks like it is in the vicinity of Danum Valley, but outside the boundary, in the timber production forest reserves that border it. So there should be 90+ m trees within Danum Valley itself....

Re: 308.7' (94.1m) tree identified in Borneo
by Bart Bouricius » Wed Nov 16, 2016 8:21 pm

Great find, I think 50 trees over 90 meters is simply a result of hardly anyone looking much before. I suspect that in this logged area many comparable trees and some taller ones were already logged out. In many of these logged areas, only a hand full of species were selected even though huge damage was done to the landscape. Thanks for the post. I am back in Costa Rica Now and plan some additional measuring trips. My friend Max who guided Will Blozan, Jess Riddle and myself says he has recently seen taller trees than the ones we saw on our little expedition. They were in the Darien province in Southern Panama and were "Cuipo" trees Cavanillesia plataniifolia. This strange tree is in the Malvaceae family along with the Kapok and Baobab trees. It has wood even less dense than the balsa, another member of the same interesting family.
Re: **308.7' (94.1m) tree identified in Borneo**

by M.W.Taylor » Sat Dec 10, 2016 3:47 pm

Given the tree is LiDAR only estimate, the precision of .1m is not realistic, especially when using the software generated estimate. When in a state of competition, most hillside trees lean towards the downhill side in effort to get maximum sunlight to the crown. This inflates the LiDAR estimate if the top position of the tree is projected normal to the ground below it. This tree looks isolated so it may have no reason to lean over the hillside, however its large broad crown could easily overhang the slope, thus inflating the estimate. It is possible to do a manual inspection of the LiDAR point cloud which is more accurate than a software interpolation. What I am referring to is you cut out a snippet of the LiDAR point cloud of the tall tree to be measured. You manually rotate and inspect this point cloud snippet in Meshlab to find the best pixel (or generate one) that represents average ground level normal to the top. You then drop a ruler down to that pixel from the top-most pixel and measure the distance. It requires a human being to do this. There is no software available that can find the averaged ground level normalized to the top-most pixel that I am aware of. If Dr. Asner would send me the point cloud snippet of the tree with ground pixels on either side I can manually inspect it and get a fairly accurate estimate. Easily to within 1m assuming the ground to trunk interface was captured.

Re: **Bedford Reservation, Cuyahoga County, OH**

by sradivoy » Tue Dec 13, 2016 8:18 pm

Here's a nice Nyssa and a delicious cucumber I came across today. The blackgum measures 85'ht x 11' 0.5"cbh while the cuke measures 129' x 12'6". The blackgum would be taller if it didn't lean. Perhaps the oldest looking tree in the park.
fat cucumber

nice crown with many leaders
tall tree grove, Cuyahoga Valley, OH

I found a nice grove of tall trees (via lidar) within the Cuyahoga Valley watershed that I hope to visit this fall after leaf drop. I went this past spring while the leaves were just beginning to bud and couldn't make it back on time before the trees were covered in foliage. This is a very wet area with lots of mosquitos and should only be visited during the winter months. I did manage to get a couple of data points on two tulip trees however. One measured 124' tall with a respectable girth of 13'2" while the other one measured a nice 152' tall by 11'4". I only have photos of the tall tree. There's about ten lidar hits of 150, many of these will prove false but others won't. In total there's about twenty hits above 140. Couldn't post the file here for some reason but was able to do so on my facebook page:

https://www.facebook.com/photo.php?fbid ...
=3&theater

ATTACHMENTS
eNTS: The Magazine of the Native Tree Society – Volume 6, Number 04, 2016

Smith College Pines

by dbhguru » Wed Dec 14, 2016 5:46 pm

Ents, Today, Ray Asselin, John Berryhill (Smith College chief arborist), and yours truly re-measured the "John Berryhill #2" white pine on the Smith College property. The pine is now officially 143.0 feet, and holds onto the title of the Connecticut River Valley's tallest tree within the borders of Massachusetts. It measures 10.2 feet in circumference and appears to be between 160 and 200 years old. Splendid tree. The pine's closest competitor is a pine on Mount Tom State Reservation at 141.7 feet.

John intends to climb the tree to check on its health aloft. Nothing like having an arborist on the Smith College Tree Committee. Oh yes, Ray took pictures. Hopefully, he'll post some later.

Robert T. Leverett

Re: Bear attack! (On my Doug fir tree?!?!)

by PAwildernessadvocate » Thu Jul 07, 2016 12:24 am

PAwildernessadvocate wrote: I will want to leave it staked for at least another growing season. Ideally I should probably leave it staked through the 2014 growing season as well, but I'll probably just take it off about this time next year and leave it at that.

So 2016 is now the fifth growing season since the bear attack on my Douglas-fir tree. I still have it staked. I will probably take the stake off late this fall. This makes me a little nervous because the tree still seems a little wobbly in the ground. I'm not sure the root system has entirely recovered.

In both 2013 and 2014 the leader and other new growth died, and I had to steer side branches both years to become new leaders. Light wooden dowel with twisty-ties to hold it in place through the end of each growing season.

It still has the appearance of being a little bit spindly and not particularly vigorous. But it is now fifteen feet tall or more, and at least the last two years no new growth has failed or died off like in the first two years after the attack.

I hope it lives after I take the plunge and remove the stake!
Re: Bear attack! (On my Doug-fir tree?!?!)
by PAwildernessadvocate » Wed Dec 14, 2016 12:51 pm

Well, I took the support rope off of it a week or so ago. She's on her own now!
The day after Thanksgiving, 2 of my children and I went to an area in northern Pennsylvania to visit relatives who had moved there in September. I am always on the look out for big trees, so when I see one I am very happy. It was a short trip. On the way home the next evening, we were on Route 6 in Wysox, just outside of Towanda. As we were driving along, I saw lit up by 4 big lights a huge Sycamore tree at a Dandy gas station/mini market. So I had to stop and check it out and take some pictures. I would have loved to have been there during daylight hours, but maybe another time. On the Pennsylvania big tree website, there are 56 Sycamores mentioned, but not this one. It would be nice if someone could get up there and measure it. I am surprised that someone hasn't.

Tom

You can see the slanted, darkened part of the bark where the little protective section of garden hose rested for five growing seasons.

Excited to see how this tree does next summer!

**huge Sycamore, (NE PA)**

by tclikesbigtrees » Thu Dec 08, 2016 2:09 pm

The day after Thanksgiving, 2 of my children and I went to an area in northern Pennsylvania to visit relatives who had moved there in September. I am always on the look out for big trees, so when I see one I am very happy. It was a short trip. On the way home the next evening, we were on Route 6 in Wysox, just outside of Towanda. As we were driving along, I saw lit up by 4 big lights a huge Sycamore tree at a Dandy gas station/mini market. So I had to stop and check it out and take some pictures. I would have loved to have been there during daylight hours, but maybe another time. On the Pennsylvania big tree website, there are 56 Sycamores mentioned, but not this one. It would be nice if someone could get up there and measure it. I am surprised that someone hasn't.

Tom

You can see the slanted, darkened part of the bark where the little protective section of garden hose rested for five growing seasons.

Excited to see how this tree does next summer!
Re: Hampton Hills, CVNP, 160.8' Tuliptree

by sradivoy » Tue Dec 13, 2016 9:23 pm

I think the 160' tulip may have grown a foot or two since you guys measured it five years ago. I recently got a 161' and a 162' from a different vantage point today. I round down to the lowest foot for all handheld measurements that includes eyeballing the mid-slope (the actual reading was something like 161.8 and 162.6 respectively). Interestingly, both the 159' and 150' tree remained the same height according to my crude measurements.

This very slender and perfectly straight 160 plus tulip is shooting for the stars. The 159' tree to the right is partially obscured by the beech.

