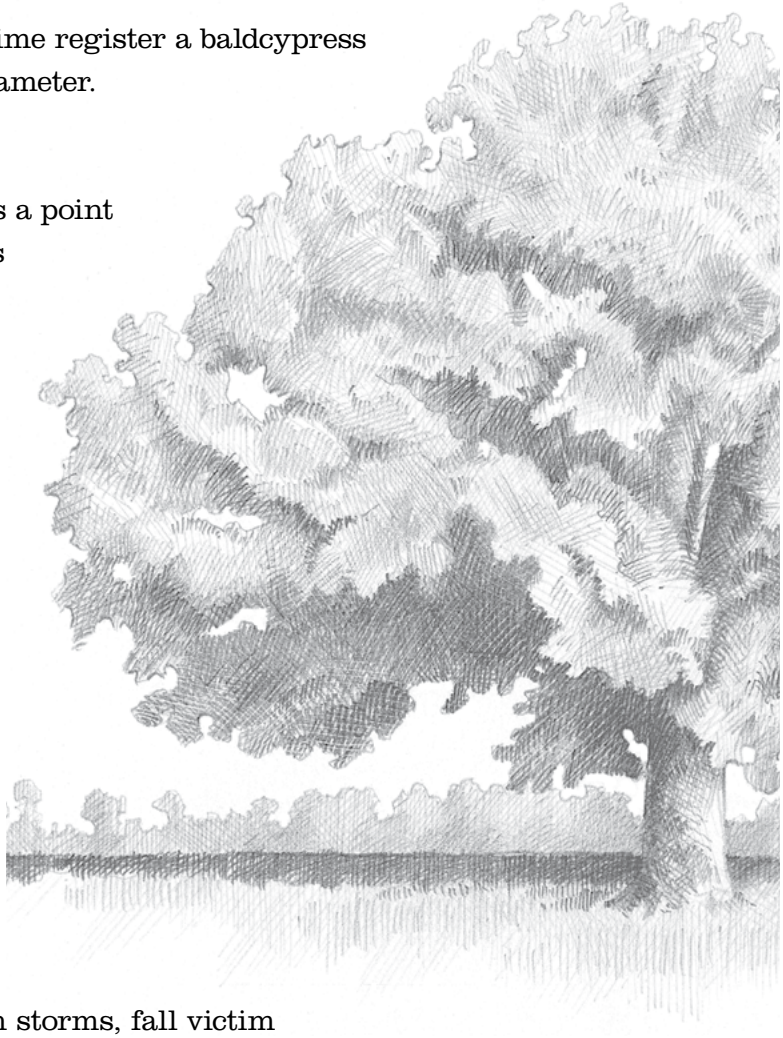
MISSOURI
State Champion Trees

MISSOURI DEPARTMENT OF CONSERVATION

B I G T R E E S

There is something about a big tree that commands interest, respect and a certain amount of awe. Trees are the largest and oldest living organisms. Giant sequoias attain a height of 300 feet and a base diameter of 30 feet.

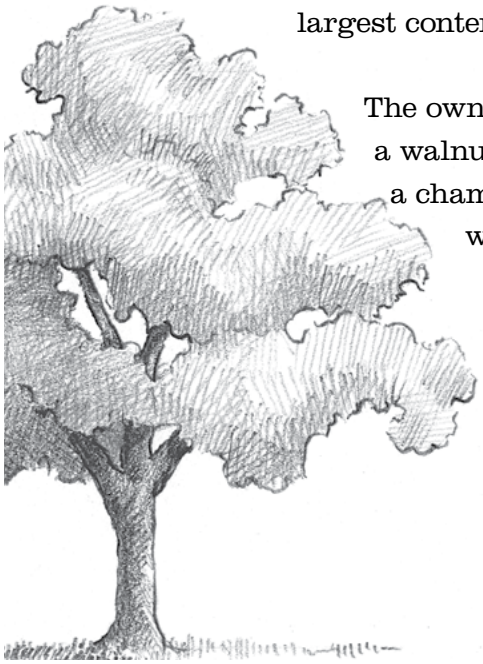
Missouri has no giant sequoias, but we did at one time register a baldcypress that was 39 feet in circumference, or 12.5 feet in diameter.



