

Bulletin of the Eastern Native Tree Society

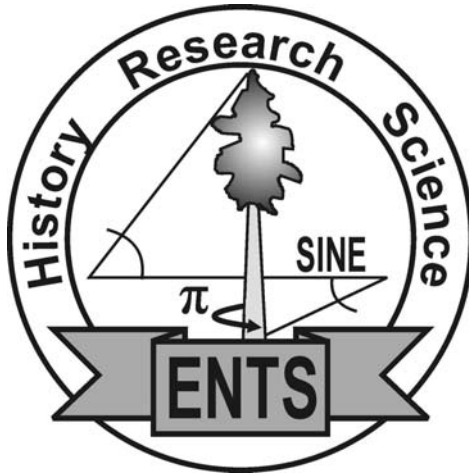
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COLBY RUCKER
SPECIAL ISSUE

EASTERN NATIVE TREE SOCIETY



Bulletin of the Eastern Native Tree Society

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Mission Statement:

The Eastern Native Tree Society (ENTS) is a cyberspace interest group devoted to the celebration of trees of eastern North America through art, poetry, music, mythology, science, medicine, and woodcrafts. ENTS is also intended as an archive for information on specific trees and stands of trees, and ENTS will store data on accurately measured trees for historical documentation, scientific research, and to resolve big tree disputes.

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Membership is free when you sign up for our discussion group, ENTSTrees, at: <http://groups.google.com/group/entstrees?hl=en>. Submissions to the ENTS website in terms of information, art, etc., should be made to Edward Frank at: ed_frank@hotmail.com

The *Bulletin of the Eastern Native Tree Society* is provided as a free download in Adobe™ PDF format (optimized for version 5 or newer) through the ENTS website. The Eastern Native Tree Society and the *Bulletin of the Eastern Native Tree Society* editorial staff are solely responsible for its content.

COVER: Colby Rucker, conservationist and friend.

Photo by Edward Frank.

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COLBY WAS A FRIEND OF MINE, BUT I DID NOT KNOW HIM WELL

This issue of the *Bulletin of the Eastern Native Tree Society* is dedicated to the life and works of Colby Buxton Rucker, one of the founding members of ENTS. He passed away from complications of cancer on November 23, 2004. I am serving as a guest editor for this tribute issue of the *Bulletin*. I first met Colby at an ENTS gathering at Cook Forest State Park in April of 2003. My earliest impression was of him giving a humorous between-session impromptu discussion of tree measuring by a progressively longer and shakier series of poles. He talked of newspaper reporters coming to see his “national champion” trees, which (to their dismay) were of the smaller species. After Will Blozan completed his climb of the Seneca Pine, I had the opportunity to speak with him. We discussed the idea of defining the form of a standard tree, so that trees that did not fit that definition could be documented in a different category and not just be ignored.

I don't believe I ever spoke to him in person again, but this event was the motivation that started my involvement with ENTS, and my becoming the webmaster for the organization a short time later. After the event we began a series of correspondence via e-mail. It got off to a rocky start, but soon we became friends and we continued those e-mails until his death. I know when I was pulling together the website, I reviewed several thousand e-mails posted to the discussion list prior to June of 2003. One of the names I always looked for and read with enthusiasm was that of Colby Rucker. These posts were always well written and thoughtful and presented with a wry sense of humor. They exhibited incredible details of observation reflecting both Colby's mind of a scientist, and his soul as an artist. He was a remarkable essayist with a wry sense of humor. Most of the articles compiled for this issue are posts made to the ENTS discussion list or to his friend Bob Leverett demonstrating these characteristics. There is a special section of the ENTS website dedicated to these discussions, and his research, essays, and poetry. We all suffered a great loss on his passing. Editing this issue is my personal tribute to Colby.

Colby also wrote a number of items that are not included in this issue. Compilations of his big tree lists that are currently out of date are not included, but are available on the ENTS website. Also, the 385-page document *A Survey of the Vascular Flora of Anne Arundel County* compiled by Colby is much too long for inclusion here, but is available on the ENTS website: <http://www.nativetreesociety.org/corner/PLANTS.DOC>. He also co-wrote *Gems of the Severn*, which is currently out of print, but used copies can be found online. A more complete listing of other Colby's written contributions can be found in his vitae in this issue.

I want to end this note with a short poem Colby wrote in 2002:

Life

Indeed, life is an ecstasy,
to be spent freely,
to be squandered well.
Such moments leave a longer impression,
to be treasured, and shared, when possible.
Here are ten:

To be a child in a world with good mud puddles.

A leaf of jewelweed held underwater.

Poison ivy foliage on a locust snag on an October afternoon.

Cheating the binders on a good load of poplar.

Mockernut buds about to open.

The sensual suffusion of green in a pawpaw thicket.

Walking inside the ruins of a great chestnut trunk.

Holding a corner on a big oak.

A big strawberry bush in fruit.

Basswood in bloom with honeybees.

Edward Forrest Frank
Associate Editor

Colby Buxton Rucker. Photo by Edward Forrest Frank.



ANNOUNCEMENTS AND SOCIETY ACTIONS

Tentative Date for ENTS Congaree Big Tree Blitz Set

February 21-23, 2009, has been identified as the ENTS Congaree Swamp National Park big tree measuring blitz. Details of this effort are still be formulated, but will include a push to accurately measure as many big trees on the Congaree as we can during this period. Those interested in participating should watch the ENTS e-mail newslst closely for further plans.

New York Passes Heritage Tree Act Honoring Bruce Kershner

On September 5, 2008, Governor David Paterson signed the "Bruce Kershner Heritage Tree Preservation and Protection Act" into law to help protect the remaining old-growth trees and forests of New York State. The law is named after now deceased environmentalist and Ent Bruce Kershner. Kershner had made it his mission to protect old-growth forests, and is credited with discovering almost 300 of them in eastern North America. He was also an author, and wrote 12 books on nature and the environment, including *The Secret Places of Western New York and Southern Ontario*.

New York has an estimated 400,000 ac of old-growth forest, mostly in the Adirondacks. Kershner was a staunch advocate of the protection of these forests, pointing out that once they were gone, they would not be replaceable for many generations. The bill inspired by Kershner's work will offer those forests the highest possible level of protection through the State Nature and Historical Preserve. Though the bill is the first of its kind in the United States, officials hope that other states will look to New York as a role model, and be inspired to create similar laws of their own.

Kentucky Benefit to Help Raise Awareness of Adelgid Threat to Eastern Hemlocks

Dr. Neil Pederson of Eastern Kentucky University invites you to join him at the Tsuga Art & Music event on Friday, November 21, 2008. This event is aimed at raising awareness about the current threat to eastern hemlock trees. All proceeds will benefit Save Kentucky's Hemlocks, a partnership of citizens, non-profits and government agencies working together to save eastern hemlocks.

The evening will start off with a group art show with approximately 25 artists participating; later that evening a line up of three of Kentucky's finest bands will take the stage. The group art show will have original paintings, reduction prints, wood block prints, stained glass, sculptures, etc. The group of artists is diverse and most are from Lexington, and some of the artists are attempting to incorporate hemlock wood into their art pieces.

Tickets will be available at the listed locations starting Saturday, October 25, 2008. For more information, please visit:

http://www.kyhemlocks.org/tsuga_event.html

World's Tallest Eucalypt Measured

Dr. Robert Van Pelt (of the University of Washington and a West Coast Ent) reported to the ENTS list that a *Eucalyptus regnans* from Tasmania is now known to be the second tallest tree species known in the world—taller than *Pseudotsuga*, *Picea*, and *Sequoiadendron*. This new discovery can be found at:

<http://www.forestrytas.com.au/news/2008/10/welcome-to-the-centurion>

The tree was first discovered with LIDAR, and then had its height (99.6 m tall) confirmed with a laser and a tree climb.

ENTS 2008 Rendezvous a Success

Robert Leverett reported in an e-mail to the ENTS list that this year's Rendezvous in western Massachusetts was another big success. Trees were climbed and measured, new friendships were made and old ones renewed, and the spirit of the effort was as strong as ever. A more detailed report will be published in an upcoming edition of the *Bulletin*.

COLBY BUXTON RUCKER: IN MEMORIAM

Jennifer Troy

Eastern Native Tree Society

COLBY BUXTON RUCKER
APRIL 26, 1937 – NOVEMBER 23, 2004

Colby Buxton Rucker of Arnold, Maryland, died at his home of complications from cancer. He was 67.

Mr. Rucker was a lifelong resident of Pines on the Severn in Arnold. Born in 1937, he was home-schooled and then attended Wroxeter-on-Severn School from 1948 to 1950, boarded at Christchurch School in Virginia from 1950-1952, and graduated valedictorian from Severn School in Severna Park in 1955.

Shortly after graduating from high school, he established Rucker Tree Experts, a regional tree-care company, which he owned and operated from 1956 until 1980. In 1981, he accepted a position with the State of Maryland as the Supervisor of Grounds at the Annapolis State Office Complex, a position he held until his retirement in 1998.

Mr. Rucker was an accomplished naturalist, and was the 2004 recipient of the Jan Hollman Environmental Education Award. Throughout his life he tirelessly shared his love of nature with others, through his involvement with environmental organizations, education outreach programs, and the governmental process. He was a three-time president of the Severn River Association, an organization through which he conducted weekly nature walks at sites along the Severn for many years. He served as vice chairman of the Severn Scenic River Advisory board, Vice Chairman of the Severn River Commission, President of the Annapolis Chapter of the Izaak Walton League, on the Citizens Advisory Board to the County Operating Budget, and on the Citizens Advisory Board to the Nevamar Division of International Paper Corporation.

He served as chairman of the State Forestry board, a director of the Scenic Rivers Land Trust, was a member of the Champion Tree Advisory Board of American Forests, and a member of the Eastern Native Tree Society, the Ann Arrundell County Historical Society, and the Anne Arundel Genealogical Society.

In 1983, Mr. Rucker published *Scenic Rivers: The Severn* in conjunction with the Maryland Department of Natural Resources. In 1988, he co-authored *Gems of the Severn*, published by the Severn River Commission. Both books are considered authoritative guides to the natural history of the Severn River. He was a contributor to *Walking Tour of the Trees of Historic Annapolis* and *Listening to Our Trees: A Guide to the Trees of Wardour and West Annapolis*. He also authored an as-yet unpublished 400 page manuscript, *A Survey of the Vascular Flora of Anne Arundel County*. He was a contributor to *The Barbary Plague*, a book chronicling the bubonic plague outbreak in San Francisco in the early 20th Century. Mr. Rucker's grandfather, William Colby Rucker, was the Assistant United States Surgeon General at that time.

Mr. Rucker also served in the Maryland National Guard from 1955 to 1961, and the U. S. Army Reserves from 1961 to 1963.

In 1972, Mr. Rucker acquired 25 ac of undeveloped property in Pines-on-the-Severn, which he has maintained as a nature preserve. The property includes state-rare plants, eight Maryland champion trees, two national champion trees, and a large pond. He was the originator of the "Rucker Index" for comparing forest profiles for the Eastern Native Tree Society. Mr. Rucker maintained an extensive personal collection of papers and books on the history of Anne Arundel County and Maryland.

He is survived by his wife, Elizabeth Trotter Rucker, two daughters, Jennifer Rucker Troy, wife of David Christopher Troy, of Arnold, Maryland, Beverly Colby Rucker of Jamaica Plain, Massachusetts, and two grandchildren, Thomas Curtis Troy and Caroline Elizabeth Troy.



Colby Rucker accepting one of the many honors and recognitions he received during his lifetime.

Photo by Jennifer Troy.

COLBY BUXTON RUCKER VITAE

Born April 26, 1937. Son of Colby Guequierre and Marcelyn Elisabeth (Buxton) Rucker.

Baptized June 6, 1937, Grace & St. Peters Protestant Episcopal Church, Baltimore, Maryland.

Lifelong resident, Pines on the Severn, Arnold, Maryland.

Calvert School - home studies.

Wroxeter on Severn School 1948-1950: academic awards.

Christchurch School 1950-1952: academic awards, president lower school honor council.

Severn School 1952-1955: academic awards, valedictorian.

Armorer, Quartermaster Co., 29th Infantry Division, Maryland National Guard 1955-1961.

U. S. Army Reserves, 1961-1963.

Owner, Rucker Tree Experts, 1956-1981.

Licensed tree expert by State of Maryland 1961-1998.

Consultant, Maryland Department of Natural Resources, 1980.

Supervisor of Grounds, Annapolis State Office Complex, 1981-1998 (retired).

Severn River Association – three-term President.

Severn Scenic River Advisory Board – Vice Chairman.

Severn River Commission – Vice Chairman.

Annapolis Chapter, Izaak Walton League – President.

Citizens Advisory Board to the County Operating Budget

Citizens Advisory Board, Nevamar Division, International Paper Corporation Member.

State Forestry Board for Anne Arundel County – 1978-1996. Chairman. [Member Emeritus].

Scenic River Land Trust – Member of Board of Directors. [Honorary Board].

American Forests – [Life Member]. [Member of Champion Tree Advisory Board].

Eastern Native Tree Society. [Member].

Ann Arrundell County Historical Society. [Member].

Anne Arundel Genealogical Society. [Member].

Author, Areas of Highest Priority for Preservation (Severn River Commission).

Primary author, Scenic Rivers: The Severn. DNR, 1983. 72 pp.

Co-author, Gems of the Severn. Severn River Commission, 1988. 345 pp.

Author, A Survey of the Vascular Flora of Anne Arundel County. 400 pp. Unpublished manuscript.
<http://www.nativetreesociety.org/corner/PLANTS.DOC>

Contributor, Walking Tour of the Trees of Historic Annapolis. (dedicated to CBR).

Contributor, Listening to Our Trees. (survey & tour guide, trees of Wardour and West Annapolis).

Author, Capitol Engine No. 5: A Montpelier Fire Company in the Civil War.

Contributor, *The Barbary Plague* (bubonic plague in San Francisco) by Marilyn Chase, 2003.

Contributor, "Vermont in the Civil War" (Internet site by Tom Ledoux)

Contributor, "A review of waterway names in Anne Arundel County" by U. S. Fish and Wildlife, 2003.

Laser-based forest height studies and reports, Belt Woods, Corcoran Woods, Chase Creek Woods.

Speaker, Advanced Tree Measuring Workshop, Cook Forest State Park, Clarion, Pennsylvania. 2003.

September 26, 2004: Winner of 2004 Janice Hollmann Environmental Education Award

Originator of the "Rucker Index" for comparing forest profiles. (Eastern Native Tree Society).

Management of properties at Pines on Severn; four houses are family-occupied.

Owner of approximately 25 ac of undeveloped properties kept as a nature preserve at Pines-on-the-Severn. Property includes state-rare plants, eight Maryland champion trees and two national champions.

Research, family genealogy and family history.

Maintains private collection of family papers and items of local history.

**This memoriam used with permission from the website <http://www.srlt.org/colbyruckerevent.htm>
(this site no longer active).**

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GREAT EASTERN TREES, PAST AND PRESENT

Colby B. Rucker (deceased)

Eastern Native Tree Society

INTRODUCTION

Although trees of all sizes can be of interest, it is the largest trees that truly capture our attention. Many of these giants are landmarks, and some have a connection with some historic event. Many of the largest trees are quite old, and nearing the end of their life. Although the Wye Oak, Maryland, reigned as the national champion for over sixty years, most champions yield their place to new specimens comparatively quickly. Many grand old trees no longer exist, and it is often difficult to determine their actual size, structure, or history.

From the earliest sources to the present, a frequent lack of uniformity or accuracy in measuring makes it difficult to determine the actual size of trees, including those that are the most famous. Measurements of trees taken from older national and state registries may be in error. Some trees accepted as champions were actually multiple-trunked specimens. Trunks were often measured below breast height, many heights were greatly exaggerated, and spreads were often maximums or aggregates, not averages. I have added comments regarding the actual size of such trees. In recent years, American Forests, America's oldest national conservation organization, has made a concerted effort to expand and refine their National Registry of Big Trees. To insure greater accuracy, American Forests is developing new guidelines for measuring trees and checking nominations. Many state big-tree programs have made similar changes.

I wish to extend my sincere appreciation to American Forests for their kind permission to use extensive information from the National Register of Big Trees and other American Forests publications. I am also most grateful to Robert T. Leverett, Michael Davie, Will Blozan, Ed Nizalowski and other members of the Eastern Native Tree Society for additional information on exceptional trees.

Much information regarding interesting old trees has been gathered from books, newspaper articles and the Internet. State and national big-tree registries are a particularly valuable source of information. Some of these are here included as references. Most of the trees in the following list are twenty feet or more in circumference at breast height (CBH), which is four and a half feet above grade. Properly, the spread is the average of the two greatest crown spreads that are at right angles to each other. A descriptive name has been assigned to many trees, but only underlined names are in common usage. The states are arranged in a geographical order, which facilitates comparisons of many of the species common to those general regions.

MAINE

National Champions

Yellow Birch. National champion 1983-2002: CBH 21' 0", ht. 76', spr. 91'. Deer Isle. Reference: *American Forests*, National Register of Big Trees, 2000, p. 34 (photo). Comments: This tree has divergent branches, but no central leader above a short trunk. It does not appear to be a coppice, but multiple hearts are likely at breast height. Girth probably taken below breast height, so the Rule of 73 should be applied.

Silver Maple. National champion 1945-1966: CBH 22' 10", ht. 90', spr. 110'. Fryeburg Harbor.

Maine State Champions

"Herbie" American elm. CBH 20' 0", ht. 93', spr. 110'. Located in Yarmouth. Reference: Internet. Wright, Virginia. "Champion of Trees," *American Profile*, January 4-10, 2004.

VERMONT

State Champions

Northern Red Oak. State champion list as (1990) circumference (at 4') 21' 6", ht. 82', spr. 92'. Shaftsbury, Bennington Co.

Northern Red Oak. State champion list as (1993) circumference (at 4') 20' 0", ht. 85', spr. 127'. Tinmouth, Rutland Co.

NEW HAMPSHIRE

Great Trees of the Past

Hampton Elm. American elm. Locally famous tree located on Elmwood Corner, on Winnacunnet Road, in Hampton. In 1946, it measured 25' in circumference at the ground, and 22' 4" six feet up. Diagnosed with Dutch elm disease in 1956, cut down in 1960, when a ring count showed it to be 176 years old. Reference: Internet. "Hampton: A Century of Town and Beach, 1888-1988." (Chapter 18, Part 3)

Sugar Maple. Once said to be "the largest tree in New England." Circumference at grade 28'. Forked at 17', diameter of larger lead 4' at 51' above grade, circumference smaller 11' 6" at 56' above grade. Total height 96'. The tree fell in 1846; it yielded 3300 board feet of lumber and nine cords of firewood. Located on the farm of Joseph Hobbs, Esq., Ossipee, Stafford Co. Reference: *New York Farmer and Mechanic*, April 1846. (courtesy of Ed Nizalowski, 7/26/2003)

White Pine. A pine cut long ago on the site of Dartmouth

College was said to have been 240' tall. Although many doubt the species is capable of attaining such a height, the legend has persisted. Reference: Lane, Ferdinand C., 1953. *The Story of Trees*, pp. 67-68.

MASSACHUSETTS

Great Trees of the Past

Hubbard Elm. American elm. CBH (ca. 1921) 24' 5", ht. 98', spr. 65'. Once located in North Andover, the tree is presumed dead. Reference: Illick, 1927. *Common Trees of Massachusetts*, p.11.

Lafayette Elm. American elm. Historic tree. CBH (ca. 1921) 20' 7", ht. 75', spr. 110'. Stood in Ware; now presumed dead. Reference: Illick 1927. *Common Trees of Massachusetts*, p.11.

Rugg Elm. American elm. Circumference (1921) 25.5' feet at point of trunk division. ht. 70', spr. 145'. Framingham. Tree is presumed dead. Reference: Illick, 1927. *Common Trees of Massachusetts*, p.12. Comments: Illick's description suggests this was a double tree, probably a coppice.

Great Sycamores of Massachusetts

Hatfield Sycamore. Measurements by Leverett & Blozan 10/26/03: CBH 23' 11.0", ht. 117.1', spr. 129', pts. 436. The trunk is 5.4' in diameter at a height of 22.4', above which it first branches. Main Street, Hatfield.

Pocumtuck Buttonwood. (Deerfield Sycamore). Measurements by Leverett & Blozan 10/26/03. CBH 21' 8.5", ht. 122.1', spr. 112', pts. 411. Located in Old Deerfield.

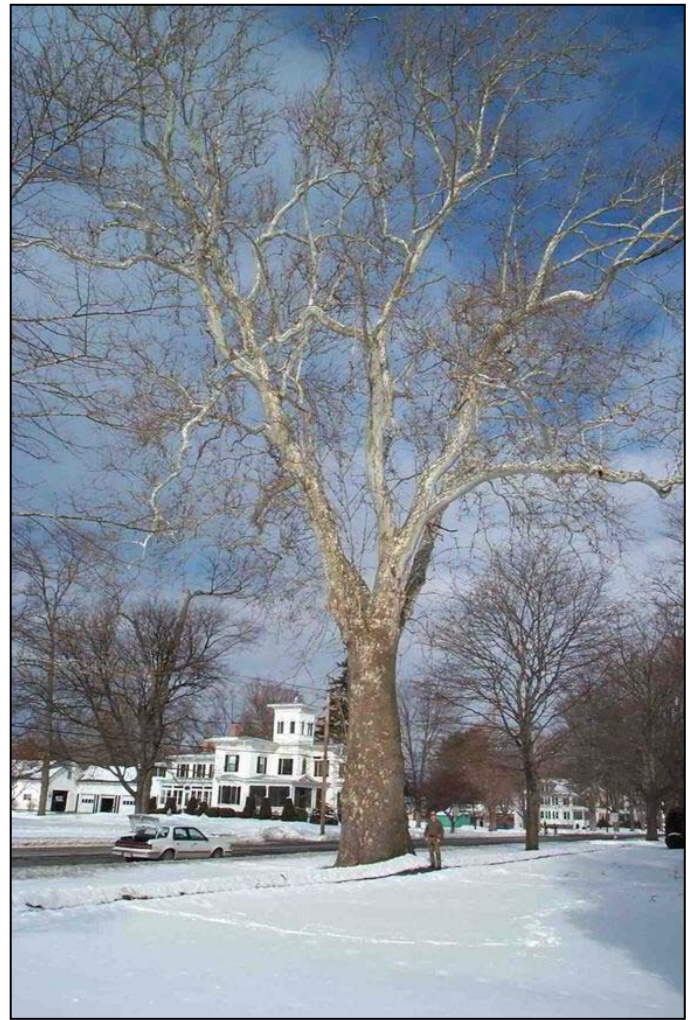
Shaker Sycamore. CBH 20.0', ht. 90.2'. (measurements by Leverett).

Sunderland Buttonwood. American sycamore. Historic tree. Measurement ca. 1921: CBH ca. 20' 6", ht. 100', spr. 100'. Measurement by Leverett & Blozan, 10/26/03: CBH 24' 11.0", ht. 114.4', maximum spr. 153'; average spr. 143', pts. 449. This roadside tree has four large upcurving leads above about eighteen feet of massive trunk. It is marked by a bronze plaque on a stone base. Located on Route 47, north of its intersection with Route 116. Reference: Illick, 1927. *Common Trees of Massachusetts*, p. 12.

West Springfield Sycamore. CBH 19.2', ht. 102'. (measurements by Leverett). West Springfield.

Massachusetts National Champions

Northern Red Oak. National champion 1983-1986: CBH 26' 6", ht. 98', spr. 102'. 1999-2001: CBH 28' 6", ht. 134', spr. 81'. Buckland, Franklin Co. Comments: The claimed height of 134 feet is excessive for the northeast, and the increase from 98 feet suggests an error due to false top triangulation. Out-pointed by a New York coppice with three well-separated trunks.



Hatfield Sycamore in winter. Photo by Bob Leverett.

Massachusetts State Champions

Eastern Cottonwood. State champion. CBH 23.3', ht. 86.9'. Located in a small park on Columbus Street, Pittsfield.

RHODE ISLAND

Great Trees of the Past

Sycamore. A sycamore that fell in 1869 was said to be 32 feet in girth. The location is unknown. Reference: Lamb, Frank H., 1939. *Book of the Broadleaf Trees*, p. 249.

CONNECTICUT

Great Trees of the Past

Wethersfield Elm. American elm. National champion: CBH 30' 3", ht. 97', spr. ca. 140'. Measurements 1930: CBH 29' 6", ht. ca. 100', spr. ca. 150'. Located in Wethersfield. Damaged by the hurricane of 1938. Died 1950. Reference: Lamb, Frank H., 1939. *Book of the Hardwood Trees*, p.193 (photo). Reference: Grimm, William C., 1967. *Familiar Trees of America*, p. 132. Comments: A massive tree with seven leads above a compact

but well-defined trunk. This was one of the largest of America's great elms. Peattie (1950), p.240, states the girth at breast height was 41 feet, an obvious error.

Charter Oak. White oak. Historic tree, very old and hollow. Said to have been 33 feet in circumference at the base. Blown down August 21, 1856. In 1907, a monument was erected nearby at Charter Oak Avenue and Charter Oak Place, in Hartford. Artifacts are on display in the State Library. Reference: Randall, Charles Edgar and Henry Clepper, 1976. Famous and Historic Trees. The American Forestry Association, pp. 4, 6 (image of well-known painting).

Ledyard Oak. White oak. Circumference 21 feet, spread 105 feet. Estimated to be 400 years old. Located in Ledyard. Tree and 11 acres were deeded to the town ca. 1960. The tree died in 1968. Reference: "From an Acorn," Maryland Living, Baltimore News American, 6/8/1969.

Connecticut National Champions

Butternut. National champion 1998: CBH 21' 7", ht. 78', spr. 76'. State champion list as (1998) CBH 21' 7", ht. 78', spr. 77'. Chester. Reference: Davey/American Forests calendar, September 2004 (photo). Comments: From the photograph, this tree forks 10-12 feet up, with a deep furrow extending to the ground. Despite the high fork, it appears this tree is double-hearted, perhaps of coppice origin.

American Elm. Dead. National champion, April 1941: CBH 28' 0", ht. 147', spr. 97'. Middletown. Presumed dead. Reference: American Forests, Jan/Feb 1990. National Register of Big Trees, p. 4.

Sugar Maple. National champion 1984-1990: CBH 22' 5", ht. 91', spr. 80'. National champion 1994: CBH 22' 5", ht. 58, spr. 72'. Norwich. Comments: Note 36% reduction in height measurement.

Black Oak. National champion 1989-1998 CBH 25' 8", ht. 84' spr. 95'. 1999-2001: CBH 26' 10", ht. 86', spr. 105'. New Gate Road, East Granby. Reference: American Forests, National Register of Big Trees, February 1992, p. 10 (photo). Reference: American Forests, National Register of Big Trees, Winter 1996, p. 26 (photo). Comments: Although the crown of this tree gives no suggestion of great age, the thick-barked trunk flares to a surprisingly great circumference. The trunk may be hollow, thereby stimulating the exceptional girth.

Northern Red Oak. National champion 1965-1966: CBH 26' 4", ht. 78', spr. 104'. State champion list as (1998) CBH 27' 9", ht. 68', spr. 61'. Ashford.

Connecticut State Champions

Eastern Cottonwood. State champion list as (1997) 20' 10", ht. 108', spr. 114'. Greenwich.

Silver Maple. State champion list as (1986) CBH 23' 11", ht. 81',

spr. 99'. Ridgefield.

White Oak. State champion list as (1998) CBH 22' 6", ht. 79', spr. 108', pts. 370. West Hartford.

Pinchot Sycamore. (Gifford Pinchot Sycamore). Largest American sycamore in Connecticut. CBH 27.0', ht. 96.6' (measurement by Leverett). State champion list as (1998) CBH 27' 0", ht. 95', spr. 140', pts 454. Located off Route 85, on the east bank of the Farmington River, in Simsbury. Tree dedicated in 1965 in honor of Gifford Pinchot, who was born in Simsbury in 1865. Reference: Randall, Charles Edgar and Henry Clepper, 1976. Famous and Historic Trees. The American Forestry Association, p. 63. Comments: This tree has four very large spreading limbs and a central lead above about eight feet of massive trunk. The largest limb is 13' in circumference.

Tuliptree. State champion list as (1991) CBH 24' 5", ht. 104', spr. 72'. Pomfret.



Dewey-Granby Oak. Photo by Dale Luthringer.

Other Connecticut Great Trees

Dewey-Granby Oak. White oak. CBH 19 feet, height 72 feet (measured by Leverett, Beluzo & Knuerr 3/26/2001). Maximum spread said to be 130 feet. Day Street, Granby,

Hartford Co. Comments: This stocky oak is significant for its age and picturesque low-spreading limb structure, with at least two large limbs resting on the ground.

Ashford Oak. Large red oak said to be 26' in circumference. Located on Giant Oak Lane, which is off Ct. Rte 44, 3.5 miles east of Ct. Rte. 195.

Little Pinchot Sycamore. American sycamore. CBH 19.3', ht. 95.0' (measurement by Leverett). Tree about 100 yards from Pinchot Sycamore. Simsbury.

NEW YORK

Great Trees of the Past

American Chestnut. Girth (1921) 26 feet. Located at Esopus (ca. 15 miles NNW of Poughkeepsie). Tree died before 1927. Reference: Illick, Joseph S. 1927. Common Trees of New York, p.12.

Gowanda Elm. American elm. Said to have been New York's largest tree. Circumference (1921) 34' 2". Circumference reputed to have been 39 feet near the ground, and the trunk clear for fifty feet, where it was 20 feet in girth. Height 100 feet. Estimated to contain 17,000 board feet of lumber. Located in Gowanda, Cattaraugus County. Tree now dead. Reference: Illick, Joseph S. 1927. Common Trees of New York, pp. 10, 11. Reference: Lane, Ferdinand C. 1953, The Story of Trees, p. 66. Reference: Grimm, William C. 1967. Familiar Trees of America, p. 132. Comments: Although the elevation of the 1921 measurement is unknown, the amount of clear trunk and board footage makes this one of the largest known elms.

Markham Elm. American elm. Reputed to be nearly 50 feet in circumference and 654 years old (before 1950). Also a claim of 40 feet. More reliably, Illick lists the girth (1921) as 18 feet. Owner: W. G. Markham, Avon, Livingston County. Tree is presumed dead. Reference: Illick, Joseph S. 1927. Common Trees of New York, p. 11. Reference: Peattie, Donald Culross 1950. A Natural History of Trees, p. 240. Reference: Lane, Ferdinand C. 1953, The Story of Trees, p. 66. Comments: It appears the reputation of this tree was due to measurements taken around the perimeter of a large basal flare.

American Elm. Circumference (1921) 25 feet (only 3 inches above grade). Located at Geneva, Ontario County. Tree is presumed dead. Reference: Illick, Joseph S. 1927. Common Trees of New York, p. 11.

American Elm. Circumference (1921) 24' 10" (3 feet up). Located at Italy Hollow. Reference: Illick, Joseph S. 1927. Common Trees of New York, p. 11. Tree is presumed dead.

American Elm. Circumference (1921) 24' 7". Located in Syracuse, Onondaga County. Reference: Illick, Joseph S. 1927. Common Trees of New York, p. 12. Tree is presumed dead.

American Elm. Circumference (1921) 22' 5". Located in Livonia, Livingston County. Reference: Illick, Joseph S. 1927.

Common Trees of New York, p. 12. Tree is presumed dead.

American Elm. Circumference (1921) 21' 6". Located at Bath, Steuben Co. Reference: Illick, Joseph S. 1927. Common Trees of New York, p. 12. Tree is presumed dead.

American Elm. Circumference (1921) 21 feet. Located in Savona, Steuben County. Reference: Illick, Joseph S. 1927. Common Trees of New York, p. 12. Tree is presumed dead.

American Elm. Circumference (1921) 20 feet. Located in Gerry, Chautauqua County. Reference: Illick, Joseph S. 1927. Common Trees of New York. Tree is presumed dead.

Washington Oak. Chestnut oak. This ancient tree is said to have been seven feet in diameter. George Washington is said to have mounted his horse here in 1783 en route to his army at Fishkill. The tree stood on the east bank of the Hudson River at Presqu'ile, near Fishkill-on-the-Hudson. Reference: Mathews, F. Schuyler 1923. Familiar Trees and Their Leaves, p. 155. Reference: Collingwood, G. H., and Warren D. Brush, 1947. Knowing Your Trees, The American Forestry Association, p. 224. Reference: Collingwood, G. H., and Warren D. Brush, 1974. Knowing Your Trees, The American Forestry Association 1974, p. 238. Comments: From the above references, the tree appeared to be living in 1947, but dead by 1974.

Wadsworth Oak. Swamp White Oak. Historic tree, site of 1797 treaty with Seneca Indians. The short trunk had a circumference of 27 feet in 1851. The height was 100 feet. Located on the Wadsworth estate, one mile from the village of Geneseo, Livingston County. The tree was located on the east bank of the Genesee River. It was destroyed in a flood in 1857 due to erosion of the bank of the river. A section of the trunk has been preserved and is displayed behind the Geneseo Historical Museum. Reference: Mathews, F. Schuyler 1923. Familiar Trees and Their Leaves, p. 152. Reference: Illick 1927, Common Trees of Massachusetts, p. 66. Reference: Collingwood, G. H. and Warren D. Bush, 1947. Knowing Your Trees, The American Forestry Association, p.220. Reference: Peattie, Donald Culross 1950. A Natural History of Trees, p. 206. Reference: Internet - "The Big Tree Inn," etc.

White Oak. Girth (1921) 21' 6". Located at Stony Brook, Suffolk County, Long Island. Reference: Illick, Joseph S., 1927. Common Trees of New York, p. 11.

Eastern White Pine. It is said that a fallen specimen at Meridith, New York measured 247 feet in length. Reference: *American Forests*, Spring 2000, p. 38. Comments: No other details are available. No authenticated records indicate that such heights were actually attained.

Black Walnut. An immense black walnut, said to be "the biggest tree east of the Rocky Mountains," stood on the banks of Walnut Creek, at the town of Silver Creek, Hanover Township, Cattaraugus County. By one account it was 27 feet in circumference, 9 feet in diameter, and 70 feet to the first branch. By another, it was 31 feet in circumference, and over 10

feet thick. It was blown down in 1822. A local grocer had a thirteen-foot section hollowed and fitted with a roof and floor for an addition to his store. A businessman bought the section in 1825, and exhibited it in Buffalo. It changed hands, was shown in New York City, and loaned to a museum in London, England, where it was lost in a fire. The original site, at Ward Avenue and Route 20, is marked by a millstone placed by the DAR in 1928. Reference: Internet. "Silver Creek History" Reference: Internet. "Fun Facts, Cattaraugus County"

New York National Champions

White Ash. National champion 1983-2002. 1990: CBH 25' 4", ht. 95', spr. 82'. 2002: CBH 25' 4", ht. 95', spr. 82'. Tony's Lobster & Steakhouse (1998); Montebello Restaurant, Palisades (2002). Reference: Davey/American Forests calendar, July 2003 (photo).

American Elm. National champion 1974-1978: CBH 26' 5", ht. 92', spr. 102'. Center White Creek. Presumed dead.

Black Locust. National champion 1974-2001: CBH 23' 4", ht. 96', spr. 92'. National champion 2001-2002: CBH 26' 0", ht. 94', spr. 68'. Dansville, Livingston County. Reference: *American Forests*, National Register of Big Trees, 1982, p. 46 (photo). Reference: Davey/American Forests calendar, July 2004 (photo). Comments: The 1982 photo suggests this is a double tree, perhaps a coppice, but forking well above breast height. It probably would not pass the slice test.

Chestnut Oak. National champion 1972-1982: CBH 21' 10", ht. 75', spr. 100'. 1990: CBH 22' 0", ht. 95', spr. 82'. Northport.

Northern Red Oak. National champion 1987-1996: CBH 30' 10", ht. 66', spr. 89'. 1997: CBH 27' 6", ht. 66', spr. 89'. Rochester, Monroe County. Reference: Davey/American Forests calendar, September 1997 (photo). Comments: This tree is a backyard coppice with three well-spaced stems and no defined trunk.

Northern Red Oak. National champion 2001-2002: CBH 33' 9", ht. 80', spr. 102'. Apparently located on a residential property. Rochester, Monroe County. Reference: Internet (three photographs). Comments: This massive tree appears to be a double-trunked coppice, probably forking above breast height, with the larger trunk forking again perhaps 12-15 feet up.

New York State Champions

American Basswood. State champion list as CBH 20' 7", ht. 76', spr. 56'. Delaware Co.

Butternut. State champion list as CBH 21' 6", ht. 61', spr. 104'. Oneida Co.

Eastern Cottonwood. State champion list as CBH 30' 5", ht. 98', spr. 100'. Rennselaer Co.

Red Maple. State champion list as CBH 21' 3", ht. 135', spr.

108'. Madison Co.

Silver Maple. State champion list as CBH 22' 0", ht. 110', spr. 112'. Cattaraugus Co.

American Sycamore. CBH 26.2', ht. 114.2' (measurements by Leverett). Average spread 144'. Pine Plains, Dutchess County.