Re: Hampton Hills, CVNP, 160.8' Tuliptree

by sradivoy » Sat Dec 17, 2016 8:17 pm

I think the 150ft tulip that I measured was the 147' tree instead of the 150ft tree mentioned in the OP. It's the largest tree in the grove with the biggest girth. I must have missed the other two 150 trees. In any case there appears to be a total of five 150plus trees in this very small but impressive grove. I doubt I hit the top of the 159 tulip. The main purpose of my visit is to see if it breeched 160.

Eric, as far as I know this is the northernmost hardwood above 160'. And just a couple of miles south from this location has the northernmost 170ft hardwood.
Canadaway Creek in Arkwright, NY

by Erik Danielsen » Sun Dec 18, 2016 6:41 pm

The Canadaway Creek, which begins in the hills of Arkwright, NY and flows down through Laona, Fredonia, and Dunkirk to drain into Lake Erie, is one of my favorite waterways in Western New York. Its very name encodes its relationship with the forest-"Canadaway" turns out to be an anglicized corruption of an Erie or Seneca place-name "gana-da-wao", meaning "flowing under hemlocks." I have previously reported on a portion of this drainage in this topic: http://ents-bbs.org/viewtopic.php?f=105&t=6449 However, I'd like to consolidate my findings in this topic. This is one of many gorges cutting into the allegheny plateau which would seem to hold a lot of similar potential to Zoar Valley. Anticipating my visit to WNY this November, I was able to find promising views in aerial images of large sycamore crowns in the "upper canadaway," a portion which I had not previously explored. The included map will make it a bit clearer, but I delineate the Upper Canadaway (upstream of Arkwright Falls) from the Middle Canadaway (downstream of Arkwright Falls), both of which are included in this report, and additionally Lower Canadaway downstream of Laona Falls, which is outside of the map.

Most of the terraces along the Upper Canadaway are state land, part of the Canadaway Creek Wildlife Management Area. This section has definitely been subjected to a lot of mixed usages in the past. Plantations of Red Pine, Scotch Pine and European Larch intergrade with regenerating native hardwoods and hemlock. The occasional open-grown sugar maple or old exotic (Honeylocust, in this case) and lots of periwinkle and multiflora rose in parts of the understory further evidence a history of clearing and small-scale agriculture. Nonetheless, occasional patches of older trees and aerial photos from the 1930s showing a healthy buffer of intact hemlock canopy along much of the streambed attest the influence of legacy elements of the area's primary forest as well.

The particular terraces that appealed to me from the aerial images did deliver. Tall Sycamores and large cottonwoods dominate the canopy of the lowest floodplain forests, where it seems that the first generation of succession is finally starting to reach late maturity. What surprised me was the tall European Larches. As is often the case, the tallest (point (1) on the map) has a split leader driving some internal competition. The next "step" up in elevation from the creekbed was generally some mixture of hemlock and hardwoods, including basswood, sugar maple, black cherry, bitternut hickory, and white ash. There were very few red oaks in this area and no tuliptrees. There was also a scattering of very interesting Cucumber Magnolias; the first in a grove of smaller hemlocks right along the trail near the parking area, a very full-crowned tree, the second a messy octopus form of a tree at point (2) on the map-imposing but not very tall, and the last an enormous upright form at point (3) on the map which bore claw-marks from a local bear in its bark.
Two of the large Sycamores— the thinner one is the tallest measured at 123.6'/7.3'cbh and the larger one measures 121.2'/10.6'cbh

The tallest Larch (119.1'/7.5'cbh) is shown here with the split leader.
The beautiful Cucumber Magnolia at point (3) with myself at the base for scale. Measured 108.9 /9.2'cbh.

Bear markings in the bark of the big Cucumber Magnolia.

Returning to the Tributary Gorge and other portions of the Middle Canadaway was exciting, as I've long suspected there were tall trees among the large tulips I remember on the long shelf midway down between the upland and the gorge bottom at point (5) on the map. In the Tributary Gorge (point (4) on the map) I did find some reasonably tall trees on the steep slopes, but unfortunately with better measuring skills today I'm forced to conclude that the measurements I made two years ago in that earlier thread were mostly the tops of trees rooted higher on the slopes. There is really nothing particularly tall in there as far as I can tell, aside from a pair of tall cottonwoods.
The two tall Cottonwoods in the Tributary Gorge.

The Shelf at point (5) was even taller than I expected; a nice forest of mixed early-maturity hardwoods with some legacy hemlocks, sugar maples, and tuliptrees. The tallest Tulip, at 134.1, becomes the tallest measured hardwood in Chautauqua County and is exceeded only by the two tallest white pines at Lilydale. It's a very large tree rooted right at the edge of a steep slope, which may have made it unappealing to cut for timber. Multiple tall Bitternut hickories were also impressive, and a very nice slippery elm was great to see.

A view from within the grove of hemlocks that includes the 129'/8.3’cbh tuliptree.

A final nice surprise was a very tall Red Maple growing with a slightly shorter companion, both of them quite exposed and isolated above a canopy of much smaller trees, at the edge of the terrace at point (6) on the map. There's plenty of territory yet to cover in the Canadaway Creek drainage, and I'm looking forward to it. I have no doubt that the RHI10 would exceed 120 with a bit more coverage.

The full set of measurements from the two days I worked on these sites are in the attached PDF. The Rucker Index and other maximums are as follows:

**Rucker Height Index:**

Tuliptree 134.1'/11.7’cbh
Bitternut hickory 128.4'/7.3’cbh
American sycamore 123.6'/7.3' cbh
European Larch 119.1'/7.5' cbh
Red Maple 117.6'/5' cbh
White Ash 115.2'
Sugar Maple 111.3'/8.4' cbh
Red Oak 110.4'
Cottonwood 109.5'
Slippery Elm 109.2'/6.6' cbh

Average Top Ten: 117.84

Cucumber Magnolia 108.9'/9.2' cbh
Black Locust 107.7'
Eastern Hemlock 107.4'/7.8' cbh
Shagbark Hickory 107.4'/6.2' cbh
Basswood 106.5'/5.2' cbh
Black Cherry 102.6'
Red Pine 98.4'
Honey Locust 89.1'/9.4' cbh
Ironwood 47.4'

ATTACHMENTS

Welwyn Preserve, Nassau County, NY

Welwyn Preserve is Long Island's other Big Tree old-growth site described in Ancient Forests of the Northeast (along with recently reported on Shu Swamp). It also received a bit of ENTS attention in 2004 when Ed Coyle measured a number of trees, including many 140'+ tuliptrees, red oaks to 128', and the tallest sassafras on record for NY state at 107.3. A black birch at the same height was another superlative.

In the time since then, Welwyn Preserve suffered serious damage stemming from Hurricane Sandy- but largely at human hands. News articles I read while researching the site summarized the story: members of a local trail-running group found that just days after the hurricane while most of the island still lacked power and water, a firm with a pre-existing contract with the county for post-disaster damage control were in the preserve, felling trees and sectioning their trunks into marketable logs under the guise of ensuring trail safety. The fellow who led the pushback that successfully prevented the contractors from felling any more trees and removing the wood they had already cut still walks in the preserve every day, so it was a surprise in the moment but statistically favorable that I encountered him there by chance. When he learned I was studying the trees, he told me the whole story in first-person and showed me many of the felled trees. Mostly they were red
oak, thick straight boles with not a hint of structural instability and sectioned for the mill. Fresh, they'd have been worth thousands, but more importantly were a priceless environmental and aesthetic asset still standing. It's a shame. These were the oaks standing among the gallery of the tallest, straightest tulips, and likely would have been the best of their species in the preserve. At least the tree-poachers had no economic interest in tuliptrees, beech, black birch, or many of the others...