How big is big? American Forests and the Missouri Department of Conservation use a formula to assess a point value for big trees. Points are determined by a tree's height, crown spread and trunk size. The formula adds the circumference in inches (measured at a point 4.5 feet above the ground) to the height in feet to one-fourth of the average crown spread.

Based on this formula, one of the largest known living trees in Missouri is a baldcypress with a point total of 466. One of the trees with the largest circumference is an eastern cottonwood at 28 feet 4 inches. One of the tallest trees on record a shumard oak with a height of 150 feet.

Everyone is invited to join the search for Missouri's champion trees. There are many unreported giants just waiting to be discovered. All trees that are nominated and are within 10 points of the champion are filed as contenders. Frequently, champion trees blow over in storms, fall victim to disease or old age, or are simply cut down. When a mishap occurs, the largest contender of that species on file becomes the new champion.



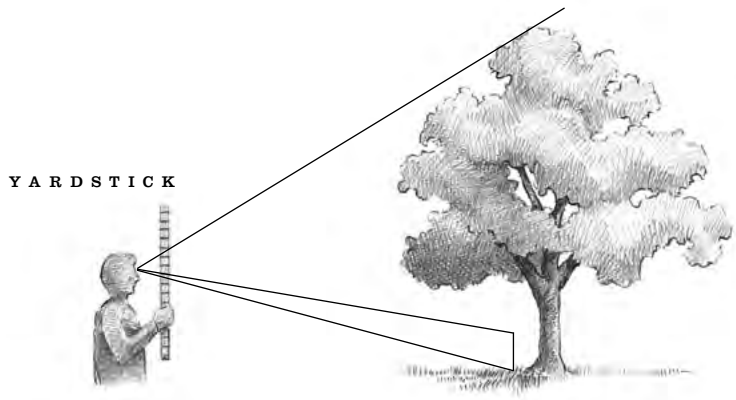
The owner and nominator of each champion will receive a certificate mounted on a walnut plaque and all the bragging rights associated with finding or owning a champion tree. If two or more trees are within four points of each other, they will be co-champions.

For the current list of champion trees, go to: http://short.mdc.mo.gov/Zw7

Measuring for the Champion Tree Program

Measuring Height

Height is the distance between the base and the topmost branch of the tree. A simple method of measuring tree height is done in the following manner: Make a target which is a known height (5 feet works well when measuring tall trees). You also will need a yardstick, into which you have cut a fine notch at each inch mark.

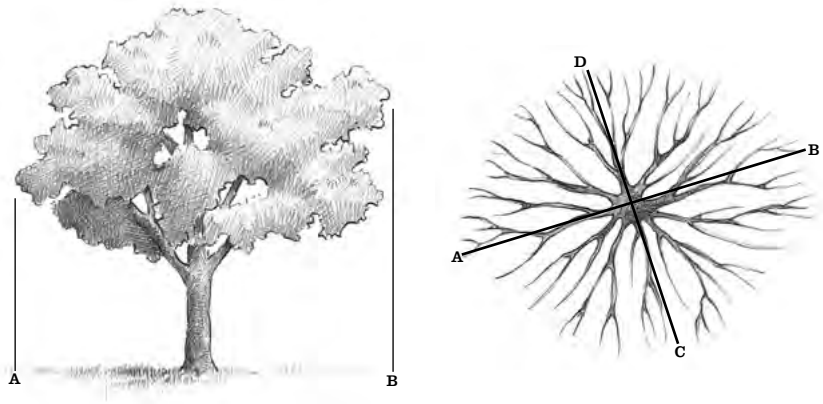


Place the target against the tree, making sure that it will be visible as you walk away from it to measure. Be sure the target is vertical or your reading will not be true. Holding the yardstick vertically, back up from the tree to the point where the 5-foot target fills exactly 1 inch on the yardstick.