NEW JERSEY

Great White Oaks, Past and Present

Joyce Kilmer Oak. White oak. Large open-grown tree with symmetrical crown, spread over 100'. Often said to be the 1906 inspiration for Kilmer's 1913 poem. Rutgers University, New Brunswick. The tree died, and was taken down in September 1963. Reference: *Life* magazine, 8/30/1963 (photo). Reference: "Kilmer's Tree Coming Down," *Evening Sun* (Baltimore), 9/16/1963.

Tatum Oak. White oak. CBH 25 ½ feet, ht. 87', spr. 121'. The Tatum Oak died before 1950. Located at Mantua Grove, West Deptford Township. Reference: Peattie, Donald Culross 1950. *A Natural History of Trees*, p. 200.

White Oak. 27 feet in girth at 3 feet above grade. This old tree blew down in 1869. It was located at the White Horse Tavern in Trenton. Reference: Lamb, Frank H. 1939. *Book of the Broadleaf Trees*, p. 153.

White Oak. CBH 24 feet. Evesham. (see Frank H. Lamb, p. 153).

White Oak. CBH 22' 7" (1998). Somerset Co. Reference: Internet. Garden State EnviroNet.

Salem Oak. CBH (1996-98) 21' 6", ht. 61', spread (east-west) 86'; spread (north-south) 122', pts. 345. This tree, located at Friends' Cemetery, in Salem, in Salem County, is said to be the site of a treaty with the Indians, and at least 400 years old. Reference: Lamb, Frank H. 1939. *Book of the Broadleaf Trees*, pp. 112 (photo), 153. Reference: Peattie, Donald Culross, 1950. *A Natural History of Trees*, p. 200. Reference: Grimm, William C., 1967. *Familiar Trees of America*, p.114. Reference: Internet. Salem County Historical Society. (photographs & text). Reference: Internet. Oak Tree Chapter NSDAR. (illustration & text). Comments: This handsome tree has a single trunk to some height, and a symmetrical crown.

White Oak. Over twenty feet in girth. Quaker meeting house, Crosswicks. Reference: Lamb, Frank H. 1939. *Book of the Broadleaf Trees*, p. 153.

Mercer Oak. White oak. Princeton Battlefield Park. Named for General Hugh Mercer, who was fatally wounded in the Battle of Princeton, 1/3/1777, and is said to have rested by the tree. Dimensions unknown. The tree, greatly decayed, collapsed 3/3/2000. Reference: Internet. Princeton Battlefield Park.

New Jersey State Champions

White Ash. CBH 25' 0" (1998 list). Morris Co. Reference: Internet. Garden State EnviroNet.

White Ash. CBH 20' 2" (1998 list). Camden Co. Extinct. Reference: Internet. Garden State EnviroNet.

Baldcypress. CBH 21' 11" (1998 list). Salem Co. Reference: Internet. Garden State EnviroNet.

American Basswood. CBH 20' 1" (1998 list). Monmouth Co. Extinct. Reference: Internet. Garden State EnviroNet.

Silver Maple. CBH 25' 0" (1998 list). Somerset Co. Reference: Internet. Garden State EnviroNet.

Northern Red Oak. CBH 20' 1". Near Musconetcong River, Mansfield Township, Warren Co. Reference: Internet. New Jersey forest service.

American Sycamore. CBH 23' 1" (1998 list). Warren Co. It appears this may be the General Washington Sycamore. Reference: Internet. Garden State EnviroNet.

Tuliptree. CBH 20' 0" (1998 list). Mercer Co. Reference: Internet. Garden State EnviroNet.

Other New Jersey Great Trees

Black Walnut. "24 feet around the trunk." Near Hanover Neck, Morris County. Reference: Lane, Ferdinand C. 1953, *The Story of Trees*, p. 67. Comments: Lane referred to the tree as if existing in 1953, but such is uncertain, and no other references have been found.

The General Washington Sycamore. American sycamore. CBH 21' 8". Located on Route 521, 1.5 miles south of Hope, in Warren County. Washington said to have rested here in July 1782. Reference: Randall, Charles Edgar and Henry Clepper, 1976. *Famous and Historic Trees. The American Forestry Association*, p.16.

PENNSYLVANIA Great Trees of the Past

Grant Noll Buttonwood. This immense open-grown tree stood in front of a large farmhouse west of Rohrerstown, Lancaster County. CBH ca. 27 ½ feet, height 105 feet. Circumference 22 feet at five feet above grade. Maximum spread 138 feet. A huge low limb was 85 feet in length, horizontally, the stem reaching to within two feet of the ground. Once considered Pennsylvania's most massive tree. Now dead. Reference: *Woman's Day* magazine, ca. 1956 (description and photograph). Reference: Grimm, William C., 1967. *Familiar Trees of America*, p. 155.

Shackamaxon Elm. American elm. Penn's Treaty Elm; signed treaty with Indians here. Girth 24 feet. The tree was blown

down 3/3/1810, aged 283 years. The site is marked by a large stone monument. Reference: Wertz and Callender, 1981. *Penn's Woods 1682-1982*. pp. 30, 31.

American Elm. CBH 24' 6". Berks Co. Reference: Wertz and Callender, 1981. *Penn's Woods 1682-1982*. Tree is presumed dead.

The Lone Sentinel. American elm. CBH 20' 2", ht. 90', spr. 135 x 95 (115' av. spr.). Also claimed to be 22' 6". Recognized as a state champion in 1983. The fall of a six-ton limb revealed massive decay, and the entire crown was removed in Sept. 1998. Located in Bayne Park, Bellevue, Allegheny County. Reference: Internet, including 1998 newspaper articles.

Catalpa. Circumference 24 feet, height 70-80 feet. Located on a small farm owned by Robert Smith in Center Moreland, near Scranton. Tree was measured for an unknown survey (perhaps Penn's Woods) in the 1970's. It was blown down in July 2003. Reference: E-mail from Mr. Smith to the Eastern Native Tree Society, 12/7/2003.

Bur Oak. CBH 21' 0". Union Co. Tree dying 1982. Reference: Wertz and Callender, 1981. *Penn's Woods 1682-1982*. Tree is presumed dead.

Bur Oak. Circumference at grade 39' 9"; diameter at breast height 7 feet, according to Dr. Joseph S. Illick in *Pennsylvania Trees*. Located near Neff's Mill, Huntingdon County. Destroyed in storm, 1924. Reference: Grimm, William Carey, 1957. *The Book of Trees*. p. 176. Reference: Grimm, William C., 1967. *Familiar Trees of America*, p. 118.

Eastern White Pine. Girth 37 feet, height 200 feet. "Felled near Cedar Run." Reference: Lane, Ferdinand C., 1953. *The Story of Trees*, p.67. Comments: Lane gives no other details. The girth seems excessive, even at grade.

National Champions of Pennsylvania

White Ash. National champion 1954-1966: CBH 22' 3", ht. 80', spr. 82'. CBH 20' 7" (Wertz & Callender, 1981). Haverford State Hospital, Glenn Mills, Delaware Co. Reference: Wertz and Callender, 1981. *Penn's Woods 1682-1982*.

American Basswood. National champion 1993-2002: CBH 24' 4", ht. 78', spr. 100. Montgomery Co. Reference: Davey/American Forests calendar, February 1998 (photo). Reference: Davey/American Forests calendar, April 2004 (photo). Comments: This low-branched specimen appears to be a coppice with no real trunk, and not a valid champion.

Chinquapin Oak. National co-champion 1989-1990: CBH 20' 5", ht. 84', spr. 120'. CBH 19' 10" (Wertz & Callender, 1981). Old State Road, Berks Co. Reference: Wertz and Callender, 1981. *Penn's Woods 1682-1982*.

Swamp White Oak. National champion 1969-1971: CBH 21' 6", ht. 65', spr. 80'. Luzerne County.

Other Pennsylvania Great Trees

Holland Hall Farm Ash. White ash. CBH 21' 9". 150 Middle Holland Road, Holland, Northampton Township, Bucks County. Reference: Wertz and Callender, 1981. Penn's Woods 1682-1982, pp. 48, 49 (photo).

White Ash. CBH 20' 11". Durham Road (Route 413, north of Wrightstown, Bucks County. Poor condition. Reference: Wertz and Callender, 1981. Penn's Woods 1682-1982, p. 53.

American Basswood. CBH 22' 8". Montgomery Co. Reference: Wertz and Callender, 1981. Penn's Woods 1682-1982.

Northern Red Oak. CBH 20' 1". Erie Co. Reference: Wertz and Callender, 1981. Penn's Wood 1682-1982.

Columbus Oak. White Oak. 327 Aquetong Road, at Squire Lane, Solebury Township, Bucks Co. CBH 19' 6". Height ca. 50 feet, spread ca. 100 feet. This is a very handsome tree with wide-spreading branches. Reference: Wertz and Callender, 1981. Penn's Woods 1682-1982, p. 51 (photo).

White Oak. CBH 20' 1". London Grove Village, West Marlboro Township, S. Chester Co. Reference: Wertz and Callender, 1981. Penn's Woods 1682-1982.

White Oak. Pennsylvania's largest white oak is said to be located on the Hanover Shoe Farms property, near the Adams-Hanover County line. Reference: Internet, January 2004.



Longfellow Pine. Photo by Edward Forrest Frank.

Longfellow Pine. Eastern white pine. CBH 11' 1.5", ht. 180.9' (measured by drop line, Blozan & Busch, 4/20/2002). This is the tallest tree in the northeast, and the third tallest in the eastern United States. Longfellow Trail, Forest Cathedral Natural Area, Cook Forest State Park, Clarion Co.

Mercersburg Sycamore. CBH 31.1', ht. 102', spread 122'. State champion 1993. Private property. Mercersburg, Franklin Co.

Reference: Internet. State list, "Big Trees of Pennsylvania," 1993.

Rodman Buttonwood. American sycamore. CBH 29' 4". 958 Flushing Road, Cornwells Heights, Bucks Co. Remnant of a double tree; the larger trunk has torn away. Hollow. Reference: Wertz, Halfred W., and M. Joy Callender, editors, 1981. Penn's Woods 1682-1982, pp. 43 - 45 (photo).

Bolton Farm Sycamore. CBH 23' 7". 85 Holly Drive, Holly Hill Section, Levittown, Bristol Township, Bucks Co. Now reduced to a tall stump with some sprouts. Reference: Wertz and Callender, 1981. Penn's Woods 1682-1982, pp. 45, 46 (photo).



Sycamore on Brandywine Battlefield, PA. Photo by Scott Wade.

Lafayette Sycamore. Brandywine Battlefield Park, Chadds Ford, Delaware Co. Old tree on Revolutionary War battlefield. CBH 18' 4", ht. 111', spr. ca. 120'. Reference: Book of the Broadleaf Trees, by Frank H. Lamb, 1939. p. 249. Reference: Internet.

Tuliptree. CBH 20' 6". South of Liverpool, Perry Co. Reference: Wertz and Callender, 1981. Penn's Wood 1682-1982.

MARYLAND

Great Trees of the Past

Carmichael Ash. White ash. Maryland champion 1956 (CBH 18' 2", ht. 98', spr. 112'), 1973 (CBH 19' 3", ht. 116', spr. 93'). 2002 Md. extinct list (CBH 20' 0", ht. 116', spr. 93'). Wye Institute, Carmichael, Queen Anne's Co. Owner (1956) Leon Andrus, "Cheston-on-Wye." Reference: Besley, Fred W., 1956. Big Tree Champions of Maryland. p. 14 (photo). Reference: "Trees that Are Maryland Champions," *The Sun Magazine*, Baltimore 8/18/1956. p.10 (photo). Reference: Yingling, Earl L., 1973. The Big Tree Champions of Maryland. p. 4 (photo). Comments: The Cheston-on-Wye estate was noteworthy for once having nine Maryland champion trees.

American Chestnut. A huge chestnut cut in 1895 by a tenant on the farm of D. H. Zile was eleven feet in diameter. The trunk and larger limbs were dynamited, and the tree yielded fifteen cords of firewood. It was said to be "the biggest tree in the county, if not the state." Located near Taylorsville, a community on South River, Anne Arundel County. Reference: "One Hundred Years Ago." *The Baltimore Sun*, 5/21/1995, quoting from an article in the *American Sentinel* of 5/18/1895. (per Internet)

Buckeystown Elm. American elm. 1990 Md. list. Md. champion 1999 (CBH 20' 0", ht. 91', spr. 102'). 2002 extinct list (CBH 20' 0", ht. 91', spr. 102'). Owner: Bill Starkey, Buckeystown, Frederick Co.

Chestertown Elm. American elm. Maryland champion 1990 (CBH 20' 0", ht. 129', spr. 94'). Washington College, Chestertown, Kent Co. Reference: Prenger and Brooks (editors). The Big Tree Champions of Maryland 1990. p. 44 (photo). Comments: The height seems exaggerated, probably by false-top triangulation. Succeeded by a smaller tree by 1999, presumed dead.

Myrtle Grove Black Oak. State champion 1956: CBH 21' 2", ht. 72', spr. 95', pts. 349.8. Owner (1956) Robert Goldsborough Henry, Myrtle Grove, Easton, Talbot Co. Reference: Besley, Fred W., 1956. Big Tree Champions of Maryland. p. 30 (photo). Comments: This was a well-shaped tree. It was replaced in 1973 by a slightly smaller (344 pts.) Montgomery County tree, suggesting the Myrtle Grove tree had died.

Myrtle Grove Chestnut Oak. Md. champion 1933 (CBH 19' 2", ht. 93', spr. 138'), 1937 (CBH 19' 10", ht. 98', spr. 136'). National champion 1956-1966 (CBH 22' 3", ht. 95', spr. 108', pts. 389). Owner (1933) W. Laird Henry; (1937-1966) Robert G. Henry, Myrtle Grove, Easton. Comments: A smaller New York tree (362 pts.) was national champion in 1978, suggesting the Myrtle Grove tree had died.

Queenstown Chinquapin Oak. 2002 Md. extinct list: CBH 20' 0", ht. 118', spr. 106'. Owner: F. Jelke III, Queenstown, Queen Anne's Co.

Tuckahoe Oak. Overcup oak. National co-champion 1973-1982:

CBH 21' 5", ht. 116', spr. 118'. Md. champion 1983 (CBH 22' 7", ht. 115', spr. 118'), 1990 (CBH 22' 9", ht. 130', spr. 118). Tuckahoe State Park, Queen Anne, Caroline Co. Tree now dead. Reference: *American Forests*, National Register of Big Trees, 1978, p. 35 (photo). Comments: This tree had a clear massive trunk for nearly thirty feet. Its status caused the state to build a smaller pond than first proposed. The tree stood in an often-flooded swamp above the pond. It was first listed as the national champion swamp white oak, until its identification was corrected. A wooden overlook was provided for a close view of the tree.

Pikesville Red Oak. Northern red oak. Md. champion 1973 & 1983 (CBH 22' 2", ht. 121', spr. 110'). 2002 Md. extinct list (same dimensions). Owner (1973-1983): Mrs. Selma Caplin, 6807 Cross Country Blvd., Pikesville, Baltimore Co.

Wye Oak White oak. National champion 1940-2002. Wye Oak State Park, Maryland Route 662, Wye Mills, Talbot County. Measurement 1933, 1937, 1956: CBH 27' 8", ht. 95', spr. 165'. 1973: CBH 32' 2", ht. 108', spr. 160'. 1990: CBH 31' 2" ht. 79', spr. 102'. 2002: CBH 31' 10", ht. 96', spr. 119'. The base was hollow, and the tree had an unusually great basal flare. The tree lost four immense limbs. The largest, six feet in diameter, fell in 1956. The spread of 165 feet (before 1956) was probably a record for the species. Although some live oaks have had a greater maximum spread, their branches often rest on the ground. The Wye Oak was felled by a windstorm on 6/6/2002. Reference: *American Forests*, September 1955, p.33 (photo). Reference: Besley, Fred W., 1956. Big Tree Champions of Maryland. p. 48 (text/photo). Reference: Randall, Charles Edgar and Henry Clepper, 1976. Famous and Historic Trees. The American Forestry Association, pp. 82 (photo), 83. Reference: Preston, Dickson J., 1972. Wye Oak, the History of a Great Tree. Cambridge, Md. 135 pp. Reference: Davey/American Forests calendar, October 1990 (photo). Reference: Davey/American Forests calendar, April 1997 (photo). Comments: Although some complained that the flaring base gave the tree an unusual advantage, the circumference at 7.5 feet (immediately below the site of the largest limb) was a significant 22' 3.5" (Rucker, 11/27/1969). Heights of 95', 102', 108', etc. were exaggerated (false-top triangulation). The height was actually 87 feet (Rucker & Yingling, dropline 4/5/1989). The reputed age of 440 years was probably exaggerated. The tree showed a rapid increase in CBH over the years, although it was due, in part, to the incorporation of a knee into the trunk mass.

St. Paul's White Oak. Maryland's second-largest white oak. CBH (1948) 24' 6", ht. (1932) 86', spr. (1948) 127'. St. Paul's Episcopal Church Cemetery, Fairlee, Kent County. This tree was blown down during hurricane Hazel, in October 1954. Reference: Peattie, Donald Culross 1950. A Natural History of Trees, p. 201. Reference: Preston, Dickson J., 1972. Wye Oak; The History of a Great Tree, pp. 89-91 (text & 1915 photo).

Richards Oak. White oak. Second-largest Maryland white oak 1954-1986. Beside U.S. Route 1, near Rising Sun, Cecil Co. Saved by application of first roadside tree law. CBH (1981) 24'

2", ht. (1965) 85', spr. (1965) 115'. Trunk hollow. Died. Cut down ca. Feb. 1986. Reference: Besley, Fred W., 1956. Big Tree Champions of Maryland. pp. 51, 52 (photo). Reference: Randall, Charles Edgar and Henry Clepper, 1976. Famous and Historic Trees. The American Forestry Association, p. 71. Reference: Preston, Dickson J., 1972. Wye Oak; The History of a Great Tree, pp. 88-89 (text & photograph). Reference: Yingling, Earl L., 1973. The Big Tree Champions of Maryland. pp. 44 (photo), 45.

North Glen Avenue Oak. Third largest Maryland white oak, 1954-1974. Measurement (1949) Circ. (at 5 ft.) 21' 9", ht. 88', spr. 127'. 303 North Glen Avenue, Annapolis, Anne Arundel County. Struck by lightning 1948, decayed, fell 9/3/1974. This tree had a single massive trunk above a typical base. The trunk divided into numerous large limbs perhaps fifteen feet up. The low hollow stump was preserved for some years. Site now occupied by a new house. Reference: "Old Landmark Needs a Doctor," *The Evening Capital*, Annapolis, 11/2/1949 (article & photo). Reference: "Ancient Tree Heralds a New Spring," *The Evening Capital*, Annapolis, 4/8/1958 article & photo. Reference: "City White Oak in Hall of Fame," *The Evening Capital*, Annapolis, 8/20/1974, pp. 1 (photo), 10. Reference: "Fall of an Old Oak Tree," *The Evening Capital*, Annapolis, 9/3/1974, pp. 1 (photo), 10.

Three Mile Oak. Presumably a white oak. Historic tree about six feet in diameter, located three miles from Annapolis, Anne Arundel County. A delegation met George Washington here on 12/17/1783, en route to Annapolis (then the U.S. capitol) to resign his commission. A piece of the trunk is preserved at Anne Arundel Community College. The tree was struck by lightning, became hollow, was killed by fire, and finally blew down on 5/22/1909. Reference: Besley, Fred W., 1956. Big Tree Champions of Maryland. p. 54 (photo of commemorative marker and piece of trunk). Reference: "Needed: Proper Marker," *The Evening Capital*, Editorial, Annapolis, 6/4/1964. Reference: Mellin, John A. "Three Mile Oak depredations," *The Capital*, Annapolis, 11/29/1984. Reference: "AACC Gets Remains of Historical Tree," *The Capital*, Annapolis, 10/12/1988. Reference: "Three Mile Oak Gets Uprooted to New Home," *The Capital*, Annapolis, 10/16/1988.

Forest Oak. White oak. Historic tree, said to be April 1775 meeting place of General Braddock and Governor Sharpe. CBH nearly 16'. Located in front of Bell Atlantic building, 5 North Frederick Avenue (Route 355), Gaithersburg. Blown down 6/26/1997. Reference: Randall, Charles Edgar and Henry Clepper, 1976. Famous and Historic Trees. The American Forestry Association, p. 31.

Treaty Oak. White oak. Reputed to be nearly 400 years old, site of Indian treaty. Near state road, Church Creek, Dorchester County. Died 1957. Reference: Besley, Fred W. 1956. Big Tree Champions of Maryland. pp. 51, 53 (photo).

Cedar Park Oak. Southern red oak. Md. champion 1933 & 1937 (as a black oak CBH 21' 10", ht. 98', spr. 123'), 1956 (CBH 24' 4", ht. 120', spr. 117'), 1973 (CBH 27' 3", ht. 128', spr. 149'), 1983

(CBH 28' 0", ht. 135', spr. 141'), 1990 (CBH 27' 7", ht. 104', spr. 135'). National champion 1951-1996 (1966 CBH 24' 1") Later CBH 27' 7", ht. 104', spr. 135'. Located at "Cedar Park," a historic estate on Cumberstone Road, Harwood, Anne Arundel County. Owner (1973): Eveleth Bridgman (now deceased). This tree had a handsome single trunk that although outwardly sound, split and collapsed 9/16/1998. It was not hollow. Reference: Besley, Fred W., 1956. Big Tree Champions of Maryland. p. 35 (photo). Reference: *Gardenews*, October 1956, p. 4 (photo). Reference: *American Forests*, May 1966, p. 27 (photo as cherrybark oak). Reference: Yingling, Earl L., 1973. The Big Tree Champions of Maryland. p. 22 (photo). Reference: Davey/American Forests calendar, December 1994 (photo). Reference: Davey/American Forests calendar, July 1997 (photo). Reference: *American Forests*, Spring 1998, p. 60 (photo). Reference: "Giant Harwood Oak Succumbs to Age," *The Capital*, Annapolis 9/17/1998. Comments: This was a very fast growing specimen. The 1990 CBH was highly inaccurate, and did not reflect the actual growth rate. A careful measurement by Rucker on 5/18/1991 showed a CBH of exactly 30' 0". The tree ("near Cumberstone") was also listed as the national champion cherrybark oak from 1954 to 1966 (CBH 24' 1", ht. 110', spr. 80'). Despite a lesser spread measurement, the CBH and photograph match the CBH and 1956 photographic details of the champion southern red oak.

Franklin's Oak. Southern red oak. 1933 & 1937 Maryland champion (CBH 23' 5", ht. 105', spr. 129'). Owner (1933, 1937): J. Harris Franklin, Sudley, Anne Arundel Co. This tree is presumed dead. Reference: Besley, Fred W., 1956. Big Tree Champions of Maryland, p. 6. Comments: It appears Franklin's tree was misidentified as a black oak in Maryland's first big tree competition of 1925, when it had a CBH of 23' 2".

Myrtle Grove Basket Oak. Swamp chestnut oak. 1956 National champion (CBH 21' 3", ht. 97', spr. 117'). 1956 Md. champion (CBH 21' 10", ht. 72', spr. 95'). 1973 Md. champion & 1974-1982 national champion: CBH 22' 7", ht. 122', spr. 123'. Owner (1956) Robert Goldsborough Henry, "Myrtle Grove." Owner (1973) John F. Donoho, Myrtle Grove, Easton, Talbot Co. Reference: Besley, Fred W., 1956. Big Tree Champions of Maryland. p. 29 (photo). Reference: *American Forests*, National Register of Big Trees, 1978, pp. 34-35 (photo). Reference: "Storm Splits Champion Oak," *The Evening Sun*, Baltimore, 10/27/1982. Comments: This was a magnificent tree with a full trunk. It was reported to have been split in two by a fierce storm in October 1982.

Bowlingly Willow Oak. National champion 1954-1966: CBH 21' 2", ht. 118', spr. 106'. National co-champion 1972-1982: CBH 23' 6", ht. 125', spr. 106'. Maryland champion 1956, 1973, 1983 (CBH 25' 3", ht. 135', spr. 103'). Md. 2002 extinct list: CBH 25' 3", ht. 135' spr. 103'. Owner (1956, 1973) W. Randolph Burgess, Bowlingly Estates, Queenstown. Owner (2002): National Trust for Historic Preservation, Queenstown, Queen Anne's Co. Reference: Besley, Fred W., 1956. Big Tree Champions of Maryland. p. 37 (photo). Reference: "National Champion Trees," *The Sun Magazine*, Baltimore, 7/1/1973. p. 9 (photo). Comments: The photograph in the 1956 publication

shows some low limbs, but the 1973 photo does not. The earlier photo may have been taken by Besley in the 1920's, suggesting that many low limbs were lost over the years, leaving a tree with a high crown by 1973.

Eastern White Pine. National champion April 1941. Maryland champion 1933, 1937. CBH 11' 6", ht. 159', spr. 40'. Located near Merrill, in the Savage River Valley of Garrett County. Owner 1933, 1937: John Merrill. Replaced by a smaller tree in Howard County in 1956, the Merrill tree is presumed dead. Reference: Besley, Fred W. 1956. *Big Tree Champions of Maryland*, p. 5. Reference: *American Forests* Jan./Feb. 1990. National Register of Big Trees, p.4. Comments: This tree is significant for long being the tallest tree recorded in Maryland. It was recently exceeded by two tuliptrees accurately measured by laser at Belt Woods, in Prince George's County, the taller tree being 159.9' in height.

Tulip Hill Poplar. Tuliptree. "Tulip Hill," a renowned five-part Georgian mansion was built at "Poplar Knowle" in the late 1700's. The 1983 Maryland champion is thought to have dated from the original grove. CBH 23' 2", ht. 155', spr. 82', pts. 454. It was replaced by a smaller tree, so is presumed dead. Owner: Lewis R. Andrews (deceased 1990, age 98), "Tulip Hill," Muddy Creek Road, Harwood, Anne Arundel County. Comments: Depending on the topography and competition, the 155' height seems possible, but not probable.

Mount Pleasant Poplar. Tuliptree. Girth 20', ht. 98', spr. 87'. Hollow, taken down ca. February 2003. Mount Pleasant Farm, east of Route 99, near Woodstock Road, Woodstock, Howard County. 1976 state-listed bicentennial tree. Reference: *The Sun*, Baltimore, 1/12/2003, pp. 1B (photo), 13B.

Liberty Tree. Tuliptree. Maryland's most historic tree. Last of the Liberty Trees from the Revolutionary era. Md. champion 1933, 1937, 1956. National champion/co-champion 1949-1966: CBH 26' 6", ht. 83', spr. 98'. St. John's College Campus, Annapolis, Anne Arundel County. Max. CBH 26' 11.0" (Rucker, 1988, 1999); max. ht. 96' (1999); max. spread 117' (1937). Hollow, base filled with 55 tons of concrete ca. 1907. Slightly damaged by hurricane Floyd Sept. 1999, it was cut down Oct. 1999, thereby avoiding any liability for those involved. Reference: Lamb, Frank H., 1939. *Book of the Broadleaf Trees*. p. 225 (photo). Reference: *American Forests*, August 1955, p. 39 (photo). Reference: Besley, Fred W., 1956. *Big Tree Champions of Maryland*. pp. 50 (photo), 51. Reference: *The Liberty Tree*. Pamphlet, St. John's College. Reference: Yingling, Earl L., 1973. *The Big Tree Champions of Maryland*. pp. 42 (photo), 43. Reference: Randall, Charles Edgar and Henry Clepper, 1976. *Famous and Historic Trees*. The American Forestry Association, pp. 44 (photo), 46.

Pettibone Walnut. Black walnut. Tree cut 1906. It was cut slightly below grade, and took eleven days to fell, sawing through wood, earth and oyster shells. The butt of the log was trimmed down to nine feet in diameter. It was said to be the biggest tree ever seen in Baltimore, and attracted some crowds. The trunk was sold to the Stieff Piano Company, which

produced a special series of instruments with brochures featuring the tree. Owner: John E. Pettibone, Pleasant Plains Farm, mouth of Whitehall Creek, Anne Arundel County. Reference: McCauley, Mrs. Ida E.. "I Remember...A Tree It Took Eleven Days to Fell." *Baltimore Sun Magazine*, 9/23/1956. Article and photograph.

Walnut Spring Tree. Black walnut. A local landmark, located at the Walnut Spring Hotel, southeast corner of Patapsco Avenue and South Hanover Street, Brooklyn, Anne Arundel County. "The trunk is nearly 8 feet in diameter and more than 25 feet in circumference." The tree stood on a bluff overlooking the Patapsco River. It was sold to a furniture manufacturer, and was taken down in 1916. Reference: *Evening Capital*, Annapolis, 5/1/1916. Article reprinted in *Anne Arundel County History Notes*, a quarterly of the Ann Arundell County Historical Society, October 2001, p. 10.

Maryland White Oaks – The State Tree of Maryland

Wilmer Stone Oak. White oak. Maryland champion, 2002, succeeding the Wye Oak. Named for former owner, Wilmer Theodore Stone, educator and graduate of Johns Hopkins University and the Biltmore School of Forestry. Measurement by state 2002: CBH 20' 1", ht. 127', spr. 96', pts. 392.0. CBH 2002 by Fedor & Rucker: 20' 9.5". County recreation park, Jones Station Road, Arnold, Anne Arundel County. Reference: "Towering Oak" *The Evening Capital*, Annapolis, 7/26/1973. (photo). Reference: "Arnold Tree May Succeed Wye Oak." *The Capital*, Annapolis 6/20/2002. article & photo. Reference: "How Big is Arnold Tree?" *The Capital*, Annapolis, 7/14/2002. article & photo. Comments: This massive heavy-limbed tree stands in a very fertile woodland swale. A large section was blown out about 1988, reducing the spread of the tree.

Kent County Oak. White oak. Md. co-champion, 2002. CBH 20' 3", ht. 113', spr. 133', pts. 389.25. Owner: Jean Spears & Bill Kropp, Kent Co.

Adams Oak. White oak. Md. co-champion, 2002. CBH 22' 2", ht. 102', spr. 83', pts. 388.75. Owner: Katherine Aldrich Adams, Honeybee Hollow Farm, near Norrisville, Harford Co. Reference: "Wye Oak Successor Declared." *The Capital*, Annapolis, 6/9/2002. Comments: Tree hollow, stands near an old farmhouse.

Chevy Chase Oak. White oak. Apr. 2001 Montgomery Co. list: CBH 20' 7", ht. 103', spr. 58', pts. 364.5. Chevy Chase, Montgomery Co., Md. Owner: Mr. & Mrs. Richard Marsh. Reference: Internet. "The Champion and Potential Champion Trees of Montgomery County, Maryland, April 2001."

Linden Oak. White oak. Diameter "over six feet in width at waist level." Circumference at grade "just under 38 feet." Height 95', spread said to be 130-135'. Maryland bicentennial tree for Montgomery Co., 1976. There is a plaque near the tree. Located off Rockville Pike at Beach Drive (Grosvenor Lane), Rock Creek Stream Valley, Montgomery County. Reference:

Maryland Arborist Association, 1983. Press release re. pruning of tree on Arbor Day. Reference: Internet (as Linder Oak). Comments: Points roughly 360. Claimed to be Maryland's fourth largest white oak.

Barnesville Oak. White oak. CBH 20' 7", ht. 88', spr. 93', pts. 358.0. Barnesville, Montgomery Co. Owner: Victor & Linda Pope. Reference: Internet. "Champion and Potential Champion Trees of Montgomery County, Maryland, April 2001."

Hartig Oak. White oak. 1990 Md. list. CBH 20' 8", ht. 74', spr. 112', pts. 350.0. Owner 1966-1990: Franz J. Hartig, 524 Wilton Avenue, Ellicott City, Howard Co. Reference: "Younger, but Prettier Perhaps Than the Wye Oak," *The Sun Magazine*, Baltimore 8/18/1968, pp. 32-33 (article and photos). Comments: This is a very fine fully branched tree with a short clear trunk and sturdy structure. It stands on a large lawn in a residential area.

Holly Hall Oak. White oak. Wildman's 1933 list. 1990 Md. list: CBH 21' 1", ht. 72' spr. 92', pts. 348.0. Formerly on Holly Hall Farm. Owner (1990): Big Elk Mall, Elkton, Cecil Co. Reference: Randall, Charles Edgar and Henry Clepper, 1976. Famous and Historic Trees. The American Forestry Association, pp. 81 (sketch), 82. Reference: Wertz and Callender, editors, 1981. Penn's Woods 1682-1982, p.14 (photo).

Boudrie Oak. White oak. 1990 Md. list. CBH 21', ht. 71', spr. 84', pts 344.0. Owner (1990): K. B. Boudrie, Easton, Talbot Co.

Other Maryland Oaks Over Twenty Feet In Girth

St. Paul's Basket Oak. Swamp chestnut oak. Md. champion 1933 (CBH 20' 0", ht. 95', spr. 100'), 1983 (CBH 22' 2", ht. 116', spr. 108'), 1990 (CBH 22' 3", ht. 120', spr. 110'), 2002 (CBH 23' 7", ht. 120', spr. 90', pts. 425.5). Tree in churchyard, St. Paul's Episcopal Church, Chestertown, Kent Co. State bicentennial tree for Kent County, 1976. Reference: Prenger and Brooks (editors). The Big Tree Champions of Maryland 1990. p.86 (photo). Reference: Internet - webpage for St. Paul's. Comments: Although a basket oak at St. Paul's appears on the Md. 2002 extinct list (CBH 21' 3", ht 117', spr 97') it is assumed that all records of *Quercus michauxii* at St. Paul's are the same specimen, which is extant, and the last of the big oaks (basket and white) at the site. With 426 points (2002), this tree easily surpasses the discredited 2002 national champion from Alabama, and the earlier champions from Missouri (417 points) and North Carolina (416 points).

Deckman Black Oak. Md. champion 1999 (CBH 20' 0", ht. 114', spr. 94', pts. 377.5). Owner (1999) James Deckman, Calvert Co. Comments: This tree is assumed to be living. It was replaced on the 2002 list by a much smaller Harford County tree (308 pts.) that was mistakenly entered as having 389 points.

Queenstown Chestnut Oak. State champion 1983 (CBH 20' 5", ht. 117', spr. 109'), 1990-1999 (CBH 20' 9", ht. 90', spr. 115', pts. 367.8). Owner (1983-1999): Marion R. Leaverton, Queenstown,

Queen Anne's Co. Reference: Prenger and Brooks (editors). The Big Tree Champions of Maryland 1990. p. 97 (photo). Comments: This is a very handsome open-grown tree with a massive trunk.

Joyce Lane Chestnut Oak. 2002 Md. champion: CBH 22' 9", ht. 104', spr. 99', pts. 406.8 (addition error; actually 401.8). Owner: Jeanine Ove, 278 West Joyce Lane, Arnold, Anne Arundel Co. Comments: This tree is on a steep north-facing wooded slope. It is a double-trunked coppice forking about six feet up. CBH is 22' 7.5" (1/24/04). The separate trunks measure 14' 7" and 10' 2". The 104' height was based on the taped distance from the trunk to the furthestmost estimated impact area, using no sighting devices. The smaller trunk is the taller, at 99 feet (laser, 1/24/04). Spread is (1/24/04) 101.8 x 95.0, average 98.4. Revised points 396.

Chase Creek Red Oak. Northern red oak. State champion 2002: CBH 22' 0", ht. 136', spr. 98', pts. 424.5. Owner: The Iliff family, West Joyce Lane, Arnold, Anne Arundel Co. Comments: This forest tree is located on a very rich steep slope. It is a high-stump coppice with three leads. Owing to the steep terrain, the elevation of the lowest fork is above breast height, as measured above the central basal contour.

Hutchins Spanish Oak. Southern red oak. State champion 2002. Measurements (1990 list) CBH 22' 4", ht. 88', spr. 112'.

Owner: Mrs. Ailene W. Hutchins, Prince Frederick, Calvert Co. **Myers Willow Oak.** State champion 1990, 1999-2002 (23' 6", ht. 111', spr. 90'). Owner: William Myers, Oxford, Talbot Co.

Myers Second Oak. Willow oak. 1990 Md. list. CBH 22' 11", ht. 88', spr. 85'. Owner: William Myers, Oxford, Talbot Co.

Myrtle Grove Willow Oak. Willow oak. State champion 1937 (CBH 21' 5", ht. 93', spr. 107'). Myrtle Grove, Easton, Talbot Co. This tree was succeeded by a larger specimen at Bowlingly. It is unknown if the Myrtle Grove tree still exists.

Hunter Oak. Willow oak. 1990 Md. list (CBH 20' 6", ht. 121', spr. 109'), 2001 list (CBH 21' 1", ht. 125', spr. 115', pts.). Owner: Thomas Hunter, Easton, Talbot Co.

Edwards Oak. Willow oak. 1990 Md. list. CBH 20' 0", ht. 78', spr. 85'. Owner: Horace Edwards, Greensboro, Caroline Co.

Guy Oak. Willow oak. 1990 Md. list. CBH 20' 0", ht. 115', spr. 89'. Owner: William Guy, Clements, St. Mary's Co.