I spent most of my time in the wet lower valley of the preserve, which widens outward towards the bay. The features of this section remind me of a fusion of Inwood Hill's sheltering bowl and Shu Swamp's rich wetland forest. Both gnarled veteran and youthful towering tulips create a supercanopy that's neither as tight as Inwood or as open as Shu Swamp, and a diversity of other trees fill in the main canopy and midstory. The understory includes many thick sections of rhododendron, which impaired measurement in many cases. Large portions of the floor are also flat wetland. This site would benefit from an intensive measurement during the cold season, as the many non-evergreen shrubs and vines already in full leaf present an absolute visual cacophony obscuring the lower sections of many trees.

One of the tall black birches rises in the center of this photo. I wonder if the removal of many red oaks 4 years ago boosted some of these birches with the extra light availability.

This is in New York State in April?

That this forest was once considerably more open is strongly suggested by both the spreading veteran tulips and by a scattering of very large open-grown white and black oaks, which are now shaded and slowly falling apart. Heights on many of the oldest
trees are just moderate, but the subsequent
generations are really putting it up there. This site is
definitely marked for many returns to better
document its composition and superlatives. I didn't
have time to explore the dryer upland forest in the
southern portion of the preserve, but this is indicated
to have a lot of potential as well. At the edge of that
section I encountered a black oak that becomes the
new state height champion, and I think one of the
most beautiful trees I've ever encountered.

The gorgeous black oak!

**Tree Heights (in feet)**

<table>
<thead>
<tr>
<th>Tree</th>
<th>Height 1</th>
<th>Height 2</th>
<th>Height 3</th>
<th>Height 4</th>
<th>Height 5</th>
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<td>111.9</td>
<td>108.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black Oak</td>
<td>122.9/8.8'cbh</td>
<td>99.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sassafras</td>
<td>100.1</td>
<td>99</td>
<td>96.9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Red Oak I'm sure there are taller, but I worry the
poachers probably felled the best

121.2
111.9
108.8
Black Oak
122.9/8.8'cbh
99.5
Sassafras
100.1
99
96.9
Re: Welwyn Preserve, Nassau County

by Erik Danielsen » Mon Dec 05, 2016 10:42 pm

After planning to head to a promising site upstate today, an assessment of the city traffic situation led me to reroute to Welwyn Preserve. I had unwittingly left my D-tape at home and wasn't feeling great anyway, so I figured I might as well salvage the day with an effort to really get into every corner of the preserve and push up the rucker. I left my rangefinder set to feet for easier addition, but intend to do more precise measuring of the tallest specimens when I can get back with a tape and really focus in based on what I found today.

The somewhat dryer, higher elevation section I mentioned previously turns out to be where the best stuff grows. I initially went back into the same dense section of tall tulips further down and put a real kink in my neck scanning 148 after 149 after 148 again, in vain pursuit of a 150 that just wasn't there. Wouldn't you know, the head of the little valley is packed with 150+ trees. Further searching could well yield a contender for tallest tree in the state and I wouldn't even rule out a chance of 160'. Taller individuals of nearly every species showed up in this section, including a surprising new state max on Black Birch. I made sure to replicate my reading from the opposite side of the tree, just to be sure. The only tree I did take time to measure more precisely was the beautiful black oak, which I was unsurprised to see gain a little height; the Bushnell I was using last time seems to shoot about a yard short compared to my trupulse.

With increasing Hickory knowledge I was also surprised to determine that the most common Carya here (though I will upload photos to get some second opinions on this) is Mockernut, with some specimens quite tall. I did also finally find some Yellow Birch, and discovered that a large portion of the understory near the old homestead is Japanese Maple that appears to be reproducing successfully as an understory tree. A section of white pine that looked promising near the shore turned out to have been badly battered by Sandy, with no standing trees seeming to exceed 100'. There was a nice post oak down in there with them, at least. Measurements for today:

**Tuliptree**
157'
155.5'
153'
152.5'
152.5'
152'
151.5'
150'
149'
149'
148.5'
148'
143'
142.5'

**Black Birch**
120' new state max
108.5'

**Yellow Birch**
91'

**Black Tupelo**
102.5'

**Sweetgum**
107.5'

**Red Maple**
110.5'

**Japanese Maple**
56'

**White Ash**
123'

**Sassafras**
102.5'

**American Beech**
122.5'
117.5'

**Northern Red Oak**
132'
129.5'
120.5'

**Black Oak**
123.2' updated state max
111.5'
111'
108'

**Scarlet Oak**
91'

**White Oak**
114.5'  
111'  
Post Oak
46.5'  
Mockernut Hickory
120' new state max, I believe  
108.5'  
104'
Bitternut Hickory
116'
Hornbeam
41.5'
American Holly
30.5'

RHI10 for Welwyn Preserve currently stands at 124.7.

Re: Welwyn Preserve, Nassau County
by Erik Danielsen » Tue Dec 20, 2016 12:10 am

ENTS,

Today (Monday 12/19) I had time for another trip to Welwyn to focus in on more careful measurements of several specific trees. First was the Black Birch that I had previously measured to not less than 120', which Elijah pointed out would be a new species maximum. I'd like to note that this specimen follows a pattern that describes several of the other tallest black birches I've seen, which are all young, thin trees rising up to a narrow paintbrush crown that sweeps sideways into some canopy gap, including the 112.8' specimen nearby at Tiffany Creek. I'd suggest that Black Birch in such a form may represent the greatest heights at many sites and that as such trees age and develop more girth and crown structure they may discard some of the upmost sprigs to spread a more subordinate canopy. Having less impressive boles, they may also be less likely to draw attention to be measured. I would imagine there are taller individuals of this species hiding somewhere in the Smokies (where the previous maximum was measured in 2004), but for today this tree reigns supreme:

- Betula lenta 121.3' tall 4.4'cbh 43.3'
  average crown spread 40.881430, -73.638361

Tall black birch seen from a distance, circled in green.
I measured one more black birch, an older specimen.

Betula lenta 101.3’ tall 6’dbh

Returning to the tallest Hickory, I had my mind changed yet again- unfortunately at some point it had stuck in my mind that Pignuts only ever have five leaflets and have finer twigging, which led me to think these tall trees with 5-7 leaflets and thick, twisty lower twigs must be mockernut. Further review shows that I was simply confused. The very much glabrous nature of the foliage and buds and relatively thinner husks on the fruit suggest the dominant hickory at this site to be Pignut after all. I remeasured the 120’ tree from a better vantage point and found a much higher top.

Carya glabra 127.2’ tall 6.2’dbh
Fruits look most like Pignut to me though the husks seem to separate nearly all the way down like ovalis, but that could just be decomposition.

I stopped to measure a nice Black Oak that came to 114.1’ tall— which was just as well since I also stopped by the tallest Black Oak, the tree I’ve referred to previously in this thread, and noticed that clinging leaves on sprouts low on the trunk seemed oddly bizarrely, this tree turns out to be a white oak. As there’s not a hint of scalyness to the bark on the whole trunk, it’s very dark in color, and the majority of the leaves on the ground are black oak, I don’t feel too embarrassed by this mis-ID; but it’s a bummer.

Quercus velutina 114.1’ tall 7.5’cbh

The 127.2’ tall Pignut

Pignut bark
Looking up the black oak that turns out to be a white oak...

Last I worked on the Tulips for a good while, seeking that 160’. It didn’t come, but I recorded a few of the largest and also the tallest, the tree I had previously put at no less than 157’. With today’s measurements it becomes the second-tallest recorded in NY state. The grouping it’s in follows a shallow ravine down the hill where many trees top 150’ but few top 155’.

<table>
<thead>
<tr>
<th>Species</th>
<th>Height (ft)</th>
<th>Cbh (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liriodendron tulipifera</td>
<td>158’</td>
<td>8.8’</td>
</tr>
<tr>
<td>Liriodendron tulipifera</td>
<td>152.7’</td>
<td>14.2’</td>
</tr>
<tr>
<td>Liriodendron tulipifera</td>
<td>152.6’</td>
<td>13.3’</td>
</tr>
</tbody>
</table>

Tallest tuliptree is leftmost of the trio in the center of this photo, with a dark green area painted in to point at its base.
Autumn colors at Dawes Arboretum
by Rand » Fri Dec 23, 2016 3:53 am

Dawes Arboretum is located ~ 5.5 miles south of Newark, Ohio. Oct 29 was warm and breezy, with scattered clouds and an ideal day for pictures:

152.7'/14.2' cbh tuliptree dead center in this photo

The 152.6' tall tuliptree

RHI is now 125.6 with new trees and species corrections.