Now, without moving the yardstick, sight from the base of the tree to the top of the tree. Note the number of inches on the yardstick filled by the tree. Each inch is equal to 5 feet. If the tree occupied 18 inches on the ruler, then 18 x 5 feet = 90 feet, the height of the tree. Be sure to take measurements from several points around the tree and use an average of measurements for the height.

Measuring Crown Spread

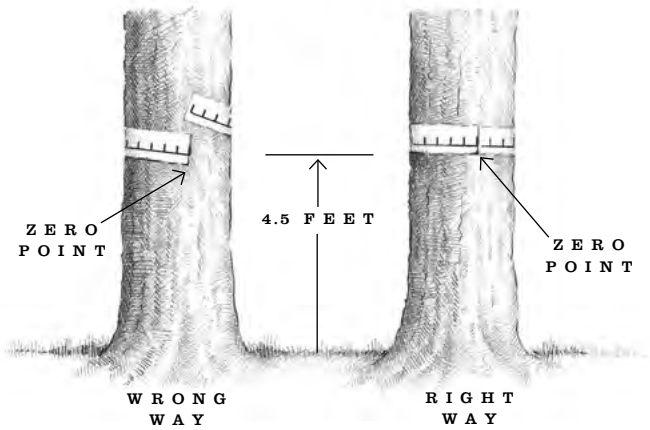
Crown Spread can be measured by setting a stake directly under the outside edge of the crown farthest from the trunk (A) and another directly opposite it at the outer edge of the crown (B) on a line passing through the center of the tree. Next, set stakes marking the shortest diameter of the crown passing through the center of the tree (C and D). Measure both diameters to the nearest foot with a tape measure. Add the two measurements together and divide the sum by two to obtain the average crown spread.



Measuring Circumference

Circumference is measured at 4.5 feet above the ground. If a growth or branch is located at this point, measure below it where the circumference is least. If the tree forks below 4.5 feet or looks like two trees grown together, consult the instructions on the following pages.