Great Maryland Tuliptrees

Lusby Poplar. Tuliptree. State champion 1999-2002: CBH 28' 8", ht. 105', spr. 79', pts. 468.75. Owner: Dr. Thomas F. Lusby, Calvert Co. Comments: The structure of this unusually large tree is unknown; it is suspected to be multiple-trunked.

Gunpowder Falls Poplar. Tuliptree. State champion 1973: CBH 25' 2", ht. 136', spr. 105', pts. 437.3. 1990: CBH 25' 0", ht. 116', spr.85'. Gunpowder Falls State Park, Baldwin, Baltimore Co.

Comments: All dimensions were exaggerated in 1973, and would have outpointed North Carolina's Wasilik Poplar, the national champion, but Virginia's Bedford Poplar surpassed both trees. The Gunpowder tree was listed as the 1990 Maryland champion, due to an alteration of the recorded actual CBH of the Liberty Tree. Reference: Yingling, Earl L., 1973. *The Big Tree Champions of Maryland*. p. 29 (photo).

Howat Poplar. Tuliptree. 1990 Md. list: CBH 24' 6", ht. 115', spr. 98', pts. 433.5 (1990). Owner: Y. Kirkpatrick Howat (deceased 2003), Contee Farms, Edgewater, Anne Arundel Co. Comments: This tree is said to be hollow.

Brookeville Poplar. April 2001 list for Montgomery Co.: CBH 24' 5", ht. 110', spr. 82'. Brookeville, south portion of Manor Oaks subdivision. Owner: Classic Communities: Manor Oaks Subdivision. Reference: Internet. "Champion and Potential Champion Trees of Montgomery County, Maryland, April 2001."

Bethesda Poplar. 1990 & 2001 Md. lists (CBH 23' 6", ht. 126', spr. 80', pts. 428.0). Owner: Robert Jones, Bethesda, Montgomery Co.

Ringgold Cove Poplar. Tuliptree. CBH 22' 8", ht. 116.1' (laser; measurements by Rucker 2/11/2001). Arnold, Anne Arundel County. Owner: Mrs. Grafton Lee Brown, Jr. Comments: This is a very old open-grown tree standing at the head of a precipitous ravine. Bark plates on the sheltered side are five to six inches thick.

Mitchell Poplar. Tuliptree. 1990 Md. list: CBH 22' 7.5", ht. 113', spr. 77.5', pts. 404.5. Mitchell residence, Bowie, Prince George's Co. Reference: *The Big Tree Champions of Prince George's County, Maryland*, ca. 1990. p. 22 (photo).

Northeast Poplar. Tuliptree. 1990 Md. list: CBH 21' 11", ht. 118', spr. 62', pts. 396.5. Owner: Jo Ann Kricker, North East, Cecil Co.

Sandy Springs Poplar. Tuliptree. Md. list, 2001: CBH 21' 3", ht. 125', spr. 115'. Montgomery Co. list, Apr. 2001: CBH 20' 0", ht. 121', spr. 101'. Graveyard, Sandy Spring Friends Meeting House, Sandy Springs, Montgomery Co. Reference: Internet. "Champion and Potential Champion Trees of Montgomery County, Maryland, April 2001."

Blackwater Poplar. Tuliptree. 1990 Md. list: CBH 21' 1", ht. 93', spr. 87', pts. 372.8. Blackwater Farms, Cambridge, Dorchester Co.

Chestertown Poplar. Tuliptree. 1990 Md. list: CBH 20' 4", ht. 125', spr. 85', pts. 390.3. Owner: Jim & Tracy Stone, Chestertown, Kent Co.

Bittner Poplar. 2001 Md. list (CBH 20' 1", ht. 130', spr. 115') Owner: Deborah Bittner, Baltimore Co.

Woodlawn Poplar. 1990 Md. list: CBH 20' 1", ht. 108', spr. 62",

pts. 364.5. Owner: Social Security Administration, Woodlawn, Baltimore Co.

Bacon Ridge Poplar. Tuliptree. CBH by Rucker, December 1977: 20' 0.5". Forest grown, base hollow. Struck by lightning ca. 1976. State bicentennial tree, 1976. Owner 1976: Mrs. E. Murray Sullivan, Sanroco Farm, Old Waterbury Road, Crownsville. Tree located in woodland off Bacon Ridge Road (toward Route 32), Anne Arundel County.

Chase Creek Poplar. Tuliptree. CBH 19' 10 1/2". This is a very old tree, with a hollow about nine feet in diameter at the ground. Chase Creek Woods, Arnold, Anne Arundel County.

Belair Poplars. Tuliptrees. The original driveway to "Belair," called the home of governors, was lined with tuliptrees. Planted about 1750, many of the original trees still exist, and are of great size. Their history is associated with the Ogle and Woodward families. Perhaps nowhere else in Maryland can so many great trees be seen. Located at Tulip Grove Road, Bowie, Prince George's County.

Cedar Park Poplars. Tuliptrees. One of the oldest estates in southern Maryland, Cedar Park has many great trees. A number of these are tuliptrees, which may be seen along Cumberstone Road, and on the slopes along Popham Creek. Harwood, Anne Arundel County.

Other Great Maryland Trees Over Twenty Feet In Girth

Lothian Beech. American beech. National champion 1995-2002: CBH 23' 3", ht. 115', spr. 138'. Owner: Mrs. Joseph Emmerich, Lothian, Anne Arundel Co.

Worton Cherry. Black cherry. National champion 1955: CBH 18' 4", ht. 64', spr. 77'. State champion 1933 & 1937 (CBH 15' 8", ht. 60', spr. 75'), 1956 (CBH 18' 4", ht. 64', spr. 77'), 1973 (CBH 20' 6", ht. 54', spr. 77'), 1990-2002 (CBH 22' 6", ht. 67', spr. 63'). Former owner: Henry Raisin. Owner (1999-2002): Renate E. Sass. Located on property at Coopers Lane, near Worton, Chestertown, Kent Co. Reference: *American Forests*, September 1955, p. 34 (photo). Reference: Besley, Fred W., 1956. *Big Tree Champions of Maryland*, p. 19 (photo). Comments: This sturdy open grown tree has a single trunk to perhaps ten feet. It has been a Maryland champion for at least seventy years.

Belair Cucumbertree. Cucumber magnolia. Md. champion 1973 (CBH 18' 10", ht. 92', spr. 88'), 1983 (CBH 20' 10", ht. 76', spr. 63'), 1999-2002 (CBH 22' 7". ht. 77', spr. 73'). Full trunk. Belair Mansion, Tulip Grove Drive, Bowie, Prince George's Co. Tree planted, not indigenous. Reference: Yingling, Earl L., 1973. *The Big Tree Champions of Maryland*. p.17 (photo).

Black Gum. This tree was listed as the 1990 Maryland champion, with a CBH of 27 feet; ht. was 92', spr. 54'. It appeared on the 2002 Md. extinct list as CBH 27' 0", ht. 92', spr. 65'. Reference: Prenger and Brooks (editors). *The Big Tree*

Champions of Maryland 1990. p. 65 (photo). Comments: The incomprehensible trunk size is an obvious error. From the 1990 photograph, this tree was a tall forest-grown specimen of unremarkable stature. Perhaps the tree was measured with a diameter tape, likely being 27" in diameter, or 7' 1" CBH, and the girth was recorded as 27 feet. Therefore, it was probably the smallest of the four 1990 nominees. The spread appears somewhat exaggerated.

Elkton Maple. Silver maple. Reported 2003 by Maryland Forest Service as new state champion, and national contender. Circumference (presumably CBH) 27 feet. Height 114 feet. Located in Eder Park, Elkton, Cecil Co. Owner: Eder Park Association. Reference: *The Capital* (Annapolis) 11/11/2003. Reference: "Elkton Tree Believed to be Record Size." *The Sun* (Baltimore) 11/16/03.

Catoctin Maple. Silver maple. State champion 1983 (CBH 22' 5", ht. 119', spr. 108'). C & O Canal, near Catoctin Creek, Frederick Co.

Fowley Maple. Silver maple. State champion 2002: CBH 22' 4", ht. 90', spr. 134'. Owner: Victoria Fowley, Baltimore Co.

Silver Spring Maple. Silver maple. State champion 1973 (CBH 21' 8", ht. 84', spr. 103'), 1990 & 1999 (CBH 25' 5", ht. 84', spr. 103'). Owner: Wilbur S. Smith, 1616 Overlook Dr., Silver Spring, Montgomery Co. Apr. 2001 Montgomery Co. list: CBH 25' 5", ht. 84', spr. 103'. Silver Spring. Owner: John Henrici. Reference: Internet. "Champion and Potential Champion Trees of Montgomery County, Maryland, April 2001."

Kensington Maple. Silver maple. Apr. 2001 Montgomery Co. list: CBH 20' 6", ht. 104', spr. 52'. Kensington, Montgomery Co. Owner: Clum Kennedy Gardens. Reference: Internet. "Champion and Potential Champion Trees of Montgomery County, Maryland, April 2001."

C&O Maple. Silver maple. Apr. 2001 Montgomery Co. list: CBH 20' 2", ht. 90', spr. 80'. Lock 26, C&O Canal, Montgomery Co. Owner: National Park Service - C&O Canal. Reference: Internet. "Champion and Potential Champion Trees of Montgomery County, Maryland, April 2001."

Kitzmiller Maple. Sugar maple. National champion 1966: CBH 19' 9"; 1977-2002: CBH 22' 10", ht. 65', spr. 54'. Maryland champion 1956 (CBH 19' 9", ht. 116', spr. 75'), 1973 (CBH 21' 3", ht. 78', spr. 63'), 1983 (CBH 21' 6", ht. 78', spr. 66'), 1990 (CBH 22' 5", ht. 51', spr. 47'), 2002 (CBH 22' 10", ht. 65', spr. 54'). Owners: Milo Wilson (1956); Thomas Wilson (1973); Richard Cropp (1983-2002). Located at Kitzmiller, Garrett Co. Comments: The tree was said to be in failing condition (*The Sun Magazine*, Baltimore, 7/1/73). The diminishing height suggests progressive dieback, but the trunk growth seems satisfactory.

Wakefield Sycamore. National champion 1955: CBH 25' 10", ht. 114', spr. 79'. Maryland champion 1956 (CBH 25' 10", ht. 114', spr. 79'), 1973 (CBH 24' 4", ht. 119', spr. 81' 8"), 1983

(CBH 24' 8", ht. 124', spr. 78'), 1999 (CBH 25' 5", ht. 144', spr. 89'), 2002 (CBH 26' 3", ht. 110', spr. 87'). Owner (1956) John S. Hyde; (2002) John E. Smith, Wakefield, Hyde Quarry Road, New Windsor, Carroll Co. Reference: Yingling, Earl L., 1973. *The Big Tree Champions of Maryland*, p. 28 (photo). Reference: Prenger and Brooks (editors). *The Big Tree Champions of Maryland*. p.103 (photo). Comments: Located in a wooded grove, this tree has a massive trunk to some height.

Fallston Sycamore. 1990 Md. list: CBH 23' 7", ht. 100', spr. 77', pts. 402.3. Owner: Glenn Neuman, Fallston, Harford Co.

Sparks Sycamore. 1990 Md. list: CBH 22' 7", ht. 122', spr. 99', pts. 417.8. Owner: H. H. Hackney, Sparks, Baltimore Co.

Dickerson Sycamore. Apr. 2001 Montgomery Co. list: CBH 20' 10", ht. 123', spr. 125'. Dickerson Conservation Park, Montgomery Co. Owner: Maryland-National Capital Parks and Planning Commission. Reference: Internet. "Champion and Potential Champion Trees of Montgomery County, Maryland, April 2001."

Silver Spring Sycamore. Apr. 2001 Montgomery Co. list: CBH 20' 5", ht. 100', spr. 100'. Northeast corner, Lexington Drive lot, Silver Spring, Montgomery Co. Reference: Internet. "Champion and Potential Champion Trees of Montgomery County, Maryland, April 2001."

Washington Sycamore. 2001 Md. list (CBH 20' 4", ht. 127', spr. 115'). Owner: Neil Wright, Washington Co.

McKee-Beshers Sycamore. 2001 Md. list (20' 2", ht. 132', spr. 114') McKee-Beshers Wildlife Management Area, 100 yards from C&O, upstream from mile post 24, Montgomery Co. Owner: State of Md. (DNR). Reference: Internet. "Champion and Potential Champion Trees of Montgomery County, Maryland, April 2001."

Contee Farms Walnut. Black walnut. National champion 1945-1975. 1955-1966: CBH 20' 3", ht. 108', spr. 128'. State champion 1933 & 1937 (CBH 19' 7", ht. 100', spr. 130'), 1956 (CBH 20' 4", ht. 93', spr. 130'), 1973 (CBH 20' 8", ht. 111', spr. 125'), 1983-1999 (CBH 20' 11", ht. 85', spr. 112'), 1990 (CBH 20' 11", ht. 85', spr. 107'), 2002 (CBH 21' 6", ht. 92', spr. 102'). Owner: Y. Kirkpatrick Howat, Contee Farm, Edgewater, Anne Arundel Co.; he died 2003. Reference: Besley, Fred W., 1956. *Big Tree Champions of Maryland*, p. 45 (photo). Reference: Yingling, Earl L. 1973. *The Big Tree Champions of Maryland*. p. 30 (photo). Reference: "National Champion Trees," *The Sun Magazine*, Baltimore 7/1/1973. p. 6 (photo). Comments: This is a fine open-grown tree with a full trunk to some height. A Maryland champion for at least seventy years, it is one of the two largest black walnuts remaining in the east. It has been surpassed in points by low-forked younger trees in Oregon and California.

DELAWARE

Great Tuliptrees of Delaware

Tuliptree. State champion 1973: CBH 23.3', ht. 116', spr. 100'. Route 68, Dover.

Calloway Tuliptree. Tree on steep hillside. Circumference (1973) at breast height (upper side) 17.9'. Circumference (lower side) as much as 28.2'. ht. 104', spr. 125'. 1938 circ.: 21'. Located near Odessa.

Tuliptree. State co-champion. CBH 20' 0", ht. 146', spr. 36', pts. 395. Rising Sun Lane, Wilmington.

Tuliptree. State co-champion. CBH 18' 7", ht. 151', spr. 60', pts. 389. Winterthur estate, Wilmington.

Tuliptree. State co-champion. CBH 17' 3", ht. 187', spr. 63', pts. 410. Chandler Woods, Winterthur estate, Wilmington. Comments: The claimed height would exceed any hardwood in the east, and is certainly much exaggerated.

William Penn Tree. Tuliptree. Oldest tree on Winterthur estate. Chandler Woods, Winterthur, Wilmington.

Delaware State Champions

American Basswood. State champion 1973. CBH 21.2', ht. 92', spr. 100'. Woodside.

Southern Red Oak. State champion 1973. CBH 19.7', ht. 102', spr. 130'. Road 298, 0.2 mile south of State route 24, below Angola.

Hercules Oak. White oak. State co-champion 1973. CBH 20.1', ht. 72', spr. 126', pts. 345.5. Hercules Country Club golf course.

Dragon Run Oak. White oak. State co-champion 1973 CBH 20.5', ht. 85', spr. 117'. Dragon Run.

White Clay Oak. White oak. State co-champion 1973: CBH 19.7', ht. 100', spr. 102'. White Clay.

VIRGINIA

Great Tuliptrees of Virginia

Bedford Poplar. National champion 1972-1985: CBH 30' 3", ht. 124', spr. 122'. 1986-1996: CBH 31' 2", ht. 146', spr. 125'. 1997-2002: CBH 31' 2", ht. 111', spr. 125', pts. 516. Located in the town of Bedford. Reference: Nancy Ross Hugo, "A Tree to Take Your Breath Away." *American Forests*, April 1986, p. 38. (text & photo). Reference: *American Forests*, May/June 1988, cover (photo). Reference: *American Forests*, 1990 National Register of Big Trees, pp. 6, 7 (photo), p. 38 (photo). Reference: *American Forests*, National Register of Big Trees, Spring 2000, p. 59 (photo). Reference: *American Forests*, Spring 2000, p. 38 (photo). Comments: Short trunk, six leads. Smallest girth probably below breast height. This tree once dominated a second-growth woodland near the intersection of Route 43 and

Smith Street, but now stands behind a rock wall in "Poplar Park," a 1 ½ acre parcel on Grande Arbre Drive, owned by the city. The claimed height of 146' was greatly exaggerated. This 1986 measurement has not been corrected on the 2003 state list.



Bedford Poplar in 1996 (above); in 2008 (below). Photos by Will Blozan.



Amelia Poplar. Tuliptree. National champion 1961-1966: CBH 24' 3", ht. 110', spr. 119'. Amelia, Amelia County.

Nomini Hall Poplars. Tuliptrees. Row(s) of immense tuliptrees planted ca. 1750 on the Carter estate, "Nomini Hall," Westmoreland County. Reference: Peattie, Donald Culross 1950. *A Natural History of Trees*, p. 268. Reference: Farish, Hunter Dickinson (editor) 1965. *The Journal and Letters of Philip Vickers Fithian, 1773-1774*. pp. xxix-xxx. Also p.81. Comments: These trees (if they still exist) might be compared with those at "Belair," in Prince George's Co., Maryland.

Mount Vernon Tuliptrees. Two large tuliptrees are among the five original trees which remain from Washington's time. The tuliptrees are along the serpentine walk. The larger has a diameter of 62 inches (1976). Reference: Randall, Charles Edgar and Henry Clepper 1976. *Famous and Historic Trees*. The American Forestry Association, pp. 20, 21 (photo). Reference: Clepper, Henry. "George Washington's Trees." *American Forests*, August 1976, pp. 22-25. Comments: The two pecans, once thought planted by Washington, appear to have been planted in 1824.

Virginia's Largest National Champions

Black Oak. Dead. Former national champion 2001-2002: CBH 27' 8", ht. 108', spr. 116'. Blown down in Hurricane Isabel, September 19, 2003. 512 Monroe Bay Avenue, Colonial Beach, Westmoreland County. Owner: Betty and Joe Wilson. Reference: Brittin, Rachel. "Giving New Life to Famous Trees." *American Forests*, winter 2004, p. 39 (text & photo). Reference: Internet. Virginia Big Tree Program. Text & Photo. Comments: Although the AF photo suggests the tree was single trunked, the tree "split in two." The Big Tree photo shows this tree was not single-trunked, but a double-trunked coppice, the abutting trunks dividing at ca. seven feet above grade.

Cherrybark Oak. National co-champion 1991-2002: CBH 27' 0", ht. 124', spr. 136' (1989). South side Nottoway River, east of Rt. 626, Sussex Co. Reference: Internet. Virginia Big Tree Program.

Cherrybark Oak. National co-champion 1993-2002: CBH 28' 6", ht. 110', spr. 108' (1992). 215 Ball Street, Colonial Beach, Weston Co. Owner: Jerry and Ann Davis. Reference: Internet. Virginia Big Tree Program.

Laurel Oak. National champion 1987-2002: CBH 21' 5", ht. 82', spr. 106' (1987). 413 Currituck Drive, Chesapeake, Chesapeake Co. Owner: Terry Davidson. Reference: Internet. Virginia Big Tree Program.

Swamp White Oak. National champion 2000-2002: CBH 25' 0", ht. 68', spr. 49' (2000). Very old single-trunked hollow tree in low field, minus lower limbs. 200 yards west of Jackson River, 150 yards south of rt. 607, Warm Springs, Highland Co. Owner: Bill Bratton. Reference: Internet. Virginia Big Tree Program. (photo).

Osage Orange. National champion 1969-1971: CBH 23' 0", ht.

50', spr. 90'. 1972-1982: CBH 24' 6", ht. 51', spr. 93'. 1994- 2002: CBH 26' 9", ht. 60', spr. 85'. 2002: CBH 27' 2", ht. 60', spr. 64'. Red Hill National Memorial (Patrick Henry Estate), Brookneal, Campbell Co. Owner: Red Hill Shrine. Reference: *American Forests*, National Register of Big Trees, 2000, p. 7 (photo). Reference: "The Mystery of Patrick Henry's Osage-orange," *American Forests*, Summer 2003, pp. 32-35 (photo). Reference: Internet. Virginia Big Tree Program. (photo). Comments: This tree is multiple-trunked, probably a coppice, and under review by American Forests.

American Sycamore. National champion 1999-2001: CBH 27' 10", ht. 95', spr. 105' (1991 measurement). Virginia Route 42, 4 miles south of Millboro Springs, Bath Co. Owner: Lunsford and Wellford Farm. Reference: Internet. Virginia Big Tree Program.

Water Tupelo. National champion 1991-2002: CBH 28' 0", ht. 105', spr. 56' (1990 measurement). Near Route 58, north of Nottoway River, Courtland, Southampton Co. Reference: Internet. Virginia Big Tree Program.

Virginia Big State Champions

Baldcypress. State champion 2003: CBH 32' 6", ht. 134', spr. 71' (1988). West side Blackwater River, 2 miles north of Rt. 260, Southampton Co. Reference: Internet. Virginia Big Tree Program.

Baldcypress. State champion 2003: CBH 38' 0", ht. 74', spr. 51' (1986). West side of Nottoway River, north of Rt. 653. Owner: Union Camp Corporation. Reference: Internet. Virginia Big Tree Program. Data & photo. Comments: The photo shows that this tree has a greatly enlarged fluted base.

Eastern Cottonwood. State champion 2003: CBH 23' 0", ht. 130', spr. 105' (1994). North side of intersection of Rts. 651 & 661, Opal, Fauquier Co. Owner: Giles Early. Reference: Internet. Virginia Big Tree Program.

American Elm. Dead. State champion. CBH 28' 8", HT. 135', SPR. 125'. Located in southern Hampton County, near Nottoway. Died from Dutch elm disease. Reference: Internet. Comments: This tree may have been a national champion, but did not appear in the biennial listings.

American Elm. State champion 2003: CBH 23' 6", ht. 122', spr. 68' (1991). Southwest side of Fountains Creek, between Routes 301 & 625, Greensville Co. Reference: Internet. Virginia Big Tree Program.

Silver Maple. State champion 2003: CBH 21' 7", ht. 84', spr. 102' (1988). East side Rt. 220, 1 mile south of Hot Springs, Bath Co. Owner: Arthur P. McMullen. Reference: Internet. Virginia Big Tree Program. (two photos). Comments: This is a low-forked tree, probably a coppice.

Black Oak. State champion 2003: CBH 20' 2", ht. 96', spr. 125' (1982). 1121 Springhill Road, McLean, Fairfax Co. Owner: Peter

C. Andrews. Reference: Internet. Virginia Big Tree Program.

Black Oak. State champion 2003: CBH 23' 2", ht. 87', spr. 96' (2003). West side Rt. 637, ½ mile south of Mill Swamp. Owner: Jack Ramsey. Reference: Internet. Virginia Big Tree Program.

Chestnut Oak. State champion 2003: CBH 20' 5", ht. 75', spr. 108' (1987). Chatham Hall, Chatham, Pittsylvania Co. Owner: Chatham Hall. Reference: Internet. Virginia Big Tree Program.

Chinquapin Oak. State champion 2003: CBH 21' 4", ht. 78', spr. 102' (2002). Route 641, Rockingham Co. Owner: Edward L. Strickler. Reference: Internet. Virginia Big Tree Program.

Northern Red Oak. State champion 2003: CBH 22' 3", ht. 116', spr. 91'. (1987). North side of Route 42, Shenandoah Co. Reference: Internet. Virginia Big Tree Program.

Southern Red Oak. State champion 2003: CBH 22' 6", ht. 124', spr. 116' (1997). Route 612, Sussex Co. Owner: Gladys Robbins. Reference: Internet. Virginia Big Tree Program. Data & photo. Comments: The photo indicates that this is a single-trunked specimen.

Swamp Chestnut Oak. Dead. Former state champion (2003): CBH 21' 5", ht. 99', spr. 96' (2003). Blown down September 2003 (Hurricane Isabel). Charles City Co. Owner: Henry Tench. Reference: Internet. Virginia Big Tree Program.

White Oak. State champion 2003: CBH 26' 0", ht. 93', spr. 120' (1978). East of Rt. 632, Lawrenceville, Brunswick Co. Owner: Mr. and Mrs. Caleb Short. Reference: Internet. Virginia Big Tree Program.

Virginia's Other Important Trees

Pecan. Girth said to be 34 feet. Elevation of girth unknown. Brandon-on-the-James. Reference: Lane, Ferdinand C. 1953, *The Story of Trees*, p. 67.

WEST VIRGINIA Great Trees Of The Past

Mingo Oak. White Oak. Exceptional forest giant. Stood on Trace Mountain, near the head of Trace Fork of Pigeon Creek, Mingo County, not far from the Logan County line. Circumference at the base 30' 9". Diameter at the base 9 feet 10 inches. Diameter at breast height was 6 feet. Height 145-146 feet. Diameter 90 feet above the base 3 ½ feet. Various estimated to be 570-582 years old. Killed by fumes from a burning gob pile (coal mining refuse). The tree was felled with ceremony in September 1938. The logs were said to scale 15,000 board feet. Perkins Coville of the U. S. Forest Service estimated (presumably earlier) that the trunk contained 20,000 board feet. Called the "largest and oldest oak in the United States." Reference: Lamb, Frank H. 1939. *Book of the Broadleaf Trees*. p. 153. Reference: Encyclopedia Americana ("West Virginia"). Reference: Lane, Ferdinand C. 1953, *The Story of Trees*, p. 67. Reference: Strausbaugh and Core, *Flora of West Virginia*, p.

302. Reference: Clarkson, Roy B. 1964. *Tumult on the Mountains*, p. 7. Reference: Grimm, William C. 1967. *Familiar Trees of America*, p. 114. Comments: It appears the CBH was between 19 and 22.4 feet. A hypothetical model showing six 12 foot logs, with diameters of 65, 60, 53, 49, 45, and 43 inches, and two 8 foot logs, 41 and 39 inches (all inside bark) would scale 15,032 board feet. A claim of 165' in height (see Lane, p. 67) is not valid. Although the height of 145-146 feet has been equaled but once by any known white oak, the massive 90-foot trunk suggests the measurements offered are plausible.

Lead Mine Oak. White oak. This forest giant was felled near Lead Mine, Tucker County by Mangold, Straub and Carlston Lumber Company in 1913. Two photographs have led to much controversy regarding the tree. Reference: Clarkson, Roy B. 1964. *Tumult on the Mountains*, p. 7 (Figs. 10, 11). Reference: Personal communications from Dr. Roy Clarkson. Reference: Internet. Chromogenics. Logging prints for sale. (photo of logs at Mad River). Comments: It appears the tree existed, but the size was greatly exaggerated. A photograph of logs (13' in diameter 16' from the base, and 10' in diameter 31' from the base, by John Vance) attributed to the oak were of a redwood on the John Vance Mill and Lumber Company holdings on Mad River near Eureka, California. The second photograph, said to show the notched base of the tree, appears to have been altered. The photo does show two local loggers, but lighting on their faces differs, and the thick-barked tree is now thought to be a western conifer. A third photograph, found on the Internet, shows three redwood logs at Mad River that exactly match those shown in the first photograph, but from a slightly different position, and the negative has been reversed.

Bergoo Poplar. Tuliptree. This massive tree was cut on Bergoo Creek in Webster County in 1941. The tree yielded nine 16-foot logs; three below the fork, and three in each lead above the fork. The butt log was hollow, but the other eight logs scaled 12,000 board feet. Reference: "Letter from the Hills," *West Virginia Hillbilly*, 8/16/1975, p. 9 (text & photo).

Tuliptree. A large poplar on a tract bought by Stevenson and Haggerty in Nicholas County about 1906 was estimated to be seven feet in diameter, 80 feet to the first limb and contained 17,500 board feet. Reference: Clarkson, Roy B. 1964. *Tumult on the Mountains*, p. 8.

Tuliptree. A poplar cut on the Big Coal River in Boone County in 1889 was 8' 9" in diameter at the base and 71' to the first limb, where it was 5' 6" in diameter. Reference: Clarkson, Roy B. 1964. *Tumult on the Mountains*, p. 8.

Tuliptree. A large poplar cut by Hamlett and Strother on Long Pole, in McDowell County in September 1899 was 85" across the stump, and 90' long. It took three men half a day to fell, and 22 men to turn a 16' log. Eight horses were required to skid it. The tree yielded 12,500 board feet. Reference: *The Charleston Gazette* September 20, 1999 (via Internet).

The Poplar Cube. It is said that a cube of solid yellow poplar, 6 feet on a side, was exhibited by West Virginia at the Louisiana

Purchase Exposition in St. Louis, 30 April – 1 December, 1904. Reference: "Letter from the Hills," *West Virginia Hillbilly* (newspaper), 8/16/1985, p. 9. Comments: If the cube was as described, the tree was probably notched and felled about seven feet above grade, and the remainder cut very low and shaped. To yield such a cube, the trunk would have been nearly nine feet in diameter over six feet above grade. That suggests a CBH over thirty feet, an astounding size for a sound tree, even if open-grown. A cube five feet on a side would suggest a CBH of about 24 feet, which would be an exceptional specimen, but possible.

Washington's Sycamore. This specimen was mentioned in George Washington's journal for 11/4/1770. Girth 44' 10", 3 feet above grade. In about 1790, Andre Michaux recorded the tree as being Washington's, and measuring 40' 4" at five feet above grade. Located along the lower Kanawha River. Reference: Peattie, Donald Culross, 1950. *A Natural History of Trees*, p.319. Reference: "Letter from the Hills," *West Virginia Hillbilly* (newspaper), 8/23/1975, p.1. Reference: Clarkson, Roy B., 1964. *Tumult on the Mountains*, p. 2. Reference: Lamb, Frank H., 1939. *Book of the Hardwood Trees*, p.249. Comments: Lamb mentions a 47' sycamore found by Francois Michaux on a small island in the Ohio River, near Marietta, Ohio in 1802, and then states, "Another near by at five feet above the ground was forty feet and four inches in girth." This might suggest the smaller tree was also in Ohio, but "nearby" seems to be relative, referring to the Kanawha River specimen, perhaps twenty miles distant.

Washington's Second Sycamore. In his journal of 11/4/1770, George Washington mentioned a second large sycamore along the lower Kanawha River, only 50 yards from the first. It was 31 feet in girth. Reference: "Letter from the Hills," *West Virginia Hillbilly*, 8/23/1975, p. 1. Reference: Clarkson, Roy B., 1964. *Tumult on the Mountains*, p.2.

Blennerhasset Sycamore. This huge tree stood on Blennerhasset Island. It was once claimed that a team of horses could be driven into the hollow trunk and turned around. The tree was gone by 1975. Reference: "Letter from the Hills," *West Virginia Hillbilly*, 8/23/1975, p.6.

Pringle Sycamore. The Pringle brothers, Samuel and John, lived in this huge tree from 1764 to 1767. They had deserted in 1761 from the British Army at Fort Pitt in the French and Indian War. The tree was twelve feet across the hollow. A successor arose from the roots, but was destroyed in a flood in 1880. Its successor, in turn, is called the Old Pringle Sycamore, and has a large hollow trunk. Located at the mouth of Turkey Run near the Buckhannon River in Upshur County. Reference: Cutright, W. B., 1907. *History of Upshur County, West Virginia*, Chapter XVIII. (via Internet). Reference: Lamb, Frank H. 1939. *Book of the Broadleaf Trees*, p.249. Reference: Cater, Ruth Cooley 1950. *Tree Trails and Hobbies*, p.195. Reference: Lane, Ferdinand C. 1953. *The Story of Trees*, p.65.

American Elm. In 1963, the West Virginia Department of Natural Resources listed an American elm on Big Hurricane

Creek, Putnam County, as the state's largest, with a breast-high diameter of 97" (ca. 25.4' CBH). It is assumed this tree is now dead. Reference: Strausbaugh and Core, *Flora of West Virginia*, p. xl.

Other West Virginia Giants

Yellow Buckeye. State champion 2002: CBH 13' 9", ht. 196', spr. 81'. Clendenen, Kanawha County. Reference: Internet. "Big Trees of West Virginia." List of 10/9/02. Comments: The height of 196' appears to be greatly exaggerated, probably by false-top triangulation.

Eastern Cottonwood. State champion, 2002. CBH 24' 4", ht. 105', spr. 114'. Greystone, Berkeley County. Reference: Internet. "Big Trees of West Virginia." List of 10/9/2002.

Centennial Hemlock. Eastern hemlock. State champion, 2002: CBH 15'5", ht. 94', spr. 49'. Located in Cathedral State Park, near Aurora, in Preston County. It has been struck by lightning, and has dieback in the top. Claimed to be 500 years old. Reference: Internet. "Big Trees of West Virginia." List of 10/9/2002. Reference: Internet, web page for Cathedral State Park. Reference: Internet, web page for "Corridor H", West Virginia Division of Highways. Comments: The circumference has been given as 21 feet or 26 feet, which may have been taken at grade. According to Leverett and Luthringer, the Centennial Hemlock is on a slope with a boardwalk around it. Luthringer (9/26/03) measured CBH as 16' 2.5", height 94.3'. This is compatible with 1995 measurements by Leverett and Landenberger. American Forests listed a national champion hemlock at Aurora from 1979-1995 as CBH 18' 8", ht. 123', spr 68' (pts 364). The AF entry is probably a bad measurement of the same tree. The web page for the park includes two photographs of a large double-trunked hemlock, forking well above breast height, but gives no details. This is, apparently, a different tree.

Silver Maple. State champion, 2002: CBH 21' 7", ht. 97', spr. 93'. Mission Road, Jefferson County. Reference: Internet. "Big Trees of West Virginia." List of 10/9/2002.

Bur Oak. State champion 2002: CBH 22' 2", Ht. 113', spr. 118'. Lone Oak Campground, South of West Columbia, Mason Co. Reference: Internet. "Big Trees of West Virginia." List of 10/9/2002.

Chestnut Oak. In 1963, the West Virginia Department of Natural Resources listed a chestnut oak one mile from Center, in Upshur County, as the state's largest, with a breast-high diameter of 84" (CBH would be ca. 22'). Reference: Strausbaugh and Core, *Flora of West Virginia*, p. xl. Comments: The location might have been one mile south of Century, a town just over the county line, in Barbour County. This would be perhaps six miles north of Buckhannon.

Chestnut Oak. State champion 2002: CBH 18'4", ht. 111'. Spr. 69'. Buckhannon, Upshur County. Reference: Internet. "Big Trees of West Virginia. List of 10/9/2002. Comments: It

appears that this tree is the same as the 1963 chestnut oak, Buckhannon being a better-known reference point. A trunk smaller than the 1963 diameter suggests that "breast height" was an approximation.

Northern Red Oak. CBH (1975) "just over 22 feet." Ht. 90', spr. 110'. Said to be the state's largest red oak, and second-largest tree. Located in a pasture on Sam Warner's farm in Pocahontas County. Reference: "Letter from the Hills," *West Virginia Hillbilly*, 12/20/1975. pp. 1, 12 (text & photo).

Northern Red Oak. In 1963, the West Virginia Department of Natural Resources listed a northern red oak on Hackers Camp Run, in Lewis County, as the state's largest, with a breast-high diameter of 84" (ca. 22' CBH). Reference: Strausbaugh and Core, *Flora of West Virginia*, p. xl.

Northern Red Oak. State champion 2002: CBH 22' 2", ht. 106', spr. 85'. Located in Arnold Cemetery, Weston, Lewis County. Reference: Internet. "Big Trees of West Virginia." List of 10/9/2002. Comments: It is unknown if this is the Lewis County tree of 1963.

White Oak. In 1963, the West Virginia Department of Natural Resources listed a white oak one mile south of Huttonsville, in Randolph County, as the state's largest, with a breast-high diameter of 135". Reference: Strausbaugh and Core, *Flora of West Virginia*, p. xl. Comments: If the tree was single-trunked, the CBH would be ca. 35.6', which would be an astounding (and improbable) size for the species, suggesting the tree was multiple-trunked.

White Oak. State champion, 2002: CBH 18' 8", ht. 100', spr. 109'. Fox's Hollow, Hampshire County. Reference: Internet. "Big Trees of West Virginia." List of 10/9/2002.

Webster Sycamore. State champion, 2002: CBH 25' 9", ht. 112', spr. 90'. This tall forest giant has a straight trunk with little taper. Hollow. Trunk broken off at 86 ½ -90 feet, with a hemlock growing in the break. Located in Sycamore Park, Backfork Road. Tree on Back Fork of Elk River above Webster Springs, Webster County. Called "the largest sycamore in the world." In 1963, the West Virginia Department of Natural Resources listed the tree as the state's largest sycamore, with a breast-high diameter of 89" (CBH would be ca. 23.3'). Reference: Internet. "Big Trees of West Virginia." List of 10/9/2002. Reference: Strausbaugh and Core, *Flora of West Virginia*, p. xl. Reference: "Letter from the Hills," *West Virginia Hillbilly* (newspaper) 8/23/1975, p. 6 (photo). Comments: Circumference (January 1925) said to be 39 feet, which was probably a measurement taken at grade. In terms of trunk volume, the Webster Sycamore may be one of the largest trees in the east.

