

OVERVIEW OF NATIONAL CHAMPION TREES

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@vtarborist



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WEBiNAR

ASCA Presents:

Champion Trees: Expert Panel Discussion

Brian French, Steve Nimz, & Eric Wiseman, Ph.D.

October 21, 2021

AGENDA FOR THIS OVERVIEW

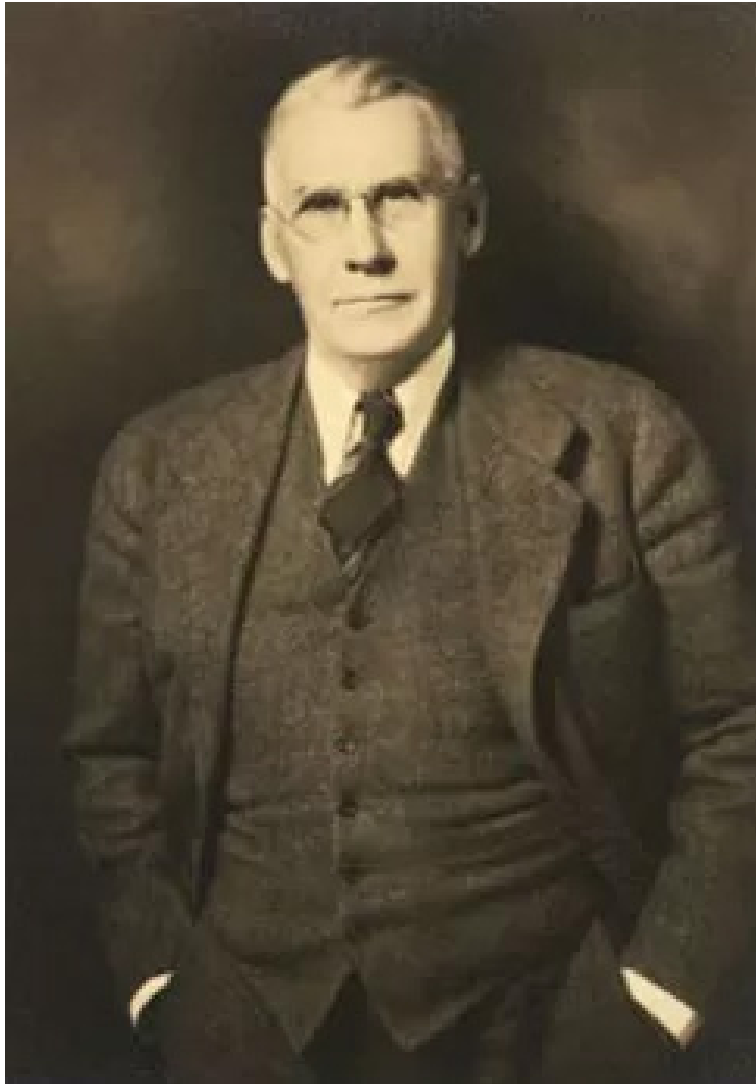
Champion Trees:
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October 21, 2021

- **Background of National Champion Trees**
- **The National Register of Champion Trees**
- **Measuring and Scoring of National Champion Trees**
- **My top-three favorite National Champions in Virginia**

BACKGROUND



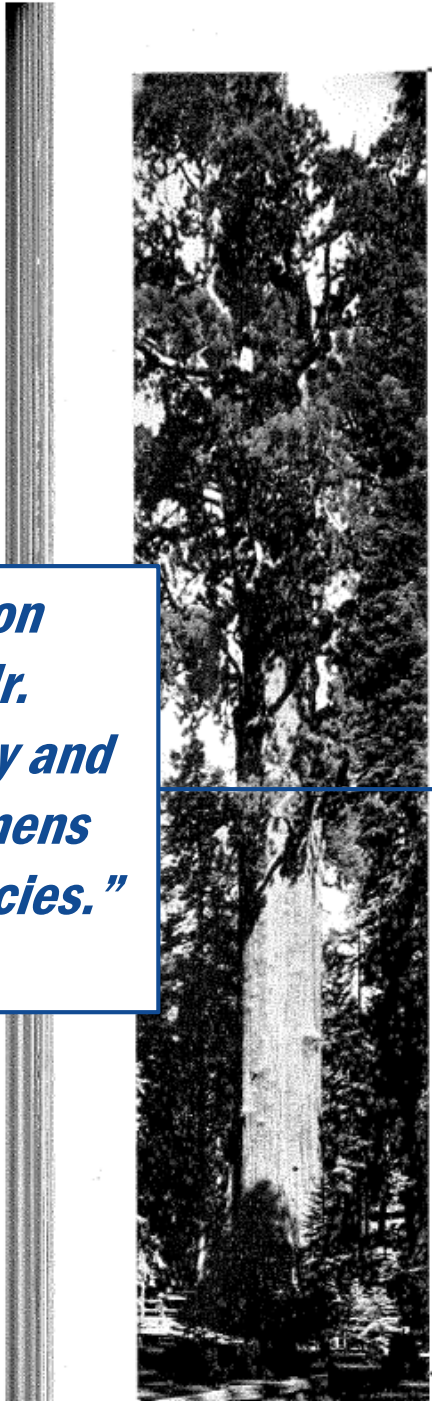
Frederick Wilson Besley

Source: www.stateforesters.org

- **Maryland's first state forester**
- **Graduate of Yale School of Forestry and mentored by Gifford Pinchot**
- **Helped create Maryland's Roadside Tree Law in 1914**
- **Helped create Maryland's Big Tree Program in 1925**
- **Created the measurement and scoring system used today nationally for crowning champion big trees**

BACKGROUND

“The American Forestry Association heartily endorses the appeal by Mr. Joseph L. Stearns for the discovery and preservation of the largest specimens of outstanding American tree species.”
~ September, 1940



WANTED!

The Location and Measurement of the Largest Specimens of the Following American Tree Species

Ash	Dogwood, flowering	Larch	Pine
Mountain White	Elm	Eastern Western	Digger Jack
Aspen, trembling	American Slippery	Locust	Jeffery Limber
Basswood	Fir	Black Honey	Loblolly
Beech, American	Alpine Balsam	Maple	Lodgepole
Birch	Douglas	Bigleaf	Longleaf
Black	Lowland white	Red	Northern white
Peper	Red	Silver	Pinon
Yellow	Silver	Sugar	Pitch
Buckeye	Western white		Pond
Butternut	Gum	Magnolia, laurel	Ponderosa
Catalpa	Black Red	Oak	Red Shortleaf
Cedar	Hackberry	Bur	Slash
Eastern red	Hemlock	California white	Sugar
Eastern white	Carolina	Chestnut	Virginia
Incense	Eastern	Eastern live	Western white
Port Orford	Mountain	Oregon white	White bark
Western red	Western	Pin	Sassafras
Cherry, black	Hickory	Post	Spruce
Chestnut, American	Bitternut	Scarlet	Black
Cottonwood	Pignut	Swamp white	Elm
Eastern	Shagbark	White	Engelmann
Western	Holly, American	Willow	Red
Cucumber	Horse Chestnut		Sitka
Cypress	Juniper	Osage orange	White
Arizona	Alligator	Pecan	Sycamore, American
Southern	Western	Persimmon	Tulip
			Walnut, black

The American Forestry Association heartily endorses the appeal by Mr. Joseph L. Stearns, on the opposite page, for the discovery and preservation of the largest specimens of outstanding American tree species. Such a conservation activity, it is believed, will have incalculable benefits, not only in stimulating greater tree appreciation, but in establishing a nation-wide laboratory for tree and forestry studies by future generations. Furthermore, these old monarchs, protected from fire, disease and the ax, will stand to the end of their natural lives as cherished landmarks in the saga of America.