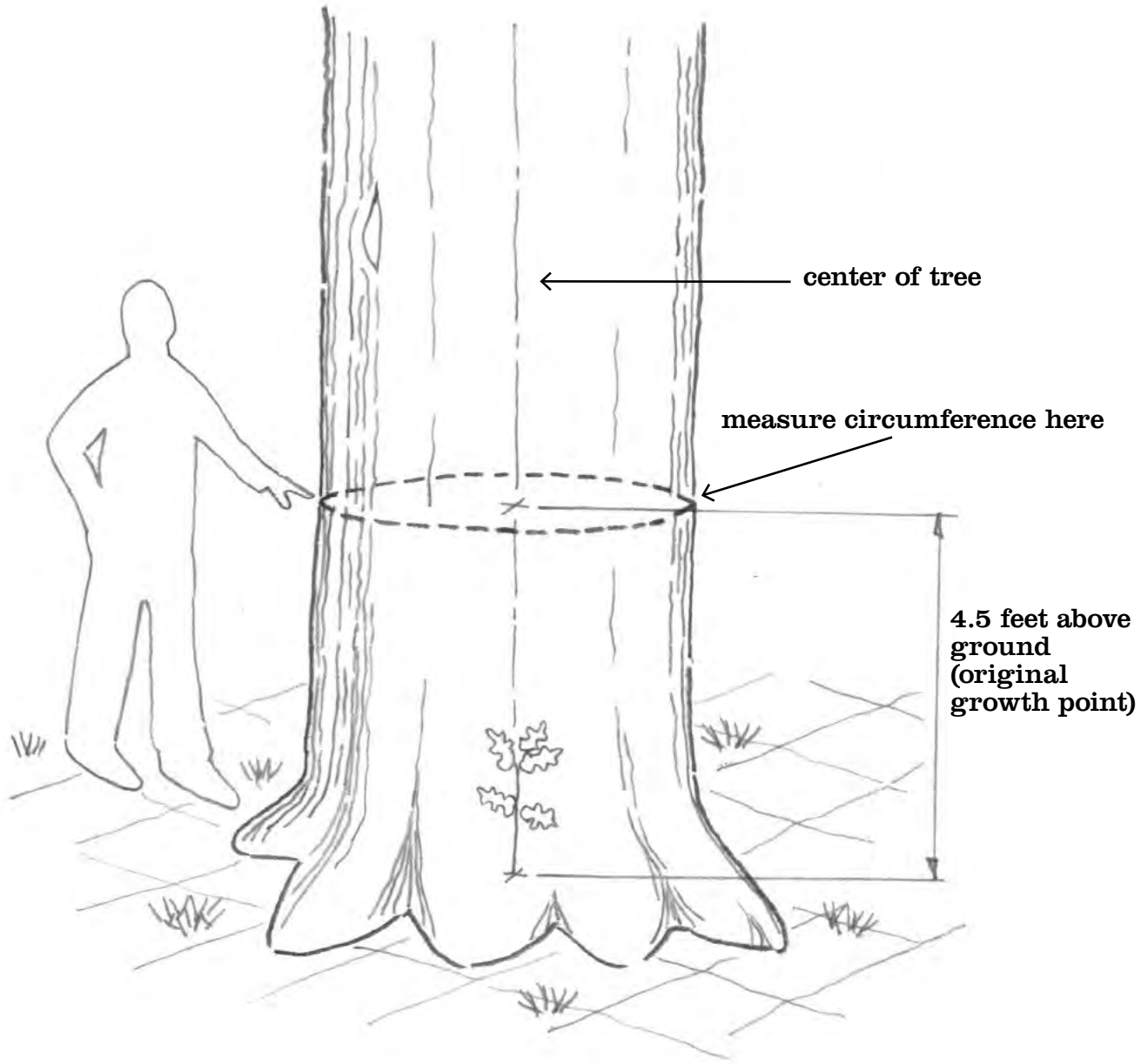
To measure the circumference, locate a point at 4.5 feet above the ground on the trunk and place the zero end of the tape there. Wrap the tape around the trunk tightly, without sagging, so that it exactly meets the zero end of the tape. The circumference is read in feet and inches.