Sugar Maple
All the ash trees in the woods are dead, but a few open grown trees remain. The one person I asked did not know if they had been treated or not.
Regal Beech

Looking up the oak alley in the SE corner of the Arboretum. It consists of mainly swamp white, and overcup oaks, with a handful of swamp chestnut oaks (Mislabeled as Q. Montana) and red oaks. One swamp white had died, and I ring counted it to the early 1940’s.

Oak Alley

Looking up at the largest swamp chestnut oak on the property. It was noticeably larger than the other growing in the alley, presumably because its position at the base of the hill made for better growing conditions (the embankment visible on the right hand side of the picture holds back a small lake).

Swamp Chestnut Oak
Young and beautiful White Oak

Old White Oak
Hi all,

My name is Jack Ruddat and I am an 18 year old High School student in West Hartford, Connecticut. I have been involved in the science of dendrochronology since 2013 and have kept a list of sampled trees along with their circumference and minimum age. I recently found an eastern red cedar in my home state of Connecticut that is 550+ years old, probably the oldest known tree in Connecticut. The age was verified (with a margin of error due to the missing rings, false rings, fire scars, and missing wood by pith) by a dendrology professor at the University of Connecticut who counted the rings under a stereo microscope. As far as I am aware, the only trees that come close to that age are the 350-400 year old eastern hemlocks in Sage's Ravine in Salisbury, Connecticut. This tree was found in Simsbury, Connecticut on a trap rock basalt ridge and was aged using an increment tree borer. Would this information be of any use to people keeping a list of old trees? I have also found a couple of 250+ year old sugar maples in what I believe to be a very early secondary old growth forest in Ridgefield, Connecticut from the early 1700's and a 200 year old shagbark hickory in West Hartford. I'll attach a picture of the eastern redcedar and a word document of the trees I have found for anyone interested.

Jack Ruddat

Oldest tree in Connecticut?

by jcruddat » Sat Dec 17, 2016 5:33 pm

Hi all,

My name is Jack Ruddat and I am an 18 year old High School student in West Hartford, Connecticut. I have been involved in the science of dendrochronology since 2013 and have kept a list of sampled trees along with their circumference and minimum age. I recently found an eastern red cedar in my home state of Connecticut that is 550+ years old, probably the oldest known tree in Connecticut. The age was verified (with a margin of error due to the missing rings, false rings, fire scars, and missing wood by pith) by a dendrology professor at the University of Connecticut who counted the rings under a stereo microscope. As far as I am aware, the only trees that come close to that age are the 350-400 year old eastern hemlocks in Sage's Ravine in Salisbury, Connecticut. This tree was found in Simsbury, Connecticut on a trap rock basalt ridge and was aged using an increment tree borer. Would this information be of any use to people keeping a list of old trees? I have also found a couple of 250+ year old sugar maples in what I believe to be a very early secondary old growth forest in Ridgefield, Connecticut from the early 1700's and a 200 year old shagbark hickory in West Hartford. I'll attach a picture of the eastern redcedar and a word document of the trees I have found for anyone interested.

Jack Ruddat

545-600 year old eastern redcedar.

Dendrochronology of North America Location removed.docx
Re: Tree Maximums - Genus of the Week: Betula (Birch)
by dbhguru » Wed Dec 21, 2016 10:29 am

Erik,

Gott'um. Thanks. I've attached an updated copy of the BB database. We now have 681 measurements. I'm shooting for 1,000, and obviously could get there by measuring more trees in Massachusetts, but that would be contrary to the objective of developing a range-wide profile for Betula lenta.

I plan to update this database by adding columns for the measurer. I realize that this information should not be lost.

BlackBirchDatabase-11-17-2016.xlsx

Re: The Big Pine and the Small Pine, Fine, NY
by Matt Markworth » Fri Dec 23, 2016 8:48 pm

Elijah, All,

When I spent a few days in the Five Ponds Wilderness back in September I decided to go on a morning hike over to the big Wanakena Pine. I took my time with a tripod and a Trupulse 200X and looks like I'm right in line with some of the height measurements that have been taken - a testament to the Sine Method.

Height: 140.5' (top has some damage as Elijah explained)
Circ. at 4': 15.3'
CBH: 14.93'
Circ. at 5': 14.64'
Avg Spread: 37'
Height to first branch (the big J-hook branch in the photo): 76'

In the same general area there is also a nice 11.44' x 118' (original top out) white pine and also an impressive white pine snag with a CBH of 13'.
Matt Markworth

Re: The Big Pine and the Small Pine, Fine, NY
» Sat Dec 24, 2016 1:26 pm

No question that the Wanakena pine is one of the big boys in the Northeast. Although we don't have diameter dimensions aloft, we can make intelligent estimates of its trunk volume. The form factor for Wanakena is probably between 0.43 and 0.46. This factor is applied to the cross-sectional trunk area at 4.5 feet and the full height of the tree. Using a circumference of 14.9 feet, a height of 140, and a form factor of 0.43, we get a trunk volume of 1063 ft^3. Given the form of the trunk, there is no way the factor will be less than 0.42, which would still lead to a volume of 1038 ft^3. At the upper end, the volume could be as much as 1,137 ft^3.

Having done these calculations many times in the past, my guess is about 1,100 ft^3. How does this compare to the other contenders? The largest trunk in the Adirondack's Elder Grove is around 1,180 cubes. The Tamworth Pine in NH is possibly 1,200. The Grandfather pine in Monroe State Forest, MA is about 1,100 ft^3, maybe slightly more. It was about 1,073 when Will Blozan climbed and modeled it in 2007. By now it could be as much as 1,120.

The Graveyard pine in Conway, MA (Yo Mama's Brother) is about 1,025 ft^3. The Grandmother pine in Pack Forest, NY is approximately 1020 ft^3. That's a half dozen 1000-ft^3 pines. I can't think of any others that will break 1,000 in the Northeast. There used to be one in PA, the Cornplanter Pine, climbed by Will Blozan, but it is dead. So is the bulky Bradford pine in NH that at its best would have been close to 1,100 cubes. Here the population is only single-trunk, stand-grown pines.

Beyond these behemoths, there are several single-trunk great whites over 900 cubes in the Northeast. They include the Seneca Pine in Cook Forest, PA, The Ice Glen Pine in Stockbridge, MA, and the Thoreau Pine in Monroe State Forest, MA. I expect there are a few others and there are quite a few over 800, including the famous Boogerman Pine in the Smokies, which I believe by now has reached 800.

If we include broad-crowned pasture pines in the competition, we could add a few more trees to the 1,000-ft^3 club. However, it is very difficult to calculate volumes for this form, especially if a pine has suffered weevil damage, giving rise to multiple twisted trunks. For example, near Ice Glen, there is a huge weeviled pine measuring 15.7 feet around and 122 feet tall. It looks kine an upside down octobus. The job of modeled the separate trunks plus include the bulky out-of-round lower trunk must await warmer temperatures. However, I doubt this tree will make 1000 cubes. My guess is between 930 and 980.

I've been thinking about proposing an article to
American Forests on the white pine to revisit historical information about the species and showcase these great trees we have today and the competitions we have created for them. I'll see the American Forests VP for Communications on Dec 26th and propose the article then. It would be great to by an NTS-Cadre collaborative affair. It could be a lot of fun. Erik Danielsen and Elijah Whitcomb from NY, Sam Stoddard and Kevin Martin from NH, and the Mass A-team are on board. I fully expect Dale Luthringer to sign on. We have the southern Apps left. Who signs on from that region?