The Association, therefore, gladly takes leadership in a national program to locate and preserve the largest specimens of the most important American trees. [To the hundred specified trees listed above others may be added.] Permanent records of these specimens will be compiled and maintained for this and future generations; these records will be made immediately available to the public through the pages of AMERICAN FORESTS. Furthermore, every effort will be made to gain the active cooperation of landowners, lumbermen, and professional foresters and other conservationists, as well as national, state and local conservation agencies.

But the success or failure of this undertaking will rest largely upon the active participation of tree lovers everywhere. Therefore, if you know of a very large tree make it your business to see that its full and accurate record is sent to The American Forestry Association: its identity as to species, its diameter or circumference four and a half feet above the ground, its height, its state of preservation, and, particularly, its location and ownership. If professional assistance for accurate identity and measurements is needed, solicit the aid of your state or local forester, or an experienced lumberman. Also, be sure to send the Association a photograph of the tree and nominate it as a candidate for "Biggest Tree" of its species.

In this way, and with your assistance, it is hoped to establish and preserve not only the largest specimens of our most important trees in the country as a whole, but also in each individual state. When the largest specimens of each species have been definitely determined, The American Forestry Association will issue appropriate certificates both to their discoverers and to their owners. Act now to save the largest specimens of America's trees. Send records and pictures to The American Forestry Association, 919 - 17th Street, N. W., Washington, D. C.

THE GENERAL SHERMAN TREE
Largest and oldest living thing. 36 feet 6 inches in diameter at the base. (Sequoia gigantea)

Nathaniel Park Service

LET'S FIND AND SAVE THE BIGGEST TREES

By JOSEPH L. STEARNS

ONE OF THE most tragic stories in the history of American forests is now in the making. It hasn't been written in its final form, but our children will live to see that day unless something is done. I refer to the gradual disappearance of our most magnificent remaining tree specimens. The giants I have in mind are not necessarily the big redwoods of the West Coast; nor are they the well known famous and historic trees. Such trees are in the main well protected. I refer to the giants scattered throughout our remaining virgin forest stands, most of which are now inaccessible to the public because they are in private ownership.

At this moment I can think of several unusually large oaks, gums, sycamores, and pines that should be given special protection. In one restricted location in southeast Georgia I came across a mill that is, to my knowledge, now cutting the last original growth red bay trees in the United States. When logging operations have been completed there will be no red bays in the country worthy of classification above shrubs. Shall we sit idly by while this is being done? I believe that a few of our biggest specimens of each tree species should be singled out, marked, plotted on timber maps, and preserved. All lumber company employees should be notified that such trees are not to be cut, damaged by felling adjacent trees, or scarred by careless axmen. Railings should be erected around them; the ground should be cleared of fire hazards for a reasonable distance in every direction, and, when possible, a plowed strip of ground should be maintained as a further fire protective measure. This done, many of our finest specimens could be preserved for their natural lives. Then future generations would be able to see matured specimens of each tree species. If things go on as they are now this will never be possible.

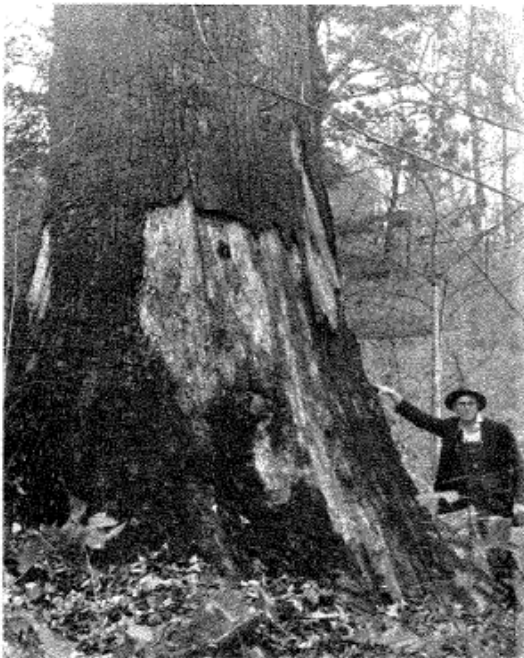
Let me relate the story of a grand old tulip, or yellow poplar tree that fought for its existence for hundreds of years and, finally, through the carelessness of man, crushed to the ground in a fiery blaze one night in 1934.

Back in 1792, when the first settlers made their way into western North Carolina, the mountains were covered with an endless jungle of massive hardwood trees. The principal occupations at first, of course, were clearing land and making homes. But soon the sawmills came—small, crude affairs in those early days. Transportation of logs was by oxen, and the strength of these beasts, contrary to the popular expression, "strong as an ox," was pitiful in comparison to a mod-

ern tractor. For this reason the largest trees were left standing. Equipment then could not handle the big logs. As time went on larger mills made their appearance. These operations brought in overhead skidders and donkey engines, and most of the hardwoods up to six feet in diameter were easy prey.

But up on the steep slopes of Craggy Mountain, fifteen miles northeast of Asheville, there was one lordly yellow poplar that towered above all the great trees around it. No sawmill in the South could have handled such a log without blasting it in quarters, for its trunk was more than twelve feet in diameter, broad high, and not a limb emerged from its straight, massive shaft for a hundred feet above the ground.

Lumbermen in the early days passed this tree by because it was too big to handle. Those in later years would no doubt have cut it, even though they would have found it necessary to (Continuing on page 416)



All that remains of the world's largest tulip, or yellow poplar. Located near Weaverville, North Carolina, it was killed by fire in 1934