Tips for Accurate Circumference Measurement – Single Stemmed Trees

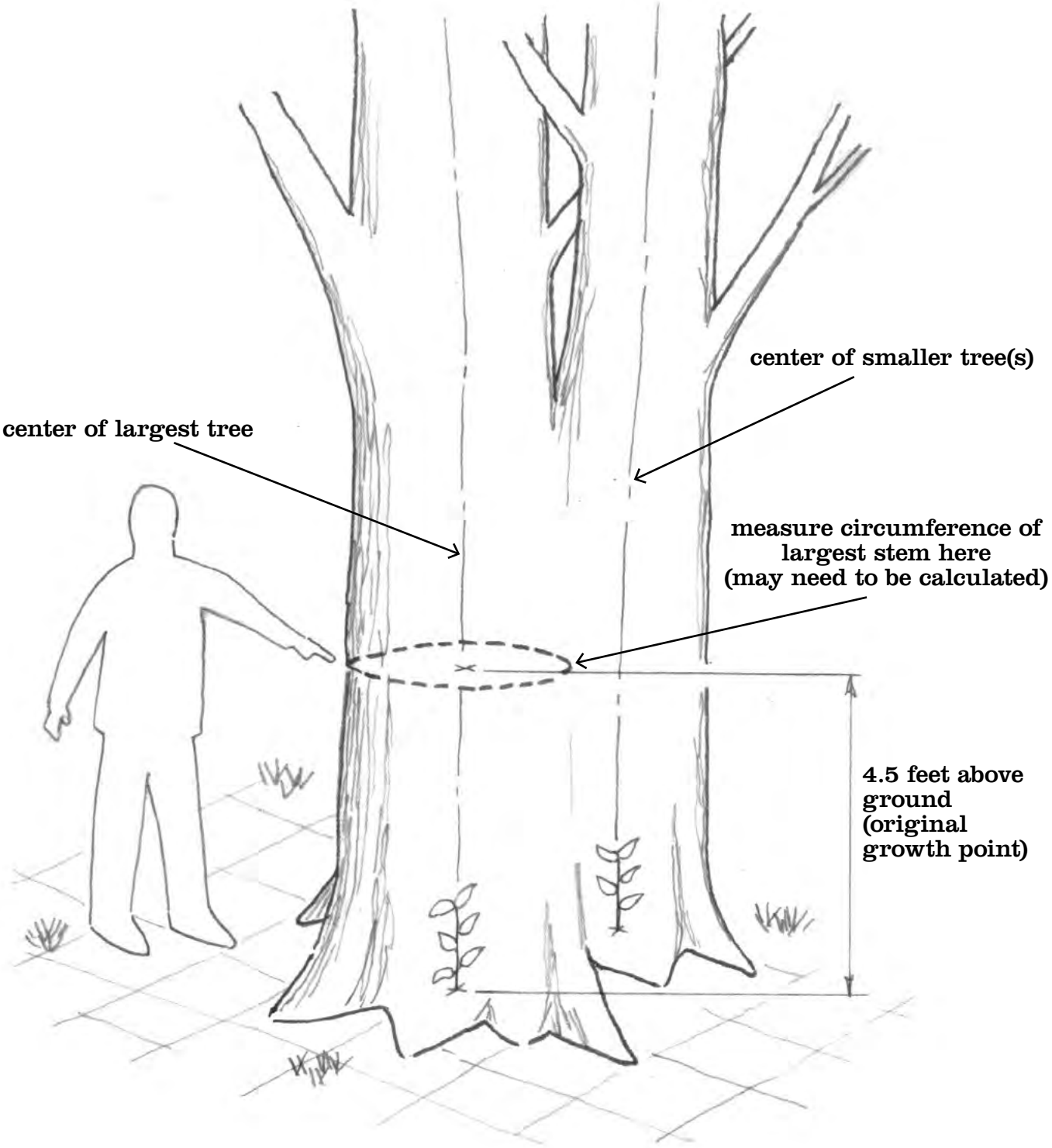
Single stemmed trees clearly have one solid trunk, or stem, which can easily be measured at 4.5 feet above the ground. If the tree is growing on a hill or slope, stand at mid-slope and measure the tree from there.

To get the most accurate measurement, wrap the tape around the trunk tightly, without sagging, so that it exactly meets the zero end of the tape. The circumference is read in feet and inches.