Robert T. Leverett

Riverside Cemetery, Baldwinsville, NY

by ElijahW » Sun Dec 25, 2016 10:15 pm

NTS,

Earlier this year, Bob Henry and Tom Howard stumbled upon a very attractive collection of old, large trees in Riverside Cemetery, in the village of Baldwinsville, just a few minutes west of Syracuse, NY. Shortly after, Tom and I returned to see the trees up close and get some measurements. I swung by again this morning to get in a nice walk and in the snow and remeasured the largest trees. The river in the background of the photos and referenced in the cemetery's name is the Seneca.

According to its Facebook page, Riverview was established in 1807, and the oldest trees, mostly White pine, may date from that period. Some trees are obviously younger, but probably still date from the mid- to late-nineteenth century. The pines, though not exceptionally tall, do reach close to the maximum height currently known for the Syracuse area, and show definite signs of age, including orange-tinged platy bark and thick trunks. Tom got a laser return of just over 130' on the tallest one, but I was unable to match that with my equipment. The biggest surprise was a giant black cherry, much larger than any other I've seen. Below is a list of trees remeasured today; Tom may have a few additions from our earlier visit.

<table>
<thead>
<tr>
<th>Tree</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Pine</td>
<td>120.7' x 12'0&quot;</td>
</tr>
<tr>
<td></td>
<td>119.8' x 10'9&quot;</td>
</tr>
<tr>
<td></td>
<td>118.7' x 10'5&quot;</td>
</tr>
<tr>
<td></td>
<td>112.3' x 11'9&quot;</td>
</tr>
<tr>
<td></td>
<td>112.0' x 11'9&quot;</td>
</tr>
<tr>
<td>Red Spruce</td>
<td>61.6'</td>
</tr>
<tr>
<td>Silver Maple</td>
<td>93.3' x 15'2&quot; (Single trunk)</td>
</tr>
<tr>
<td>Black Cherry</td>
<td>92.0' x 14'3&quot; x 81.5' Average Crown Spread (10 spokes)</td>
</tr>
</tbody>
</table>

Some photos from today:

120.7' x 12'0" White Pine
119.8' x 10'9" White Pine

118.7' x 10'5" White Pine (center-right next to the maple)

112.0' x 11'9" White Pine on left; 112.3' x 11'9" White Pine on right

93.3' x 15'2" Silver Maple

92.0' x 14'3" x 81.5' Black Cherry

Merry Christmas everyone,

Elijah
Re: North Chagrin Reservation: Cumulative Forest Data
by sradivoy » Tue Aug 09, 2016 2:05 pm

I came across a nice forest grown Quercus bicolor early this morning before the sweltering heat chased me inside. I don't think this species has been documented at this site before. I got a height of at least 117' (one of many tops) with a girth of 13'2". I also measured a tulip with a girth of 14'10" (on a slope) that may be the thickest known in the park. I didn't get a height or photo of the tulip at this time.

ATTACHMENTS
Re: North Chagrin Reservation: Cumulative Forest Data

by sradivoy » Tue Nov 29, 2016 10:52 pm

Took advantage of the mild weather and visited this large pignut hickory the other day that I don’t believe has been documented at this site before. It measured 121’ht x 11”2”cbh.
Tall pitch pine in Blomfelt Conservation Land of Harvard, MA

by a_blooming_botanist » Sat Nov 19, 2016 6:40 pm

Hello, ENTs!

Last Sunday and again today I spent a few hours in the woods of northern Harvard, specifically the Blomfelt conservation land. This piece of land lies just west of an old Shaker settlement, and includes the southern portion of a small hill with wetlands and a pond flanking it. The town’s brief description and hand-drawn map mentions there being “big pines” here. Naturally, I had to investigate.

Setting off from my car I had high hopes for this place. Entering the woods I walked through a dense stand of ~110’ white pines, crossed a small wooden bridge, and slowly began climbing the southeastern slope of the hill. Here other tree species, like birches, oaks, maples, pitch pines, and the occasional aspen, make an appearance with white pines. As I reached the crest of the hill I realized that I wasn’t going to find any white pines that we ENTs would consider truly big (for eastern MA, at least), so I turned back and, with what little daylight I had left last Sunday, I decided to focus on the pitch pines.

Growing right next to the trail on the lower half of the hill I found a small cluster of pitch pines that are fiercely competing for light with their cousins, the whites. The first one that I measured was 101.75’ with a CBH of 4.41’. This was the first pitch pine I’ve ever measured over 100’, and, coincidentally, it has almost the exact same dimensions as one that Doug Bidlack measured in Lincoln some two years ago. Here it is:
I returned today to see if I could find an even taller *Pinus rigida*. To the best of my knowledge, the tallest pitch pine measured by an ENT in MA is one in Springfield that stands a mighty 102’ tall, so that’s the number to beat. Well, the second tree that I measured today beat that record, coming in at 104.6’ tall with a CBH of 4.0’.
Just to be sure that I had gotten the tallest one, I measured the leaning pitch pine next to the height champ at 100.3’ by 48.9” CBH.

So there you have it, folks. I’d say that 104.6-footer is probably the tallest pitch pine in Harvard, MA. I have a feeling it could even be the tallest measured pitch pine in the state, at least until Bob or someone else takes it upon themself to find a taller one. :)

Jared
Re: Gone Wild Over Black Birches
by sradivoy » Wed Dec 28, 2016 5:24 pm

South Chagrin Reservation (Cleveland Metro Parks) has I nice collection of black birches right here in northeast Ohio. Here's what I got so far:

96ft
97ft
92ft
88ft
91ft x 4ft6.5in
95ft x 6ft3.5in
103ft

There are many more that I waymarked but didn't measure. Like a contortionist I got all bent out of shape trying to find the top of these unusually shaped and unassuming trees. I really enjoyed it!

Re: Gone Wild Over Black Birches
by sradivoy » Sat Dec 31, 2016 6:45 am

No, thank you Bob! I would have overlooked this species if I wasn't dispatched on this quest for the "holy grail". I've come to appreciate this forest a lot more than I might have otherwise thanks to you. Not known as a tall tree site until now, at least for this species. Unlike other nearby locations where the yellow birch plays a more dominate role, the exact opposite is true here. This particular place is a black birch bonanza and is an important component of this particular forest along with the hemlocks.
Aspirations
by Bosque » Fri Dec 30, 2016 9:06 am

Let your children climb
and fall in love with a tree
Making their own world

Carol Diamond

Re: Aspirations
by pattyjenkins1 » Sat Dec 31, 2016 10:23 am

Here at TCI we frequently tell people that once a kid climbs a tree, they never look at trees the same way again. Sad to say, we get infrequent calls from mothers who wonder what to do when nosy neighbors tell them to haul their kids out of a tree because it's "dangerous" to climb. The New Yorker in me tells them to "suggest" to the neighbors to mind their own business, and send their kids back up into the branches. Happy to say that a great many of the parents who bring their kids to us for an introductory rope-and-saddle climbing experience tell us that they climbed trees themselves as children. Of course. In my view, "dangerous" or not, it's a rite of passage.

Patty Jenkins

Tall Tree Listing for Mass
Updated
by dbhguru » Thu Dec 29, 2016 3:54 pm

Hi Ents, Attached is an updated copy of the Mass Tall Tree Register. Although more species have been measured, where the effort has been minimal for a species, a champ has not been declared. The list includes that all time highs for the listed species.