BACKGROUND



REPORT ON AMERICAN CHAMPION TREES				
In September 1940, The American Forestry Association launched a campaign to locate the largest living specimens of American trees. After four years of diligent search on the part of cooperating individuals, the following "champions" were on record as of January 1, 1945. Common and botanical names listed conform to "Standardized Plant Names" issued by the American Joint Committee on Horticultural Nomenclature. Identification and measurements are by nominators. The challenge is to locate trees larger than those listed, if they exist, and also giants of species not listed. Send all reports to The American Forestry Association, 919 Seventeenth Street, N. W., Washington 6, D. C.				
Species	Circumference at 4 1/2 feet	Spread	Height	Location of Tree and Nominator
ALDER				
Red, or Oregon, <i>Alnus rubra</i>	15'7"	—	—	On Nehalem River, Clatsop County, Oregon. Oliver V. Matthews, Salem.
Sierra, or White, <i>Alnus rhombifolia</i>	9'8 1/2"	—	—	Salem, Oregon. Oliver V. Matthews, Salem.
Speckled, <i>Alnus incana</i>	1'4"	20'	31'	Dunes State Park, Indiana. Kendall Laughlin, Chicago.
ARBORVITAE				
Eastern, or Northern White Cedar, <i>Thuja occidentalis</i>	15'6"	50'	125'	Natural Bridge, Virginia. Fred C. Pederson (Deceased).
Giant, or Western Red Cedar, <i>Thuja plicata</i>	62'8"	—	100'	Olympic National Park, Washington. F. W. Mathias, Hoquiam.
ASH				
American Mountain, <i>Sorbus americana</i>	3'9"	—	—	Wassataquoik Lake, Maine. Miss Elisabeth G. Weeks, Providence, R. I.
Biltmore, <i>Fraxinus biltmoreana</i>	9'5"	55'	80'	Madisonville, Ohio. Miss Emilie Blome, Madisonville.
Black, <i>Fraxinus nigra</i>	17'4"	—	—	Sparkhill, New York. Dexter B. Dawes, Englewood, N. J.
Blue, <i>Fraxinus quadrangulata</i>	9'6"	85'	72'	Piqua, Ohio. John Pickin, Dayton.
Green, <i>Fraxinus pennsylvanica lanceolata</i>	10'6"	—	—	Baltimore, Maryland. F. W. Besley, Baltimore.
Oregon, <i>Fraxinus oregona</i>	18'	49'	62'	Near Burlington, Oregon. T. J. Carlson, Corvallis.
Red, <i>Fraxinus pennsylvanica</i>	8'9"	—	—	Riverside Woods, Cook County, Illinois. Kendall Laughlin, Chicago.
White, <i>Fraxinus americana</i>	19'9"	—	—	Near Glen Mills, Pennsylvania. H. Gleason Mattoon, Philadelphia.
ASPEN				
Bigtooth, or Largetooth, <i>Populus grandidentata</i>	2'11"	22'	59'	Dunes State Park, Indiana. Kendall Laughlin, Chicago.
Quaking, <i>Populus tremuloides</i>	10'2"	—	—	Manti National Forest, Utah. J. W. Humphries, Ephraim.
BALDCYPRESS				
Common, <i>Taxodium distichum</i>	42'	—	126'	Near Sandford, Florida. Devereux Butcher, Washington, D. C.
<i>us grandifolia</i>	15'10"	—	55'	Cannon, Delaware. William S. Taber, Dover.
<i>palifolia</i>	4'3"	31'	58'	Near Catonsville, Maryland. F. W. Besley, Baltimore.
<i>Betula papyrifera</i>	18'	—	—	East Northfield, Massachusetts. William P. Wharton, Groton.
<i>etula nigra</i>	9'7"	78'	77'	Near Easton, Maryland. F. W. Besley, Baltimore.
<i>Betula lenta</i>	11'	87'	80'	Near Port Deposit, Maryland. F. W. Besley, Baltimore.
<i>venosa, Betula lenta</i>	13'9"	63'6"	88'	Green Mountain National Forest, Vermont.
BOXELDER, <i>Acer negundo</i>	14'8"	90'	95'	Devereux Butcher, Washington, D. C.
BUCKEYE: Horsechestnut	12'9"	40'	35'	Near Spring Brook State Park, Ohio. O. E. Filer, Toledo.
California, <i>Aesculus californica</i>	8'1"	60'	90'	Olema, California. R. H. Menzies, San Francisco.
Ohio, <i>Aesculus glabra</i>	15'8"	—	—	
Yellow, or Sweet, <i>Aesculus octandra</i>				
BUCKTHORN				

Lillian M. Cromelin

- Associate editor of American Forests Magazine
- Created the initial program for registering big tree champions in 1940

THE NATIONAL REGISTER

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1940: American Big Trees

1961: The Social Register of Big Trees

1978: The National Register of Big Trees

2014: The National Register of Champion Trees



Forester Doug Cruikshank checks measurements that nominator John Woolcott made of a new champion golden chinquapin tree on a farm in Cottage Grove, Oregon

1980 Supplement to the NATIONAL REGISTER OF BIG TREES

Exactly two years ago, the old Social Register of Big Trees became the National Register. This reflected a serious effort at AFA to make an interesting list of "champion" trees into a comprehensive symbol of successful conservation.

The list has come a long way since 1940, when AMERICAN FORESTS first sent out a call for nominations. The Social Register was published in 1945 with 100 species; we now have more than seven times that number. The inauguration of the National Register marked a new effort toward generating more participation in big-tree programs on the state level. We contacted representatives of all 50 states, and we now have big-tree coordinators in all but nine states. (Those nine without coordinators are Arizona, California, Colorado, Kansas, Nevada, North Dakota, Washington, and West Virginia.)

The biggest recent change in the National Register was sparked by the long-awaited publication last year of Elbert L. Little's *Checklist of United States Trees (Native and Naturalized)*. With the new *Checklist* in hand, we have weeded the Register, pulling out those species that are not considered native or naturalized in the U.S. This process should make the National Register more representative of American trees.

We have sought out champions for those eligible species that are not yet represented in the Register. Included in this supplement, for the first time, is a list of those species. We hope people will go out and find the champions.

LIST I

These are the changes to the 1978 National Register. The entries are in three categories: new-species listings, corrections to the last Register, or new champions for a species previously recognized.

LIST II

These species—all recognized as native or naturalized in the United States—are those for which no champion

has been nominated. In order to have a representative for every recognized tree, we need your help in finding champions for these trees.

LIST III

These species are, for one reason or another, no longer considered eligible for inclusion in the National Register. Some species, such as the Boynton hawthorn (*Crataegus boyntonii*), are no longer considered separate, distinct species. The Boynton is now considered a variation of the Biltmore hawthorn (*Crataegus biltmoreana*). The former champion Boynton and all its challengers will be listed under the Biltmore hawthorn. The largest tree, of course, will be the champion.

Some trees, such as the Bender oak (*Quercus benderi*), are simply no longer considered species; their champions have not been listed under another species.

Other trees, such as the flamboyant tree (*Delonix regia*) were accepted originally in the Register because they were included in Mary Franklin Barrett's *Common Exotic Trees of South Florida*. We are no longer using that book to determine the eligibility of exotic species.

In his most recent *Checklist*, Dr. Little does not consider some species naturalized in the U.S. But some species may in fact be naturalized in specific areas of the country. We are willing to recognize those trees in the Register if an authority can be cited stating that the species is naturalized in the area from which the tree is being nominated.

AFA's Big Trees office will send you a free brochure that tells how to measure and nominate a potential champion. For a complete list of the National Register, send \$1.40 (this includes postage) to AFA. You may also want a copy of E. L. Little's *Checklist of United States Trees*. It's available for \$10 from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Request stock number 001-000-03846-0.

Dorothy Behlen

Reprinted from AMERICAN FORESTS, April, 1980, Magazine of The American Forestry Association,
1319 18th Street N.W., Washington, D.C. 20036

AMERICAN BIG TREES

These are the largest of their species reported up to March 1 in The American Forestry Association's campaign to locate and preserve the giant specimens of America. The challenge to all tree lovers is to locate and report trees larger than those listed. Reports on giants of species not listed are also desired. Send all information to The American Forestry Association, 919 17th St., N. W., Washington, D. C.