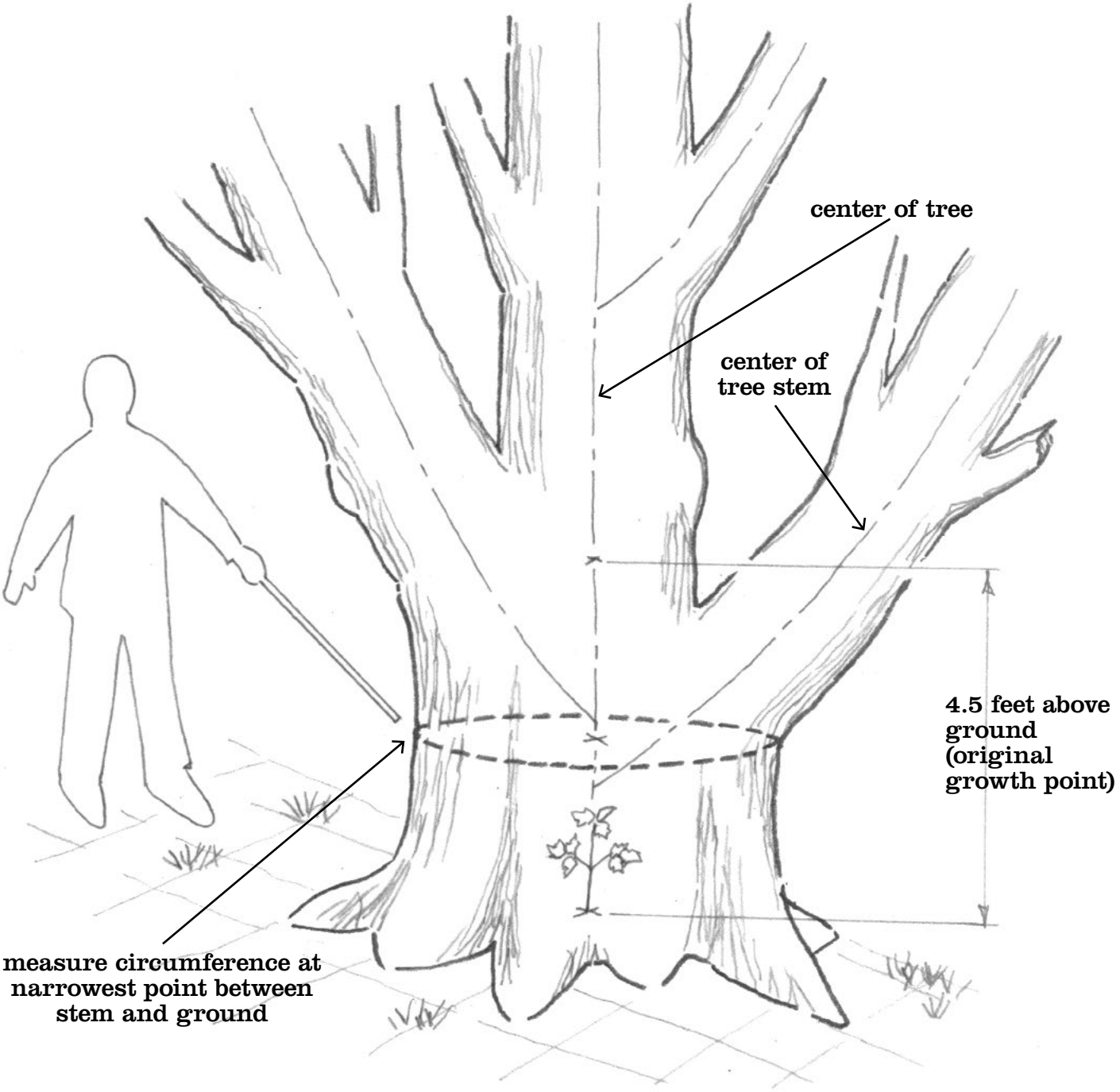
Tips for Accurate Circumference Measurement – Two Trees Grown Together

Two trees grown together can be considered for the champion tree program, but the circumference measurement must follow specific guidelines set forth by the national program. To determine if your big tree is actually two trees grown together, picture a line running down the center of each trunk into the ground. If the lines from each trunk meet before they hit the ground, you have a "multi-stemmed" tree (check out the instructions on the next page). If the lines never meet, you have two trees grown together. Only measure the circumference, height and crown spread of the largest stem. You may need to do some calculations to get an accurate number.



Tips for Accurate Circumference Measurement – Multi-stemmed Trees

Multi-stemmed trees appear to branch out fairly low to the ground, and it may not be possible to get an accurate circumference measurement at 4.5 feet above the ground. First, confirm that your tree is a multi-stemmed tree and not just multiple trees grown together. Picture a line running down the center of each tree stem into the ground. If the lines from each stem meet before they hit the ground, you have a "multi-stemmed" tree. If the lines never meet, you have two or more trees grown together. Measure the circumference at the narrowest point below where the tree branches fork. If the tree forks below 4.5 feet, measure at the narrowest point.