Champion Tall Trees of Massachusetts copy.xlsx

Robert T. Leverett
Re: Tall Tree Listing for Mass
Updated
by DougBidlack » Fri Dec 30, 2016 10:45 pm

Bob,

here are some trees that you can add to you list:

Species: American Chestnut
Height: 81.7'
Girth: 2.64'
Crown Spread: 32'
Date: April 2013
Township: Sudbury
Where: Assabet River National Wildlife Refuge
Method of Measurement: sine
Equipment: Nikon Prostaff 440

American Holly
60.4'
3.30' @ 2' 0"
NA
January 2009
Mattepoisett
Nasketucket Bay State Reservation
sine
Nikon Prostaff 440

Common Winterberry
28' 1"
7.6'
11'
April 2014
Waltham
Beaver Brook North Reservation
sine
LTI TruPulse 200X

Bear Oak
24' 3"
1.72'
21'
April 2013
Lexington
Arlington's Great Meadows
direct
Telescoping Pole

Spicebush
22' 2"
8.1"
NA
April 2014
Lexington
Swammin Land Conservation
direct
Telescoping Pole

Dwarf Chinkapin Oak
21' 3"
2.41'
23'
July 2009
Boston
Arnold Arboretum
direct
Telescoping Pole

Andrew Joslin also found a tall Cucumbertree Magnolia that he measured to 117.3' in March 2010. We both remeasured it in April of 2010. Andrew got 116.4' and I got 116.5'. I was using a Nikon Prostaff 440 and I think Andrew was too. We measured the girth to 7.43'. This was in Edmund Hill Woods, Northborough. I hope Andrew will correct me if I made any mistakes here.

Doug

Re: Tallest California Hardwoods
Update:
by yofoghorn » Wed Sep 07, 2016 5:51 pm

Forum update:

There’s been one new tanoak discovered at 163.9’, but it was burned by the Soberanes Fire in Big Sur and may have died in the blaze. It was a very large, old one, as opposed to the young whippersnapper in this forum that hasn't been measured since 2011. I need to get back there to remeasure that tree.

The Bay Laurels have changed drastically. The top 3 tallest are in Hendy Woods: 177.5 (second tallest CA
native hardwood), 173.9', and 171'. The 177.5' bay laurel is only 1.77' DBH. It barely branches and is just crazy-looking (kind of like the 178.6' sycamore). Sometime I ought to remeasure the 177.5' tree (it's discovery and last measurement was January 1, 2014).

I had been measuring the sycamore every year in May, but the drought has severely impacted the leaders. There are 4 branches competing to be the tallest branch on that tree and the height fluctuates both up and down each year. The tallest I've recorded is 178.6' and that was in 2012. It shrunk in 2013. I really need to get back there and measure the tree once more when I get a better laser. The Impulse I use right now has very poor range and is less powerful than the one I had a few years ago.

Zane J. Moore

---

**Re: Royal Gorge, Kitsuma Trail, Pisgah Nat’l Forest, NC**

by bbeduhn » Fri Apr 01, 2016 10:44 am

Heartbreak Ridge

This is slightly outside the Royal Gorge but since I didn't find too much I'll just include it under this heading. I had my eyes on a cove just off trail which looked very promising. In actuality, it did look very promising but it was on private land, with no trespassing signs every 20 yards or so. The trail skirted around the private land within two feet of it. Apparently, the land owner is serious about keeping people off his land. the steep cove may well have some gems but I couldn't even tell what species i was looking at deep down and I didn't feel like trespassing was in my best interest.

Heartbreak Ridge has a flat which has some nice tulips. It soon heads up a mountain range via many switchbacks. I remembered some nice sized trees along a few of these switchbacks. They were sizable tulips but not particularly tall. There plenty of old growth on the trail but much of it is scrub height with table mountain pine. The steep upper coves may contain old growth hardwoods. I noticed a thick tulip years ago at over 4,000' elevation.

**Flat**

Lirio tulip 152.3' 144.3'
Juglans nigra 128.0'

cove

Lirio tulip 150.5'
Quercus coccinea 105.9'

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**Re: Royal Gorge, Kitsuma Trail, Pisgah Nat’l Forest, NC**

by bbeduhn » Tue Mar 29, 2016 4:22 pm

I just had a little time so I hit up the exceptional tulip grove on The Point Lookout Trail. The tulip weevil wrecked havoc on tulips in the Asheville area last year so I was expecting about the same height. Apparently, this grove was spared. The second tallest is at least 172'. I didn't spend much time on it so it may go a foot higher. I did spend some time on the Point Lookout Tulip, however, and it has soared since last season. The leader has split into two divergent twigs, within inches of each other in height. I got readings of 180.0, 180.1' and 180.2' from three different, though fairly close together spots. A head on shot is obscured by a 160' tulip. These two trees are up from 170.4' and 177.6' from last year.
Re: Royal Gorge, Kitsuma Trail, Pisgah Nat’l Forest, NC

by bbeduhn » Tue Aug 02, 2016 9:56 am

walnut consuming guard rail

tree graveyard

ferns

skeleton tree
Most of these photos are from the drainage just north of the Royal Gorge. All of these flow into Mill Creek before Mill Creek spills into the Catawba River. Tributaries of Mill Creek hold some promise for tall trees. I've scoped out one spot that is loaded with rich forest with patches of productive acidic soils as well. Parts had been cut in the last 30 years but an 80 or so year old location is promising.

**Tiffany Creek Preserve, Long Island**

by Erik Danielsen » Fri Apr 22, 2016 11:34 am

Long Island has been a long time without any ENTS attention. Welwyn Preserve saw some measuring by Ed Coyle over a decade ago, and along with Shu Swamp is acknowledged in Ancient Forests of the Northeast as a superlative site. Besides these two, though, there are probably a couple dozen (or more) sites worthy of documentation- some of which are on private land that may be difficult to secure access to, but some of which are simply out of the way. Tiffany Creek Preserve is one of those- a parcel acquired by Nassau County in 1992, comprising portions of three former estates. Bruce Kershner visited this site with Daniel Karpen in 2002, and Daniel's description in a Long Island Botanical Society newsletter put it high on my list to visit- mentioning old-growth tuliptrees up to 54”dbh, about an acre of old-growth chestnut oak (stump counted to 295 rings) on the slope to the south of the colonial-era pond, and a lone old-growth Black Tupelo (partial core exceeded 200 rings) at the interface between slope and pond. A short blurb on the Nassau County website also mentioned a small native stand of Atlantic Whitecedar, which is more typical on the southern shore of Long Island.
Topo map annotated in blue

The directions to access the site involved parking at the end of a road that turned out to be private (on the topo the road is mapped past the point where it actually ends). I left a note in the window and hoped not to get towed—then again, I was gone before 9am, so maybe I went unnoticed. Subsequent research shows there’s now a parking lot on the other side of the preserve. Entering the preserve, I hiked east towards the pond through dry upland forest consisting of mature oaks, beech, black birch, red maple, and a bit of tuliptree. None of this was particularly tall, but the thick understory of evergreen Mountain Laurel was unique and interesting. Getting down into the wet valley I’ve marked "1" on the map I entered a gallery of tall trees, old tulips 3-4’dbh and 130+’ tall, and beneath them a variety of hardwoods reaching good heights. Here also stands the same old-growth Tupelo mentioned by Karpen (marked with "5" on the map), now also the tallest measured in NYS. Most of the fine branch structure was gone from the crown, so this tree may be declining. One battered old-growth chestnut oak was there, but the slope directly south of the pond is occupied by the new-seeming lawn of a recently built estate—if that’s where the rest of the chestnut oak was, they are now long gone. It’s possible the description was actually of the slope more southwest of the pond that I didn’t have time to explore, so there is still hope for those.

In this section:
- **Tuliptree**
  - 136.4
  - 133.4
  - 130.6
  - 128.6/11.7'cbh
- **Black Tupelo**
  - 102.6
- **Chestnut Oak**
  - 88.9/~3’dbh, battered and broken, main leader fell long ago
- **White Ash**
  - 113.3/7.2’cbh
  - 110.1
  - 108.8
  - 106
- **American Beech**
  - 114.9/6.9’cbh
  - 103.6
- **Black Birch**
  - 102.2/5.7’cbh
- **Northern Red Oak**
  - 113.7
  - 111.5
  - 110.6
Where this wet valley meets the pond, there's a small island on which the several Atlantic Whitecedar grow (marked "3" on the map), good old-looking trees, the tallest 77.1’ tall and about 12”dbh (I didn't cross to the island to wrap them).