Species	Spread	Height	Location of Tree and Nominator
10'2"	---	---	Nanti National Forest, Utah. J. W. Humphries, Supervisor.
16'	---	---	Albert Morrill Property, Albemarle County, Virginia.
3'1"	---	---	G. M. Dillard, Scottville.
15'5"	---	---	Fountain Park, Piqua, Ohio. John Pickin, Dayton.
---	---	---	Hockessin, Delaware. William S. Taber, Dover.
15'10"	---	---	Cannon, Delaware. William S. Taber, Dover.
15'	---	---	Convent of the Visitation, Washington, D. C.
17'5"	---	---	Near Coldwell Corners, Delaware. William S. Taber, Dover.
62'8"	---	100'	Near Lake Quinault, Olympic National Park, Washington. F. W. Mathias, Hoquiam.
15'8"	75'	60'	Worton, Maryland. F. W. Besley, Baltimore.
8'	40'	---	Old Portage Trail, Akron, Ohio. Fred Smoyer, Akron.
29'8"	70'	55'	Near Clyde Cover Ranch, Thermopolis, Wyoming.
42'	---	126'	O. F. Ludtke, Thermopolis.
---	---	---	Near Sanford, Florida. Devereux Butcher, Washington, D. C.
5'8"	---	---	L. F. Ventres Property, Woodville, Mississippi.
---	---	---	J. R. Hamilton, Woodville.
28'	97'	142'	The Wethersfield Elm, Middletown, Connecticut.
7'2"	---	90'	Dr. Nelson W. Barker Property, Rochester, Minnesota. Dr. Nelson W. Barker.
14'6"	---	105'	Near Madison, Alabama. Thomas Z. Atkeson, Jr., Washington, D. C.
38'	---	---	Near Elbe, Washington. Charles Lutkins, Elbe.
17'2"	---	114'	Priest River Experimental Forest, Idaho. Elers Koch, Missoula, Montana.
11'2"	71'	77'	College Park, Maryland. F. W. Besley, Baltimore.
14'7"	71'	101'	Near Easton, Maryland. F. W. Besley, Baltimore.
12'4"	68'	72'	Near Vinton, Maryland. F. W. Besley, Baltimore.
16'9"	---	---	Kaniku National Forest, Idaho. Elers Koch, Missoula, Montana.
7'10"	---	---	Wicomico County, Maryland. Harry Erickson, Haddonfield, New Jersey.
10'10"	61'	55'	Near Collington, Maryland. F. W. Besley, Baltimore.
40'11"	---	80'	Stanislaus National Forest, California. J. R. Hall, Sonoma.
21'6"	---	35'	Logan Canyon, Utah. R. P. McLaughlin, Logan.
11'1"	71'	76'	Near Hickory, Maryland. F. W. Besley, Baltimore.
23'	---	---	Lolo National Forest, Montana. Elers Koch, Missoula.
13'5"	---	---	Broadkill Neck, Delaware. William S. Taber, Dover.
12'11"	67'	73'	Fell Property, Baltimore, Maryland. F. W. Besley, Baltimore.
19'2"	70'	70'	Trinity National Forest, California. A. G. Brenners, Weaverville.
11'10"	---	---	H. H. Carter Property, Hampton, South Carolina.
7'11"	36'	92'	Cleary M. Hothcock, Badin, North Carolina.
---	---	---	S. C. Mason Property, Baltimore, Maryland. F. W. Besley, Baltimore.

AMERICAN FORESTS

THE NATIONAL REGISTER

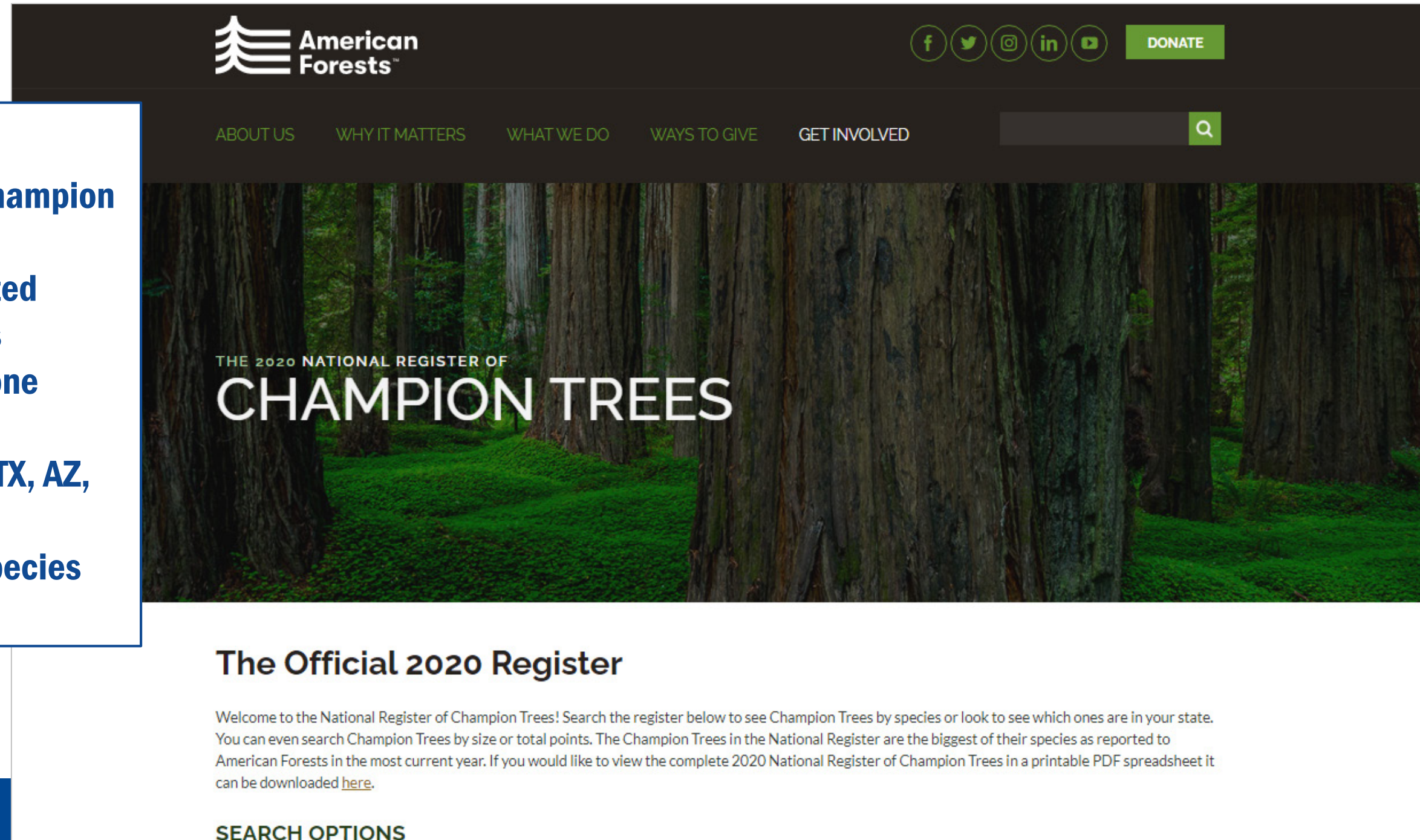
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2020 Register

- 761 champion and co-champion trees
- 543 native and naturalized species and sub-species
- 42 states have at least one champion tree
- Top-5 states are VA, FL, TX, AZ, and CA
- Currently 188 eligible species are without a champion



The screenshot shows the American Forests website. At the top, the American Forests logo is on the left, and social media icons (Facebook, Twitter, Instagram, LinkedIn, YouTube) and a green 'DONATE' button are on the right. Below the header is a navigation bar with links: ABOUT US, WHY IT MATTERS, WHAT WE DO, WAYS TO GIVE, and GET INVOLVED. A search bar is on the right of the navigation bar. The main content area features a large image of a forest with the text 'THE 2020 NATIONAL REGISTER OF CHAMPION TREES' overlaid. Below this image, the heading 'The Official 2020 Register' is followed by a paragraph: 'Welcome to the National Register of Champion Trees! Search the register below to see Champion Trees by species or look to see which ones are in your state. You can even search Champion Trees by size or total points. The Champion Trees in the National Register are the biggest of their species as reported to American Forests in the most current year. If you would like to view the complete 2020 National Register of Champion Trees in a printable PDF spreadsheet it can be downloaded [here](#).' Below the paragraph is the heading 'SEARCH OPTIONS'.

2020 Register

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The Official 2020 Register

Welcome to the National Register of Champion Trees! Search the register below to see Champion Trees by species or look to see which ones are in your state. You can even search Champion Trees by size or total points. The Champion Trees in the National Register are the biggest of their species as reported to American Forests in the most current year. If you would like to view the complete 2020 National Register of Champion Trees in a printable PDF spreadsheet it can be downloaded [here](#).