Widen Poplar. State champion, 2002. CBH 18' 9", ht. 195', spr. 72'. Byers states it is the largest yellow poplar in West Virginia, with a height of 200 feet. Located on a four-acre parcel once occupied by the sportsmen's club of the Elk River Coal and Lumber Company. The surrounding area has been strip-

mined. Site is near the town of Dille (Widen), in Nicholas County, near the Clay County line. The big-tree list states the tree is in Clay County. Reference: Internet. "Big Trees of West Virginia." Big-tree list of 10/9/2002. Reference: Internet. Robert J. Byers, "Living History." *Sunday Gazette* (newspaper, Charleston) 6/23/2002. Comments: The claimed heights of 195 and 200 feet are certainly greatly exaggerated; the Blennerhasset tree may be larger.



Webster Sycamore with Will Blozan in base. Photo by Jess Riddle.

Blennerhasset Tuliptree. In 1963, the West Virginia Department of Natural Resources listed a tuliptree on Blennerhasset Island, in Wood County, as the state's largest, with a breast-high diameter of 88 inches (ca. 23' CBH). Reference: Strausbaugh and Core, *Flora of West Virginia*, p. xl. Reference: Internet, 2003. "A Brief Sketch of Blennerhasset Island." Comments: The Blennerhasset website claims the tree is the "second largest yellow poplar east of the Mississippi." That seems rather unlikely, and West Virginia's Widen Poplar is now (2003) listed as the state champion. However, the Widen tree has a greatly exaggerated height, and the unusually large trunk of the Blennerhasset tree probably makes it the state champion.

NORTH CAROLINA Great Trees Of The Past

Reems Creek Poplar. Tuliptree. Tall forest giant on Craggy Mountain (on the slope of Mt. Mitchell), about 12 miles

northeast of Asheville, at an elevation of 3000 feet. Girth 33' at 3 feet up in 1866 (Mathews). Girth also said to be 34' 6" (Lane). Girth 31' at ten feet up (Lounsberry). Height claimed to be 198 feet (American Genetic Association); other sources say 150 feet. Hollow (Lounsberry; also photos). Felled by fire sometime after 1928. Reference: Lounsberry, Alice, 1900. A Guide to the Trees. Reference: Mathews, F. Schuyler 1923. Familiar Trees and Their Leaves. p. 39. Reference: Old photograph of base, from National Park Service archives. (courtesy of Will Blozan 2003). Reference: Photo of entire tree, before fire. (courtesy of Michael Davie, 2003). Reference: Pre-fire photo of base, "1/1/1932". Photo # 000385, D. H. Ramsey Library, NCSU, Asheville. (via Internet).

<http://toto.lib.unca.edu/findingaids/photo/usfs/show.asp?PassVar=000385>

Reference: Post-fire photograph of base, from National Park Service archives. (courtesy of Will Blozan 2003). Reference: Lamb, Frank H. 1939. Book of the Broadleaf Trees. p. 245. Reference: Harlow, William M. 1942. Trees of the Eastern and Central United States and Canada, p. 185. (reference to 198 feet). Reference: Preston 1948. North American Trees, p. 235. (reference to 198 feet). Reference: Lane, Ferdinand C. 1953, The Story of Trees, p. 67. (reference to 198 feet). Reference: *American Forests*, Spring 2000, p. 37. Comments: Lounsberry gives a circumference of 31' at ten feet above grade, which is grossly inaccurate. Any measurement at that height is unlikely. Photo #000385 suggests a girth of perhaps 22 feet six feet up, and 29' at 4 ½ feet. Further supposition would place 31' at 4 feet, 33' at 3 feet, and 34 ½ feet below that. This does not consider date or angle of measurement. The base was enlarged due to the influence of the hollow trunk, which had a small opening near the downhill side. Another photo shows the tree's tall straight trunk extending perhaps 80' to a large spreading crown. The claimed height of 198 feet, which has appeared in texts, including Preston and Harlow, has been questioned by many, and was probably due to false-top triangulation, due to the spreading top. Lounsberry stated the tree "stands upward of 150 feet tall," which seems more reasonable. A section of trunk cut from 53' up is preserved at Sugarlands Visitors Center, GSMNP. The section is ca. 4.5' in diameter sans bark, and more than 350 years old (per Will Blozan 2003). The preservation of this section suggests the tree was in public ownership when it fell. Trunk volume was roughly 3000 cubic feet. A reported volume of 5000 cubic feet (AF) is greatly exaggerated.

Tuliptree. Stupka (1964) quoted Buckley (1859): "[A yellow poplar] near the Pigeon River in Haywood County, North Carolina, about eight miles from the Tennessee line, thirty-three (33) feet in circumference at three feet from the ground, or eleven feet in diameter, and upwards of one hundred feet high." Reference: Stupka, Arthur, 1964. Trees, Shrubs, and Woody Vines of Great Smoky Mountains National Park, p. 62. Comments: Although the 1859 reference gives dimensions identical to those in an 1866 reference to a tree on Mt. Mitchell, the locations appear to be in different counties, and perhaps thirty miles apart.

Tuliptree. A giant yellow poplar was cut long ago on the Little Santeetlah Creek watershed. It scaled a total of 20,163 board

feet. Reference: Information courtesy of Bob Leverett, 3/26/2003.

American Chestnut. Joseph S. Illick stated that a chestnut at Francis Cove, near Waynesville, Haywood County, had a trunk diameter of seventeen feet. This is considered the greatest known diameter of any eastern hardwood. Reference: Grimm, William C. 1967. Familiar Trees of America, p. 109. Reference: Detwiler, Samuel B. "The American Chestnut Tree," *American Forestry*, October 1915. Comments: Randy Cyr of ENTS reported (1/18/2004) that he had interviewed a relative of the tree's owner who knew the stump as a boy, and said the tree was hollow, single-trunked, and was cut for firewood, but any photographs had been lost.

American Chestnut. A. J. Sharp reported an ankle-high stump of a chestnut in the Greenbrier section of the Great Smoky Mountains National Park that was "13 feet the long way across." Reference: Grimm, William C. 1967. Familiar Trees of America, p. 109. Comments: It seems curious that the tree was cut so low. Perhaps the trunk was hollow, and was cut for firewood, or was on a slope, and was cut low on the uphill side.

American Chestnut. Girth 33' 6", height 75'. "Great Smoky Mountains." Lane does not indicate whether this tree was in North Carolina or Tennessee. Reference: Lane, Ferdinand C. 1953. The Story of Trees, p.67.

O'Neal-Brevoort Oak. White Oak. Circumference said to be "more than 28 feet," height and spread over 100 feet. Located on a hill in dairy farm pasture near Wake Forest, in northern Wake Co. Tree destroyed by Hurricane Fran in September 1996. Reference: Internet. Capital Tree Program. Wake County. (text and photo).

North Carolina's Appalachian Giants

Boogerman Pine. Eastern white pine. CBH 11' 5.0", ht. 185.5'. Measured by Will Blozan et al 3/29/2002. This is the tallest tree in the eastern United States. Height before top breakage (Hurricane Opal, Oct 1995) was 207.0' (measured by Will Blozan 8/24/1995). Located near the eastern end of Boogerman Loop Trail, off Caldwell Creek Trail, Palmer Branch, Cataloochee Valley, Great Smoky Mountains National Park, Haywood County.

John Wasilik Memorial Poplar. Tuliptree. "Second-largest poplar." National champion 1969-1971: CBH 25' 2", ht. 135', spr. 51'. Near the Appalachian Trail, Nantahala National Forest, near Franklin, Macon County. The top was much reduced by 2003, and the tree was in failing condition. Bark was reported falling off the lower trunk, and only two small limbs had leaves. Comments: Tree named for an early forest ranger. Leverett stated that the size of the trunk decreased very rapidly, creating a bottle-like outline. He also stated the trunk was 27 feet CBH, but it is doubtful that this infirm tree increased more than several inches beyond its 1969 measurement.

Tuliptree. CBH 24' 0", ht. 120'. Measured by Jess Riddle. Located on Collins Creek, Great Smoky Mountains National Park. Information courtesy of Will Blozan, 3/3/2003.



Boogerman Pine at 207 feet tall in October of 1995. Photo by Will Blozan.

Sag Branch Tuliptree. CBH 22' 3", ht. 167.7'. Volume of trunk 2430 cu. ft., branch volume 1560 cu. ft., total 3990 cu. ft. Measured by Will Blozan, Robert Van Pelt et al Feb 2004. Located on Sag Branch, Cataloochee Valley, Great Smoky Mountains National Park, Haywood County.

Tuliptree. CBH 20' 6", ht. 175.5'. Measured by Will Blozan before 1999, this is the third-tallest tuliptree accurately measured. Located on Left Fork, Deep Creek, Great Smoky Mountains National Park, Swain County.

Fodderstack Poplar. This appears to be the same as the *Horse Cove Poplar*, which has a trunk diameter of 71" (circumference would be 18' 7"). Promoted as the second-largest poplar in the state, third largest in the east. 100 yards from trail head off

Rich Gap Road, three miles east of Highlands. Reference: Internet – hiking information. Comments: Although a relatively large tree, the supposed ranking is completely in error.

North Carolina's Largest National Champions

Baldcypress. National co-champion 1977-78: CBH 38' 3", ht. 138', spr. 36'. State list as (1977). CBH 38' 3", ht. 138', spr. 34'. Windsor, Bertie County.

Southern Magnolia. National champion 1978-1986: CBH 20' 3", ht. 86', spr. 96'. Bladen County. Owner: H. C. Blake of Riegelwood, N.C. Reference: Davey/American Forests calendar, June 1990 (photo). Comments: A large tree with two leads above a compact but valid trunk, with a very large low limb. Probably measured below breast height; the Rule of 73 should be applied to such trees.

Cherrybark Oak. National champion 1975-1978: CBH 29' 0", ht. 120', spr. 126'. Perquimans Co. Reference: *American Forests*, National Register of Big Trees, 1982, p.25 (photo). Comments: Large open-grown specimen in agricultural area. Valid trunk, but the height may be somewhat exaggerated.

Cherrybark Oak. National champion 1989-1990: CBH 28' 0", ht. 105', spr. 140'. SR1231, South Mills, Camden County. On state champion list as (1988) CBH 27' 0", ht. 105', spr. 140'.

Northern Red Oak. National champion 1997-2000: CBH 21' 5", ht. 134', spr. 81'. Double Gap Bridge, Cataloochee Valley, GSMNP, Haywood County. Nominated by Will Blozan & Michael Davie. Reference: *American Forests*, National Register of Big Trees, 2000, p. 47 (photo).

Overcup Oak. National champion 1987-2002: CBH 21' 6", ht. 156', spr. 120'. Lewiston-Woodville, Bertie Co. On state list as (1987) CBH 21' 4", ht. 156', spr. 120'. Owner: Georgia-Pacific Corp. Comments: Height exceeds any known oak, probably exaggerated by false-top triangulation.

Water Oak. National champion 1983-1986: CBH 20' 2", ht. 110', spr. 122'. On state list as (1984) CBH 20' 2", ht. 110', spr. 123'. Currituck Co.

Sweetgum. National champion 1986-2002: CBH 23' 2", ht. 136', spr. 66'. State list (1984) same dimensions. Neuse River, near Perfection, Craven Co.

North Carolina State Champion Trees

Pond Cypress. State champion list as (1994) CBH 28' 8", ht. 32', spr. 24'. Hyde Co. Comments: It is unknown if the height is correct.

Live Oak. State champion list as (1996) CBH 25' 4", ht. 79', spr. 127'. New Hanover Co. Owner: Oak Landing Homeowners Association

Southern Red Oak. State champion list as (1990) CBH 23' 2", ht. 101', spr. 128'. Cumberland Co.

Willow Oak. State champion list as (1990) CBH 25' 9", ht. 90', spr. 101'. Mecklenburg Co. Owner: Betty Pope.

Willow Oak. CBH 27' 1", ht. 127', spr. 113'. Located on a residential property at 4611 Gibbon Road, Charlotte. Reference: Internet. "Treasure Tree Program of Mecklenburg County." (three photos). Comments: A photograph indicates that this is a double tree, a coppice, but probably abutting to six or ten feet. It is said to have been listed as state champion in 1990. It is unknown if this is the same as Betty Pope's willow oak, in the same county.

White Oak. State champion list as (1988) CBH 22' 10", ht. 124', spr. 114', pts. 426.5. Johnston Co. Owner: Ben Wadsworth.

Osage Orange. State champion list as (5/3/2001) CBH 26' 5", ht. 74', spr. 84'. Haywood Co.

Pecan. State champion list as (1989) CBH 20' 1", ht. 109', spr. 115'. Chowan Co.

Tuliptree. State champion list as (1992) CBH 22' 8", ht. 151', spr. 163'. Bertie Co. Owner: Ben Williams Estate. Comments: From the height, this appears to be a forest grown tree. The spread exceeds records for nearly all species, and is far beyond the known capability of tuliptree. The spread is almost certainly an aggregate, not average, calculation.

Other North Carolina Giants

Live Oak. A large tree at Hilton Park, north of Wilmington is illuminated each year and billed as the "World's Largest Living Christmas Tree." It is said to be 35 feet in circumference. Reference: Willard Fell, Georgia big tree coordinator. Comments: Fell states (October 2003) that this tree is multiple-trunked.

Tuliptree. CBH 21' 8", ht. 121', spr. 131'. Old Duke Mansion, 400 Hermitage Road, Charlotte. The tree is visible from the street. Reference: Internet. "Treasure Tree Program of Mecklenburg County." (three photos). Comments: The photographs are poor, but suggest that this is a single-trunked tree. The spread of 131', if correct, is exceptional for a tuliptree; it may be an aggregate, not average, measurement.

TENNESSEE

Great Trees Of The Past

The Tennessee Titan. Baldcypress. National champion 1954-1977; co-champion 1978: CBH 39' 8", ht. 122', spr. 47'. Located in bottomland on south fork of Obion River, three miles west of Sharon, Weakley County. Site within 330-acre Big Cypress Tree State Natural Area, 297 Big Cypress Road, Greenfield. The tree was killed by a lightning strike in July 1976. It is no longer standing. Reference: Randall, Charles Edgar and Henry Clepper 1976. Famous and Historic Trees. The American

Forestry Association, p. 83. Reference: *American Forests*, September 1955, p. 37 (photo). Comments: This was a very significant specimen. The tree was completely hollow, with a large opening extending up about 20 feet on one side. The wide-flaring base was not fluted, and did not suggest the site was subject to significant flooding. The huge base tapered concavely to perhaps six feet in diameter at 25-30 feet above grade.

American Beech. Circumference 28.5 feet, height 70 feet. Estimated to be 365 years old. Inscription on bark: "D. Boone cilled a bar on tree in year 1760." This famous tree stood near Carroll Creek, on the old stage road between Jonesboro and Blountsville, Washington County. The tree fell in 1916. Reference: Peattie, Donald Culross 1950. *A Natural History of Trees*, p. 182.

Rich Mountain Pine. Eastern white pine. This tree was felled to salvage the timber after the top was blown out. Diameter, 6' up downhill side was 6' 2"; circumference was 19' 2". The logs scaled 7522 board feet. Length to broken top, 168'. Considered the largest white pine in nation, and to have been nearly 200' tall before wind breakage. Rich Mountain, Unicoi County. Reference: Undated newspaper clipping, courtesy of Will Blozan.

Tuliptree. Stupka (1964) quoted Buckley (1859) : "[A yellow poplar] on the western slope of the Smoky Mountains in Tennessee, on the Little Pigeon River, is twenty-nine feet in circumference at three feet from the ground." Reference: Stupka, Arthur 1964. *Trees, Shrubs, and Woody Vines of Great Smoky Mountains National Park*, p. 62.

American Chestnut. Circumference 28 1/2 feet at four feet above grade. Located at Porters Flats, Greenbrier Cove, Great Smoky Mountains National Park, Sevier County. Reference: 11/19/1933 photo, Flora and Fauna Section, Albert "Dutch" Roth Digital Photograph Collection, University of Tennessee. (via Internet).

Notable Tennessee Tuliptrees Of The Great Smokies

Greenbrier Giant. Tuliptree. Tall forest giant. CBH 24' 3", ht. 154'(laser), spr. 96'. Measured by Will Blozan. Kalanu Prong, near Gatlinburg, Great Smoky Mountains National Park, Sevier County. Information courtesy of Will Blozan, 3/5/2003.

Tuliptree. "23' 7" in circumference." Between Indian Camp Creek and Dunns Creek, almost on the Sevier-Cocke County line, north of Mt. Guyot. Reference: Stupka, Arthur 1964. *Trees, Shrubs, and Woody Vines of Great Smoky Mountains National Park*, p. 62. Comments: It is unknown if this tree still exists. Stupka considered it to be the largest sound tuliptree in the park. This suggests he may have been aware of a larger, but hollow, specimen.

Mill Creek Monster. Tuliptree. Tall forest giant. CBH 22' 10", ht. 156'(laser). Measured by Will Blozan. Located near Cades Cove, Great Smoky Mountains National Park. (information

courtesy of Will Blozan, 3/5/2003). Reference: See photo, ENTS webpage, courtesy of Will Blozan.

Tuliptree. CBH 21' 3", ht. 162.3' (laser). Measured by Will Blozan and Michael Davie 5/5/2002. Porters Creek, Greenbrier District, Great Smoky Mountains National Park.

Other Tuliptrees. According to Will Blozan (5/6/2002), there are a total of nine tuliptree over 20' CBH in the Greenbrier/Cosby sections of GSMNP, including the 24' 3", 22' 10", and 21' 3" trees.

Tennessee's Largest National Champions

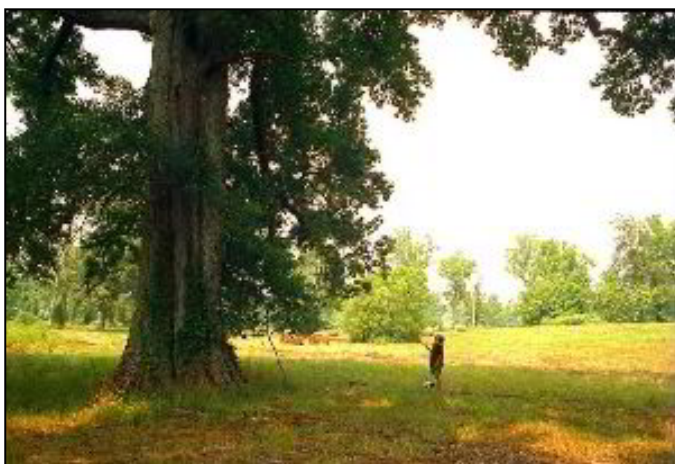
American Elm. National co-champion 2002 CBH 23' 1", ht. 122', spr. 84'. State list 2001 with same dimensions. Meerman-Shelby State Park, Shelby Co.

American Elm. National champion 1951-1966: CBH 24' 7", ht. 160', spr. 147'. Blount County. Now dead. Reference: *American Forests*, September 1955, p. 34 (photo). Comments: The height was greatly exaggerated, probably due to false-top triangulation. The photo suggests the tree was much wider than tall.

Red Maple. National champion 1997-2002: CBH 23' 0.5", ht. 141.0' (laser), spr. 88'. Indian Camp Creek, Maddron Bald Trail, Great Smoky Mountains National Park, Cocke County. Nominated by Will Blozan.

Red Mulberry. National champion 1999-2002: CBH 25' 1", ht. 52', spr. 52'. Private residence, Fayette Co. Owner: Doug & Janet Jackson.

Chestnut Oak. National champion 2002: CBH 18' 5", ht. 144', spr. 78'. Mill Creel, Great Smoky Mountains National Park. Nominated by Will Blozan, Michael Davie and A. Stupka. Comments: This tree has a single trunk. It was accurately measured, and is the tallest known chestnut oak.



Former national champion pin oak near Lexington, KY. Photo by Michael Davie.

Pin Oak. National champion 1994: CBH 20' 0", ht. 110', spr. 112'. Dick Barry Farm, Henderson County. Reference: Davey/American Forests calendar, May 1994 (photo). Comments: The photo showed this handsome tree to be open-grown, but having a tall well-defined trunk.

Shumard Oak. National champion 1994-2001: CBH 20' 9", ht. 190', spr. 88'. National champion 2001-2002: CBH 17' 10", ht. 147', spr. 88'. State co-champion. Overton Park Forest, Memphis. Comments: The 190' height was greatly exaggerated, and would have exceeded any hardwood in the east. It is assumed the same tree was remeasured in 2001, and the height reduced by 43 feet. The CBH was reduced by nearly 3 feet, suggesting the tree was first measured at 34" above grade.

Swamp Chestnut Oak. National co-champion 1998-2000: CBH 23' 0", ht. 105', spr. 216'. State list as (2000) CBH 21' 10", ht. 83.5', spr. 114.5'. Private residence, Marshall County. Owner: Sharon Hayes. Comments: The first measurements of this tree were greatly exaggerated. The incomprehensible spread of 216 feet appears to have been the aggregate of two measurements, not the average. The tree was remeasured in 2000, and proved smaller in all respects. It has been removed from the national register.

Pecan. National champion 2000-2002: CBH 22' 3", ht. 136', spr. 111'. Emily Boyd residence, Newport, Cocke County. Comments: Michael Davie, of the Eastern Native Tree Society, examined the tree on 9/8/03. It is an open grown specimen near a house, apparently a coppice, having double trunks dividing about ten feet up, with included bark to the ground. It would not pass the slice test. Height by laser was 141.1'.

Tennessee's Largest State Champions

Green Ash. State champion list as (2001) CBH 21' 5", ht. 63', spr. 76'. Private residence, Henderson Co. Owner: Keith Harris.

Baldcypress. State champion list as (2001) CBH 28' 8", ht. 97', spr. 76'. State of Tennessee, Weakley Co. Comments: This tree may be on the same tract as was the "Tennessee Titan."

Northern Catalpa. State champion list as (1998) CBH 20' 11", ht. 52', spr. 39'. Private residence, Giles, Co. Owner: Janice and James Duncan.

Eastern Cottonwood. State champion list as (2001) CBH 23' 3", ht. 147', spr. 115'. Private residence, Shelby Co. Owner: Dorothy Smith.

Hackberry. State champion list as (2002) CBH 20' 0", ht. 73', spr. 89'. Private residence, Loudon Co. Owner: David Bartlett.

Black Locust. State champion list as (1998) CBH 22' 0", ht. 93', spr. 43'. Private residence, Maury Co. Owner: Helen Thurman.

Black Oak. State champion list as (1998) CBH 23' 1", ht. 83',

spr. 75'. Private residence, Giles Co. Owner: Milky Way Farms.
Bur Oak. State champion list as (2001) CBH 21' 8", ht. 94', spr. 92'. Celebration of Life Church property, Sumner Co.

Cherrybark Oak. State champion list as (2002) CBH 27' 8", ht. 123', spr. 122'. Private residence, Tipton Co. Owner: John Hayes (JCH Development Co.)

Shumard Oak. Co-champion on state list as (2001) CBH 21' 5", ht. 98', spr. 107.5'. Private residence, Davidson Co. Owner: Michael R. Shea. Comments: This tree is within one point (382 to 383) of the national champion Shumard oak measured in 2001 in Memphis, and should be listed as a national co-champion.

Southern Red Oak. State champion list as (2001) CBH 27' 8", ht. 123', spr. 122'. Private residence, Washington Co. Owner: George & Laura Boy.

White Oak. State champion list as (1985) CBH 22' 4", ht. 93', spr. 118'. State list as (2001) CBH 21' 6.2", ht. 110', spr. 118', pts. 398.1. Private residence, Union Co. Owner: Paula Hornan Less Gray & Lori Rose.

Willow Oak. State champion list as (2001) CBH 26' 11", ht. 115', spr. 143'. Private residence, Shelby Co. Owner: Larry & Joyce White

Osage Orange. State champion list as (1985) 20' 0", ht. 61', spr. 84. State list (2000) as CBH 23' 0", ht. 63', spr. 81'. Private residence, Maury Co. Owner: Dr. and Mrs. Walter Brown.

American Sycamore. State champion list as (2001) CBH 22' 0", ht. 117', spr. 131'. Private residence, Dickson Co. Owner: Wallace Ramussen.

SOUTH CAROLINA Famous Live Oaks



Angel Oak, Johns Island, SC. Photo by James Parton.

Angel Oak. Live Oak. John's Island, 6 miles south of Charleston, off Highway 700, Charleston County. Trunk circumference 25', spr. 160'. Some limbs rest on the ground. Once a privately owned tourist attraction, now open as a park owned by the city of Charleston. The largest limb is 11' in circumference, 89' in length, and rests on the ground. Reference: Randall, Charles Edgar and Henry Clepper 1976. Famous and Historic Trees. The American Forestry Association, pp. 74, 75 (photo). Reference: Postcard by Charleston Post Card Co., Inc. (description and photo). Comments: This is a very picturesque tree, but the estimated age (1400-1526 years) was grossly exaggerated, probably for promotional purposes. Randall and Clepper downplay a suggested age of 700 years, pointing to the rapid growth of live oaks, and a more conservative estimate of 275-300 years.



Middleton Live Oak. Photo by Will Blozan.

Middleton Live Oak. State champion list as (1984) CBH 30' 0", ht. 85', spr. 145'. Randall & Clepper quote dimensions as: circumference 37 feet, spread 144 feet. Grimm gives the circumference as 35 feet at 5 feet above grade, with a symmetrical spread of 180 feet. Measured by the Eastern Native Tree Society in February 2004, the tree is 67.4 feet tall, with an average spread of 118 feet, and has a trunk volume of 970 cu. ft., branch volume 3850 cu. ft.; the total of 4820 cu. ft. appears to be the greatest volume of any tree standing in the east. This tree is 1st vice president of the Live Oak Society, which lists its girth as 31 feet. Located at the Middleton Place Gardens, 4300 Ashley River Road, seventeen miles north of Charleston, Dorchester Co. The site is within the formal gardens, near the Ashley River. Reference: Grimm, William C. 1967. Familiar Trees of America, p. 121. Reference: Randall, Charles Edgar and Henry Clepper 1976. Famous and Historic Trees. The American Forestry Association, p. 40. Reference: Live Oak Society (Internet). Comments: The variety of stated girths illustrates the lack of conformity in measuring trees. This is a rather upright tree, with two massive limbs about 20 feet up, and the trunk continuing above that. It is higher branched, with a taller crown, than many live oaks. It appears that only two branches approach the ground.

South Carolina's Largest National Champions

Laurel Oak. National champion 1958-1966: CBH 20' 0", ht. 84' spr. 102'. Darlington.

Laurel Oak. National champion 1976-1978: CBH 20' 9" ht. 148', spr. 76'. Beidler Tract, Congaree Swamp, Richland Co.

Overcup Oak. National co-champion 1976-1982: CBH 22' 0", ht. 123', spr. 48'. Beidler Tract, Congaree Swamp, Richland Co. Reference: *American Forests* April 1978, p. 50 (photo).

Shumard Oak. National champion 1984-1986: CBH 20' 0", ht. 155', spr. 116'. State list as (1999) CBH 21' 11", ht. 155', spr. 106', presumably the same tree. Congaree Swamp National Monument, Richland Co.

Sugarberry. National champion 1969-1971: CBH 19' 10", ht. 59', spr. 57'. North Augusta.

Sugarberry. National champion 1994-2002: CBH 25' 1", ht. 81', spr. 114'. Society Hill.

Sugarberry. National champion. CBH 26' 9", ht. 79', spr. 87'. Darlington County. Reference: Davey/American Forests calendar, March 2004. (photo). Comments: This tree stands near a farmhouse. The two trunks divide perhaps 8-10 feet from the ground. Although possibly of coppice origin, the trunks appear to be rather well united.

Sweetgum. National champion 1970-1971: CBH 19' 8", ht. 125', spr. 100'. Richland County.

Big State Champion Trees of South Carolina

Baldcypress. State list as (1995) CBH 26' 1", ht. 131', spr. 48'. Congaree Swamp National Monument.

Cherrybark Oak. State list as (1999) CBH 23' 2", ht. 156', spr. 122'. Congaree Swamp National Monument.

Laurel Oak. National champion 1966: CBH 20' 0".

Laurel Oak. National champion 1976: CBH 20' 9".

Southern Red Oak. State list as (1989) CBH 20' 4", ht. 73', spr. 79'. Henson residence, Fort Lawn, Chester Co.

Swamp Chestnut Oak. State list as (1995) CBH 20' 2". Ht. 120', spr. 106'. Congaree Swamp National Monument.

Willow Oak. State list as (1992) CBH 22' 0", ht. 103', spr. 116'. Maidendown Bay, near Marion, Marion Co.

Tuliptree. State list as (1984) CBH 20' 1", ht. 135', spr. 85'. Hunter May residence, near Hodges, Abbeville Co.

Water Tupelo. State champion (1978) CBH 20' 11", ht. 124', spr. 62'. Beidler Tract, Congaree Swamp, Richland Co. Reference:

American Forests, April 1978, pp. 50-53: "Congaree: Forest of Giants."

GEORGIA

Interesting Trees Of Georgia

Lover's Oak. Live oak. Corner of Albany Street and Prince Street, Brunswick. Once listed as the state champion. Marked by bronze plaque - U.S. Constitution bicentennial tree 1787-1987. Said to be 13 feet in diameter at 3 feet up. Reference: numerous Internet sites. Comments: This tree has a huge base, tapering rapidly to a fork about eight feet up, with two leads perhaps four feet thick. A very large low limb is about three feet above grade, greatly contributing to the mass of the base.

Clubhouse Oak. Live oak. Located at guards' clubhouse, Georgia State Prison. CBH 22' 2". Reference: Information courtesy of Willard H. Fell. Comments: From Fell's photo, this tree has a single trunk of classic shape, dividing into numerous leads at about fifteen feet up. The crown is symmetrical, and well elevated.

Gennett Poplar. Tuliptree. Called the largest poplar in Georgia, or the second-largest tree in northern Georgia. Circumference said to be almost 18 feet or nearly twenty feet. About 100 feet tall, part of top blown out. Located near Bear Creek Trail, Cohutta Mountains, Chattahoochee National Forest, Murray County. Reference: Internet.

Georgia's Great National Champions

Cherrybark Oak. National champion 1969-1971: CBH 24' 0", ht. 115', spr. 131'. Dougherty County.

Laurel Oak. National champion 1969-1971: CBH 19' 5", ht. 102', spr. 116'. Waycross. (replaced North Carolina champion).

"Village Sentinel." Live Oak. National co-champion, 2000-2002: CBH 34' 3", ht. 77', spr. 140'. State list 8/3/2000. Single trunk. It appears that the limbs do not rest on the ground. Symmetrical crown. Bronze plaque. Located within Baptist Village Retirement Communities, Waycross, Ware Co.

Southern Red Oak. National champion 1999-2002: CBH 26' 0", ht. 150', spr. 156'. State list 1/12/1996. Thomaston, Upson Co. Comments: The height appears to be greatly exaggerated, due to false top triangulation. Obviously open grown, the actual height may be 40 feet less.

Water Oak. National champion 1969-1971: CBH 20' 11", ht. 72', spr. 90'. Hawkinsville, Pulaski Co.

Willow Oak. National co-champion 1972-1982: CBH 24' 0", ht. 112', spr. 125'. Taliaferro County.

Willow Oak. National champion 1998-2002: CBH 21' 7", ht. 138', spr. 116'. State list 8/28/1998. Thomaston, Upson Co. Comments: For a tree with a broad spread, the height appears to be exaggerated (false-top triangulation).

Pond Cypress. National champion 1999-2000: CBH 20' 3", ht. 115', spr. 54'. Altamaha River, Jefferson Davis Co. Reference: *American Forests*, 2002 Register, pp 12-13. Comments: This tree was actually a common baldcypress, and was deleted from the 2002 Register.

Eastern Redcedar. National champion 1997-2002: CBH 20' 2", ht. 57', spr. 69'. State list 8/8/1994. Lone Hill Church Cemetery, West Green, Coffee County. Reference: Davey/American Forests calendar, June 2000 (photo). Comments: This is a most remarkable heavy-limbed tree, with a single trunk.

Big State Champions Of Georgia

Baldcypress. CBH 28' 6", ht. 110', spr. 57'. 8/1/2000. Sylvania, Screven Co.

Baldcypress. CBH 32' 11", ht. 78', spr. 53'. 11/27/1998. Ebenezer, Effingham Co.

Baldcypress. CBH 23' 7", ht. 135', spr. 90'. 7/29/1998. Wadley, Jefferson Co.

Black Oak. CBH 20' 9", ht. 124', spr. 124'. 9/19/1994. Atlanta, Fulton Co.

Cherrybark Oak. CBH 22' 6", ht. 91', spr. 140'. 6/10/1996. Albany, Dougherty Co.

Laurel Oak. CBH 22' 6", ht. 77', spr. 94'. 6/7/2000. Fargo, Echols Co.

Scarlet Oak. CBH 20' 10", ht. 70', spr. 56'. 9/12/2002. Commerce, Jackson Co.

Swamp Chestnut Oak. CBH 20' 1", ht. 95', spr. 72'. 9/1/1994. Hawkinsville, Pulaski Co.

Water Oak. CBH 21' 7", ht. 87', spr. 121'. 7/10/1998. Ft. Benning, Chattahoochee Co.

Pecan. CBH 20' 10", ht. 83', spr. 123'. 8/16/1994. Milledgeville, Wilkinson Co.

American Sycamore. CBH 20' 3", ht. 108', spr. 105'. 21/11/2000. Metter, Candler Co.

Tuliptree. CBH 21' 3", ht. 128', spr. 65'. 3/10/2001. Oconee National Forest, Farmington, Oconee Co.

Water Tupelo. CBH 24' 7", ht. 70', spr. 53'. 11/28/1998. Ebenezer, Effingham Co.

FLORIDA

Great Trees Of Florida

The Senator. Baldcypress. Also called the "Sovereign Cypress," this is the largest known baldcypress in terms of trunk volume,

estimated at 4217 cu. ft. CBH 35' 5", ht. 115' (per Dr. Robert Van Pelt). Circumference (at grade) 54 feet, diameter (at grade, before 1979) 17' 6". CBH (before 1979) 34' 6". Av. spr. 57'. Florida's largest tree, claimed to be 3500 years old. Located in Big Tree Park, Spring Hammock Nature Park (state owned), General Hutchinson Parkway, Longwood, Seminole Co. Reference: *American Forests* Register, 2002, p. 13 (photo). Reference: Grimm, William C., 1967. *Familiar Trees of America*, p. 48. Reference: Morris, Allen, 1979. *The Florida Handbook*, p. 422 (description & photo). Reference: *American Forests*, Spring 2000, p. 36. Comments: The age estimate seems excessive, but this is, undoubtedly, a very old tree. The trunk has been found to be entirely hollow, from the ground, where the walls are about thirty inches thick, to a broken top at the 109-foot level. Compared to many old cypresses, the Senator has minimal basal flare. The trunk tapers very gradually, and the tree is thought to have the largest trunk volume of any tree in the eastern United States. A reference to a volume of 8000 cubic feet (AF 2000) appears to be an error.

Water Hickory. National champion 1967-1978: CBH 22' 2", ht. 150', spr. 87'. Near Blountstown, Calhoun Co.

Laurel Oak. National co-champion 1987-2002: CBH 21' 6", ht. 80', spr. 114'. Baker, Okaloosa County.

Bulow Creek Live Oak. A live oak in the Bulow Creek State Park is said to be the state's seventh largest, and to be 150 feet tall. Reference: Internet. "Bulow Creek State Park." Comments: The claimed height appears to be enormously exaggerated, approaching twice the actual.

Lake Griffin Live Oak. A live oak in Lake Griffin State Park (460 acres north of Orlando) is said to be Florida's fifth largest, and 130 feet tall. Reference: Internet. "Lake Griffin State Park." Comments: The stated height appears to be greatly exaggerated.

"Old Pisa." Live Oak. Located near Daytona, Florida. Girth 35 feet. Reference: Lane, Ferdinand C., 1953. *The Story of Trees*, p. 67.

Live Oak. Circumference 36 feet. Alexander Blair Big Oak Trail, Highlands Hammock State Park, Sebring. Reference: Internet.

ALABAMA

National Champion Oaks

Laurel Oak. National champion 1993-2000: CBH 22' 2.5", ht. 93', spr. 121.9'. Marengo Co. Owner: Charles Mayton.

Swamp Chestnut Oak. National champion 1989-2000: CBH 16' 5", ht. 200', spr. 148'. National champion 2000-2002: CBH 16' 5", ht. 156', spr. 148'. Fayette Co. Reference: Davey/American Forests calendar, July 1994 (photo). Comments: This tree was first listed as being 200' in height, which exceeded the height record for any eastern hardwood. The measurement was revised to 156', which still appears excessive, taller than any

known oak in the east. From the photograph, the actual height may be 120-130 feet. Also, the spread would be unprecedented for a forest-grown tree. It appears the claimed 148' spread is the aggregate of two measurements, not the average; an average spread of 74 feet is more plausible. This tree is more than fifty points smaller than the Maryland champion at St. Paul's Cemetery. It is located in a seasonally flooded brushy wet bottom, apparently a cutover area.

Water Oak. National champion 1990: CBH 22' 9", ht. 97', spr. 117'. Monroe County.