Atlantic Whitecedar on the island

Marked on the map as "2" is a section dominated by Tuliptrees 2-3’dbh and very tall. I would be surprised if there isn’t a 150’ tree in here, if I spend some more time measuring. At the least there should be several within the decade, these are still rising. Near the start of these is the now tallest measured Black Birch in NY state. East from these along the north shore of the pond are still more tulips, not quite as tall, including one particularly old veteran (marked "4" on the map). Near it are a couple tall black oaks.

Tuliptree
148.7
There's plenty more to be seen and measured at this small site. With the leaves coming on fast, I'll look forward to getting back out to this site sometime in the winter.

**Pike State Forest Report (West of SR 41)**

by Matt Markworth » Sun Oct 30, 2016 4:15 pm

NTS,

I don't know all the ins and outs of Ohio's State Forest High Conservation Value Forest (HCVF) program, but here's a report I created for an environmental organization in an effort to seek additional protections for this site. My next report will be on a very special ravine in Hocking State Forest.

I think that these types of activities help explain one of the reasons for the "why" of our accurate measuring activities, with conservation efforts being one of many reasons for accurate tree dimension measuring.

The PowerPoint presentation looks best in slide show mode:

[![Pike State Forest (West of SR41) Report.pptx](image)](image)
Hi All,

For several years I have wanted to connect NTS to an academic/scientific organization or agency with good standing that can make use of our data for both research and public education. I have feelers out to Harvard University’s Harvard Forest Research Center as a home for our data. They have shown interest. In addition, I recently made contact with Virginia Tech’s Dendrology Lab. Preliminary discussions with them are encouraging. In addition to storing our data, they would use our measurements to update their popular VTree app. Lots of possibilities. I’m supposed to get a formal reply from Dr. John Seiler next week on whether or not he wants to proceed. If he says yes, a mountainous project will suddenly loom over us.

As it stands now, our many, many tree measurements serve little purpose among either the scientific or forestry communities. Our measurements may satisfy our individual curiosities and love of tree measuring, but beyond that the data largely languish in the thousands of posts submitted to the NTS BBS. New members join us but remain largely unaware of the mountain of information available to them. However, it is not their fault. The information, as good as it is, remains impossibly scattered. If we can have our NTS data reside in a dendrology database at VA Tech, our efforts over these many years will be vindicated.

Remember, we define ourselves as a science-based Internet Interest Group engaged in citizen science - albeit with a narrow focus. When webmaster Ed Frank was active, he frequently emphasized our mission and brought us back when we strayed. As a result of our collective efforts, we know more about the maximum dimensions that many species attain and where they are attained than any other group. Yet despite our collective expertise, the sporting tree competitions in the states still largely use outdated measurement methods and contribute to the mountain of mis-information out there. At the national level, things are better. NTS has been the primary supplier of members to the American Forests National Cadre and the continued connection between NTS and the Cadre is fairly well assured since the same individuals who created NTS-WNTS created and manage the Cadre.

So where do we go from here? We need to begin assembling our data into a common format. Don Bertolette and I will soon supply that format for those of you willing to contribute to the cause. Our hope is that each person who measures trees using NTS methods will begin assembling their data for pooling. We’ll have more to say about this in the coming weeks, but I conclude with the point that this is our best opportunity to bring our data to the many potential users who could benefit: researchers, timber professionals, sporting tree hunters, forest historians, etc.

Robert T. Leverett

Re: Link to Virginia Tech Dendrology Lab

Bob said, “As it stands now, our many, many tree measurements serve little purpose among either the scientific or forestry communities.”

I suggest again, that what’s needed is a publishable essay on why this information is important- to both the scientific and forestry communities. An essay or better yet, a full article published in a major publication like Scientific American.

I also think it would be cool to see Bob do a TED talk on old growth. Nobody could do it better than Bob. He’s now got a lot of data, along with photos and videos.
Joe

**Re: Link to Virginia Tech Dendrology Lab**
by dbhguru » Wed Jan 18, 2017 6:30 pm

Ents, We're moving ahead on the NTS - VA Tech partnership. John Peterson, the Dendrology Lab's database manager is starting to establish the database infrastructure that we can use. Details are being worked out, but it is crystal clear, we will have a home for NTS data in a very prestigious institution. Participation is entirely voluntary. Each member who wants his/her data to reside in the VA Tech database will be signed in and be able to add, edit, and delete tree records. There will be extensive reporting capabilities. Uses of our data will be accompanied by the proper credits. Stay tuned for more details.

Robert T. Leverett

**Re: Link to Virginia Tech Dendrology Lab**
by dbhguru » Thu Jan 19, 2017 7:17 pm

Ents, Over the weekend, Don Bertolette and I will finalize the record structure for the VA Tech Dendrology Lab NTS database. John Peterson will then create the database and begin developing the admin process that will allow us to sign up. It's happening. Details to come.

Robert T. Leverett

**Re: Link to Virginia Tech Dendrology Lab**
by Larry Tucei » Fri Nov 18, 2016 12:52 pm

Bob- That's great news and it will be great to see it all in one location. Something published in Scientific American would be nice as Joe stated and maybe we could get in National Geographic as well. One problem is we all have such a passion for trees, measurements and so on but most of the public just doesn't have the interest that we all do. I share my info as many here do with the Park Service, Forest Service or whoever shows and interest. I've been wanting to contact my local University's as you did Bob and share my state tree Data with them as well if they show an interest. Larry

**Re: Link to Virginia Tech Dendrology Lab**
by dbhguru » Fri Nov 18, 2016 3:28 pm

Larry, Joe, Erik,

Thanks, Guys. Joe, I've not forgotten your suggestion to write an article on what our kind of measurement data is important. I think a brainstorming session where everyone has a chance to list their reasons would be the right starting point. I'd bet we could come up with some pretty original reasons.

In communicating with VA Tech's Dendrology people, I gave them a copy of my black birch database, which presently contains 671 measurements spread across 12 states. This database makes the point abundantly clear that traditional sources under-describe the maximum growth attained by this species, and some by a lot.

VA Tech takes most of their descriptions from a USDA plant database, USFS Silvics of North America, and at least one other source - all ostensibly credible. Here's what these and other sources say about the eastern cottonwood.

**USDA Plant Database**

*Description*

*Populus deltoides Bartr. ex Marsh.*, *eastern cottonwood*, is a fast-growing tree which reaches 80 to 100 feet in height and 3 to 4 feet in diameter. It is a relatively short-lived tree, seldom surviving for more than 80 years.

**USFS Database**
GENERAL BOTANICAL CHARACTERISTICS: Eastern cottonwood is a native, deciduous bottomland hardwood [68,121,132,212,225]. **Height ranges from 36 to 190 feet (11–57.9 m)** [37,47,67,120,132,150,151,224]. At maturity (approximately 35 years) [132], diameter at breast height ranges from 10.7 inches to more than 6 feet (27.2–182.9 cm) [7,47,67,132,150,224]. In open areas, eastern cottonwood typically has a large trunk that divides into branches near its base and ascends to form a wide, spreading crown [47,100]. In closed stands, it tends to have a tall, straight, and relatively branch-free bole with a small rounded crown [9]. Life expectancy is approximately 100 to 200 years [9,120,142]. It is dioecious. Female catkins range from 2 to 5.1 inches (5–13 cm) long, and fruit capsules are 0.3 to 0.6 inch (8–1.5 cm) long [56]. The bark is thick and deeply furrowed with wide, flat ridges [56,199]. The rooting depth averages 100 inches (254 cm) [97], and mature stands can reach 117.6 to 196.8 inches (298.7–499.9 cm) rooting depth [22].