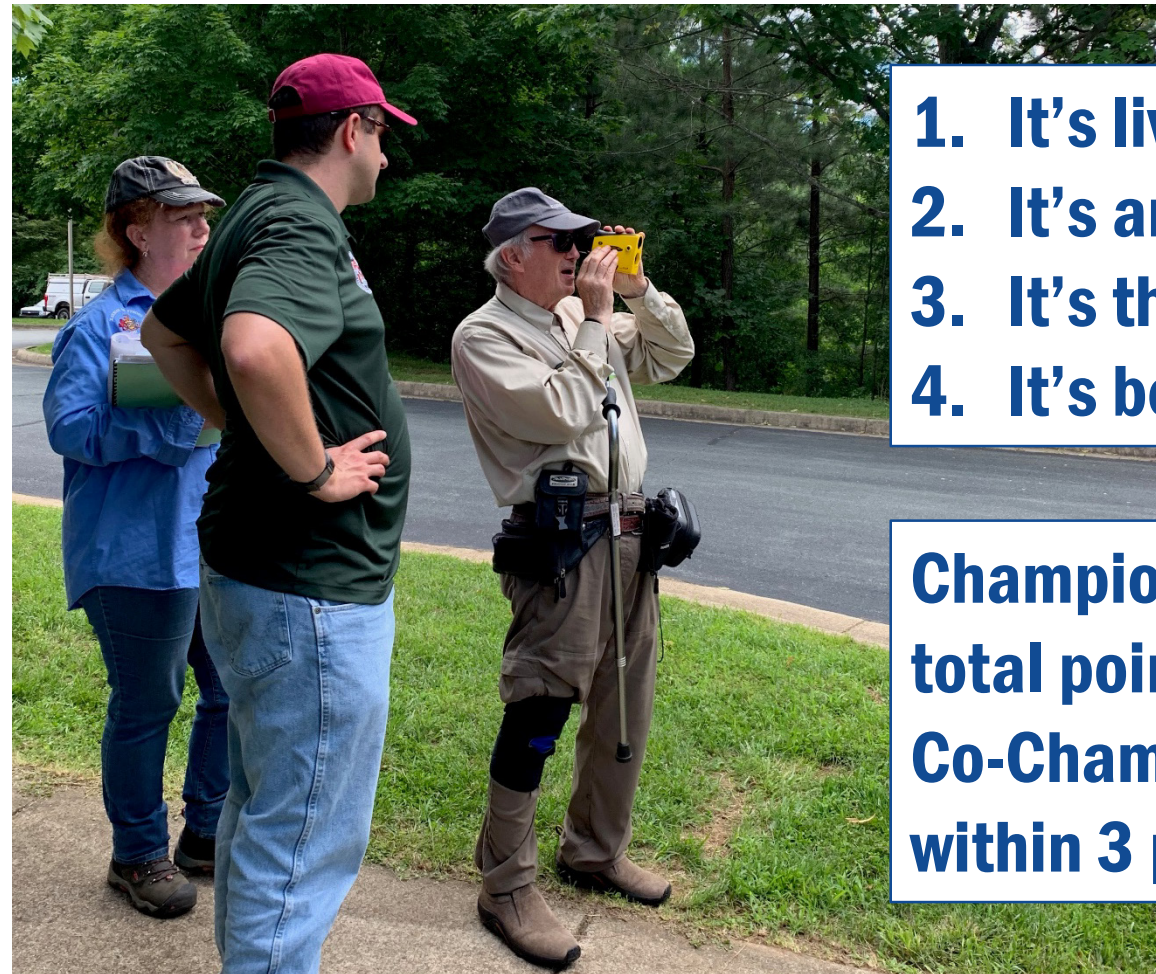
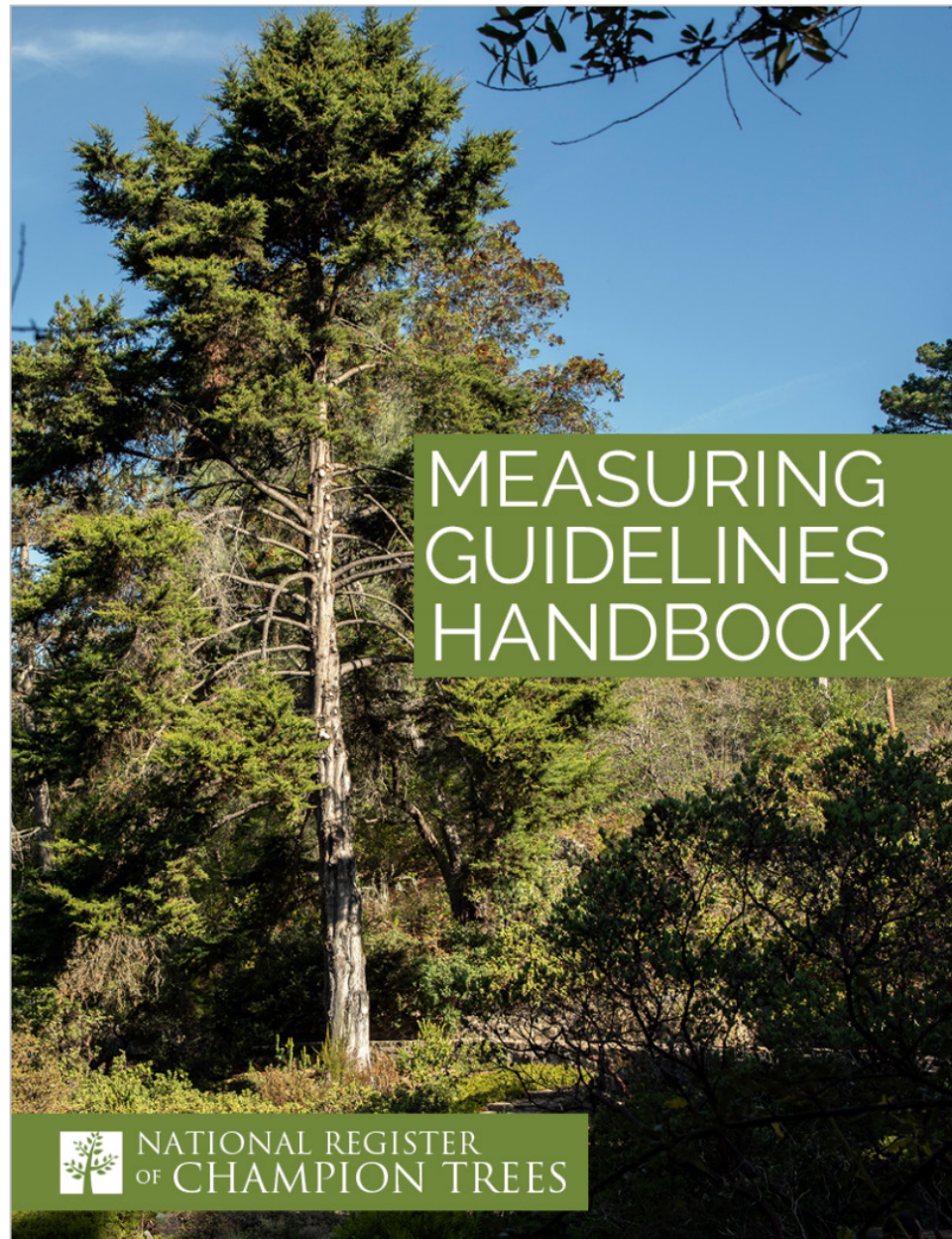
SEARCH OPTIONS

MEASURING & SCORING

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1. It's living
2. It's an eligible species
3. It's the largest of its species
4. It's been verified by an expert