Alabama's Biggest State Champions

Baldcypress. State champion list as CBH 27' 0", ht. 131', spr. 47.8'. Baldwin Co.

Cherrybark Oak. State champion list as (1999) CBH 20' 4.2", ht. 123', spr. 140'. Bibb Co. Owner: Joe Elliott, Jr.

Southern Red Oak. State champion list as (1987) CBH 23' 10", ht. 92', spr. 123'. Pike Co.

Southern Red Oak. State champion list as (1987) CBH 23' 11", ht. 107', spr. 133'. Montgomery Co. Owner: Hunter J. Flack.

Water Oak. State champion list as (2003) CBH 24' 10.2", ht. 80', spr. 98'. Montgomery Co. Owner: Hartley & Diane McLaney.

White Oak. State champion list as (1973) CBH 20' 11", ht. 140', spr. 130', pts. 423.5. Autauga Co. Comments: The height of this tree is excessive for a broad crown, suggesting exaggeration by false-top triangulation.

Sycamore. State champion list as (1973) CBH 28' 8.4", ht. 124', spr. 108'. Marengo Co. Owner: W. T. McAlpine.

Tuliptree. State champion list as (1974) CBH 20' 8", ht. 151', spr. 73'. Lawrence Co. Owner: USDA Forest Service. Comments: This is presumed to be the same as a tuliptree said to have a 22-foot girth and 150-foot height in the Bee Branch Scenic Area of the Sipsey Wilderness, in the William B. Bankhead National Forest.

Water Tupelo. State champion list as (1984) CBH 21' 9.6", ht. 82', spr. 48'. Jackson Co. Owner: Washington estate.

MISSISSIPPI

Great Trees Of The Past

"Old Boss," or "Old King Shortleaf." Shortleaf Pine. This huge pine escaped injury by a tornado in 1920, but was struck by lightning and killed soon after. It was 120 feet tall, and 91 feet to the first limb. Cut to salvage the lumber, its diameter was 7' 3" across the stump, and 4' 1" at the first limb. It yielded five 16' logs, and one 10' log, all clear. Three ten-foot logs were cut from leads in the top. Owned by Legan and McClure Lumber Co. of Bates, Mississippi, the tree stood near Nanawayah Creek, in the headwaters of the Pearl River, in Winston

County, 16 miles east of Louisville, Mississippi. Reference: Internet 2003, Sam Lindsey web page. See old newspaper article and photographs.

"The Tree That Won a Locomotive." Longleaf pine. Cut by J. S. Newman Lumber Co. of Hattiesburg in 1902 or 1903. The butt log of this tree was exhibited at the 1904 Louisiana Purchase Exposition in St. Louis. The log was 12' long, and 9' in diameter at the larger end. It won a competition, receiving a full-sized logging locomotive as the prize. The tree stood in northwest Lamar County. Reference: Internet, 2003. Sam Lindsey web page. Text and old photograph.



Alabama's Sipsy Tuliptree. Photo by Marcus Houtchings.

Councilor Oak. Live oak. Circumference over 21 feet. Spread over 100 feet. Pradat House, Biloxi. Reference: Randall, Charles Edgar and Henry Clepper, 1976. Famous and Historic Trees. The American Forestry Association, p. 33.

Mississippi's Largest National Champion Trees

Southern Catalpa. National champion. State list as CBH 22' 7", ht. 88', spr. 68'. Yalobusha Co.

Southern Magnolia. National champion 1986-1992: CBH 20' 3", ht. 122', spr. 63. Smith County.

Southern Magnolia. National champion 1994-2002: CBH 22' 4", ht. 98', spr. 90'. Spread (state list): 89.5'. Jones County.

Nuttall Oak. National co-champion. State list as CBH 21' 8", ht. 110', spr. 96'. Washington Co.

Water Oak. National champion 1990: CBH 21' 8", ht. 105', spr. 117'. Itawamba County.

Water Oak. National co-champion. State list as CBH 23' 10", ht. 118', spr. 108'. Jones Co.

Willow Oak. National champion 1986-2000: CBH 26' 6", ht. 73', spr. 132'. Noxubee Co.

Pecan. National co-champion 1981-1982: CBH 19' 11.5", ht. 128', spr. 130'. Warren Co.

Big State Champions Of Mississippi

Baldcypress. State champion list as CBH 46' 9", ht. 70'. Located on Mississippi Dept. of Wildlife, Fisheries and Parks property, 8 miles north of Belzoni, in Humphreys Co.

Baldcypress. See state champion list. Former state champion, located within 300 feet of present (46' 9") champion.

Eastern Cottonwood. State champion list as CBH 23' 8", ht. 120', spr. 141. Tunica Co.

Cherrybark Oak. State champion list as CBH 24' 3", ht. 137', spr. 133'. Warren Co.

Live Oak. State champion list as CBH 30' 4", ht. 81', spr. 145'. Pearl River Co.

Southern Red Oak. State champion list as CBH 25' 3", ht. 96', spr. 48' 7". Panola Co.

Swamp Chestnut Oak. State champion list as CBH 21' 2", ht. 92', spr. 93.5'. Warren Co.

Willow Oak. State champion list as CBH 21' 1", ht. 140', spr. 118'. Lee Co.

Pecan. State champion list as CBH 21' 2", ht. 132', spr. 115'. Adams Co.

Water Tupelo. State champion list as CBH 25' 3", ht. 96', spr. 58'. Leflore Co.

LOUISIANA Great Live Oaks

The Live Oak Society was founded in Louisiana in 1934. Live oaks are designated as officers of the society, being nominated by their owner or sponsor. More than 4000 live oaks in eight states have been listed as members, including some that were larger than trees serving (presumably permanently) as officers. It is unknown if there are any rules regarding the height where circumference is taken. Reference: The Live Oak Society (Internet).

Locke Breaux Live Oak. National champion April 1941-1966: CBH 35' 0", ht. 78', spr. 168'. President of the Live Oak Society 1934-1966. Located near Hahnville (or Taft), St. Charles Parish. Died 1966. Reference: *American Forests*, August 1955, p. 38 (photos). Comments: Perhaps the largest of measured live oaks, this massive tree had a fairly decent trunk. Heavy limbed; from the 1955 photograph it appears a very large limb had torn away, leaving a gaping hole in the lower trunk, which may have been hollow. It appears that the ends of some limbs reached to the ground, but the tree was essentially self-supporting. The 168-foot spread may have been a maximum, not average, but was probably a record for any eastern species.

Seven Sisters Live Oak. Formerly called Doby's Seven Sisters, due to its seven trunks. National champion 1976-2002: CBH 36' 7", ht. 55', spr. 132'. President of the Live Oak Society since 1966. Located at 200 Fountain Street, Lewisburg, Mandeville, St. Tammany Parish (north of Lake Ponchartrain). Reference: *American Forests*, National Register of Big Trees, Spring 2000, p. 22 (photo). Reference: *American Forests*, Spring 2000, p. 35 (photo), 36 (text). Reference: *American Forests*, National Register of Big Trees, Spring 2002, p. 25 (photo). Comments: As acknowledged by *American Forests*, this is a seven trunked coppice-like structure with no defined trunk, and a cleft between basal groups. Circumference probably taken well below breast height.



Seven Sisters Oak. Photo by Larry Tucei.

St. John The Divine Cathedral Oak. Girth 27 feet. 2nd vice president of the Live Oak Society (South Carolina's Middleton Oak is the 1st vice president). Located in Lafayette, La. This impressive tree stands in a developed area, presumably on church grounds. It has a massive trunk about 30 feet tall, with perhaps eight large limbs at different levels. Reportedly, some limbs are supported by props.

LaGarde Oak. (Luling Live Oak). Girth 29 feet. 3rd vice president of Live Oak Society since 1934. Luling, La.

Arnaud Robert Live Oak. Girth 33.10 feet. Former 1st vice

president of the Live Oak Society. Cecilia, St. Martin Parish. Died before 1989.

George Washington Live Oak. Girth 28.06 feet. Former 2nd vice president of the Live Oak Society. Audubon Park, New Orleans, Orleans Parish. Died before 1989.

Martha Washington Oak. Girth 28 feet. Former 4th vice president of the Live Oak Society. Audubon Park, New Orleans, Orleans Parish. Now dead.

McDonough Oak. Live oak. Trunk diameter ca. 8 feet. Circumference over 24 feet. Ht. 60 feet, spr. 140 feet. Named in honor of John McDonough, city benefactor. Located in City Park, New Orleans. Reference: "Famous Trees of the United States," Woman's Day Magazine, ca. 1959 (photo). Reference: Randall, Charles Edgar and Henry Clepper, 1976. Famous and Historic Trees. The American Forestry Association, p. 81.

Great National Champion Trees Of Louisiana

Cat Island Cypress. Baldcypress. National champion 1981-2002: CBH 53' 8", ht. 83', spr. 85'. Cat Island Wildlife Management Area, five miles west of St. Francisville, West Feliciana Parish. Reference: *American Forests*, National Register of Big Trees, 1982, p. 25 (photo). Reference: *American Forests*, Spring 2000, p. 38 (photo). Reference: *American Forests*, National Register of Big Trees, Spring 2002, p. 12 (photo). Comments: Unusual stocky hollow tree with an irregular double but unified trunk and flaring bases. The tree's unusual form has resulted in some controversy regarding its chief competitor, "The Senator," in Florida.

Shumard Oak. National champion 1975-1982: CBH 21' 9", ht. 97', spr. 105'. Lake Providence.

Swamp Chestnut Oak. National champion 1961-1966: CBH 20' 9", ht. 130', spr. 100'. Near Urania, La Salle County.

Water Oak. National champion 1996-2002: 23' 2", ht. 120', spr. 111'. Roseland Plantation, Concordia Parish.

Pecan. National champion 1945-1966: CBH 21' 4", ht. 135', spr. 145'. Assumption Parish. Reference: Grimm, William C., 1967. Familiar Trees of America, p. 93. Comments: In 1966, AFA mistakenly listed this tree as being in Michigan. This tree is probably dead, the 1972 champion pecan from Louisiana being smaller in all respects.

Water Tupelo. National champion 1970-71: CBH 27' 1", ht. 105', spr. 45'. Kinder, Allen County.

TEXAS

Exceptional Trees

Pecan. Locally called "Jumbo." Girth 24 feet, height 120 feet. Near San Saba. Reference: Lane, Ferdinand C. 1953. The Story of Trees, p.67.

National Champion Trees of Texas

Water Oak. National champion 1960-1966: CBH 20' 3", ht. 77', spr. 100'. Near Center.

Pecan. National champion 1999-2000: CBH 21' 5", ht. 91', spr. 120'. Internet: CBH 20' 11", ht. 118', spr. 159'. A local tourist attraction, located on the farm of Billy and Lynn Finch, Highway 51, 2.7 miles north of Weatherford, Parker Co. Comments: It appears this tree is in failing condition with serious basal decay. From a photo on the Internet, this is a very handsome tree, heavy limbed and symmetrical, with perhaps twenty feet of single trunk. The claimed 159' spread seems excessive, as does the suggested age of "1000-1100 years". This tree was "dethroned" by a Tennessee pecan (431 points to 388) but that tree is double trunked.

OKLAHOMA

Great Trees of Oklahoma

Red Mulberry. National champion 1984-1999: CBH 20' 8", ht. 62', spr. 76'. Edmond, Oklahoma County.

ARKANSAS

Great Trees of Arkansas

Persimmon. Girth said to be 22 feet, height 130 feet. Luxora. Reference: Lane, Ferdinand C. 1953. The Story of Trees, p. 67. Comments: The girth of this tree is far beyond other known maximums for the species. This may have been a basal girth of a multiple-trunked tree.

MISSOURI

Great Trees Of The Past

Big Oak. Bur oak. The largest tree at Big Oak Tree State Park. The park was named for this tree, and contains numerous champion trees. The old oak was a tall, forest grown specimen "nearly seven feet in diameter" with some basal decay. It died ca. 1975, and was felled. Reference: *American Forests*, July 1986, p. 40.

Missouri's Greatest National Champions

Swamp Chestnut Oak. National champion July 1986. 1984 measurement: CBH 20' 11", ht. 142', spr. 96', pts 417, easily surpassing the 352-point April 1986 champion found in Virginia. Big Oak Tree State Park, Mississippi County. Reference: *American Forests*, July 1986, p.40 (photo). Comments: This is a very significant forest grown tree with columnar trunk. It was nearly equaled by a 416-point North Carolina tree listed as co-champion in 1988. Both trees were deprived of national listing in 1992, when an Alabama tree with a bogus height of 200' and 435 points was crowned. A bogus tree from Tennessee with an impossible spread of 216' and 434 points was listed in 2000. The Tennessee tree was dropped in 2002, and the Alabama tree was reduced to 390 points. Neither the Missouri nor North Carolina tree was reinstated. The Maryland champion in Kent County appears to

be the leader with a 425.2-point measurement in 2002. The Missouri and North Carolina trees (if extant) should be remeasured.

Missouri's Largest State Champions

Baldcypress. State champion list as CBH 25' 10", ht. 128', spr. 74'. New Madrid Co.

Northern Catalpa. State champion list as CBH 20' 2", ht. 50', spr. 72'. Robinson Cemetery. Owner: Virginia Robinson, Hannibal, Marion County.

Eastern Cottonwood. State champion list as CBH 25' 9", ht. 117', spr. 103'. Property of Robert L. Bell, Joseph and Esther Streets, St. Joseph, Buchanan Co.

American Elm. State champion list as CBH 22' 3", ht. 73', spr. 67'. Location: 200 yards south of Old Bass Road, 1.3 miles west of Hwy. 54, Cote County. Owner: Wesley and Betty Scott.

Hackberry. State champion list as CBH 19' 11", ht. 87', spr. 86'. Location: front yard of Mr. and Mrs. Duane Schaller, 2.3 miles south of Lexington on Hwy. 13, Lafayette County.

Silver Maple. State champion list as CBH 23' 0", ht. 100', spr. 75'. Location: Sec 17, T47N, R4W, off Bear Creek Road, Warren County. Owner: Bill, David and Katherine Klein.

Silver Maple. State champion list as CBH 20' 1", ht. 121', spr. 120'. Location: NWNE, Sec 17, T51N, R23W, near railroad and levee, Saline Co. Owner: Jay Plattner.

Bur Oak. State champion list as CBH 22' 8", ht. 84', spr. 116'. Along Bur Oak Road, one mile northwest of McBaine, Boone Co. Owner: John Sam Williamson, Jr.

Swamp Chestnut Oak. State champion list as CBH 21' 6", ht. 128', spr. 101'. Big Oak Tree State park, Mississippi County. Comments: This 411.25-point specimen is of different dimensions from the 417-point 1986 national champion in the same state park. It is unknown if it is the same tree.

American Sycamore. State champion list as CBH 24' 3", ht. 112', spr. 200'. Cape Girardeau Co. Reference: *American Forests*, February 1969. (photo). Comments: The photograph suggests that this is a forest-grown tree with a clear trunk to some height. Under any circumstances, the claimed 200' spread is implausible, and is probably an aggregate, not an average.

KENTUCKY

Great Trees Of The Past

The Coonden Tree. American Chestnut. Diameter: "ten feet eight inches across the stump." This was a hollow tree, located on the former Seaton Farm, in a small valley called "Coonden Tree Hollow." It was the largest tree in the area where Jesse Stuart grew up. Not yet claimed by blight, the old chestnut was felled by raccoon hunters, probably in the 1920's.

Undoubtedly located near W-Hollow, in Greenup County. Reference: Stewart, Jesse. "Trees I Have Known." *American Forests*, March 1970, pp. 33, 40, 42. Comments: If perfectly round, the stump girth would have been 33.5'. Hunters would have no incentive to cut low, so we might assume the tree was cut about three feet above grade. Correcting by the Rule of 73, CBH would have been 30' 5".

Tuliptree. Forest-grown specimen said to have been eighty feet to the first branch. Owned by Ritter Lumber Company, cut 1/12/1937. Said to have been 27 feet around the base. Proved to have a hollow center 5' 10" in diameter at stump height. Located at Linn Fork, near Highway 699, ca. one mile from the Leatherwood school, Leatherwood, Perry County. Reference: Internet (hazardkentucky.com) Article and photograph. Courtesy of Will Blozan, November 2003. Comments: The article contains a number of wild exaggerations to support the claim of "world's largest tuliptree." These include a height of "nearly 250 feet," and an age of "2000 years." Accounts submitted to the web page included a stump diameter of eleven feet. The photograph suggests the hollow base might have produced a girth of 27 feet at grade, but tapered rapidly.

Kentucky's Largest National Champions

Eastern Cottonwood. National champion 1972-1978: CBH 27' 4", ht. 121', spr. 96'. Kentucky Bend.

American Elm. National champion 1991-1992: CBH 26' 0", ht. 100', spr. 91'. Louisville. This tree is presumed dead.

Slippery Elm. National champion 1966: CBH 21' 2".

Bur Oak. National champion 1980-1982: CBH 26' 6", ht. 95', spr. 101'. 1994: CBH 26' 7", ht. 95', spr. 102'. National champion 1995-2003: CBH 26' 7", ht. 96', spr. 103'. Northeast of Parris. Reference: Davey/American Forests calendar, October 1994 (photo). Reference: Davey/American Forests calendar, November 2002 (photo). Reference: Davey/American Forests calendar, November 2003 (photo). Comments: This is a handsome single trunked specimen.

Chinquapin Oak. National champion/co-champion 1973-1990: CBH 20' 1", ht. 91', spr. 82'. Montgomery Co. Reference: *American Forests*, National Register of Big Trees, February 1992, pp. 8-9 (photo).

Chinquapin Oak. National champion 1995-2002: 26' 6", ht. 110', spr. 92'. Near Montgomery, Clark Co. Reference: *American Forests*, National Register of Big Trees, Spring 2002, pp. 10-11 (photo). Comments: The photograph is unclear, but this may be a double tree.

Pin Oak. National champion 2001-2002: CBH 20', ht. 134', spr. 88'. Bell County.

Scarlet Oak. National champion 1995-2002: CBH 20' 8", ht. 120', spr. 93'. Powell Co. Reference: *American Forests*, National Register of Big Trees 2000, pp. 12-13 (photo). Reference:

Davey/American Forests calendar, October 2002 (photo). Comments: This is a handsome single-trunked tree on a road bank with an unusually large buttressed base.

Swamp White Oak. National co-champion 1977-1982: CBH 20' 7", ht. 104' spr. 119'. Tomkinsville. Reference: *American Forests*, National Register of Big Trees, 1982, p. 42 (photo). Comments: A massive open-grown tree, heavy-limbed with one central trunk to some height.



National champion sassafras. Photo by Michael Davie.

Sassafras. National champion since 1954. 1966: CBH 16' 0", ht. 88', spr. 68'; 1972: CBH 17' 3", ht. 100', spr. 68'; 1986: CBH 21' 1", ht. 76', spr. 69'. National champion 1995-2002: 21' 10", ht. 78' spr. 69'. Identified by a historical highway marker. Owensboro, Davless County. Reference: American Forestry Association, additions to national register, February 1969 (photo). Reference: *American Forests*, National Register of Big Trees, 2000, pp. 4-5 (photo). Comments: This tree has a single trunk, with two large limbs perhaps 6' up. With the death of Maryland's Wye Oak (champion 1940-2002), this tree may be the longest-reigning national champion in the east.

American Sycamore. National champion 2001-2002: CBH 36' 8", ht. 85', spr. 68'. Grassy Creek, Montgomery Co. Owners:

Barbara Vaughn and Hubert Verhofstadt. Reference: *American Forests*, National Register of Big Trees, 2002, pp. 12-13 (photo). Reference: Internet. BywaysUSA.com (photo). Comments: This tree is a very significant specimen with an immense single trunk, which is completely hollow, with a large opening. Much of the crown has been lost to trunk failure, perhaps thirty feet up, but vigorous branches sustain the tree. Three cows have been seen in the hollow at one time.

American Sycamore. National champion 1973-1982: CBH 39', ht. 96', spr. 100'. Estil County. This tree died in 1982. Comments: It is unknown if this tree had a single trunk. It was succeeded by a multiple-trunked specimen in Ohio.

Kentucky State Champion

Kentucky Coffeetree. CBH 20' 1". Located in Morgan Co. Reference: Internet.

OHIO

Great Trees Of The Past

Logan Elm. American elm. Once Ohio's best-known historic tree. Reputed site of 1774 treaty with Indians, named in honor of Chief Logan. Trunk diameter (before 1927) 7 feet at 6 feet above grade. Height 70 feet, spread 148 feet. Logan Elm State Park, 6 miles south of Circleville, Pickaway County. Tree damaged by storm 1961, dead by 1964. Reference: Illick, Joseph S. 1927, Common Trees of Ohio, p. 9. Reference: "Logan Elm Hit by Heavy Winds," *Baltimore Sun*, 5/16/1961. Reference: "Tree Named after Indian Chief is Dead." *Baltimore Morning Sun*, 8/8/1964.

Rathbone Elm. American elm. Circumference at ground 50 feet. Height 99 feet, spread 150 feet. Located on Muskingum Drive, Marietta, Washington County, Ohio. Died (Dutch elm disease), taken down 1959. Claimed to be 400 years old, and the "largest standing elm in the world." Reference: "Mammoth Ohio Elm Tree Dies." *Baltimore Sun*, 11/6/1959. Reference: *The Marcolian* (newsletter of Marietta College). Internet. Comments: The claim "largest standing elm," may have been justified, since many of the great elms (Gowanda, Wethersfield, etc.) had died by 1959. According to *The Marcolian*, the tree was 105 feet high, with a girth of 24 feet, and 170 foot spread. Even a maximum spread of 170 feet is probably exaggerated; it would exceed that of any tree recorded in the east, and far more than the Wethersfield Elm.

American Sycamore. Washington, as a young surveyor, measured a hollow sycamore having a girth of "a round forty feet" on an island in the Ohio River. Reference: Lane, Ferdinand C., 1952. *The Story of Trees*, p.65. Comments: Lane continues to say that, in 1802, Joseph Francois Michaud [Michaux] found a 47' tree in the "same neighborhood." He does not suggest that it was the same tree as Washington's.

American Sycamore. Tree measured in 1802 by Francois Michaux near Marietta. Girth 47 feet at four feet above grade, trunk hollow, but without any visible opening. Reference:

Lamb, Frank H. 1939. Book of the Hardwood Trees, p. 249. Reference: Peattie, Donald Culross, 1950. A Natural History of Trees, p. 319. Reference: Lane, Ferdinand C., 1952. The Story of Trees, p.65. Comments: Lamb mentions a 40' 4" sycamore as being "near by," but the tree actually was one measured by Michaux's father Andre in 1790, and located some miles away on the Kanawha River in West Virginia.

American Sycamore. Hollow tree, circumference 42' at 5' above grade. 21 feet in diameter, and 60' in girth at the base. The opening was ten feet across at the base, and 9 ½ feet high. The hollow was 14' in diameter, presumably at grade. The tree was forked, dividing about eight feet up. One lead was broken off, the other living. Thirteen horses were ridden into the hollow in June 1808. The tree was still standing in 1810. Located on the farm of Abram Miller. Seal Township (now Valley Township), Northern Scioto County. Reference: Internet. "Back to Our Roots: A Trek Through the History of Ohio's Forests." Reference: Internet. "Scioto County History. (The Sycamore of Fifteen Horsemen)."

Ohio's Largest National Champions

Slippery Elm. National champion 1989-1994: CBH 20' 0", ht. 100', spr. 119'. Village Park, Sugar Grove. Reference: Davey/American Forests calendar, November 1994 (photo). Reference: Davey/American Forests calendar, January 1997 (photo). Comments: Despite numerous leads above a short trunk, the tree may be valid.

Black Oak. National champion 1964-1966: CBH 22' 3", ht. 125', spr. 85'. Warrensville Heights.

Chinquapin Oak. National co-champion 1971-1982: CBH 21' 11", ht. 72', spr. 62'. 1990: CBH 22' 0", ht. 72', spr. 66'. Ross Co.

Northern Red Oak. National co-champion 1978-1982: CBH 26' 3", ht. 88', spr. 88'. Ashtabula County.

Swamp White Oak. National champion 1999-2002: CBH 23' 6", ht. 75', spr. 107'. Washington County.

American Sycamore. National champion 1986-1999: CBH 48' 6', ht. 129', spr. 105'. Clarence Briggs Farm, Jeromesville, Ashland County. Reference: *American Forests*, Spring 2000, p.36. Reference: Internet. "Helios: Barbara Bosworth National Champion Sycamore." photo. Comments: The Bosworth photo shows that this tree was located near a stream, and was a coppice, with four well-separated stems, and no central trunk. In 2000, American Forests acknowledged that the Ohio tree had multiple trunks forking below breast height, and has removed it from the national register. Although this tree was listed as being measured in 1974, a Kentucky tree was listed as the champion in 1978 and 1982. The Ohio tree was first listed in *American Forests* for April 1986.

American Sycamore. National champion 1957-1966: CBH 32' 10", ht. 80', spr. 102'. Near South Bloomfield.

Yellowwood. National champion 1987-1998: CBH 23', ht. 72', spr. 73'; 2000-2002: CBH 21' 4", ht. 61', spr. 63'. Spring Grove Cemetery, Cincinnati. Reference: Davey/American Forests calendar, October 1997 (photo). Comments: This tree is a large coppice with numerous leads. The circumference was probably taken about one foot above grade. The measurements were reduced by 2000, but it is presumed to be the same tree.

Ohio's Largest State Champion Trees

White Ash. State champion list as CBH 21' 0", ht. 115', spr. 90'. Erie Co.

American Beech. State champion list as CBH 20' 2", ht. 110', spr. 60'. Ashtabula Co.

Northern Catalpa. State champion list as CBH 21' 1", ht. 73', spr. 91'. Gallia Co.

Eastern Cottonwood. State champion list as CBH 28' 7", ht. 136', spr. 135'. Delaware Co.

American Elm. State champion list as CBH 22' 2", ht. 118', spr. 107'. Ross Co.

Slippery Elm. State champion list as CBH 20' 10", ht. 100', spr. 100'. Huron Co.

Cucumber Magnolia. State champion list as CBH 20' 7", ht. 94', spr. 93. Stark Co.

Red Maple. State champion list as CBH 23' 0", ht. 81', spr. 70'. Carroll Co.

Silver Maple. State champion list as CBH 22' 10", ht. 100', spr. 90'. Ashtabula Co.

Black Oak. State champion list as CBH 20' 10", ht. 55', spr. 88'. Gallia Co.

Bur Oak. State champion list as CBH 20' 9", ht. 117', spr. 117'. Hamilton Co.

Northern Red Oak. State champion list as CBH 23' 3", ht. 90', spr. 61'. Ashtabula Co.

White Oak. State champion list as CBH 21' 5", ht. 104', spr. 130', pts. 393.5. Ross Co.

White Oak. State champion list as CBH 22' 10", ht. 93', spr. 122', pts. 397.5. Athens Co.

Osage Orange. State champion list as CBH 22' 1", ht. 60', spr. 80'. Coshocton Co.

American Sycamore. State champion list as CBH 29' 3", ht. 119', spr. 94'. Grand River watershed, Sustinburg Township, Ashtabula Co.

Black Willow. State champion list as CBH 28' 8", ht. 74', spr. 85'. Richland Co.

INDIANA

Great Trees Of The Past

American Sycamore. Tree near Worthington, Greene County. Girth 42' 3" at 5' above grade, according to the American Genetic Association (Lamb, 1939). Height said to be 150 feet. Reference: Illick, Joseph S. 1927. Common Trees of Indiana, p. 83. Reference: Lamb, Frank H., 1939. Book of the Hardwood Trees, p. 249. Reference: Lane, Ferdinand C., 1953. The Story of Trees, p.66. Comments: Although Lane speaks of the tree as "now growing" in 1953, Illick states that it was blown down in 1925. The 150-foot height is excessive for what was, certainly, an open-grown tree.

American Sycamore. "The World's Biggest Sycamore Stump." This large tree grew on the north bank of Wildcat Creek, two miles north of New London, in Howard County. The trunk was broken in a storm, leaving a high hollow stump. A large limb was said to be eight feet in diameter. On June 18, 1916, the stump was moved 2 ½ miles to City Park (now Highland Park) in Kokomo, at a cost of \$300. The stump once served as a phone booth, and is now housed as a tourist attraction. Estimates of the tree's age have ranged from 434 to 1500 years. The stump is said to be 12 feet high, 57 feet in girth, and 217 inches (18 feet 1 inch) in diameter. Reference: Numerous Internet references. Comments: The stump appears to have been cut at grade, and includes considerable root flare. The diameter is proportionate to the basal circumference. Size at breast height is unknown.

National Champions of Indiana

Pin Oak. National co-champion 1982-1986: CBH 22' 0", ht. 81', spr. 99'. Hope.

ILLINOIS

Great Trees Of The Past

American Sycamore. A tree on the banks of Coffee Creek, four miles below Mt. Carmel, in Wabash County, is said to have been 16 feet in diameter and 168 feet tall. Another source gives a girth of 66 feet at the base, and a circumference of 62 feet twenty feet above grade. The tree was cut by the owner in 1897, after numerous sightseers damaged his crops. Photographs of the tree are displayed at the Red Barn Nature Center in Beall Woods State Park. Reference: *American Forests*, Spring 2000, p.36. Reference: Internet. INHS Reports November-December 1997. Comments: Some of the dimensions are questionable. An exposed root system could measure 66 feet, but the claimed 62-foot girth at twenty feet may have been a transposition. The elevation of the 16-foot diameter is unknown. The height of 168 feet is well above accurate records for the species.

Some Large Illinois National Champions

Southern Catalpa. National champion 1981-1990: CBH 22' 2", ht. 80', spr. 60'. Henderson County.

Eastern Cottonwood. National champion 1973-1978: CBH 27' 4", ht. 120', spr. 111'. Called the largest tree in the state. Located on the south side of the I & M Canal, one mile west of Gebhard Woods, in Grundy County.

Hackberry. National champion 1994-2003: CBH 20' 9", ht. 84, spr. 89. Owner: John and Carol Witt, Ware County. Blown down 2003. Reference: *American Forests*, Summer 2003, p. 14 (photo).

Pin Oak. National co-champion 1978-1982: CBH 20' 0", ht. 100', spr. 80'. Mt. Eric Township.

Large State Champions of Illinois

Sycamore. State champion (1998) as CBH 31' 0", ht. 119', spr. 134'. Located in the southern part of Christian County. Reference: Internet. "Stately Sycamore." (text & photo by William McClain). Comments: From the photograph, this is a double tree, cleft to the ground. The article suggests that the central trunk has been hidden by continuing soil deposition around the tree, but it is clearly a coppice.

IOWA

National Champions

Eastern Cottonwood. National champion 1979-1982: CBH 34' 1", ht. 78', spr. 126'. Tama County.

Cucumber Magnolia. National champion 1985-2002: CBH 24' 5", ht. 75', spr. 83'. Waukon. Comments: Planted, not indigenous.

Silver Maple. National champion 1993-1998: CBH 31' 7", ht. 61', spr. 82'. Polk City.

WISCONSIN

Great Trees Of The Past

MacArthur Pine. Eastern white pine. National champion, 1948-1971. Named by a Milwaukee newspaper in 1945 in honor of General Douglas MacArthur. CBH 17' 8", ht. 148'. Weight 27 tons. 35 feet of trunk hollow. Nicolet National Forest, near Newald. 40 feet of top blown out in 1977. Struck by lightning in 1986. Felled by a suspicious fire on 6/23/2001. Reference: *The Capital*, newspaper, Annapolis, Md. 7/12/2001. Reference: Randall, Charles Edgar and Henry Clepper 1976. Famous and Historic Trees. The American Forestry Association, p. 22.

Eastern white pine. A white pine felled near the Flambeau River, in northwest Wisconsin yielded 14 logs that scaled 22,620 board feet. Reference: *Stevens Point Journal*, 2/26/1898. (courtesy of Paul Jost, 2/16/2004).

Eastern white pine. A white pine near the Plover River, in the Hatley area of Marathon County, was reported to have a

circumference of 19' 6", and a height of nearly 200 feet. Reference: S. A. Sherman, pioneer lumberman, 1884. (courtesy of Paul Yost, 2/16/2004).

Eastern white pine. A white pine to be cut on the land of Mr. Wadleigh, near Hatley, Marathon County, was said to be the largest in Wisconsin. It was 27 feet in circumference. Reference: *Stevens Point Journal*, 12/1/1883. (courtesy of Paul Yost, 2/16/2004).

Wisconsin National Champions

Hackberry. National champion 1989-1990: CBH 20' 2", ht. 111', spr. 89'. Rock County.

Silver Maple. National champion 1989-1992, also 1998-2002: CBH 24' 5", ht. 115', spr. 110'. Columbia County. Reference: National Register of Big Trees, *American Forests*, January/February 1994, p.23 (photo). Reference: National Register of Big Trees, *American Forests*, Spring 2002, p.21 (photo). Comments: This is a multiple trunked tree of coppice form. Although the elevation of the lowest fork may be above breast height, owing to the sloping terrain, the obvious coppice form should take precedence, and the tree should be removed from the register.

Peachleaf Willow. National champion 1988-2000: CBH 34' 9", ht. 58', spr. 82'. Greenfield Park, West Allis. Reference: *American Forests*, National Register of Big Trees, Spring 1998, p. 27 (photo). Reference: *American Forests*, National Register of Big Trees, Spring 2000, p. 57 (photo). Reference: *American Forests*, Spring 2000, p. 37 (photo). Comments: This appears to be a five or six-trunked coppice, with no defined trunk. In one photograph, exposed roots seem to indicate where the central parent tree has rotted away.

Wisconsin's Largest State Champions

Eastern Cottonwood. State champion list as CBH 29' 6", ht. 110', spr. 41.3'. Seneca, Green Lake Co.

Bur Oak. State champion list as (1995) CBH 20' 2", ht. 53', spr. 79'. Dousman, Waukesha Co.

Other Wisconsin Big Trees

Eastern Cottonwood. Circumference 23.2', ht. 138', spr. 132'. Located in a park near the Marquette County courthouse on State Highway 23 west of Montello, in Marquette County.

MICHIGAN

Great Trees Of The Past

Tuliptree. National champion 1967: CBH 19' 3", ht. 176', spr. 112'. Fred Russ Forest Park (10 acres), near Dowagiac, Cass County. Tree blown down in May 1984. About sixteen feet of the trunk has been preserved under a shelter. An Internet source claims the tree was 23.6' in girth, 200' tall, and had a spread of 136'. Reference: *American Forests*, September 1967.

Reference: Internet. "TreeHunt: Yellow-Poplar." Comments: The height of this tree was greatly exaggerated.

Some Michigan National Champions

Green Ash. National champion 1990-1994: CBH 20' 2", ht. 131', spr. 121'. 1995-2002: CBH 21' 6", ht. 95', spr. 95'. Cass County. State champion 1994-1997: CBH 21' 7", ht. 95', spr. 95'. Topash and Townline Road, North of Dowagiac, Cass Co. Reference: Davey/American Forests calendar, January 1994 (photo). Reference: Davey/American Forests calendar, October 2000 (photo). Reference: Internet. 1997 Michigan list. Comments: Trunk probably measured below breast height. A very low-branched specimen, with three massive leads, but not a typical coppice. The reduction in height and spread suggests some earlier problems in measuring.

White Ash. National champion 1976: CBH 20' 5", ht. 114', spr. 126'. Near Adrian, Lenawee County.

American Basswood. National champion 1971-1982: CBH 22' 3", ht. 115', spr. 76'. Grand Traverse County.

Northern Catalpa. National champion/co-champion 1990-1997: CBH 20' 2", ht. 107', spr. 85'. State Capitol grounds, Lansing, Ingham County.

Black Cherry. National champion 1959-1966: CBH 23' 4", ht. 102', spr. 89'. National champion 1972-1978: CBH 23' 9", ht. 114', spr. 93'. Lawrence, Van Buren Co.

Black Cherry. National champion 1994-1996: CBH 15' 11", ht. 138', spr. 126'. Washtenaw County. State co-champion 1997: CBH 15' 3", ht. 82', spr. 36'. North end of Pineview Road, south of Ypsilanti, Washtenaw County. Reference: *American Forests*, National Register of Big Trees, 1996, p. 31 (photo). Reference: Internet. 1997 Michigan list. Comments: It appears the national and state champions are the same tree. The photograph shows three remaining limbs on one side of a short trunk hidden by vegetation. Much decay, breakage, and dieback is evident, all well-weathered, suggesting the breakage occurred well before the tree was listed as a national champion. It is extremely doubtful that an open-grown tree ever reached 138' in height.

Eastern Cottonwood. National champion 1963-1966: CBH 25' 9", ht. 131', spr. 129'. National champion 1973-1978: CBH 25' 9", ht. 137', spr. 129'. Wayne County. State champion 1992-1997: CBH 28' 7", ht. 107', spr. 92'. Near Michigan and Josephine, Wayne, Wayne Co. Reference: Internet. 1997 Michigan list. Comments: It is uncertain if the national and state champions are the same tree.