Nomination Form – Missouri Champion Tree Program

Common Name of Tree _____

Scientific Name (*if known*) _____

Nominated By _____ Date _____

Address _____

City _____ Zip _____

Nominator's Phone _____ Nominator's Email _____

Location of tree (*Use GPS coordinates if possible; if location is hard to describe, furnish map on separate sheet*) _____

_____

_____

County _____

Landowner's Name _____

Address _____ City _____ Zip _____

Landowner's Phone _____ Landowner's Email _____

Has the landowner given permission for his tree to be selected as a champion tree? Yes _____ No _____

Tree Measurements:

Circumference: _____ Feet _____ Inches

Total height: _____ Feet

Crown Spread: _____ Feet

Date Measured _____ Measured by _____

Description of Physical Condition _____

_____

_____

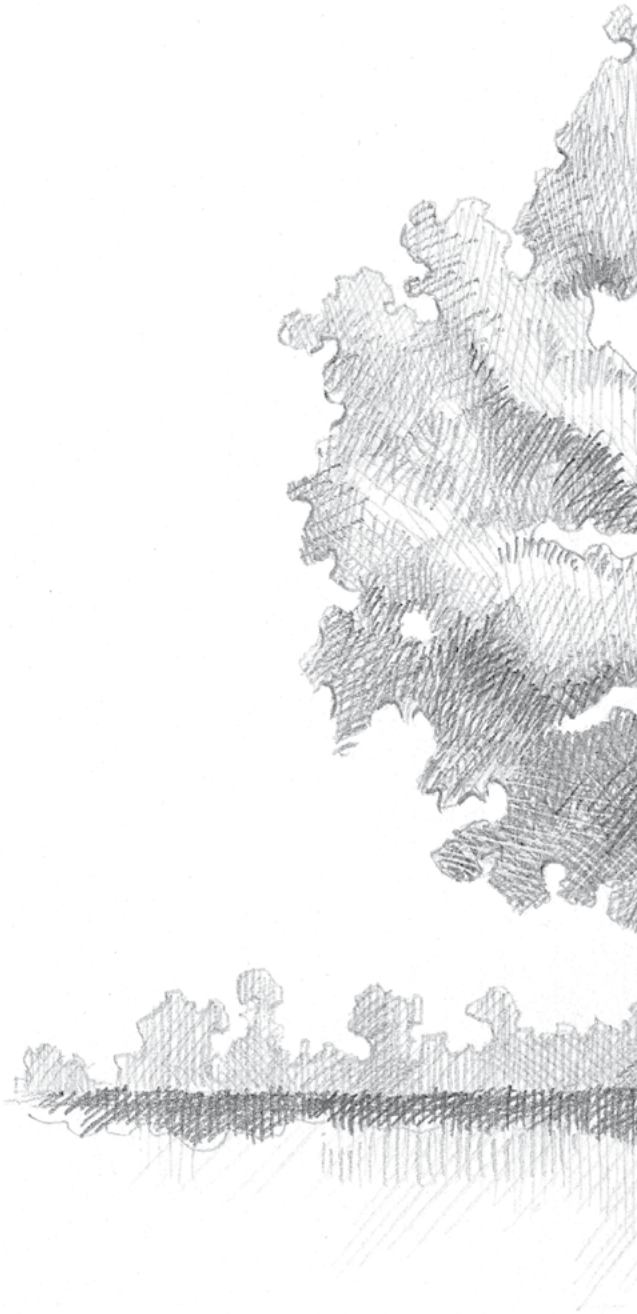
Historical or interesting information about the tree _____

_____

Please include photos of the tree with this nomination form. Photos from several angles, close-up shots of the leaves and bark, wide angle showing the entire tree (or as much as possible), and shots of the tree trunk are extremely helpful.

Send nomination form and photos by email to championtrees@mdc.mo.gov or mail hard copies to:

Champion Tree Coordinator
Forestry Division
Missouri Dept. of Conservation
PO Box 180
Jefferson City, MO 65102



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Equal opportunity to participate in and benefit from programs of the Missouri Department of Conservation is available to all individuals without regard to their race, color, national origin, sex, age or disability. Questions should be directed to the Department of Conservation, P.O. Box 180, Jefferson City, MO 65102, (573) 751-4115 (voice) or 800-735-2966 (TTY), or to the U.S. Fish and Wildlife Service Division of Federal Assistance, 4401 N. Fairfax Drive, Mail Stop: MBSP-4020, Arlington, VA 22203.