Champions: one tree with the most total points

Co-Champions: two trees that are within 3 points or 3% of each other

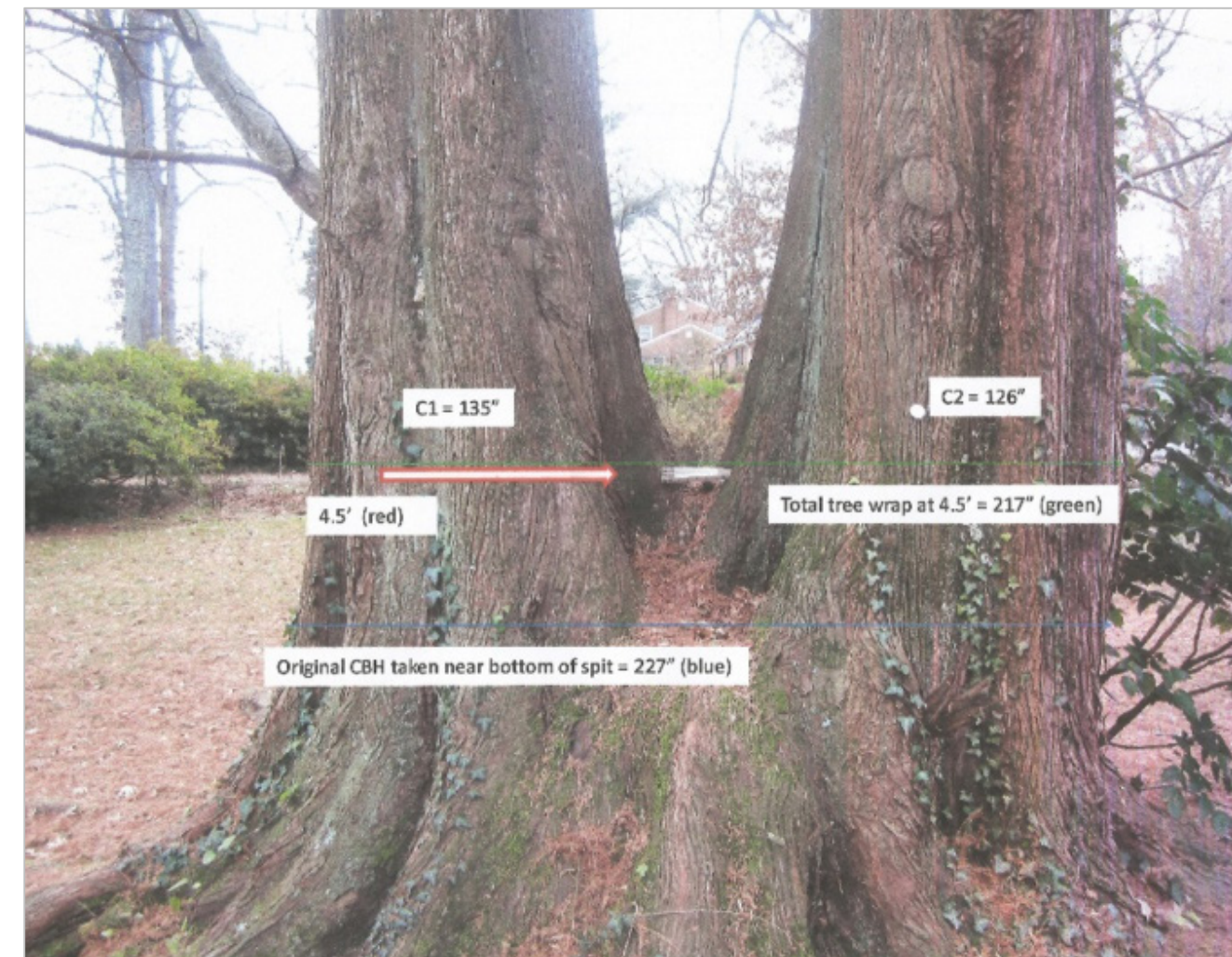
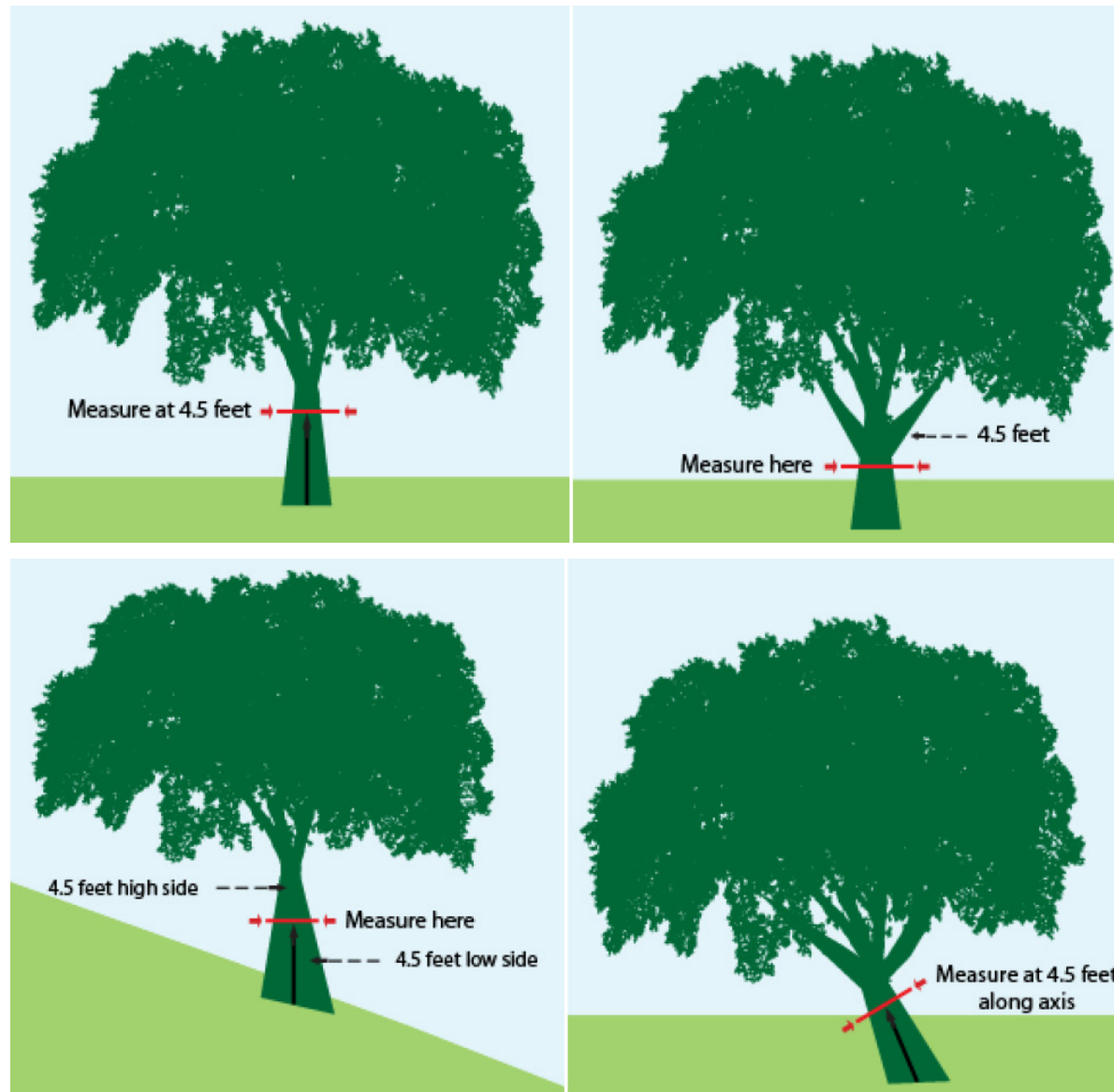
MEASURING & SCORING