American Elm ("Buckley Elm"). Dead. National co-champion September 1997-2002: CBH 23' 6", ht. 112', spr. 115'. near Buckley, near Traverse City, Grand Traverse Co. State champion 1997: CBH 23' 6", ht. 112', spr. 116'. Located in a cornfield on Wilson Road, 3 miles northwest of Buckley. The tree is in Grand Traverse County, 1.5 miles north of the Grand Traverse/Wexford county line. Buckley is in Wexford Co. Tree

dead from Dutch elm disease by 2003. Reference: Internet. 1997 Michigan list. Reference: "Champion Elm Dying of Disease, Expert Says." *Baltimore Sun* 9/11/2000. Reference: *American Forests*, National Register of Big Trees, Spring 1998, p. 20 (photo).

Red Maple. National champion 1984-1994: CBH 18' 6", ht. 179', spr. 120'. 6700 Puttygut Road, St. Clair, China Township, St. Clair County. Comments: The height was greatly exaggerated, probably due to false-top triangulation, resulting in a figure taller than any known eastern hardwood. The spread also was inflated. The tree was measured with a laser by Will Blozan on 12/30/2002: CBH 19' 6", ht. 120.4', spr. 82'. No crown breakage or other explanation for the difference has been determined.

Silver Maple. National champion 1972-1982: CBH 22' 7", ht. 125', spr. 111'. National champion 1986-1992: CBH 23' 0", ht. 125', spr. 134'. Rochester, Oakland Co. State champion 1997: CBH 24' 9", ht. 79', spr. 77'. 405 West Stony Creek Road, ½ mile west of Rochester Road, Oakland County. Reference: Internet. 1997 Michigan list. Comments: It is uncertain that the national and state champions are the same tree.

Black Oak. National co-champion 1981-1982: 21' 2", ht. 107', spr. 122'. Monroe County. Reference: *American Forests*, National Register of Big Trees, 1982, p. 37 (photo).

Black Oak. National champion & co-champion 1976-1982: CBH 19' 9", ht. 117', spr. 129'. National champion 1986: CBH 20' 6", ht. 127', spr. 137'. National champion 1990: CBH 20' 7", ht. 131', spr. 137'. St. Clair County. State champion 1964-1997: CBH 20' 7", ht. 131', spr. 137'. Washington and Clay (school), Algonac, St. Clair Co. Reference: *American Forests*, National Register of Big Trees, 1986, p. 21 (photo). Reference: Internet. 1997 Michigan list. Comments: This is a very handsome open-grown tree with a good trunk, but probably not as tall as listed.

Bur Oak. National champion 1965-1966: CBH 20' 9", ht. 122', spr. 107'. Algonac, St. Clair County.

Bur Oak. National champion 1975-1978. CBH 22' 0", ht. 126', spr. 124'. Niles, Berrien Co. State champion 1994-1997: CBH 24' 0", ht. 92', spr. 106'. 702 Chippewa Trail, Niles, Berrien County. Reference: Internet. 1997 Michigan list. Comments: It is uncertain that the national and state champions are the same tree.

Northern Red Oak. National co-champion 1978-1982: CBH 23' 3", ht. 118', spr. 128'. Berrien County.

Pecan. National champion 1945-1966: CBH 21' 4", ht. 135', spr. 145'. Clawson, Oakland County.

Eastern White Pine. National co-champion 1984-1990: CBH 15' 6", ht. 201', spr. 52'. Fisher Creek Trail, Huron Mt. Club, Marquette Co. Comments: The height was greatly exaggerated. The tallest known accurately measured white pine in Michigan is in Hartwick Pines State Park, and is 157' tall.

Eastern White Pine. National co-champion 1984-1990: CBH 16'

10", ht. 181', spr. 64'. Fisher Creek Trail, Huron Mt. Club, Marquette Co. Comments: The height was greatly exaggerated.

Russ Forest Tuliptree #1. Dead. Listed as a national co-champion with a tuliptree in Amelia, Va. In 1967: CBH 19' 3", ht. 176', spr. 112'. The tree was blown down in May 1984 and the 16-foot butt log has been protected by a shelter. Russ Forest and Newton Woods County Park, Cass County, near Dowagiac. Reference: Internet. "TreeHunt: Yellow-Poplar." Comments: The spread is exceptional for a tuliptree, and suggests an open-grown tree. The 1967 height of 176 feet is considered to be greatly exaggerated, probably due to false-top triangulation. The actual height was probably fifty feet less. Inexplicably, measurements of this tree are now (2003) given as CBH 23.6', ht. 200', spr. 136', which interestingly, give a point total of 517.2, just surpassing Virginia's Bedford Poplar, with 516.25.

Black Willow. The following entries are from *American Forests*, and are, presumably, the same tree. National champion 1960-1966: CBH 26' 1", ht. 85', spr. 79'. Traverse City. National champion 1973-1986: CBH 28' 1", ht. 90', spr. 96'. Traverse City. National champion 1990: CBH 31' 5", ht. 109', spr. 132'. Grand Traverse Co. National champion 1992-1994: CBH 31' 7", ht. 114', spr. 136'. Grand Traverse Co. National champion 1995-2002: CBH 33' 4", ht. 76', spr. 92'. State Hospital (west side), Grand Traverse Co. Reference: Davey/American Forests calendar, September 2003 (photo). Comments: Although the photograph is inconclusive, it appears this tree may be a three-trunked coppice. The 2003 photograph may have been taken earlier; it shows no top breakage to account for the crown reduction in 1995.

Michigan State Champions

White Ash. State champion 1995-1997: CBH 20' 3", ht. 100', spr. 61'. 11347 Hanel Road, south of Elk Rapids, Antrim County. Reference: Internet. 1997 Michigan list.

American Basswood. State champion 1993-1997: CBH 22' 11", ht. 57', spr. 68'. South side of Michigan Route 36, southeast of Dansville, Ingham County. Reference: Internet. 1997 Michigan list.

Black Cherry. State champion 1995-1997: CBH 16' 3", ht. 74', spr. 90'. 54622 Rudy Street, north of Dowagiac, Cass County. Reference: Internet. 1997 Michigan list.

Northern Red Oak. State champion 1993-1997: CBH 23' 0", HT. 100', SPR. 87'. 329 St. Joseph, Saugatuck, Allegan Co. Reference: Internet. 1997 Michigan list.

Scarlet Oak. State champion 1997: CBH 20' 3", ht. 117', spr. 126'. North Adams Road, east of Jonesville, Hilldale Co. Reference: Internet. 1997 Michigan list.

Swamp White Oak. State champion 1988-1997: CBH 20' 8", ht. 129', spr. 128'. Rouge Branch (southwest of Palsar and Sheldon), Canton Township, Wayne County. Reference:

Internet. 1997 Michigan list.

White Oak. State champion 1993-1997: CBH 21' 8", ht. 84', spr. 125', pts. 375.25. 1308 Ely Street, Allegan, Allegan County. Reference: Internet. 1997 Michigan list.

Tuliptree. State champion 1989-1997: CBH 19' 11", ht. 105', spr. 90', pts. 366.5. Tuliptree Trail, Lower Huron Metro Park, Wayne County. Reference: 1997 Michigan list.

Tuliptree (Russ Forest Tuliptree #2). State champion 1996: CBH 14' 9", ht. 171', spr. 133', pts. 381.25. Russ Forest County Park, Cass County, near Dowagiac. Tree located southeast of Dowagiac Creek. Reference: Internet. "TreeHunt: Yellow-Poplar." Comments: These measurements are extremely questionable. The height is exaggerated, perhaps due to false-top triangulation. No tuliptrees over 160 feet have been found outside the Southern Appalachians. The exceptional spread may be unequaled for a tuliptree, is incompatible with a tall forest-grown tree, and may be an aggregate, not average measurement.

Black Walnut. State champion 1997: CBH 22' 2", ht. 121', spr. 119'. 6565 W H Avenue, Kalamazoo, Kalamazoo County. Reference: Internet. 1997 Michigan list. Comments: If this is a single-trunked tree, and the measurements are valid, this would be the largest black walnut remaining in the east.

MINNESOTA

Great Trees Of Minnesota

Eastern Cottonwood. State champion list as (1998) CBH 28' 8", ht. 124', spr. 106'. Nicollet, Nicollet Co.

Silver Maple. State champion list as (1988) CBH 22' 8", ht. 90, spr. 118. Spring Grove, Houston Co.

Bur Oak. State champion list as (1988) CBH 20' 8", ht. 82', spr. 85'. St. Peter, Nicollet Co.

NORTH DAKOTA

North Dakota's big tree program began in 1998. The eastern cottonwood is thought to be the state's largest tree.

SOUTH DAKOTA

Great Trees Of South Dakota

Eastern Cottonwood. State champion: CBH 31' 2", ht. 120', spr. 87'. U. S. Army Corps of Engineers property near Springfield, Bon Homme County. Reference: Internet. South Dakota Register of Big Trees. (photo). Comments: From the photo, this open-grown tree appears to have two main leads. The height at which they join is unknown.

Peachleaf Willow. State champion: CBH 23' 6", ht. 79', spr. 94'. Keystone, Pennington County.

NEBRASKA

Eastern Cottonwood. National co-champion 2001-2002: CBH 36' 9", ht. 85', spr. 108'. Seward.

KANSAS

Eastern Cottonwood. This tree, said to be the state champion, is located in Riverside Park, Blue Rapids, Marshall County.

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Editor's note: To keep with Colby's efforts in assembling this and other works in this issue, typical Bulletin of the Eastern Native Tree Society formatting protocols were not followed.

MARYLAND'S TALLEST TREE SPECIES

Colby B. Rucker (deceased)

Eastern Native Tree Society

Stretching from baldcypress swamps on the Mid-Atlantic Coastal Plain to rare tamarack bogs on the Allegheny Plateau, Maryland provides varied habitats for numerous native trees. Approximately one hundred and forty species are indigenous to the state, including about twenty small hawthorns and a few shrubs that occasionally reach tree-like proportions. Although the nation's first big-tree list based on a point system was devised in Maryland in 1925, the search for Maryland's tallest trees is a recent endeavor. The following trees are the tallest of their species accurately measured in Maryland at this time. Some are unequalled elsewhere. Two tuliptrees at Belt Woods are the tallest trees ever recorded in Maryland, and are the tallest eastern hardwoods known outside of the Southern Appalachian region of Tennessee and the Carolinas.

Although this study has concentrated on only three outstanding natural areas, a number of trees of record height have been discovered. The South Woods of the Belt Woods Wildland is a 43-ac National Natural Landmark considered to be one of only two remnants of old-growth forest in Maryland. Chase Creek Woods has been logged in the past, but its rich soils, deep ravines and varied ecotypes make it a significant site for champion trees. Corcoran Woods has large examples of species typical of the Mid-Atlantic Coastal Plain. No doubt additional champions will be found at other sites, but a

limiting factor common to all Maryland counties is the effect of repeated logging, agricultural activities and development. This has resulted in an extreme scarcity of old undisturbed woodlands, and a consequent shortage of intact representative habitats available for maximum height studies.

The following examples (Table 1) of fifty-six tree species grow in the wild and are of natural origin. They have been carefully measured by members of the Eastern Native Tree Society, using direct measurement or laser-based techniques, principally a laser/clinometer (sine top triangle) plus telescoping pole procedure. Direct measurement is used for species under forty feet in height. Additional laser-based techniques may be used in dense cover and challenging terrain. Traditional clinometer-baseline and similar-triangle methods have proved notoriously unreliable and are not accepted. Naturalized species are increasingly affecting the structure of Maryland woodlands; therefore, eight examples have been added. In the interest of brevity, and to facilitate height comparisons, species are grouped by a combination of height, taxonomy and habitat. Many state co-champions, extinct champions and dates of measurement are shown.

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The Saline River in southern Arkansas starting to show some fall colors—the orange baldcypress in the center of the picture is still living. Photo by Don C. Bragg.



Table 1. A list of Maryland's tallest trees, compiled and maintained by Colby B. Rucker, corrected to May 2003.

Common name	Species	Height	Circumference	Location ^a	Date measured
TULIPTREES					
Tuliptree	<i>Liriodendron tulipifera</i>	159.9'a	12' 5.5"	SW (NNL), Belt Woods SW, PGCo	10/28/01
Tuliptree	<i>Liriodendron tulipifera</i>	159.6'a	10' 7.5"	SW (NNL), Belt Woods SW, PGCo	9/30/01
Tuliptree	<i>Liriodendron tulipifera</i>	157.6'a	9' 7.5"	CCW (site 1)(P), Arnold, AACo	4/30/00
Tuliptree	<i>Liriodendron tulipifera</i>	154.6'a	15' 7.0"	RPR (P), Arnold, AACo	8/11/02
DOMINANTS: BEECH FAMILY					
Northern red oak	<i>Quercus rubra</i>	144.4'a	7' 8.5"	SW (NNL), Belt Woods SW, PGCo	11/4/01
White oak	<i>Quercus alba</i>	143.7'a	11' 1.0"	SW (NNL), Belt Woods SW, PGCo	11/4/01
Black oak	<i>Quercus velutina</i>	143.4'a	14' 2.0"	SW (NNL), Belt Woods SW, PGCo	11/4/01
Chestnut oak	<i>Quercus prinus</i>	124.8'a	5' 6.0"	CCW (site 2)(P), Arnold, AACo	12/22/01
American beech	<i>Fagus grandifolia</i>	119.5'a	10' 3.0"	CCW (site 2)(P), Arnold, AACo	12/22/01
American beech	<i>Fagus grandifolia</i>	116.2'a	6' 4.5"	RPR (P), Arnold, AACo	8/11/02
Willow oak	<i>Quercus phellos</i>	115.7'a	10' 3.0"	CW, Sandy Point State Park, AACo	5/10/02
Willow oak	<i>Quercus phellos</i>	115.0'a	9' 10.0"	CW, Sandy Point State Park, AACo	4/10/02
Southern red oak	<i>Quercus falcata</i>	109.7'a	15' 9.5"	CW, Sandy Point State Park, AACo	4/10/02
Pin oak	<i>Quercus palustris</i>	109.6'a	8' 9.0"	CW, Sandy Point State Park, AACo	5/8/02
Scarlet oak	<i>Quercus coccinea</i>	103.2'a	7' 6.5"	CCW (site 3)(P), Arnold, AACo	8/8/02
Scarlet oak	<i>Quercus coccinea</i>	100.9'a	6' 11.5"	CCW (site 3)(P), Arnold, AACo	5/8/01
Scarlet oak	<i>Quercus coccinea</i>	100.6'a	6' 1.0"	CCW (site 3) (P), Arnold, AACo	5/8/01
Swamp chestnut oak	<i>Quercus michauxii</i>	95.2'a	16' 3.5"	Patuxent River area, AACo	9/30/01
Saul oak	x <i>Quercus saulei</i>	49.2'a	1' 7.0"	CCW (site 3)(P), Arnold, AACo	7/25/02
American chestnut	<i>Castanea dentata</i>	49.1'a	1' 6.5"	BH, Arnold, AACo	9/29/02
American chestnut	<i>Castanea dentata</i>	46.1'a	3' 4.0"	CCW (site 2)(P), Arnold, AACo	5/14/00
DOMINANTS: WALNUT FAMILY					
Sand hickory	<i>Carya pallida</i>	137.4'a	7' 7.5"	SW (NNL), Belt Woods SW, PGCo	11/4/01
Pignut	<i>Carya glabra</i>	124.1'a	5' 5.0"	CCW (site 1)(P), Arnold, AACo	5/23/02
Mockernut	<i>Carya tomentosa</i>	118.1'a	7' 6.5"	CW, Sandy Point State Park, AACo	5/10/02
Mockernut	<i>Carya tomentosa</i>	117.2'a	5' 11.0"	CCW (site 1)(P), Arnold, AACo	5/23/02
Bitternut	<i>Carya cordiformis</i>	115.9'a	7' 4.5"	CW, Sandy Point State Park, AACo	5/8/02
Bitternut	<i>Carya cordiformis</i>	112.5'a	6' 0.5"	RPR (P), Arnold, AACo	8/11/02
Black walnut	<i>Juglans nigra</i>	111.4'a	5' 11.5"	SW (NNL), Belt Woods SW, PGCo	10/14/01
UPLAND LOWLAND TRANSITIONAL ZONES					
American sycamore	<i>Platanus occidentalis</i>	132.3'a	6' 3.0"	CCW (site 1)(P), Arnold, AACo	5/23/02
White ash	<i>Fraxinus americana</i>	132.0'a	8' 5.0"	CCW (site 1)(P), Arnold, AACo	4/30/00
Black gum	<i>Nyssa sylvatica</i>	124.1'a	6' 5.5"	SW (NNL), Belt Woods SW, PGCo	10/28/01
Sweetgum	<i>Liquidambar styraciflua</i>	120.9'a	6' 6.0"	CW, Sandy Point State Park, AACo	4/8/02
Sweetgum	<i>Liquidambar styraciflua</i>	118.1'a	6' 3.5"	SW (NNL), Belt Woods SW, PGCo	10/28/01
Sweetgum	<i>Liquidambar styraciflua</i>	115.6'a	13' 0.5"	CW, Sandy Point State Park, AACo	4/10/02
Red maple	<i>Acer rubrum</i>	110.3'a	7' 3.0"	CCW (site 3)(P), Arnold, AACo	2/24/02
Red maple	<i>Acer rubrum</i>	106.9'a	4' 6.5"	CW, Sandy Point State Park, AACo	4/8/02
American elm	<i>Ulmus americana</i>	95.3a	4' 6.0"	CW, Sandy Point State Park, AACo	4/10/02
MID-SUCCESSIONAL HARDWOODS					
Black cherry	<i>Prunus serotina</i>	116.5'a	6' 7.0"	CCW (site 3)(P), Arnold, AACo	4/24/02
Black locust	<i>Robinia pseudoacacia</i>	107.8'a	6' 4.0"	CW, Sandy Point State Park, AACo	12/16/01
Bigtooth aspen	<i>Populus grandidentata</i>	99.5'a	3' 10.5"	BH, Arnold, AACo	12/16/01
Sassafras	<i>Sassafras albidum</i>	93.7'a	2' 11.5"	CW, Sandy Point State Park, AACo	4/8/02
Sassafras	<i>Sassafras albidum</i>	93.1'a	4' 8.5"	CW, Sandy Point State Park, AACo	4/19/02

Continued on next page...

^a Site abbreviations: AEOEC = Arlington Echo Outdoor Education Center; BH = Broadneck Hill; CCW = Chase Creek Woods; CW = Corcoran Woods; Rays Pond Ravine = RPR; SW = South Woods; UMC = United Methodist Church
 County abbreviations: AACo = Anne Arundel County; PGCo = Prince George's County

Table 1 (continued). A list of Maryland's tallest trees, compiled and maintained by Colby B. Rucker, corrected to May 2003.

Common name	Species	Height	Circumference	Location ^a	Date measured
CONIFERS					
Shortleaf pine	<i>Pinus echinata</i>	104.6'a	5' 8.0"	CCW (site 2)(P), Arnold, AACo	5/1/00 (sc)
Virginia pine	<i>Pinus virginiana</i>	93.9'a	3' 7.0"	BH, Arnold, AACo	12/16/01
Loblolly pine	<i>Pinus taeda</i>	85.0'a	3' 4.0"	CW, Sandy Point State Park, AACo	4/10/02
Pitch pine	<i>Pinus rigida</i>	84.1'a	6' 4.5"	CW, Sandy Point State Park, AACo	1/29/02
Atlantic white cedar	<i>Chamaecyparis thyoides</i>	79.3'a	5' 2.0"	AEOEC, AACo	3/22/02
Atlantic white cedar	<i>Chamaecyparis thyoides</i>	77.0'a	4' 10.0"	AEOEC, AACo	3/22/02
Eastern redcedar	<i>Juniperus virginiana</i>	55.9'a	4' 0.5"	CCW (site 4)(P), Arnold, AACo	2001
LOWLAND ENVIRONMENTS					
Black willow	<i>Salix nigra</i>	76.8'a	2' 9.5"	CCW (site 3)(P), Arnold, AACo	5/15/01
River birch	<i>Betula nigra</i>	68.4'a	4' 5.5"	SW (NNL), Belt Woods SW, PGCo	10/28/01
Boxelder	<i>Acer negundo</i>	59.5'	6' 5.5"	CCW (site 3)(P), Arnold, AACo	1/29/02
American hornbeam	<i>Carpinus caroliniana</i>	50.8'a	2' 11.5"	CCW (site 3)(P), Arnold, AACo	5/10/00
Poison sumac	<i>Toxicodendron vernix</i>	29.5'b	1' 5.5"	CCW (site 3)(P), Arnold, AACo	5/12/00 (nc)
Hazel alder	<i>Alnus serrulata</i>	27.7'b	0' 8.0"	CCW (site 3)(P), Arnold, AACo	5/12/00 (sc)
WARM, RICH UPLAND EXPOSURES					
American holly	<i>Ilex opaca</i>	69.3'a	4' 2.0"	CW, Sandy Point State Park, AACo	4/10/02
Persimmon	<i>Diospyros virginiana</i>	66.9'a	2' 7.5"	CW, Sandy Point State Park, AACo	4/19/02
Red mulberry	<i>Morus rubra</i>	46.4'a	2' 5.0"	CCW (site 3)(P), Arnold, AACo	2/13/01
Hackberry	<i>Celtis occidentalis</i>	44.8'a	2' 5.5"	SW (NNL), Belt Woods SW, PGCo	10/14/01
Hercules club	<i>Aralia spinosa</i>	39.1'a	1' 6.0"	CW, Sandy Point State Park, AACo	5/10/02 (sc)
Flowering dogwood	<i>Cornus florida</i>	38.2'a	2' 0"	SW (NNL), Belt Woods SW, PGCo	10/14/01
Pawpaw	<i>Asimina triloba</i>	36.5'b	1' 4.0"	CCW (site 3)(P), Arnold, AACo	2/25/02
Redbud	<i>Cercis canadensis</i>	31.8'a	2' 2.5"	CCW (site 3)(P), Arnold, AACo	5/4/00
Blackhaw viburnum	<i>Viburnum prunifolium</i>	27.5'b	1' 4.0"	CCW (site 2)(P), Arnold, AACo	5/26/00
SMALL ARBORESCENT SPECIALISTS					
Spicebush	<i>Lindera benzoin</i>	24.4'b	0' 9.0"	CW, Sandy Point State Park, AACo	4/10/02 (sc)
Spicebush	<i>Lindera benzoin</i>	19.0'b	0' 11.5"	CCW (site 3), Arnold, AACo	5/4/02 (sc)
Winged sumac	<i>Rhus copallina</i>	x 22.0'c	1' 0"	CCW (site 3)(P), Arnold, AACo (dead ~ 1996)	2/24/02
Staghorn sumac	<i>Rhus typhina</i>	20.4'b	0' 9.5"	CCW (site 3)(P), Arnold, AACo	8/3/01
Staghorn sumac	<i>Rhus typhina</i>	x 32.9'b	1' 2.5"	CCW (site 3)(P), Arnold, AACo (dead ~ 1988)	4/19/87
Downy serviceberry	<i>Amelanchier arborea</i>	19.7'b	0' 9.0"	CCW (site 2)(P), Arnold, AACo	5/14/00
Whorled winterberry	<i>Ilex verticillata</i>	18.5'b	0' 6.0"	CCW (site 3)(P), Arnold, AACo	5/12/00 (sc)
Mountain laurel	<i>Kalmia latifolia</i>	17.5'b	0' 9.0"	CCW (site 2)(P), Arnold, AACo	5/14/00
Highbush blueberry	<i>Vaccinium atrococcum</i>	16.8'b	0' 9.0"	CW, Sandy Point State Park, AACo	4/10/02 (sc)
NATURALIZED SPECIES					
Ailanthus	<i>Ailanthus altissima</i>	91.0'a	5' 8.5"	CCW (site 3)(P), Arnold, AACo	4/30/03
Mazzard cherry	<i>Prunus avium</i>	89.2'a	6' 4.0"	SW (NNL), Belt Woods SW, PGCo	10/7/01
Mazzard cherry	<i>Prunus avium</i>	85.4's	7' 3.0"	UMC, Arnold, AACo	5/9/02
Paulownia	<i>Paulownia tomentosa</i>	71.9'a	5' 0"	CCW (site 3)(P), Arnold, AACo	7/22/01
Norway maple	<i>Acer platanoides</i>	59.3'a	1' 11.5"	SW (NNL), Belt Woods SW, PGCo	10/28/01
Bradford pear	<i>Pyrus calleryana</i>	40.7'a	0' 10.0"	SW (NNL), Belt Woods SW, PGCo	11/4/01
White mulberry	<i>Morus alba</i>	36.7'a	1' 7.0"	CCW (site 3)(P), Arnold, AACo	7/24/01
Mimosa	<i>Albizzia julibrissin</i>	24.3'a	1' 9.0"	SW (NNL), Belt Woods SW, PGCo	11/4/01
Althea	<i>Hibiscus syriacus</i>	19.0'b	0' 8.0"	CCW (site 3)(P), Arnold, AACo	1999 (nc)

^a Site abbreviations: AEOEC = Arlington Echo Outdoor Education Center; BH = Broadneck Hill; CCW = Chase Creek Woods; CW = Corcoran Woods; Rays Pond Ravine = RPR; SW = South Woods; UMC = United Methodist Church
 County abbreviations: AACo = Anne Arundel County; PGCo = Prince George's County

Editor's note: the formatting of much of this table follows Colby's original style, not Bulletin of the Eastern Native Tree Society formats.

THE RUCKER INDEX

Edward Forrest Frank

Eastern Native Tree Society

The Rucker Index is a common topic in many posts made to the ENTS discussion list and in the Eastern Native Tree Society website. In 2003, Colby Rucker described the metric in his prolog to the *Tall Tree Preserves of the East* as:

The following sites are among the most important examples of tall-tree habitat in the eastern United States. They are listed according to the average height of the tallest examples of the ten tallest species found at each site. This index, often called the "Rucker Index," provides a numerical evaluation of both maximum height and diversity of the dominant species. High index values are the result of many factors, including climate, topography, soils, and a lack of disturbance. While the most extensive sites benefit from a greater variety of habitat and more individual trees, some exceptional sites are quite small. Although many of these sites have been recognized as National Natural Landmarks, or are located within national forests, neither designation provides actual protection. Some sites are on private property, and are vulnerable to logging or clearing for development.

In early 2006, Bob Leverett provided some background on the development of the Rucker Index:

The Rucker Index concept is the creation of Will Blozan, Colby Rucker, and myself. I think the notion of averaging the heights of the ten tallest species originally came from Will in a telephone conversation between us. After kicking it around in subsequent telephone conversations and e-mails, I suggested that we name the idea the Rucker Index. Colby, himself, was shy and reluctant to use the term early on, although he often applied the concept. As I recall, Lee was supportive of the concept, as was Tom Diggins. However, one scientist friend of mine didn't see much value in it, so there wasn't 100% backing of the concept among the scientists on the list.

As this is such a high profile topic for ENTS, in 2003 I emailed Colby with numerous questions about the index. The quote above and a personal email resulted. The overview below draws both from my observations and questions, and Colby's replies. The Rucker Site Index or "Rucker Index" has numerous merits that make it a useful measurement when comparing various tall tree sites.

1) The formula is straight forward, unambiguous, and easy to apply. The measurement is simply the average height of the

tallest examples of the ten tallest species found at each site. Anyone who can add ten numbers and then divide by ten can calculate the figure.

2) The index can be applied to forests in any area with any make-up of trees. One of the biggest problems faced when comparing different areas is that the same tree species are not found in all areas to be compared. The index is not species dependent. It does reflect to some degree the species included, because all tree species do not reach the same height, but none-the-less the formula will produce a useful concrete number.

3) The index requires a fairly diverse mix of trees in order to generate a high index value. This means in order to achieve a high index rating that the forest patch being evaluated must not be primarily dominated by a single species, but be reflective of a more complete and by inference a more intact forest ecosystem. This has some drawbacks however. Robert Van Pelt, author of *Forest Giants of the Pacific Coast* wrote the following message on October 29, 2002:

The low diversity of trees in some Western forests quickly reduces the Index to below 200. Humboldt Redwoods State Park, for example, has the world's tallest tree, and 86 trees over 350 ft. Due to the overwhelming dominance by redwood, the Index drops below 200 after only six species are included!

The example cited above, with regard to the coastal redwood forests, whereby mature forests with a less diverse tree population being undervalued is still a question in my mind. Colby once wrote:

The index itself is subject to the whims of diversity. At Belt Woods, here in Maryland, the first four species are over 140 ft, but the tenth tree is only 100. It's a remarkable site, but may have been subjected to some sort of "forest improvement" cutting of "inferior" species a hundred years ago. So, the index does favor sites having a diversity of habitat supporting numerous species of all sizes.

As he says, the index is what it is, and this is true for whatever measurement option you choose.

4) To get a sufficient diversity of trees of great height requires a fairly large plot of forest. This limits sites with a very small area and few trees generally from having a high index. The value in this, as I see it, is small sites with only a couple of spectacular trees, or only a single big tree do not falsely appear from the index value alone to be the equal of larger sites with larger numbers of trees. The Rucker Site index is essentially a foreshortened version of a complete profile of all the species found on a particular site. Colby noted:

I enjoy constructing forest profiles for all the tree species present on a site, right down to the mountain laurels. It's extremely interesting to see how the numbers (based on a single representative specimen of each species) arrange into groups (usually six) according to habitat. I think the Chase Creek study on the web page shows that. It's clear that we couldn't expand an index to include more than ten species, because a diversity of small species could skew the whole works. I selected ten species, not perhaps twelve, because I was interested in diversity, but wanted to keep within the dominant species, and ten meant a convenient decimal point.

I would like to see someone prepare complete profiles for all the species on several sites and compare the results. At this point we have significant amounts of data on The Great Smoky Mountains, Chase Creek, Cook Forest, and Mohawk Trail State Forest. Perhaps the chart could be done as a 3-D map, arranged based upon a common x-axis by species, y-axis by latitude, and z-axis as tree height.

There are some negatives with the use of the index. Some of its limitations are the same as some of its strengths. The index is not measuring the same tree species in every different forest. White pine is present in some stands and not in others. As a general statement, the Rucker Index is dependent on the size of the site. It is not any way a measurement of the age or maturity of the forest, just size. Old-growth forests on poorer soils will receive indices lower than second growth forests on good soils. The index is an amalgamation of which any of a number of factors could cause the index to be lower, so again the factors that affect the index are variable from location to location, and not clear from the generated index value alone. I posed these concerns to Colby, and in most cases his perspective ameliorated my concerns.

The most important concept is to understand what the index portrays and what it does not. It is a measurement of the potential of a given site to produce tall trees. Differences in the age of the forest, and other parameters such as site slope, water availability, latitude, and other factors can not be deduced from the index alone. It is not meant to address these issues and should be used in conjunction with a site description to deduce the cause of height variations between forests.

The Rucker Index is not in and of itself an indicator of old-growth. The question of old-growth and height is also a subject of debate. Colby has suggested for consideration, that perhaps as a forest matures, taller, thinner trees might be replaced by broader, heavier limbed species. Tall species like tulip tree and white pine would become less dominant as old-growth is approached. The stage of tallest trees may be transitional.

I also posed a question about how the indices could be artificially inflated by including larger areas, the equivalent of gerrymandering political precincts. Colby responded:

Habitat is much more important than acreage...Yes, we can increase index ratings by incorporating more territory. By lumping a lot of Jess Riddle's

sites for Station Mountain or the Andrew Pickens Ranger District, the numbers went up, but it showed that the Great Smoky MNP wasn't so unique. Sometimes smaller sites make a good showing, as at Ice Glen (about 40 ac), Belt Woods (43 ac) or Chase Creek (about 150 ac). I don't think there'd be any point segregating sites according to acreage at this point. We don't have much info on privately-owned sites; Chase Creek is the primary example.

I believe as we collect more data perhaps some evaluation may need to be made of this factor. But at the moment we simply need to rely on the people making the evaluations to fairly delineate the boundaries of the study area.

I also questioned whether a single specimen of a tree was a fair measure of the entire population of the tree species in a forest. Colby wrote back:

I've become comfortable with a single specimen representing that species on a site. The maximum number does show the potential for the species under the inherent conditions. The validity of a single representative specimen is shown by the way the numbers become arranged in forest profiles, the Chase Creek study on the web page being a good example.

I questioned the use of a hardwood index to compare various sites. My concern was that any number of indices could be constructed with or without certain species. Colby argued, and I must agree, that hardwood indices are useful because they allow fair comparisons to be made between sites that do not have the tall species of white pine and hemlock with those that do. These species have often been removed by selective timbering in the past, or in the case of hemlock, are currently being killed off by the hemlock woolly adelgid. Colby also noted:

Both Bob and Dale have made reiterations of the indices for MTSF and CFSP. These indices, down to the ninth and tenth-place representatives, have been interesting. Of course, you have to have a lot of trees/acreage to find enough decent specimens to see much. At Cook, the reiterations are quite close, being in line with the rather monotonous aspect of the hardwood forest canopy. Chase Creek is quite the opposite, with many specimens having dramatic potential, but great vulnerability to a single windstorm or lightning strike.

I am not completely convinced by these arguments on the validity of statistical analysis, but it does provide an interesting framework for evaluating the evolution of the index for a particular locality. Overall, I have a greater understanding of the Rucker Index and how it may be successfully applied to the tree height data being collected using the Eastern Native Tree Society protocol. I want to thank Colby Rucker for his invaluable input and patience with my questions.

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ESSAYS ON TREES

Colby B. Rucker (deceased)

Eastern Native Tree Society

TULIPTREES

Another day in the mid-90s with no rain in sight. Didn't Kermit the frog say, "It's not easy being green?" The same goes for trees. Although Maryland spring times promote an exuberance of new growth, our summers are often cruel, seemingly bent on reclaiming what has been produced.



Tuliptree drawing from the Handbook of the Trees of New England by Lorin L. Dame and Henry Brooks published in 1901.

Of course, there are a few deep coves where the sun hardly penetrates, the drying winds are broken, and the multiple canopies conserve the moist fragrant air, and fresh green moss hangs in strips from old logs. The trunks of tuliptrees rise straight from these havens, their tops vertical, supported by strong fibers and non-compressible water.

Elsewhere, the tuliptrees will begin dropping yellowed leaves. While oaks retain all their foliage, inviting scorch and even the fatal exhaustion of all available moisture from the entire structure, tuliptrees are survivors. By shedding excess leaves, less precious water is expended, and the remaining leaves continue to function. More importantly, the tuliptree prevents its woody structure from the killing effects of drought. Still, drought has an effect on the structural architecture of trees. Although we say, "as the tree is bent, so grow the tree," the structural evolution of each tree is more complex, and drought is but one of many influences that creates the structural identity of each species.

A straight line being the shortest distance between two points, some trunks become straighter with time. The black locust has no terminal bud, and young stems are usually somewhat crooked. As the trunk thickens, growth is most rapid along concave curves, that being the shortest path between crown and roots. A locust post split to butterfly the curve is flat, while one split at right angles is irregular. Concave curves of the limbs of sassafras, basswood and some junipers can fill rapidly, producing flattened cross-sections, not unlike the flaring buttress root formations on some trees.

Of course, as trunks thicken, forks are raised, and limbs leave chevrons on the bark, like the wake of a boat, each spreading at precise angles according to the angle of the limb and growth rate of the trunk. Bark on concave surfaces must be shortened, and crumples, slowly forming corrugated surfaces, the attached cambium so influencing the contour of the wood beneath. Roots increase in diameter, easily elevating the turf, like moles, and adding most of their diameter on the upper surfaces.

Competition for sunlight constantly changes the structure of trees. Of course, lower and inner branches die as essential sunlight is captured by new growth of the expanding crown, but other changes take place. Some trees produce numerous limbs growing upward at a considerable angle. Due to competition, most do not greatly increase in diameter, but they grow longer, and gravity bends them downward. This bending is beneficial to the individual limb, causing it to move outwards, access more sunlight, and thereby thicken and stabilize. As gravity brings the most slender limbs below horizontal, they lose sunlight and die.

Resistance to bending is the result of the tensile strength of fibers, and the compressive strength of cell walls. These forces are often apparent in white mulberry branches, where snow

loads cause the wood to separate between the two forces, the lower half buckling downward, leaving a space large enough to put your hand into. Sections of wood exposed by a split fork are flat in cross-section, and easily broken, like a ruler, because the two forces are close together. Hollow trees are strong, but fail when twisted, or when the sides are forced outwards, allowing tensile and compressive forces to move closer together.

Heavy woods are hard to compress, but lighter woods, such as tuliptree, are strengthened by non-compressible water, and weakened when that moisture is reduced by drought. The multiple-arched structure of tuliptrees is influenced by several factors. Fast growing vertical branches may be bent by the load of precipitation on the broad leaves. This also occurs in sycamore and sweet gum, and is most likely after a drought. This bending moves a lateral branch upward, and it becomes the new leader. In time, a series of leaders so produced bend, the lower portions die from lack of sunlight, and a multiple-arched structure is created.

Although the intolerance of tuliptree leaves causes new growth to move outward, gravity is a constant factor, causing large structural members to bend over the years. The development of a tuliptree crown creates a structure where members move from one another, more than simply radiating from a central point. In winter, the outline usually shows curvatures in the upper crown arranged in a given direction, allowing one to describe a tree as being "left-handed" or "right-handed."