**Missouri Botanical Garden**

**common Name:** eastern cottonwood  
**Type:** Tree  
**Family:** Salicaceae  
**Native Range:** Eastern and central United States  
**Zone:** 2 to 9  
**Height:** 50.00 to 80.00 feet  
**Spread:** 35.00 to 60.00 feet  
**Bloom Time:** March to April  
**Bloom Description:** Red (male) and green (female)  
**Sun:** Full sun  
**Water:** Medium to wet  
**Maintenance:** Medium  
**Suggested Use:** Shade Tree, Rain Garden  
**Flower:** Insignificant  
**Tolerate:** Drought, Air Pollution

**USFS Silvics of North America**

_Growth and Yield_ Eastern cottonwood is one of the tallest species east of the Rocky Mountains. Heights of 53 to 58 in (175 to 190 ft) and diameters of 120 to 180 cm (48 to 72 in) have been reported [17], as have age 35 stand volumes exceeding 420.0 m³/ha (30,000 fbm/acre) of sawed lumber [5,10,14,22].

**Wikipedia**

_Populus deltoides_ is a large tree growing to 20–40 m (65–130 ft) tall and with a trunk up to 1.8 m (5 ft 11 in) diameter, one of the largest North American hardwood trees.

Our NTS measurements confirm heights for the eastern cottonwood into the mid-150s. Most of the tall ones are in the 130s with a few in the 140s.

Robert T. Leverett

**Re: Link to Virginia Tech Dendrology Lab**

dbhguru » Wed Jan 18, 2017 6:30 pm

Ents,

We're moving ahead on the NTS - VA Tech partnership. John Peterson, the Dendrology Lab's database manager is starting to establish the database infrastructure that we can use. Details are being worked out, but it is crystal clear, we will have a home for NTS data in a very prestigious institution. Participation is entirely voluntary. Each member who wants his/her data to reside in the VA Tech database will be signed in and be able to add, edit, and delete tree records. There will be extensive reporting capabilities. Uses of our data will be accompanied by the proper credits. Stay tuned for more details.

Bob

Robert T. Leverett
Re: Link to Virginia Tech Dendrology Lab

Re: Link to Virginia Tech Dendrology Lab

Ents,

Here is the record structure that we've requested that VA Tech Dendrology Lab support. They have some test data and with luck, we should have the site up and running within a month. Then it is up to us to supply data in the format shown below.

1. Index (a unique number for each record)
2. Family
3. Genus
4. Species
5. Common Name
6. VTree ID
7. Country
8. State-Province Abbreviation
9. Site Name
10. Subsite Name
11. Property Owner
12. Date Measured
13. Latitude
14. Longitude
15. PDOP(Meters)/CEP(Ft)
16. Circumference in Feet
17. Circumference Equipment Used
18. Circumference Measurement Method
19. Total Height in Feet
20. Height Equipment Used
21. Height Measurement Method Used
22. Average Crown Spread in Feet
23. Maximum Crown Spread in Feet
24. Tree Form (FOG, OPG, POG)
25. Number of Trunks
26. Tag Number
27. Tree Name
28. Measurers
29. Name of Tree Photo or Movie
30. Tree Status (dead/alive)
31. Age Class (Y,M,O)
32. Suppress Exact Location to Public: Y/N
33. Suppress Property Owner to Public: Y/N
34. Comments

Robert T. Leverett

Ents,

Yesterday, I had a long telephone conversation with John Peterson at VA Tech. Very productive. Just about all the details have been ironed out. He is going to create a stand alone database for us using the record format identified previously. The first field will be a key field. Don Bertolette and I discussed a key field format yesterday evening: MM-xxxxxx-NNN is the general format where MM = state abbreviation, xxxxx = numeric value in the format 000001, 000002, etc. NNN = measurers initials. So, my first submission will be MA-000001-RTL, second tree will be MA-000002-RTL. Discussions with Ray Asselin this morning suggests a form like MM-xxxxxx-NNN-xx where the latter xx identifies a sequence number for the particular tree. The entire key is alphanumeric. Other fields might suggest that measurements of the same tree could be identified by tree name, but not everyone names trees. Nor will everyone necessarily revisit old record regularly for fields updates. This format allows each data contributor to begin with a sequential number 000001. I don't think any of use will measure over 999,999 trees.

Addressing a question Doug Bidlack asked about storing the original discoverer and date of discovery, this can be handled in the comments section.

In terms of how the system will work, each measurer will be signed up by John Peterson based on the information that Don and I pass to him. We don't want people signing up who we don't know. So, we need to hear from you if you want in. Then only people who are signed in will be recognized by the system. Once you have your user name and password, you'll be able to use the database to input new trees, edit existing ones, print out lists/reports, and export trees to an Excel file. The public can see all trees, but not the property owner or where the trees are located if those flags are turned off.
BTW, John Peterson is a professional forester who took up programming as a sideline, so on record design, we can communicate with him more easily than if he were just an IT professional. He measures trees with a TP 360. How cool is that? John also maintains the VA champion tree list.

With the above said John is undertaking this project at VA Tech’s expense. We must be respectful of his time and of the computer resources they allow us to use. If anyone has a desire to have more fields, now is the time to speak up. My preference is keep it simple. Maybe one or two more fields and only then if plenty of us agree to use them.

The schedule that John and I agreed to is that we get him the final record layout by Friday. Next week he will work on building our database and website access features. So what does VA Tech get out of this for providing us a free database service. They are able to offer world class tree measurement data to the public and use our tree maximums to update his VTree app. Attached is the import database I sent to John that he’ll use unless we add fields between now and Friday.

I think I know who most of those who are interested in contributing to this database, but I don't want to assume more than I actually know. Please let Don and/or me know if you want to come aboard. We will not submit the names of any who don't contact us and let us know.

Don, do you have anything to add?

[NTS-VATech-TreeDatabaseImportForm.xlsx]

Re: Link to Virginia Tech Dendrology Lab

by dbhguru » Fri Jan 27, 2017 1:17 pm

Ents, Based on his email of yesterday, John Peterson starts building the NTS-VA Tech website today. We're set on the tree record layout. Two key points on it. Latitude and longitude must be in decimal degrees. Dates need to be in an Excel-reconized date format.

I'm presently helping Dale Luthringer and Larry Tucei convert their spreadsheet data to the standard record format. Within my available time, I'm happy to help others.

I don't want to sound too promotional, but this new partnership with VA Tech is for me a dream come true. We've been an Internet interest group since around 1994 when we started on a small server in Chicopee Mass. We had 125 members then, but the server was slow. I think it was at Joe Zorzn's recommendation that we switched to Topica. Later we switched to Google. It was better, but not good enough. Ed Frank came to our rescue and created this amazing BBS that we have now. There is no way that we can ever thank Ed enough for what he did. And his creation continues to serve to this day.

Along the way, We've played with various database ideas to include a huge effort by Mitch Galehouse. That database still exists as does many private databases mostly in the form of Excel workbooks. However, our data is so scattered that it loses much of its power to educate others. Can you imagine a researcher looking to collect NTS data on say tuliptrees? What's current? What's not? Where are the data? There is no way a researcher can efficiently assemble the data and organize it for research purposes without a monumental effort. But now, we have a way out of the fog by partnering with VA Tech. We also gain standing among academic and professional groups.

Here's a concern. Do we become separated from our data and find our numbers floating around the Internet without us being credited as the source? I've been assured that credits will be given. But, basically, members of the public can pull numbers from our posts now. I don't think we lose any security with VA Tech. Still, it is up to each member to sign on and store his/her data on the new website. e should not be pulling data from the BBS posts that others have contributed and submitting it. Each contributor should submit only his/her data.

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

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

Edward Frank – Editor-in-Chief