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TRUNK CIRCUMFERENCE



Composite functional circumference measurement on multi-trunk form when it is atypical for the species

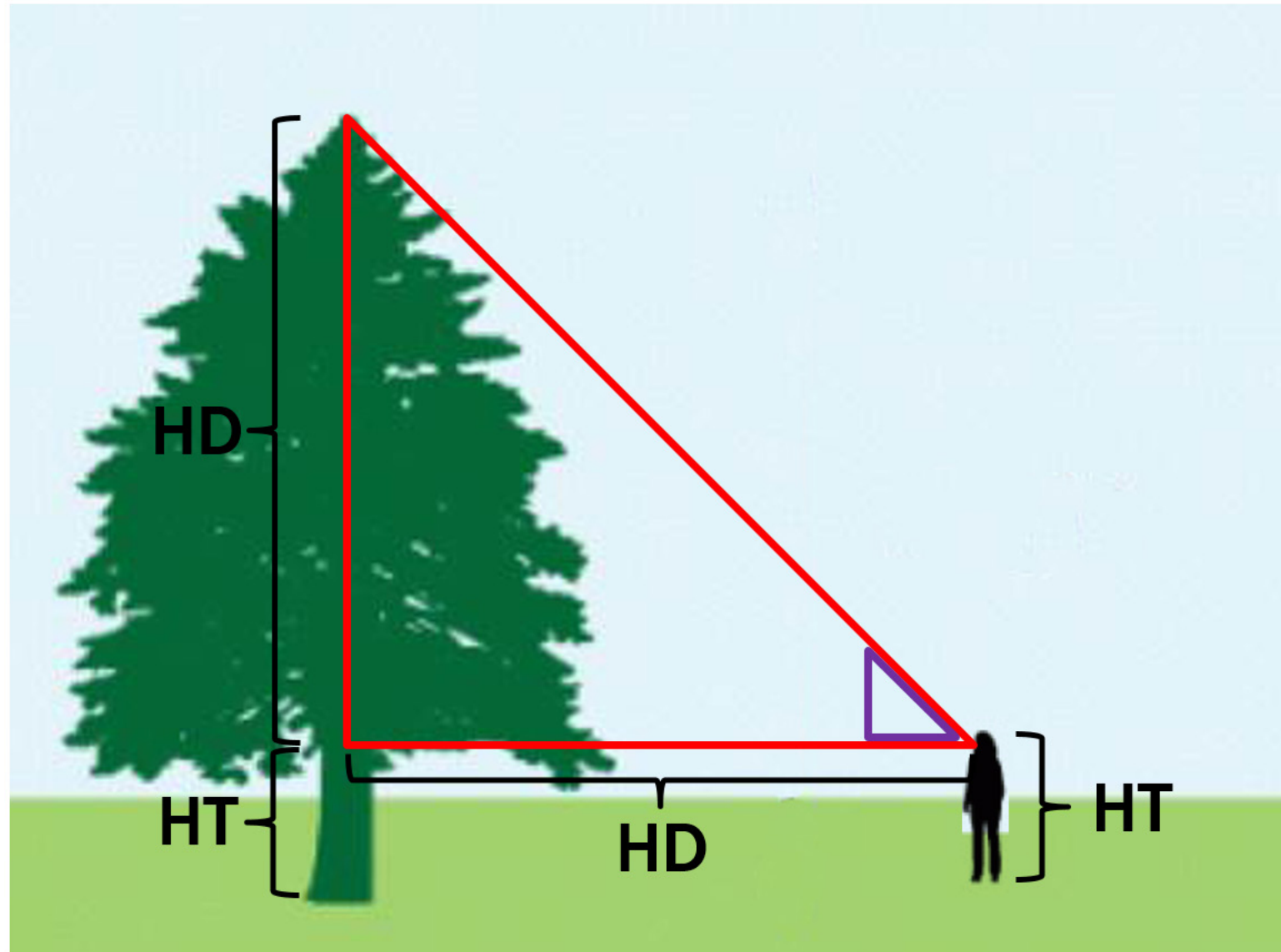
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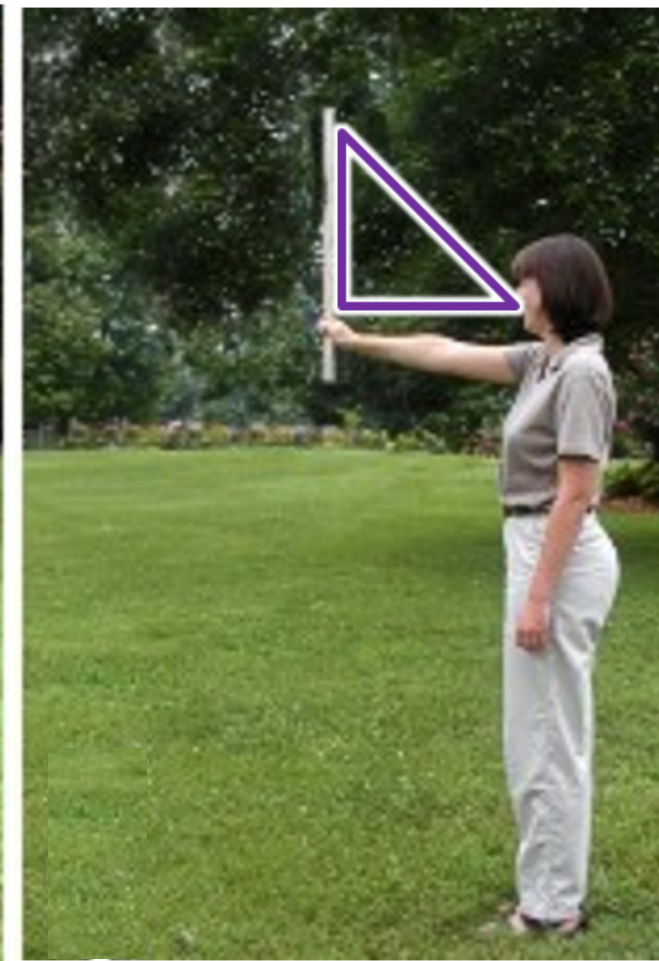
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TREE HEIGHT



The tree height equals your horizontal distance (HD) from the tree plus your height (HT)