On dry-mesic soils with mixed hardwoods, tuliptrees grow more slowly. If there is no abundance of available moisture, the supply may be more uniform through the seasons, producing trees of excellent quality. The logs are light in weight, with a distinct yellow heartwood. Poplar growing on wet soils, especially old-field sites, produces much heavier logs with less heartwood, which is somewhat greenish. Often called "blue poplar," not "yellow poplar," the lumber is more prone to warp and decays easily.

Tuliptrees are noted for their straight trunks. The tallest trees are those that maintain a vertical stem completely to the top. Such trees are rare, and usually occur in the deepest, coolest coves, protected from the extremes of climate, especially during drought. A handsome grove of eight or ten trees in a deep ravine near here has several trees nearly 150 feet in height, and the trunks are straight and devoid of branches to considerable height, 98 feet in one case. These vertical lines terminate suddenly, with several divergent and crooked leaders forming the upper fifty feet. It appears these trees were released by logging nearly 100 years ago, which stimulated faster top growth on slender stems prone to bending, while logging allowed the once-sheltered cove to dry out, resulting in extremely awkward subsequent top structures.

Very old tuliptrees growing on dry-mesic sites with little competition often develop large crowns with numerous growing tips, none having a distinct advantage. Such trees are usually about 114 feet tall, and display multiple arching down

to the twig level. At this stage, it seems that vertical growth does little more than offset the influence of gravity in bending the larger non-vertical structures.

So, we have another drought, and plants will suffer, but the tuliptrees will endure, though constantly changing their structure, adding greater interest to our natural world.

BEECH TREE MUSINGS

Last Sunday I took a neighbor for a walk through Chase Creek Woods. We were on a south-facing slope, below the big chestnut oak, with a grand old beech on the opposite side, and I mentioned an older beech, now gone, that I had known since a boy. I described the careful lettering, unchanging on the ancient trunk: "A. R. Arnold 1878," and "R. H. Arnold 1885."

My neighbor asked, "Why did they carve on a beech tree?" I said something about the smooth, unchanging bark, but he interrupted me. "No, why did they put their names on a tree?" It was a good question. I quickly thought about the uncertainty of life years ago, and gave some answer, but I realized it wasn't enough. Perhaps I should have simply said, "It was a message."

A message? For whom? I might have said, "For you."

Boys carve initials on trees, often carelessly, or too deep, so that the tree heals the wound, and the bark cracks. Those letters weren't like that. You could still see the scratch marks where Alton laid out his work. He was nearly twenty-one, still on his father's farm, and he had a good knife, sharp, and he used it well. The letters were as neat as the tombstones at the church where his father had donated the land.

Seven years later, Robert added his name below his half-brother's. He was fifteen. Perhaps it was his first good knife, one which he had saved for, and bought at his uncle's store three miles up the county road. Or maybe it was an old knife, but sharp, and he took special care to cut his letters as neatly as his brother's. No doubt he had been by the tree many times. It stood midway on the 100-perch line. The line began at a double sycamore at the head of the ravine, and continued down the valley to a big poplar near the marsh.

Those trees were on the 1856 deed. His grandfather John Arnold had given the 292 acres to Robert's father, "Out of love and affection" and "To further his advancement in life." His grandfather had died before Robert was born, but his father had told the boys about him, how he fought in the War of 1812, and came to Broadneck as a young man. Robert had seen his grandfather's grave, over at the old home place, many times.

So, Robert cut his letters as neatly as his older brother, and that may have been reason enough. For Alton, there might have been something more. Of course, there are many reasons for leaving your name, and we might compare the rationale of Union soldiers in Richmond's Libby Prison with those who cut into the soft brick at Pohick Church, where they pulled out the pews and stabled their horses.



Beech tree drawing from Handbook of the Trees of New England by Lorin L. Dame and Henry Brooks.

Visitors could once climb high in the big wooden dome of the old Maryland Statehouse, look out across the Chesapeake Bay to the Eastern Shore, and add their names, by knife or chalk, to the many others. Their lettering wasn't too large, and the date was often added. It was a happy adventure, and they left a bit of themselves, even for their own satisfaction.

For Alton, it was the family farm; the old beech testified to that, and Alton announced, as the oldest son, "This is Arnold land." But we might suppose that there was something more—something that, even for a hard-working young farmer, provided an inspiration on that day. Perhaps it was an October day—we don't know that, but perhaps—and the afternoon sun slanted through the old woods as it does at no other time. The great chestnuts, ancient even then, stood along the slopes and ridges, and squirrels were cutting in a nearby pignut, in golden leaf.

At such a time, life is good. Cutting your initials is a statement, born of your feelings at that moment. No doubt Alton, like those of his day, was keenly aware of the transitory nature of life, and left a message, to readers unknown, that he had lived, and that he was a capable person—"See my letters!" And, also,

he tells us that life is dear, a blending of young manhood and the sweet ecstasy of youth. "Shall you ever know such an October afternoon?"

COTTONWOOD STORIES

To my knowledge, cottonwoods aren't native to tidewater Maryland, but I understand they occur along rivers in the Piedmont. I've only encountered a few planted specimens.

I recall cutting about four trees, mostly about 20" DBH, all stag-headed or worse, on a local doctor's estate in the late fifties. It was a pretty simple job to drop the trees into the field, roll log lengths back to the edge, and drag the limbs into the woods. The largest tree was covered with a big poison ivy vine. If I'm fairly sensible, I can work with poison ivy, but this was a huge mass of long-limbed three-leafers, which looked pretty threatening on a hot July day.



Eastern cottonwood drawing from Handbook of the Trees of New England by Lorin L. Dame and Henry Brooks.

The doctor noticed my caution, and said that I could drag armloads of the stuff safely. He explained that he was a homeopathic doctor, made many of his own medicines, and had made lots of his special poison ivy pills from that very vine for years. Well, I'd never heard of homeopathic medicine, but his son was our family doctor, and so I took him at his

word. He soon produced a little green bottle full of tiny pure white pills—looked like sugar.

I took six as he directed, and put the bottle in the truck. I then picked up big armloads of poison ivy and dragged them into the woods. Sawing up the trunk was hot work, especially with a chain saw of the period—forty-four pounds, gear drive. It had a float-type carburetor, so you kept the engine level, but the drive shaft was front-to-back, so that the transmission and front handle could be rotated for different angles of cut.

Well, I raked up the last of the poison ivy, finished the job, went home and took the rest of the little white pills as directed, but certain that I'd soon be scratching all over, or at least have big blisters on my wrists and forearms. Amazingly, nothing happened. Apparently the doctor made a number of other medicines, and marketed them. It would have been interesting to have learned more about homeopathic medicine.

My other memorable cottonwood experience was a big ugly specimen near a tall brick wall that had once separated two grand colonial properties in Annapolis. The only access was through a very narrow alley between two Victorian houses, with almost no working space. We lowered the branches in small pieces, and carried them out without touching the siding of the houses. So far, so good.

We started to chunk the trunk down in blocks, and encountered a big nest of honeybees, which delayed things. I've worn a bee suit for German hornets and stuff, and try to spare the critters, but these bees were everywhere. An exterminator snuffed them out that night, and we resumed work the next morning. The blocks were big; four or five feet tall, some five feet thick.

We carefully winched the blocks out between the houses, and loaded them on the log truck. I had an army 6x6 truck with two winches. There were 18-foot booms in the front, and heavier booms set on top of a tow plate in the rear. The rear booms could be lowered onto the cab, but the truck still took a lot of space on the one-way street.

All went well until I was standing in the street, trying to retrieve a rake that had been left against the log truck's backstop, and was pinched by a block. The rake projected into the travel lane, and I was tugging on it. I heard a car horn, but ignored it. Apparently the driver, an elderly man, was honking at a friend and never saw me. I heard a big "boom!" and was thrown onto his windshield, which must have scared the heck out of him. He hit his brakes, and I then bounced down the street for another fifty-six feet.

One of my men was older than I, a hard worker, but henpecked. Immediately he ran to the nearest house, and pounded on the door. The door opened, and he said, "Quick! I gotta use your telephone!" The homeowner asked, "Why? What is it?" My helper replied, "My boss just got hit by a car, and I gotta phone my wife and tell her I'm gonna be late."

Well, someone else called an ambulance, and they carted me off. I was banged up all over, but nothing broken. I worked the next day, and we finished the cottonwood, but I moved like I was ninety years old—at least.

So, that's my experience with cottonwoods. Probably a good thing there weren't more of them around.

BLACK LOCUST

Indeed, black locust has many positive qualities. It appears quickly on roadcuts and abandoned "waste land", where it fixes nitrogen and fosters the growth of more permanent trees, such as yellow poplar. Locally, black locust can't compete for height, seldom going over 100 feet, but the dead and fallen trunks persist and can be utilized for fence posts. I put in over 500 in the early 1970s. I cut heavier ones for post and rail, and many are still in place, especially in the drier areas.



Black locust drawing from Handbook of the Trees of New England by Lorin L. Dame and Henry Brooks.

I also cut some larger ones into fifteen foot lengths and had it sawed 4 x 4. I picked out the clearest and straightest 4 x 4's, and cut the rest in half for posts. The best pieces were amazingly strong for their size, and I used them to crosshaul

logs from jobs where it wasn't worth taking a boom truck for a single tree. I've also used them for supporting trees on houses, pulling engines, etc. Left elevated, but exposed to the elements, they just got harder, and were always reliable. I still have several of them. Small diameter pieces of slow growth, cut from whitened snags, make wonderful tool handles. Cut down with a hatchet and drawknife, they take a high polish, and linseed oil brings out a grain of lasting beauty and high reflectivity.

Due to their straight grain, basal growth is in line with the roots. The cross-section may be like a six-leaf clover, with exposed dead wood between the roots. The Fomes fungus destroys the heartwood, so that some trees are left standing on stilts, like your fingertips on a table top. The fungus also produces large woody polypore brackets higher on the trunk, a sure sign that the inner trunk has turned to a soft sulfur-yellow material, and breakage is imminent. For BTU's, locust is only surpassed by Osage-orange, and will bow cast iron andirons, and burn common iron right through.

The matter of natural range is interesting, but I don't subscribe to all that's said. We can see that many species of field and roadside, such as persimmon, red cedar, and black cherry, would, without agriculture, be restricted to more specialized habitat where they could compete for sunlight. Persimmon arches over marshes. Red cedar and black cherry do well on sandbars. Black locust persists on exposed bluffs along tidewater. Dry sandy ridges—impoverished soils—provide habitat for many intolerant species, including black locust.

So, I see no reason why black locust wouldn't have been present at such specialized stations, and why it wouldn't have then spread to agricultural areas without introduction by man. Boundary markers in old deeds and timbers in early structures indicate the use of locust by early colonists, but I'm unsure of the dates.

Lastly, we might extend our usual timelines. We speak of pre-colonization forests, the influence of Indians, warming in the last 10,000 to 12,000 years of the post-glacial period, and the movement of forest types. (Incidentally, forests can't be "pushed;" they are drawn). Shoreline erosion along the Chesapeake Bay exposed numerous baldcypress stumps five and ten miles from here. A 1917 photograph shows the stumps, some very large, in perfect condition after being buried for 100,000 years—since the previous interglacial period. And, fossils show many familiar species millions of years ago.

My point is that our trees are prisoners of their genetics, perhaps changing little, and derived from unknown forests long ago in unknown times. Our trees are now making the best of their inherent capabilities, some perhaps not so tall, or so grand, or so "happy" as once in the past. We really don't know, but the black locust, on its own, appears to persist at sites which are perhaps not numerous, and certainly challenging, but possibly more widespread than claimed.

Yes, for all its faults, black locust is an interesting species.

FAVORITE TREES

These excerpts are from a series of Colby's posts on his favorite trees.

- EFF

When it comes to trees, we all have our likes and dislikes. I developed quite a dislike for flowering dogwoods because they don't smash up well. They often got caught in the tracks of my bulldozer, and would slap you or get jammed in the hydraulics if you didn't push them well out of the way.

I suppose it's easiest to start with one's favorite trees, and then see what's left. In ranking the native trees of Anne Arundel County, I react positively to trees that display a pleasing structure, interact with the seasons, have interesting features or historical associations, and might promote some enthusiastic comments on a field trip. Anyway, here goes:

1. Sour gum
2. Pawpaw
3. Tuliptree
4. American beech
5. White oak
6. Black walnut
7. Persimmon
8. Downy serviceberry
9. Mockernut
10. American chestnut
-
56. Slippery elm
57. American elm
58. Hazel alder
59. Black cherry
60. Smooth sumac
61. Pin oak
62. White ash
63. Silver maple
64. Black willow
65. Boxelder

Colby Rucker

Sept. 11, 2003

Any particular reason white ash is so low on the totem pole?

-EFF

Sorry about your beloved white ash, "the queen of the forest," as I've seen it called. Our favorite trees should have some outstanding features—foliage, fruit, flower, form, or an air of fantasy. Sure, I like white ash bark, but it's a gawky tree, with no nuance of outline, and ignores the seasons, dropping its indecisive foliage prematurely. Height, snaths and baseball bats just aren't enough.



Sour gum or black gum drawing from Handbook of the Trees of New England by Lorin L. Dame and Henry Brooks.

Why are silver maple and elm so far down the list?

-EFF

Yes, how we see trees is a very personal experience. One sees a couple of opposite-budded, heavy-twigged white ash with matted branches, and they look like another “dirty” urban tree. The deep-checked light bark on a tall trunk in the slanting rays of early autumn is something else. Although the elms had a wonderful symmetry, and the silver maple’s leaf is quite handsome, neither do much in the autumn. Both, often oversized in the residential environment, are indelibly associated with problems, either disease or structural. There’s no magic in the bark, and the wood, wet and often smelly, contributed little beyond elm hubs and sewer lumber. Today, both former denizens of the floodplain are problem trees. Perhaps it’s unfair, but I don’t bemoan the gradual disappearance of either species. That’s quite a contrast with the lifelong sorrow I’ve felt regarding the American chestnut.

To what extent do you feel we are influenced by the role a tree plays in fulfilling a traditional role of value (lumber, food) in shaping our perceptions of worth?

If I lived in a different state or county, my exposure to various tree species would be in a different context, and I’d certainly feel quite differently about some of them. If I simply ranked them according to their economic value, usefulness as ornamentals, or contributions to wildlife, we might end up with a somewhat standardized ranking. Although many people might use that approach, it would be pretty boring. As it is, I tried to avoid such an approach, and just ranked sixty-five local species according to how I happened to feel about them after a lifetime of personal experiences. It’s interesting to explore our inner selves later, and try to explain why we feel as we do.

Is there any better tree than the sassafras or the black birch when run through by bulldozers, for scent?

-EFF

I can’t top a sassafras stump for holding a pleasing aroma. Most of our native woods have a pretty nice odor, with the exception of sheepberry (*Viburnum lentago*). I once threw some from an old ornamental planting into a big woodpile; after a week I couldn’t stand the smell anymore, and had to sort through the whole works. Nearly as bad was sawing wet elm or weeping willow and getting your trousers soaked. I suppose they were tapping sewer water or something. My nose isn’t very sensitive to any odor, but my wife would run me out of the house immediately.

Comments [to me] about another list of favorite trees.

-EFF

Ed, your thoughtful treatment of some favorite tree species is a fine piece of work, and may be a hard act to follow. My simple list claims no such insight, but, like anything in print, may lead others to suppose that it holds some great truths worth cogitation, like splashes of paint in a modern art gallery. Not so; I simply let the trees do the work, and some struck me with pleasure and an air of promise, while others, to my regret, usually disappoint me. Then I awarded bonus points to any species despised by foresters looking for something to kill.

PINUS STROBUS FORMA MAXIMUS

Bob, your morning comments on the historic dimensions of white pine are entirely logical. Despite my title for this epistle, I don’t think there were genetically superior trees in historic times. However, as you outlined a month or so ago, the matter of habitat is definitely correlated to tree height. Forest profiles show this, as in my Chase Creek study, and the presence of indicator plants is so valuable that I discovered exceptional trees at Belt Woods by watching the herbaceous layer, and then studying the overhead canopy more carefully.

I suppose that many accounts from the past have been skewed somewhat innocently, as by transposition, diameter for circumference, yards for feet, $3.14 \times$ the longest diameter, counting logs in a multi-stemmed tree, measurement at grade, or simply rumor repeated too many times.

I gather that liars were as despised long ago as today, but a

talent for telling tall tales well was looked upon favorably. The same went for photographs, as in the case of humorous post cards showing a giant ear of corn on a heavy ox-cart. When less obvious, such exaggeration has caused problems, as in the case of the Lead Mine oak.

Of course, there was always a strong incentive to exaggerate the productivity of the soil, with farmers, land speculators, small towns, railroads and even states carrying things to great extremes, hoping to attract settlers, investment capital and more profitable land sales. Some of this stuff was completely untruthful, and some was simply clever, like the American chestnut photograph.

So, what about cants six feet on a side? There's no truth to it, for several reasons. Mills are built to handle logs of average size for the area. Larger mills cost more, require more power, are harder to maintain, and don't cut as accurately. Oversized logs are a headache for everyone. Occasionally some showoff may transport an over-sized log, but it's hard on the animals and equipment, bottoms out in the stream, and may damage the carriage. Without a big bandsaw, there are several approaches to sawing such a log, but none are very satisfactory. Having a huge cant six feet square on the carriage is not an option.

So, the big cant never existed. Let's be charitable, and say the cant was 2 feet on a side, and someone changed that to yards. That makes for good sized second and third logs. What about the first log? It may have been unsound, and was left in the woods, or was split with black powder to fit a typical mill. Undoubtedly a big tree, but not off the chart, or incompatible with some standing today.

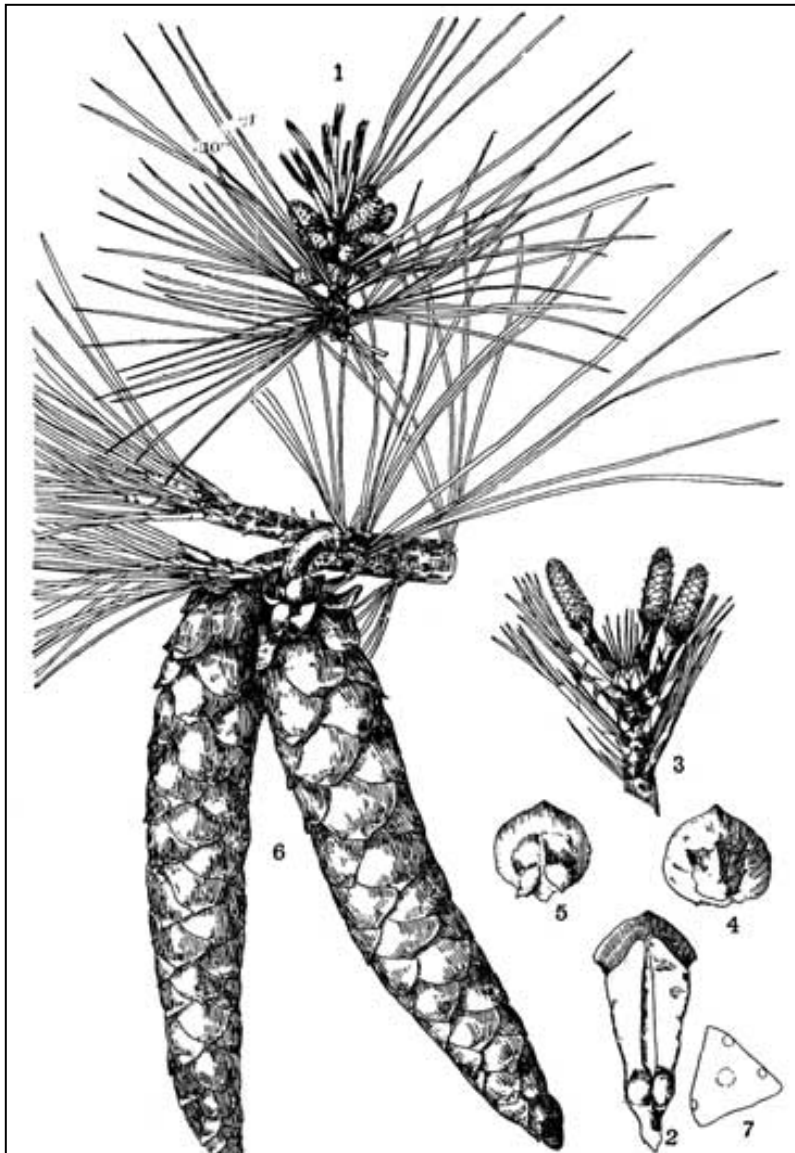
Even if perfectly round, the size tree required to

produce a six foot square cant simply didn't exist in the east. The closest thing was, if I remember correctly, a six foot cube of yellow poplar that West Virginia exhibited at the World's fair of 1907. As a yard-stick, that's a measure of exceptional big trees, even in that era of exploitation.

We might guess the tree was notched and felled above the cube, which was then cut at grade, wedged up, shaped by hand and transported. Cutting very low was done at times, as in the case of a local black walnut, where the saw passed through both nine feet of wood and a core of numerous oyster shells.

Bottom line: *Pinus strobus forma maximus* never existed.

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Eastern white pine
drawing from *Handbook*
of the Trees of New
England by Lorin L.
Dame and Henry Brooks.

"A FOREST PERSPECTIVE" AND OTHER POEMS

Colby B. Rucker (deceased)

Eastern Native Tree Society

A FOREST PERSPECTIVE

We glorify the great columns that rise from the woodland floor
To a canopy, angled and much-twigged, high above.
And though we would know the summit of that forest,
It remains untouched, unknown, and unappreciated.
For earthbound is our human perspective,
And our traditional view of the forest is inverted.

If the forest starts at the ground, its spirit is in the canopy.
To know that level of the forest, we must be part of it.
Just looking across the tree-tops from a window,
A rooftop or a rocky summit won't suffice.
Seldom can you climb a tree high enough
To be looking out over the canopy while still within it,
But on rare occasions it is possible,
And in memory, we may return.

Standing in the broken top of a lofty tree,
With dense new growth up to our waists,
We are immersed in the canopy, and joined with it.
All around us the second-growth trees form a tight mosaic,
And the surface is more uniform than supposed.
The aspect is much like a great meadow
Deep in lusty plants, where cows are seen up to their bellies
In the rolling greenery.

Here and there are islands of greater trees,
Monuments of longevity, their dark and irregular crowns
Rising above the surrounding meadows.
They court the storms and the lightning,
And show their wounds, yet they survive.
It is springtime, and the dark limbs of the tuliptrees
Yield to an exuberance of new leaves – a green so fair,
That were it blue, it would be the sky.

This is a time of brief showers and warming sunlight.
Far off, clouds rise, their shady bottoms resting
On a flat surface, real yet invisible.
This is a vapor'd realm, where colors fade in the distance.
Indeed, this is the realm of the trees.
Here the oaks bloom in bronzed profusion,
And the wind carries the pollen far into the hazy distance.
Here the buds of the mockernut and the long-pointed beech
Swell day by day, until, finally, preposterous,
They open, revealing their leaves, new and perfect.

A hawk circles on the rising air, and we think of earlier times,
When chestnut pollen filled the air, and the pigeons
Flew close over the trees, in broad swirling avenues, far off, to

the horizon.

Here the swifts cut long arcs over a green ocean,
Taking insects from seemingly empty air.
The canopy itself is not just leaves and twigs,
But a region of substance, filled with tiny birds –
Warblers and tanagers, seldom visible,
But intent on the insects spawned by the life of the trees –
The magic of leaves and sunlight, and the distant clouds.

The days pass, and it is mid-morning in summer,
And the varied greens of springtime have become one.
The cuckoo calls, unseen, and the shrill cicadas complain,
Warning of hotter hours yet to come.
Perhaps there will be a thunderstorm,
And the leaves will turn over before the wind.
The trees will bend wildly; the rain will beat in great sheets,
And lightning will claim the ancient and proud.
But the storm shall pass, and the long points of the leaves
Will draw off the wetness, drop by drop, and life will go on.

In our imagination, we may wish that we could walk
Over this high savanna, weightless.
And so, in thought, in the bright sunlight, under an expanse of
sky,
We stroll over the surface of the leaves, which are darker,
Thicker, more glossy, and more narrow than expected.
One species after another, we reach down into the foliage,
Examining the various fruits, which exist in abundance,
As if we were hunting wild strawberries.

Occasionally we come to a dark void,
Perhaps still occupied by a sun-bleached trunk,
Where one of the trees has met its end.
We stare down into the darkness, down to the cellar of the
forest.

It seems a lonely place, seemingly empty, save for the long
vertical members
That hold up our leafy surroundings. The trees do not speak of
it –
It is the crypt, the resting place of the dead and the broken,
And that no longer needed.

We shield our eyes, and see that it is a long way –
Perhaps one hundred feet – to the bottom.
And so, on the wings of thought, weightless,
We move slowly down, leaving the sun and clouds, and flocks
of birds,
Down through the angled roof structures,
Into the ravine.

We pass through beech and maple, pawpaw and spicebush,
 To where the ferns and mosses reign in their diminutive world.
 Yes, there are other worlds here too,
 Tiny worlds in the rich soils,
 Filled with innumerable life, so far and so different
 From the sunlit meadows high above.

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THE TURNING OF THE YEAR

Alas, the woodland muse does not record
 The turning of the year
 But allows the old to slip away,
 Silently, on that shadowy trip
 Beyond knowing, into the past.

And, locked in the fastness of winter's grip,
 We must abide the journey of the globe
 To those warming days when the buds
 Shall break, and the maples
 Enliven the lowlands with new color.

Safe by the hearthside, we ready our maps
 And tapes, and dream of long walks
 Into sweet-smelling groves of pine,
 Where sunlight comes in narrow beams
 From a limb'd realm high above.

Or, in moist coves, amidst the ferns
 And fragrant soil, where moss'd roots
 Anchor the great columns that rise
 Through lesser trees, green upon green,
 And birdsong rings in the dark-shadowed fastness.

The new year shall come, with new
 Ills and woes, but these are but part
 Of time linear, which shall pass away
 The good and the bad, in the unyielding
 Passage of time into distant nothingness.

Better it is that we follow the path of the seasons,
 Which is time cyclic, always renewing, enduring,
 Where the new and the past are continuously joined,
 Like the wood of an old tree, enriching that which
 Is experienced, and days pleasant, yet to be.

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THOUGHTS IN A MARYLAND WOODLAND

Standing on a mossy rise,
 I looked off through the November woods.
 Away, to the north, beyond the old chestnut oaks,
 Across the stream valley, trees on the far hill
 Faded to gray against the evening sky.
 Nearby, a chill breeze

Touched the pale beech leaves,
 And they quivered, unfallen,
 As their species has done for centuries untold.
 This is the woods of home,
 And I thought of things remembered,
 And things before my time, some but yesterday
 To the ancient trees around me.
 The measure of time is everywhere.
 These sands and clays knew the age of dinosaurs,
 And the sublime contour of these hills, valleys
 And terraces is the slow work of a million years,
 Punctuated by inroads of the sea.
 All this was the home of the bear,
 Wolf and mountain lion.
 The Indian was here too, but that was long ago,
 And there is no wildness here today.
 This is a gentle place, where one walks
 With lowered voice and measured step
 Among the ferns.
 These woods were part of "Timberneck,"
 A colonial grant three hundred and fifty years ago.
 The uplands were cleared for tobacco,
 But these slopes and deep ravines were left intact.
 For farm timbers, the trees were too large, too inaccessible.
 And so, they stood, untouched, the chestnuts,
 Oaks and poplars, sour gum and beech.
 The wind blew again, and I heard the long whistle
 Of a steam locomotive, far off, and the voices of young men.
 I saw yokes of oxen, brown sinewy beasts,
 Their ribs all showing, straining ahead of a great log.
 The year is 1902 – or perhaps later; it doesn't matter.
 They are now all gone, the last of a heroic age.
 Only deep grooves in the hillsides, and circles of woody
 mould,
 Where no moss grows, tell that they were here.
 And the mournful whistle sounded again,
 Somewhere in time.
 The light was fast fading,
 And I thought of a young boy,
 Walking the length of a fallen chestnut,
 Counting the rings on a mossy log
 Taller than he,
 And finding vulture feathers
 Under a bare silvery giant at the top of the hill.
 There were poplars and oaks where outstretched hands
 Could not span the hollow.
 Other old trees stood among the tall stumps,
 Crooked, heavy-limbed, thick-barked,
 Bypassed by the long crosscuts.
 These ancients remained, speaking in dark forms
 Of the greater forests that had been.
 And the boy knew
 That he had been born too late.
 It was near dark, and I turned,
 And walked the old path, a bit slowly.
 I passed a stand of poplars, straight columns
 Now grown to much height,
 Thinned only by lightning and the wind.
 A hundred years ago this was an orchard.

Someday, another fifty years, or a hundred,
 These will be great trees.
 Still, it will not be the original forest.
 These trees grew too easily.
This stand must pass away, and other species,
 More varied, hard-butted and strong,
 Must rise and grow old.
But that will not happen; the soils have been changed,
 The chestnut is no more,

And plants from foreign lands have made their claim.
 And, were it possible, five hundred years from now,
 Who would understand?
 Lost in thought, I walked on,
Through the honeysuckle and sassafras
 To the field, where the first stars
 Hung above the broomsedge.

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Sunset on Petit Jean Mountain in central Arkansas. Photo by Don C. Bragg.



SPLITTING FIREWOOD AND OTHER MUSINGS

Colby B. Rucker (deceased)

Eastern Native Tree Society

SPLITTING FIREWOOD

Jennifer Troy, Colby's daughter, writes: "Dad wrote 100 pages in May and June 2004 mostly about growing up and his tree business. I have sometimes cut out parts that I thought might be interesting to a particular individual or group. Found this on splitting fire wood..."

--EFF

With the first hint of autumn weather, people would order firewood. September is much too hot for firewood, and more lucrative jobs were still coming in, so I'd put them off until after October 15th. The first few days at the woodlot were just getting organized. Gradually the odd lengths were sawed up, and larger pieces split. Splitting wood is strenuous, yet relaxing. I never had a power splitter, so I didn't have to lift the heavy chunks, or hear the noise of the engine. I'd just tilt the chunks up where they lay, and split them with an eight-pound maul.

Splitting wood is actually quite interesting, and takes quite a bit of know-how to do it right. Pieces are usually split from the small end, which avoids the knots. A crooked piece may be split from the big end, which "butterflies" it into two flat pieces. For a crotch, split off the outside of the two ends, turn it over and go through the middle. Of course, the idea is to create nice pieces of a salable size, not just destroy the wood. That means splitting a section in the right number of uniform pieces, three, five, or whatever. Big sections may be split by shelling off the outside, all the way around, and then going through the center. A piece split in this way "runs out," so you swap ends once you've split a series. Each species has its own peculiarity. Sour gum, sweet gum, elm and sycamore won't split through the center. The curvatures in the grain build upward as the tree grows, so a path to the center would encounter grain slanting first left, then right, on and on. Yellow poplar usually splits well, but old-field or "blue" poplar has thick hangy sapwood, and must be shelled off, first with three blows outlining the piece. I almost never used wedges; it's slow, noisy, and there's the chance of being struck by shrapnel-like pieces of metal.

The difficult species can often be split by shelling them off, or by simply sawing them in half. They're sawed with the grain with a big saw, which has the power needed to pull out long shreds of wood, like heavy excelsior. Sawing such stuff wouldn't pay, except that it's a way to rid of otherwise useless wood, and save dumping fees. Sawing odd lengths also takes some thought. It's better to saw a three-foot length into a piece of firewood and one of stove wood than to make two equal lengths ill-suited for either purpose. Another skill is how a

maul or splitting axe is used. An old 4-pound axe with a thick blade is good for light splitting, but it will get stuck if driven straight into the grain. An axe must be rotated slightly as it comes down, so that its force pries the wood apart. Properly done, the axe does not continue through the cleft. Although a maul can be rotated, it's best to choose a maul with a thick face. Narrow mauls tend to stick.

One day I was splitting wood, and Robbie Garber stopped by. I remarked that I had a new maul, and couldn't decide if it split as well as the old one. I set up a few blocks and asked Robbie to try both mauls, and give me his opinion. He split them all with no problem. I then set up blocks of a different species, suggesting that might be a better test. Again Robbie split them all, and so it went, me setting up blocks, and Robbie splitting away, accumulating a good pile of wood. Finally, Robbie stopped, wiped his brow, and looked at me menacingly. "Hey, you've been putting me on, haven't you?" It was just like Tom Sawyer; I began to laugh, and Robbie did too.

BALD TIRES

A state policeman stopped me once and told me he had to give me a warning ticket for the tires. He said that they were worn out, with insufficient tread. He was quite pleasant, and I asked exactly how much tread was the safe limit. He looked at me and the tires, smiled, shook his head, and said, "Mr. Rucker, how can you say how much tread? You haven't got any tread!" It was true. I recall that the 1951 truck was like that. For short trips in the snow, I would wrap the tires with old pieces of climbing rope to provide a little traction. The army truck didn't have any muffler; exhaust came straight out of the block. We always had to prime the carburetor to start it up, and a big flame would come out underneath, often setting the grass on fire.

CHAINSAWS AND HEARING LOSS

Years ago, no one worried about his hearing. If you were cutting a really big tree, the convex curvature between the buttress roots would send the sound back to you like a parabolic mirror, and you couldn't stand the pain. You'd just raise your elbow so as to press your shoulder to your ear, and keep sawing. One day I was working at some nice address, and a very dignified lady came out, and said, "Mr. Rucker; isn't that bad for your ears?" I broke into a big smile, and said, "Huh?" She couldn't help laughing. Later, it wasn't so funny. I first noticed my hearing loss when my old electric shaver rattled and screeched on the left side of my face, but hummed peacefully on the right. Once, after I returned from an important planning and zoning meeting, a friend asked me, "How did your hearing go?" I replied, "Oh, chainsaws, mostly."

TWO SOUTH COUNTY TREES

Besides Annapolis, there were interesting old places in south county. I worked at Sudley a couple of times. There were three huge tuliptrees in front of the house. One was very tall, one had an immense spreading crown, and one was very old and hollow. The owner had been advised to cut down the hollow tree, but it really wasn't as dangerous as the tall one, and I suggested that the vigorous newer growth be trimmed back part way, and a cable run to a sycamore tree for added support. The lower trunk of the poplar appeared to be sound, but there was a large hole about three feet across twenty-five feet up. We set a ladder up to the opening, and I could see that the hollow went up another twenty-five feet to the fork, and extended clear to the ground, where, as my eyes adjusted, I saw a mother raccoon and several young in the sizeable circle.

I decided the best way up the tree was through the trunk. I threw a lead line up to the fork, shook it down, and we got a climbing rope in place. With two helpers taking up the slack, I made my way up through the trunk, finding various handholds. The opening was too broad to push with your feet. Once I made it to the top my greatest worry was that my helpers would forget my instructions, and simply pull me out of the hole and down to the ground. Some years later I phoned the owner, Mrs. Thomas Hammond Welsh. She said the old tree was doing well, and she still remembered when a young man went up the inside of it.

CEDAR PARK RED OAK

Perhaps the largest tree I've seen was the big southern red oak at Cedar Park, on Cumberstone Road. The tree was listed as a national champion, but its size still surprised me every time I saw it. You could park by the roadside, under the high spreading branches, but it wasn't until you hopped over the board fence that you realized how huge it was. There was nothing cheap about the trunk. It didn't have any big fork, burl, oversized low limb or anything influence the tape. It was just plain big. Surprisingly, The state measurements were way off. The tree was growing like crazy, but their last measurement was smaller than one taken earlier. A few years before the tree's death, I took a careful measurement of the trunk. I measured 4½ feet vertically, up from the soil with a carpenter's ruler angled at that height, thereby transferring the elevation to the trunk. Attaching the tape at that point, I continued around the tree, the tape wrapping the trunk, while I continuously maintained the elevation of the tape with the folding ruler. The ground was quite level, and I'm satisfied the measurement was as accurate as possible. Unfortunately, it came to exactly 30 feet. Perhaps it would sound better if I say it was 29 feet 11½ inches.

Although the tree was said to be 350 years old in 1976, it was closer to 200. Two of the lower limbs were broken in Hurricane Hazel. Someone had sawed off most of the remainders, leaving large stubs and knocking a big chunk of bark off the lower trunk. Mr. Churchill Murray engaged me to trim off the two stubs, install a concrete filling in another and shape the torn bark. The two stubs were about 28 inches thick, including the bark. I took them home and counted the annual rings— 140 on

both of them. So, 140 years before 1954 is 1814. If it took the tree about 35 years to send twigs to the level of the limbs, it sprouted about 1789. That would have made it 197 years old in 1976— almost a bicentennial tree, but not 350 years old.