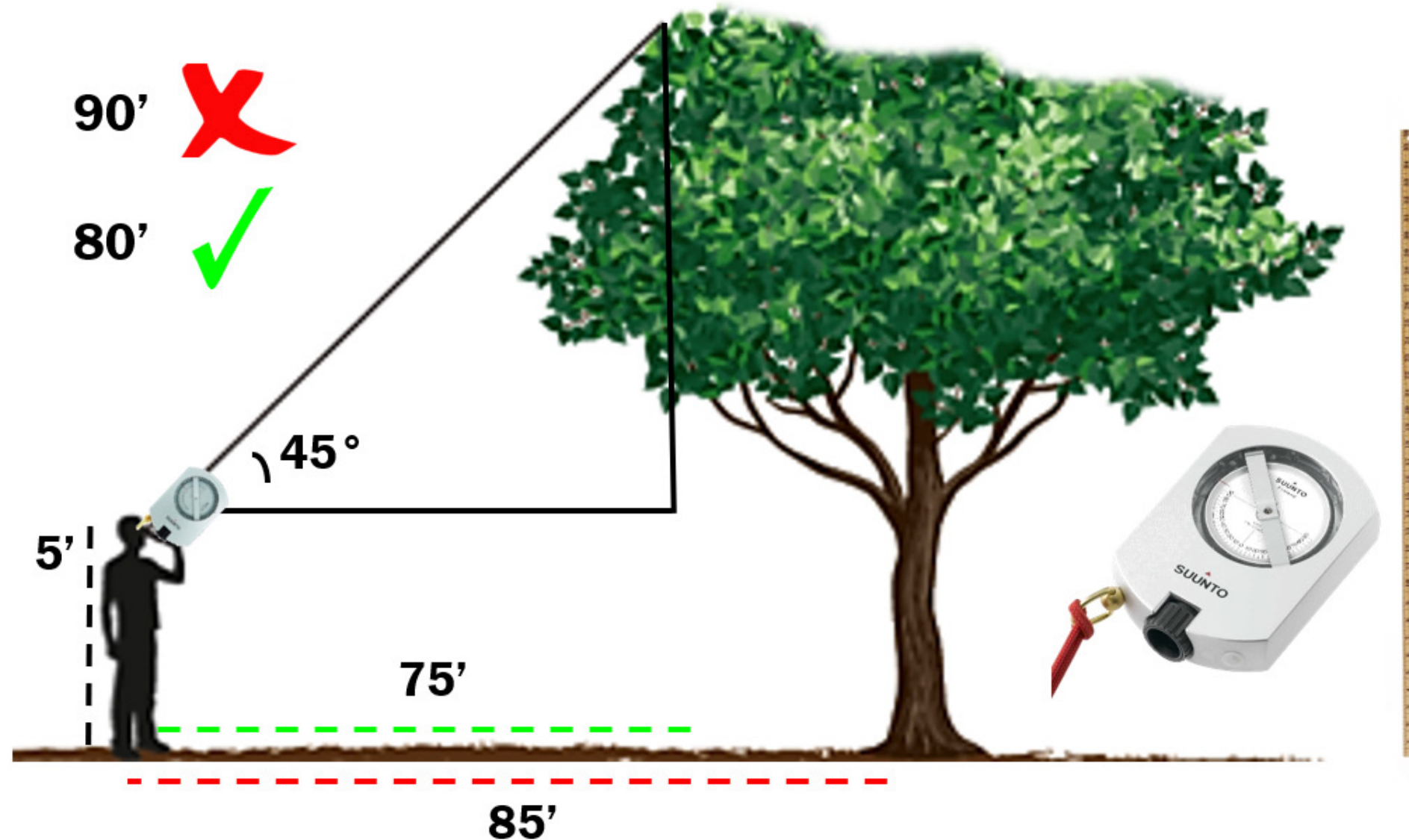
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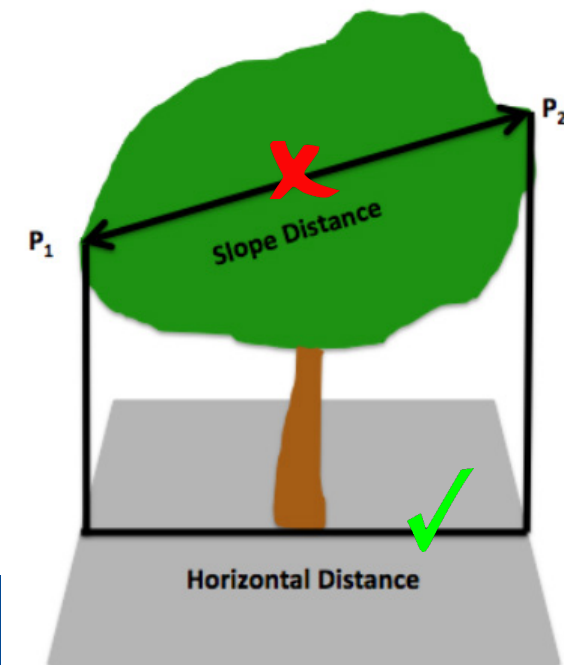
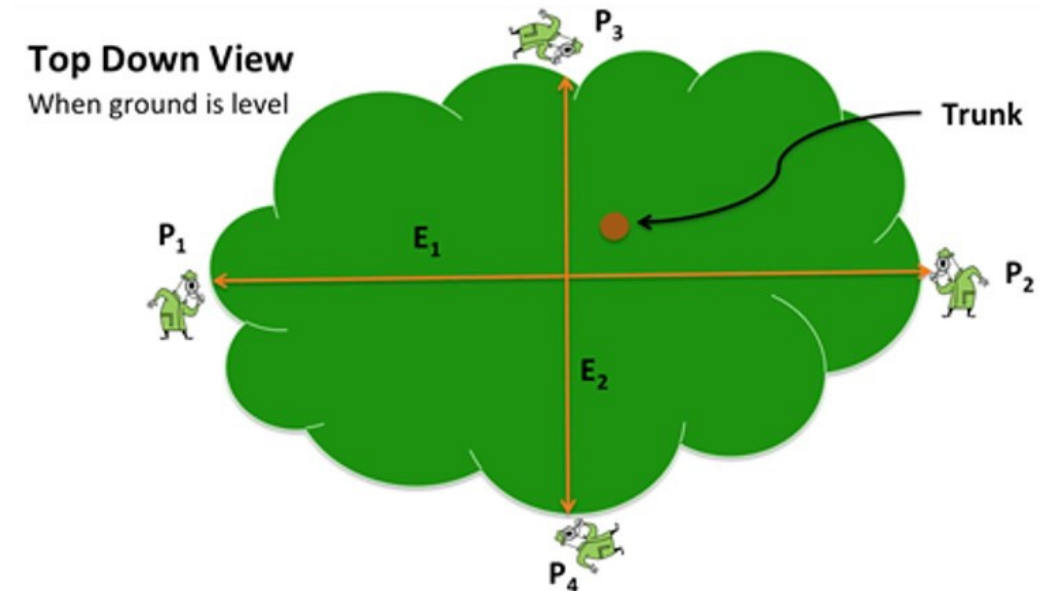
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TREE HEIGHT



MEASURING & SCORING

AVERAGE CROWN SPREAD



MEASURING & SCORING

SCORE CALCULATION

- Is it an eligible tree? Eligible species, Eligible trunk form
- Measure trunk circumference at 4.5' above ground line*: 150(inches)
- Measure tree height from ground line to highest branch: 100(feet)
- Measure average crown spread (1st max. ⊥ 2nd max.): (90', 70') 80(feet)

Circumference	(1 point per inch)	150 points
+ Height	(1 point per foot)	100 points
+ Crown spread	(1/4 point per foot)	20 points

Big Tree Score Total	270 points
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TOP-3 FAVORITE CHAMPS IN VA

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Osage-orange (*Maclura pomifera*)

Co-champ

Charlotte County

65' height

93' crown spread

328" trunk girth

416 points

1970

Mabel O. Bellwood

John McCormick

TOP-3 FAVORITE CHAMPS IN VA

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American elm (*Ulmus americana*)

Co-champ

City of Chesapeake

110' height

116' crown spread

252" trunk girth

391 points

1986?

Richard Salzer

TOP-3 FAVORITE CHAMPS IN VA

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Cherrybark oak (*Quercus pagoda*)

Champ

City of Portsmouth

114' height

138' crown spread

331" trunk girth

480 points

1987

Byron Carmean
Gary Williamson

OVERVIEW OF NATIONAL CHAMPION TREES

P. Eric Wiseman, Ph.D.

**Associate Professor of Urban Forestry, Virginia Tech
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ASCA Presents:

Champion Trees: Expert Panel Discussion

Brian French, Steve Nimz, & Eric Wiseman, Ph.D.

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