ENTS

Retirement has provided the opportunity to squander time with great abandon, and yet also, at times, be productive in various new ways via the Internet. I joined the Eastern Native Tree Society, and have enjoyed the friendship and confidence of Bob Leverett, a remarkably dedicated man who lives in Holyoke, Massachusetts. With his encouragement, I bought a laser rangefinder and a clinometer, and measured tree heights accurately, particularly at Chase Creek Woods, Belt Woods, the Corcoran Tract at Sandy Point, and a remarkable ravine at Carter's Grove, near Williamsburg. I also devised some new concepts, including backup to clickover; the pole-sine measurement method; the ten-rectangle method of measuring tree diameters at any height with a rangefinder, and the construction of forest profiles, in which maximum tree heights are shown to correlate with available niches for solar access. I also designed what others call the "Rucker Index," in which forest preserves are ranked according to the average height of the tallest examples of the ten tallest species. Another activity was maintaining various lists of hundreds of exceptional trees of nearly 150 species, showing the tallest examples found by members of the ENTS in many eastern states. These lists were posted on the Internet.

CHAMPION TREES AND MEASUREMENT STANDARDS

There are many old trees in the woods at Chase Creek, and I found nine state champions (one was on the Iliff property, one at Berry's, and seven on ours). We also have two national champions. I once had a call from a newspaper reporter who asked, "Mr. Rucker, which of your champion trees is the most magnificent?" I had to laugh at the question, since none of the seven is more than thirty feet tall. Still, a champion is a champion, and I resumed an active relationship with American Forests. There were nice little biographies of ENTS members, including me, in the spring 2002 AF magazine. In 2003, with the encouragement of Karen Fedor of AF, I assembled the opinions of myself and three other big-tree enthusiasts, and put together detailed recommendations for improvements to AF's tree measurement standards. Recognizing the need to determine the theoretical circumference of a tree trunk from measurements taken at any elevation below 4½ feet, I devised the "Rule of 73," a formula that utilizes typical percentages of trunk taper to determine the derived girth.

WOODLAND APPRECIATION

There are many compelling reasons why we should protect our small woodlands, good practical reasons: buffers and scenery, aquifer recharge and water quality, air quality and noise reduction, rare plant and animal habitat, and an alternative to development. All those are reasons enough, but there is something more: reasons beyond reasoning, and values beyond value.

In these eastern woodlands there is something special, yet

hidden to most. True, there are no sequoias, no rainbow-girded cataracts, no grizzly bears or ancient bristlecones; but these are differences of quantity, not substance. Nature, even the smallest bit of it, provides a broad window, linking us to the tarn and fen, and beck and lea of our far yesterdays, providing truth and beauty for today, and promising a bit of today in a tomorrow beyond our ken.

Life is but the pursuit of knowledge. Through art, music, literature and poetry we extend the limits of our sensitivity and understanding, but these are but imitations of nature. In the study and contemplation of nature itself we are drawn further, toward a sublime unity both real and elusive.

Through our access to nature we may move through progressive levels of understanding. In the defense of the smallest creature is the salvation of the whole, for in preservation we exhibit the highest attributes of our existence, being at one with the theme of creation. Conversely, whatever our wealth, or office, in the unnecessary destruction of one tree we consign ourselves to the Stone Age of intellectual progress.

Though we strive to understand nature, we cannot judge nature; ultimately, it is nature that judges each of us. That we understand all the intricacies of our eastern forests is not essential. What is essential is that each of us respects these areas, and protects them. If we fail, we shall have turned our backs on true progress, and shall have permanently denied a dimension of truth and enlightenment to all who may follow.

HOW TREES AFFECT THE INNER SELF

The study of trees is a journey along many avenues, leading us to that gate which is both the first and the last—the psychological impact of size—how do trees affect our inner selves? It's a wonderful subject, but I hesitate to enter, for it is not something to be taught, but something to be experienced, being the product of our own personal perceptions and expectations. Having said that, perhaps I can share some impressions, which taken together, may strike some common chord.

In winter, the silhouette of distant bare trees against the even glow of sunset is pleasing, but our attention is drawn to some great cluster of limbs, divergent, higher and denser than all its neighbors. Perhaps it is a single tree, perhaps several, perhaps the country seat of some family, now forgotten. It prompts many questions. Above all, it dominates the landscape.

Yes, size is comparative; it dominates, it must have the right presentation, and it must affect our experience and our curiosity. Dominance can be more; it can border on intimidation. In the movie, "Dr. Zhivago," when Yuri bursts out of the woods and sees the locomotive, that is size, and it is intimidating. This is simply to say that different individual trees affect us differently, because we feel that each has a different aura—a different character.

Tuliptrees are large, but they are as benign as their spring foliage—a green so fine, that were it blue, it would be the sky.

White oaks are stately, trees of history, but approachable. Black oaks are big and rough, coarse, uncultured, but completely honest. Sycamores are cold, self-centered, boorish, with no refinements—in short, unfriendly. Such feelings affect how we perceive the size of individual trees.

The trunk of a great tree inspires awe; it is like a silo; nearby trees become insignificant. To do this, it must do more than stand on a big stump. It must hold its size as it goes up. In so doing, it is overpowering, like a locomotive. The silvery trunks of great chestnuts did this. There was no crown, and it was not needed. To walk through the woods in the moonlight, among those ancient monuments, was awe-inspiring.

Is its mass that is so dominating, or is it all silhouette? Perhaps the latter is the impact on our animal minds, and mass just the product of education. No matter. If a large trunk forks repeatedly, so that a great concentration of wood occupies much space, it affects us. Though our eyes seek to find their way through, all attention returns to wood. But it is bark—so much of it—which we see. Bark, by its texture, creates feeling. An old white oak limb, endowed with broad overlapping shingles of bark, two hundred years old, commands respect.

So, respect can be part of size. Perhaps trees with large basal hollows seem larger. The silhouette may be the same, but these trunks can surround you, demonstrating their size benignly, yet overpoweringly. And we respect them; no hint of commercial value can enter into it; we respect them for themselves.

Of course, presentation is essential, like art galleries, with walls, lighting and frames. While seeing a great-crowned tree at a distance is one thing, approaching it gradually diminishes impact. It must come upon us, like Yuri and the locomotive. We may know the tree is there, but to be suddenly confronted by its size has maximum impact. I often would stop my truck by a pasture fence, in the shade of a large oak, and suggest that some new employee hop over the fence and see how large the tree was. Most were, at that point, unimpressed, but obeyed. When suddenly confronted by a cylinder thirty feet in girth, they were, without exception, completely overwhelmed.

Height does not always have the same impact. It has less impact on our animal minds. In tall groves there may be an expanse of empty space, and the play of sunlight. This evokes comparisons to cathedrals, which are surely awe-inspiring, so there is less of the primal, more of the artistic. More difficult is how we perceive the individual tree. To follow the broad orange-brown bark plates of a pine gradually upward to a green focal point may be a long visual journey, and we are impressed. In the case of a tuliptree, there are no orange plates, but the journey does not stop so abruptly, and more trunk may be above—and we strain to see it, still expecting another path leading upward. Thus height becomes a journey of anticipation and hope. The more stations the train reaches, and yet continues, the greater the sense of distance.

Of course, a tree approached from downhill has the

presentation advantage of being elevated—like the Statue of Liberty. Perhaps equally effective is the act of climbing, of physical effort—to reach even the lowest part of something larger than ourselves. This is where the sense of height takes on the aspects of dominance and even intimidation.

The matter of spread is different. Although, in my first example, the dominance of oak limbs against an evening sky concerns the crown of the tree, the effect comes from the visual density of standing wood. From under a tree, a great leafy umbrella may be cool and inviting, and if large enough, noteworthy. Our recognition of size seems to come from a visual calculation of the distances and enclosed space involved, not from any psychological effect different from that of a more modest tree. Individual limbs, if heavy and horizontal, may inspire awe, but much less so if they rise at an angle.

In summer, spread is welcome and inviting. In winter, it is all different, and a low spreading crown impresses us with its innumerable branches, limbs and twigs, all competing for our attention, so that the winter sky is forgotten, and only the cold wind intervenes. The rougher the bark, and the more thoroughly the limbs are clothed in small twigs, the greater the impact.

Bare sycamores, like red maples and beeches, long for a blue winter sky; or better, for a dark ominous sky as a cold front approaches, and sunlight still illumines their structure. Sycamores are the thing of Victorian oil landscapes, with cattle and horses standing by broad rocks and gentle brooks. It is all light and color; size has no part in it.

Our perception of tree size can be focused downward, where twisted roots are the inspiration of storybook illustrators. Beechen roots, and trunks, short, twisted and well twigged, are the stuff of enchantment, with elves and pixies galore. It is the twigged trunk that holds our attention downward. There is a painting of skirmishers in the Battle of the Wilderness—a man firing from the base of an old white oak, and a dead limb holds our attention downward, to the deadly thickets.

So, finally, tree size comes down to what we are, ourselves. Hopefully, there is a bit of the child still in us. In the woods, we may recapture some of that world, where most trees seem huge, with contours like storybooks, thick-barked and ancient, and there is still the shadow of the unknown. Great trees can bring this back, and we may be both intimidated and enchanted.

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Foam swirls in the tannin-stained waters of the Presque Isle River in the Upper Peninsula of Michigan. Photo by Don C. Bragg.



TREE MEASUREMENT

Colby B. Rucker (deceased)

Eastern Native Tree Society

MEASURING TREE HEIGHTS BY THE POLE METHOD

The ability to obtain accurate tree heights creates an opportunity for some interesting forest studies. One of these is the construction of a forest profile, in which all the tree species, large and small, are included. By including information on topography, exposure and soils for the tallest example of each tree species, those specimens may be arranged by height into habitat groups, which show the need for trees to find a niche in which they are height competitive, and can receive enough sunlight to survive.

While laser rangefinders are excellent for tall trees, most cannot measure a distance less than 54 feet. It's neither practical nor accurate to back off in a thick woodland to measure some eighteen-foot mountain laurel, much less some smaller immature tree that represents its species.

For the smallest trees, a carpenter's six-foot folding ruler works well. Above the ruler's reach, a pole is needed. An aluminum painters pole telescopes to nearly twelve feet, and works quite nicely. It can be adjusted to the height of a small tree, and the pole measured with a steel tape hooked to one end. It can be raised to the top of a slightly taller tree, and the distance to the ground measured with the carpenters' rule.

For additional reach, two aluminum extensions can be made that fit inside one another, and both fit inside the pole. I used a sturdy aluminum ski pole for the top piece. That extends the pole to about twenty feet, which is convenient for most work. Occasionally, additional height is needed. I found a 30-foot champion poison sumac in a swampy thicket, and had to make an extension that fitted below the painters pole. I didn't climb the tree.

Of course, there are other uses for a pole beside direct measurements. I measured a champion spicebush with the pole, but the top was over a steep slope. I marked the ground spot under the total measurement, and then extended the pole from the base of the tree to over the spot, leveled it with the clinometer placed upon it like a level, and measured the distance from the underside of the pole to the ground spot. This amount was subtracted from the total vertical distance.

I found that measuring big trees with a laser wasn't as easy as I expected. A tuliptree five feet thick and 154 feet tall stood in a narrow ravine. It defied measurement from a variety of locations because I couldn't see the tree's base. This was even true for trees on a mowed lawn. In some cases I could thumbtack a piece of paper or other target a measured distance above the base, but in areas thick with spicebush, I needed a

target at least fifteen feet up. The telescoping pole solved the problem.

With an elevated target, I soon found that the lower triangle wasn't needed. I could shoot the top to clickover, mark the location, adjust the pole to that eye elevation, re-shoot the top triangle, and just add the length of the pole. On level ground, the elevation was less than the pole length, so I tied a handkerchief neatly around the pole, and slid it down until the top edge of the fabric was level with the base of the top triangle.

The advantage of eliminating the lower triangle was considerable. On rough terrain, the top triangle was backed up to clickover, but the lower triangle couldn't be backed up without changing the elevation of the eye. The two triangles could overlap or be separated. Also, a direct measurement (the pole) is always more accurate than calculations based on sightings (the lower triangle).

On slopes, the pole is often set on the uphill side of the tree's base. Of course, that's not "where the acorn sprouted," the central basal contour. Whenever possible, the pole should be set on that contour, but sometimes visibility requires that it be set higher, or even lower. In such cases, a basal height adjustment must be made by measuring the difference in elevation between the base of the pole and the central basal contour. This is done by extending the pole horizontally, leveling it with a clinometer placed upon it, and measuring the vertical difference with a folding ruler.

The pole can be essential where triangulation is more difficult. I recall a handsome old sweet cherry in a dense woodland with a thicket extending to the roadside. The site was threatened unless I could get accurate measurements, and prove the tree was a significant specimen. The road was the only place I could see the tree's top. I knew the tree's base was higher than the road, but I could only see a small section of trunk about fifteen feet up. I shot a triangle to the tree's top, and one to the pole tip visible against the exposed trunk. Subtracting the pole length from the lower triangle left the elevation of the base above my eye, and subtracting that from the top triangle gave the actual height of the tree.

The pole can be handy in other ways. I recall measuring the trunk of a huge tuliptree standing at the head of a steep narrow ravine. The central basal contour was about 2½ feet below the grade on the high side, but the roots on the low side plummeted down, almost vertically, for about fifteen feet. There was no easy way to get a tape level around the trunk. I

ran the pole out to nearly its total length, and soon had the tape where I wanted it. Circumference at breast height was 22 feet 8 inches.

The pole method's not as fast as just shooting two triangles, but I think the improved accuracy is worth the trouble.

CORRECTLY MEASURING GIRTH

Big trees on steep slopes often require a variety of measurements to allow comparisons with other trees.

All height measurements start from the same place—"where the acorn sprouted." If you stand at mid-slope and sight down the centerline of the trunk, that line meets the soil at the central basal contour. You can't determine the contour by averaging the elevation on the high and low sides of the base; roots enter the soil abruptly on the high side, but run all over the hillside on the lower. The central basal contour is a constant elevation; it extends level from your side of the trunk, through the spot where the tree first sprouted, and out the other side. Like all contour lines, it may curve, but it's at a constant elevation. If you measure upwards with the lean of the tree 4.5 feet above that contour, that point is breast height on either side of the tree.

Circumference is measured at right angles to the lean of the trunk. If you temporarily mark breast height on both sides of a large tree with a scrap of paper and a thumb tack you can be sure the tape is even. You can carry some thumb tacks pressed in a wine cork. Of course, if erosion has left the tree standing on its taproot, you'll have to estimate the elevation where the tree first started. If floodplain deposition has raised the grade, you'll have to accept the existing grade level. We don't dig 'em out.

On a very large tree, a tape set at breast height may still be below grade on the high side. In that case, raise the tape to a higher elevation and attach that elevation to your circumference record. Actually, a variety of measurements is very useful, including several taken with the slope, starting at grade. This will allow others to model the architecture of the base in the future.

Yes, getting the tape even on the downhill side can be difficult. I had to use a telescoping aluminum pole to raise the tape on a 22' 8" tuliptree on a slope above a precipitous drop at the head of a ravine.

We've found a simple way to measure trunk diameters at any height with laser rangefinders. This, together with taped measurements of the base, allows us to calculate the volume of the entire trunk. For the western giants, volume is the best means of comparison. Bob Van Pelt is the expert on this, and I highly recommend his book.



Colby Rucker with pole on right and Bob Van Pelt on left. Photo by Edward Forrest Frank.

THE RULE OF 73

Trees are often compared by measurements of the trunk circumference taken at breast height (4.5 ft, or 54 in. above grade) known as CBH. National and state big-tree registries use this measurement, often known as CBH, by adding one point for each inch of CBH to points for height and average spread in their periodic lists of champion trees. When a fork, burl or low-branching habit causes the trunk to have its smallest girth at some point below breast height, many of the big-tree registries have allowed that lower girth to be entered as CBH. This has given such trees an unfair advantage over competitors that have a similar lower girth but taper to breast height, where their circumference is less.

I felt that some simple formula was needed to allow a fair comparison between trees with a low "waist," and those that taper in a typical fashion. An old list of national champions provided the elevation of 35 circumferences of trees measured below breast height. I found that those trees averaged eight feet in circumference. I then measured actual mature trees of ten species, which also averaged eight feet in girth at the same height. After taking circumferences at numerous elevations, I devised a formula to fit the actual flaring contours of the trunks measured. That formula, which I call "The Rule of 73," is as follows:

Measure the smallest trunk circumference at or below 54 inches. Add one-half the elevation (in inches) of the circumference to 73. Apply the sum as a percentage of the measured girth. The product is the hypothetical circumference at breast height.

As an example, in 1988 the Liberty Tree measured 31' 7.5"

(379.5") in circumference at 24" above grade. One-half of 24 is 12, which added to 73 gives 85. 85% of 379.5 is 322.6. By the formula, the hypothetical CBH is 322.6". The actual 1988 measurement of the tree at breast height was 26' 11", or 323.0". Although some trees have greater or less taper than is typical, the accuracy of the Rule of 73 is often quite surprising. Since the rule is based on percentages, it is applicable to trees of various sizes. Also, because of the nature of percentages, hypothetical circumferences (from breast height to grade) do not increase by fixed increments, which would produce a conic structure. Instead, circumferences increase by gradually greater increments, which produce a concave curve, which corresponds to the flaring base of a typical tree, as may be seen below.

Column "A" shows the elevation above grade in inches.

Column "B" shows the hypothetical circumference.

Column "C" shows the increase in inches over the girth just above.

Column "D" shows the increase as a percentage of the girth just above.

A	B	C	D
54	100.00		
52	101.01	1.01	1.01
50	102.04	1.03	
48	103.09	1.05	1.03
46	104.17	1.08	
44	105.26	1.09	1.05
42	106.38	1.12	
40	107.53	1.15	1.08
38	108.70	1.17	
36	109.89	1.19	1.09
34	111.11	1.22	
32	112.36	1.25	1.13
30	113.64	1.28	
28	114.94	1.30	1.14
26	116.28	1.34	
24	117.65	1.37	1.18
22	119.05	1.40	
20	120.48	1.43	1.20
18	121.95	1.47	
16	123.46	1.51	1.24
14	125.00	1.54	
12	126.58	1.58	1.26
10	128.21	1.63	
8	129.87	1.66	1.29
6	131.58	1.71	
4	133.33	1.75	1.33
2	135.14	1.81	
0	136.99	1.85	1.37

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Tupelo gum along the White River in eastern Arkansas. Photo by Don C. Bragg.



THE RUCKER TULIPTREE

Will Blozan

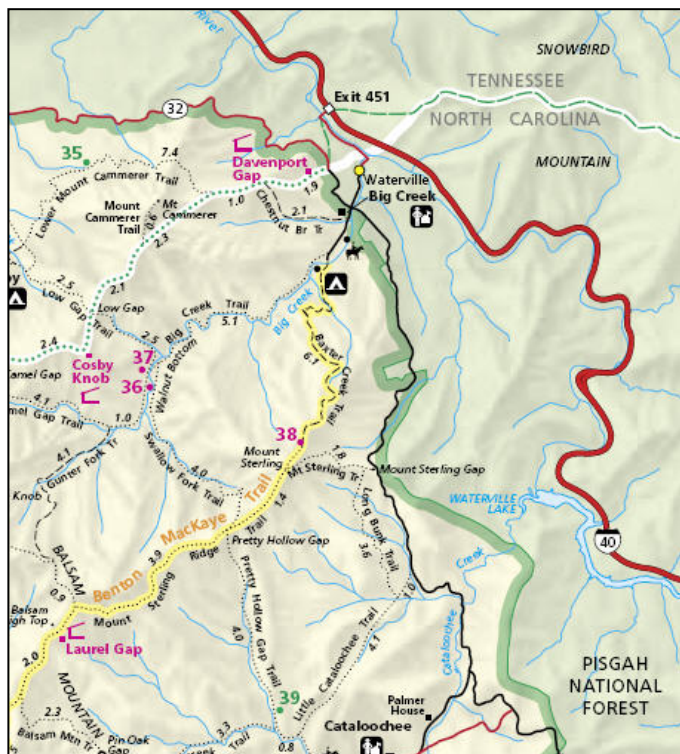
President, Eastern Native Tree Society

ENTS,

I would like to name, in honor of our dearly departed grand Ent Colby Rucker, the tallest known tuliptree on Baxter Creek the "Rucker Tuliptree." Colby was a huge fan of the species, and often wrote eloquently of the architecture and growth of the tree. His keen observations as an arborist and a naturalist have inspired many ideas and thoughts in my head about maximum height growth and the effect of age on canopy stature and form. I feel it is a fitting tribute to the man and his passion, and will memorialize his contributions to the understanding of our eastern forests.

May the tree continue to grow and teach us lessons we seek, and those we do not yet know. Colby, may you rest in blissful peace, my friend, in the soothing shade of your arboreal companions.

© 2008 Will Blozan



Map of the Baxter Creek area, location of the Rucker Tuliptree. Map courtesy of the National Park Service and Great Smoky Mountains National Park.

*The Rucker Tuliptree along Baxter Creek.
Photo by Will Blozan.*



IN REMEMBRANCE OF COLBY

Robert T. Leverett

Founder, Eastern Native Tree Society

I first became acquainted with Colby Rucker through written correspondence in the mid-1990s. Colby wrote to me from his home in Maryland. Why did he seek to communicate with me? My reputation as an old-growth forest sleuth had grown from the late 1980s courtesy of my articles in the "Wild Earth" publication and the Ancient Eastern Forest Conference Series. Through those channels, I had secured a forum for promoting eastern old-growth forest value and protection, and through media exposure, had gained a fair amount of public recognition. So, I believe it was in this context that Colby wrote to me, introducing himself as a kindred spirit very much interested in the preservation of large, old trees of historic, ecological, and aesthetic value. Colby's letter signaled the beginning of a great, largely long distance friendship. Personal meetings did occur at our official ENTS gatherings and there were frequent ENTS e-mail exchanges, but our friendship existed via Internet communications outside the ENTS list. It was through our personal communications that I came to claim Colby as a very dear friend and to know him as a person of significant insights and ideas of value to ENTS, but most importantly, a special friend. Over the course of time, Colby's personal reference to me as "Dear Brother" communicated the depths of our friendship. I was Colby's spiritual brother and he was mine. The strength of that bond never diminished and it continues to nourish me. I think of it often.

Over the years that I knew him, I came to appreciate Colby's wide range of talents. He was a very good writer, an engaging poet, a real plant expert, a superb tree measurer, and a keen observer of nature. The last talent enabled him to make valuable contributions, especially to the science mission of ENTS. If Colby gave me the nod for my mathematical insights, I clearly recognized him as having a superior understanding of the ecology of the tree species that we jointly studied. In fact, Colby was exceptional in this capacity. He exhibited an in-depth understanding of the plant associations. He meticulously observed and documented the species that favor particular soil types, moisture and temperature gradients, and levels of shade tolerance. Over the course of his professional life, Colby developed a mature grasp of the ecology of the trees and shrubs endemic to the central Atlantic region, and when he spoke, all of us listened.



When Will Blozan and I proposed naming a special kind of site species height profile the Rucker index, Colby felt uncomfortable. Colby had absolutely no ego to feed. Consequently, we could think of nobody in ENTS that better deserved the honor. The record clearly shows that Colby did much to contribute to the current shape of ENTS and our expanding data bank of superlative site indices. But I think that his love of and dedication to the Chase Woods, near his

home, was what was most inspirational to me. I could sense his pride and love for those woods in every word he wrote. Chase Woods and Colby Rucker have become synonymous in my thoughts.

Tree measuring does not provide a very good window for outsiders to become acquainted with a person's inner self, but poetry does. I found Colby's poetry extremely compelling and resonant with my own feelings. Colby expertly blended feeling tone, metaphor, and evocative description to communicate the soul of a place and how the change of the seasons, colors, and smells of nature affected him. The emotional content of Colby's

poetry was always measured, but never wanting. It was through Colby's poetry that we saw the true emotional depth of the man.

As a friend, Colby was fiercely protective of his dear brother. He wanted new list members to recognize my personal role in the creation of ENTS and to acknowledge my senior or elder status as he referred to it. I felt the same toward him. In my mind, Colby was and always will be the number one "elder" statesman of ENTS, and as such reflective of the quintessential spirit of our mission and its inherently positive nature.

Colby and I had tree missions apart from ENTS. We shared membership on a special American Forests committee to develop better tree measuring guidelines. Colby worked hard to eliminate ambiguities in the rules American Forests uses to measure circumference, height, and crown spread. In his efforts and insights, Colby was prolific and ahead of his time. Although he remained faithful to American Forests and its mission, neither Colby's nor my efforts could compensate for the extent to which measurement errors promulgated the National Register of Big Trees. He was clearly frustrated with the reduced value of the Register as a consequence, but never ceased to support it. I like to think that we gave it our best

shot, but Colby's role and effort was by far the more significant of the two of us. However Colby was capable of juggling multiple missions and tasks. He demonstrated no less determination in promoting ENTS and perfecting the Rucker Index as a valid ecological measure of site productivity. He wanted to take that index to higher levels of usefulness when illness sadly overtook him.

Throughout our association, Colby was thoroughly dedicated to the principles and mission of ENTS and he pursued them diligently. However, there was a period when Colby grew discontented with the ENTS discussion list (as opposed to ENTS itself). We had become enmeshed in forestry discussions that centered on bad timber practices in Massachusetts. The list quickly became saturated with back and forth communications on a host of problems being experienced by private foresters in the bay state. Lax enforcement of forestry regulations by the Massachusetts Bureau of Forestry, ineffective forester licensing procedures, personal vendettas by a couple of private foresters on the list, and a woeful lack of acknowledgement as to the sources of forestry problems from professional forestry associations kept emotions inflamed. The volatile issues just mentioned threatened to hijack the list and turn it into "The Massachusetts Forestry Bitching Association," as Ed Frank later described. Colby was sympathetic to the problems of the private foresters and engaged in some of the discussions, but become increasingly frustrated with the continuous barrage of

repetitive complaints from disgruntled parties. During that period, we had many off list discussions and it was through Colby's influence that I convinced participants to back off the acrimonious, non-relevant e-mails—at least non-relevant to the mission of ENTS. ENTS was just not the place for such discussions. Colby succeeded in getting his brother back on track. Colby played a critically important role in the shaping of ENTS as it began to emerge in its full power and he did not want to see the organization sidetracked.

As I think back to my dear friend, a profound feeling of sadness returns at thoughts of his passing. Yet, there is an equally persistent feeling of gratefulness at being privileged to have known him. In reflective moods, I often wonder about the nature of the past. Is the past simply a collection of leftover artifacts of those who have passed and of memory traces in those of us still present? Or is there a vibrant part of the past that feeds the present and helps to shape the future? Even more to the point, is there an active, personal side to the past? I would like to think that Colby is still with us. I would like to think that his spirit, in some form, is aware of what we are doing and is helping keep us on track in ENTS, helping to move us forward toward ever loftier goals. The nature of physical reality does not allow us to know for certain, but until someone can offer me proof to the contrary, I will continue to believe that Colby is still with us and will always be. Thank you, dear Colby for what you were and what you still are.

The beginnings of fall colors along Bayou Desiard in Monroe, Louisiana. Photo by Don C. Bragg.



INSTRUCTIONS FOR CONTRIBUTORS

SCOPE OF MATERIAL

The *Bulletin of the Eastern Native Tree Society* accepts solicited and unsolicited submissions of many different types, from quasi-technical field reports to poetry, from peer-reviewed scientific papers to digital photographs of trees and forests. This diverse set of offerings also necessitates that (1) contributors specifically identify what type of submission they are providing; (2) all submissions should follow the standards and guidelines for publication in the *Bulletin*; and (3) the submission must be new and original material or be accompanied by all appropriate permissions by the copyright holder. All authors also agree to bear the responsibility of securing any required permissions, and further certify that they have not engaged in any type of plagiarism or illegal activity regarding the material they are submitting.

SUBMITTING A MANUSCRIPT

As indicated earlier, manuscripts must either be new and original works, or be accompanied by specific written permission of the copyright holder. This includes any figures, tables, text, photographs, or other materials included within a given manuscript, even if most of the material is new and original.

Send all materials and related correspondence to:

Don C. Bragg
Editor-in-Chief, *Bulletin of the ENTS*
USDA Forest Service-SRS
P.O. Box 3516 UAM
Monticello, AR 71656

Depending on the nature of the submission, the material may be delegated to an associate editor for further consideration. The Editor-in-Chief reserves the right to accept or reject any material, regardless of the reason. Submission of material is no guarantee of publication.

All submissions must be made to the Editor-in-Chief in digital format. Manuscripts should be written in Word (*.doc), WordPerfect (*.wpd), rich-text format (*.rtf), or ASCII (*.txt) format.

Images can be submitted in any common format like *.jpg, *.bmp, *.tif, *.gif, or *.eps, but not PowerPoint (*.ppt). Images must be of sufficient resolution to be clear and not pixilated if somewhat reduced or enlarged. Make sure pictures are at least 300 dots per inch (dpi) resolution. Pictures can be color, grayscale, or black and white. Photographs or original line drawings must be accompanied by a credit line, and if copyrighted, must also be accompanied by a letter with express written permission to use the image. Likewise, graphs or tables duplicated from published materials must also have expressly written copyright holder permission.

PAPER CONTRIBUTIONS (ALL TYPES)

All manuscripts must follow editorial conventions and styling

when submitted. Given that the *Bulletin* is edited, assembled, and distributed by volunteers, the less work needed to get the final product delivered, the better the outcome. Therefore, papers egregiously differing from these formats may be returned for modification before they will be considered for publication.

Title Page

Each manuscript needs a separate title page with the title, author name(s), author affiliation(s), and corresponding author's postal address and e-mail address. Towards the bottom of the page, please include the type of submission (using the categories listed in the table of contents) and the date (including year).

Body of Manuscript

Use papers previously published in the *Bulletin of the Eastern Native Tree Society* as a guide to style formatting. The body of the manuscript will be on a new page. Do not use headers or footers for anything but the page number. Do not hyphenate text or use a multi-column format (this will be done in the final printing). Avoid using footnotes or endnotes in the text, and do not use text boxes. Rather, insert text-box material as a table.

All manuscript submissions should be double-spaced, left-justified, with one-inch margins, and with page and line numbers turned on. Page numbers should be centered on the bottom of each new page, and line numbers should be found in the left margin.

Paragraph Styles. Do not indent new paragraphs. Rather, insert a blank line and start the new paragraph. For feature articles (including peer-reviewed science papers), a brief abstract (100 to 200 words long) must be included at the top of the page. Section headings and subheadings can be used in any type of written submission, and do not have to follow any particular format, so long as they are relatively concise. The following example shows the standard design:

FIRST ORDER HEADING

Second Order Heading

Third Order Heading. The next sentence begins here, and any other levels should be folded into this format.

Science papers are an exception to this format, and must include sections entitled "Introduction," "Methods and Materials," "Results and Discussion," "Conclusions," "Literature Cited," and appendices (if needed) labeled alphabetically. See the ENTS website for a sample layout of a science paper.

Trip reports, descriptions of special big trees or forests, poetry, musings, or other non-technical materials can follow less rigid styling, but will be made by the production editor (if and when accepted for publication) to conform to conventions.

Table and figure formats. Tables can be difficult to insert into journals, so use either the table feature in your word processor, or use tab settings to align columns, but DO NOT use spaces. Each column should have a clear heading, and provide adequate spacing to clearly display information. Do not use extensive formatting within tables, as they will be modified to meet *Bulletin* standards and styles. All tables, figures, and appendices must be referenced in the text.

Numerical and measurement conventions. You can use either English (e.g., inches, feet, yards, acres, pounds) or metric units (e.g., centimeters, meters, kilometers, hectares, kilograms), so long as they are consistently applied throughout the paper. Dates should be provided in month day, year format (June 1, 2006). Abbreviations for units can and should be used under most circumstances.

For any report on sites, heights must be measured using the methodology developed by ENTS (typically the sine method). Tangent heights can be referenced, especially in terms of historical reports of big trees, but these cannot represent new information. Diameters or circumference should be measured at breast height (4.5 ft above the ground), unless some bole distortion (e.g., a burl, branch, fork, or buttress) interferes with measurement. If this is the case, conventional approaches should be used to ensure diameter is measured at a representative location.

Taxonomic conventions. Since common names are not necessarily universal, the use of scientific names is strongly encouraged, and may be required by the editor in some circumstances. For species with multiple common names, use the most specific and conventional reference. For instance, call *Acer saccharum* "sugar maple," not "hard maple" or "rock maple," unless a specific reason can be given (e.g., its use in historical context).

For science papers, scientific names MUST be provided at the first text reference, or a list of scientific names corresponding to the common names consistently used in the text can be provided in a table or appendix. For example, red pine (*Pinus resinosa*) is also known as Norway pine. Naming authorities can also be included, but are not required. Be consistent!

Abbreviations. Use standard abbreviations (with no periods) for units of measure throughout the manuscript. If there are questions about which abbreviation is most appropriate, the editor will determine the best one to use. Here are examples of standardized abbreviations:

inch = in	feet = ft
yard = yd	acre = ac
pound = lb	percent = %
centimeter = cm	meter = m
kilometer = km	hectare = ha
kilogram = kg	day = d

Commonly recognized federal agencies like the USDA (United States Department of Agriculture) can be abbreviated without definition, but spell out state names unless used in mailing

address form. Otherwise, spell out the noun first, then provide an abbreviation in parentheses. For example: The Levi Wilcoxon Demonstration Forest (LWDF) is an old-growth remnant in Ashley County, Arkansas.

Citation formats. Literature cited in the text must meet the following conventions: do not use footnotes or endnotes. When paraphrasing or referencing other works, use the standard name date protocol in parentheses. For example, if you cite this issue's Founder's Corner, it would be: "...and the ENTS founder welcomed new members (Leverett 2006)." If used specifically in a sentence, the style would be: "Leverett (2006) welcomed new members..." Finally, if there is a direct quotation, insert the page number into the citation: (Leverett 2006, p. 15) or Leverett (2006, p. 16-17). Longer quotations (those more than three lines long) should be set aside as a separate, double-indented paragraph. Papers by unknown authors should be cited as Anonymous (1950), unless attributable to a group (e.g., ENTS (2006)).

For citations with multiple authors, give both authors' names for two-author citations, and for citations with more than two, use "et al." after the first author's name. An example of a two-author citation would be "Kershner and Leverett (2004)," and an example of a three- (or more) author citation would be "Bragg et al. (2004)." Multiple citations of the same author and year should use letters to distinguish the exact citation: Leverett 2005a, Leverett 2005b, Leverett 2005c, Bragg et al. 2004a, Bragg et al. 2004b, etc.

Personal communication should be identified in the text, and dated as specifically as possible (not in the Literature Cited section). For example, "...the Great Smoky Mountains contain most of the tallest hardwoods in the United States (W. Blozan, personal communication, March 24, 2006)." Examples of personal communications can include statements directly quoted or paraphrased, e-mail content, or unpublished writings not generally available. Personal communications are not included in the Literature Cited section, but websites and unpublished but accessible manuscripts can be.

Literature Cited. The references used in your work must be included in a section titled "Literature Cited." All citations should be alphabetically organized by author and then sorted by date. The following examples illustrate the most common forms of citation expected in the *Bulletin*:

Journal:

- Anonymous. 1950. Crossett names giant pine to honor L.L. Morris. *Forest Echoes* 10(5):2-5.
- Bragg, D.C., M.G. Shelton, and B. Zeide. 2003. Impacts and management implications of ice storms on forests in the southern United States. *Forest Ecology and Management* 186:99-123.
- Bragg, D.C. 2004a. Composition, structure, and dynamics of a pine-hardwood old-growth remnant in southern Arkansas. *Journal of the Torrey Botanical Society* 131:320-336.

Proceedings:

Leverett, R. 1996. Definitions and history. Pages 3-17 in *Eastern old-growth forests: prospects for rediscovery and recovery*, M.B. Davis, editor. Island Press, Washington, DC.

Book:

Kershner, B. and R.T. Leverett. 2004. *The Sierra Club guide to the ancient forests of the Northeast*. University of California Press, Berkeley, CA. 276 p.

Website:

Blozan, W. 2002. Clingman's Dome, May 14, 2002. ENTS website http://www.uark.edu/misc/ents/fieldtrips/gsmnp/clingmans_dome.htm. Accessed June 13, 2006.

Use the hanging indent feature of your word processor (with a 0.5-in indent). Do not abbreviate any journal titles, book names, or publishers. Use standard abbreviations for states, countries, or federal agencies (e.g., USDA, USDI).

ACCEPTED SUBMISSIONS

Those who have had their submission accepted for publication with the *Bulletin of the Eastern Native Tree Society* will be mailed separate instructions to finalize the publication of their work. For those that have submitted papers, revisions must be addressed to the satisfaction of the editor. The editor reserves the right to accept or reject any paper for any reason deemed appropriate.

Accepted materials will also need to be accompanied by an author contract granting first serial publication rights to the *Bulletin of the Eastern Native Tree Society* and the Eastern Native Tree Society. In addition, if the submission contains copyrighted material, express written permission from the copyright holder must be provided to the editor before publication can proceed. Any delays in receiving these materials (especially the author contract) will delay publication. Failure to resubmit accepted materials with any and all appropriate accompanying permissions and/or forms in a timely fashion may result in the submission being rejected.



A quiet summer day on the Tomahawk River in Oneida County, Wisconsin. This stretch of river is filled with tall white pines and abundant bald eagles, mussel-covered shoals and occasional rapids. Photo by Don C. Bragg.