

Florida Champion Tree Measuring Procedures

(Revised: 5/11/2018)

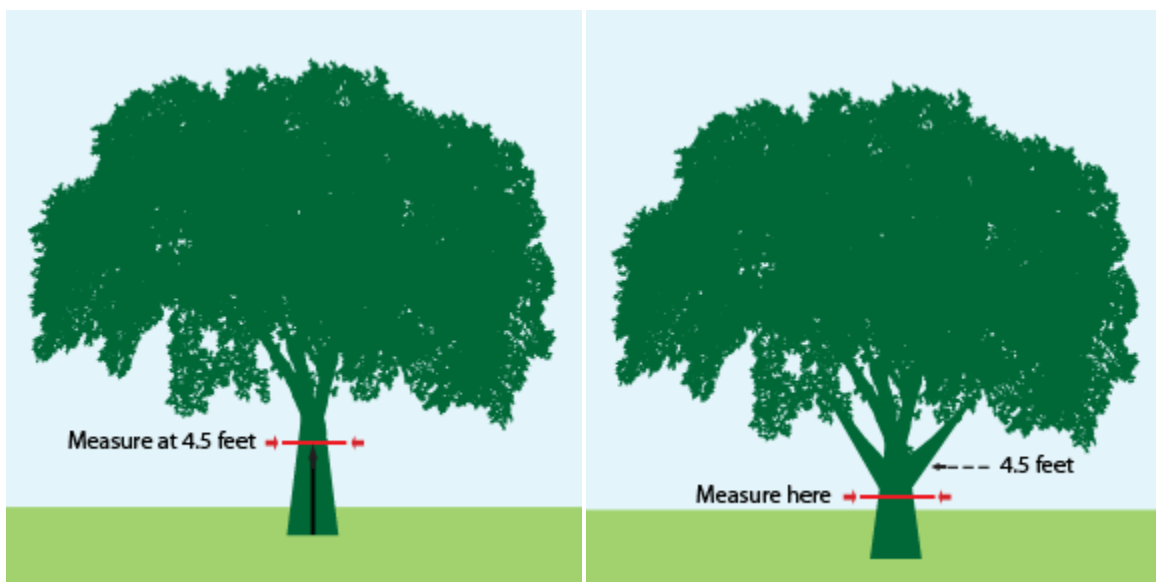
To nominate a tree, you need three measurements: Trunk Circumference (inches), Height (feet), and Average Crown Spread (feet). Trees of the same species are compared using the following calculation:

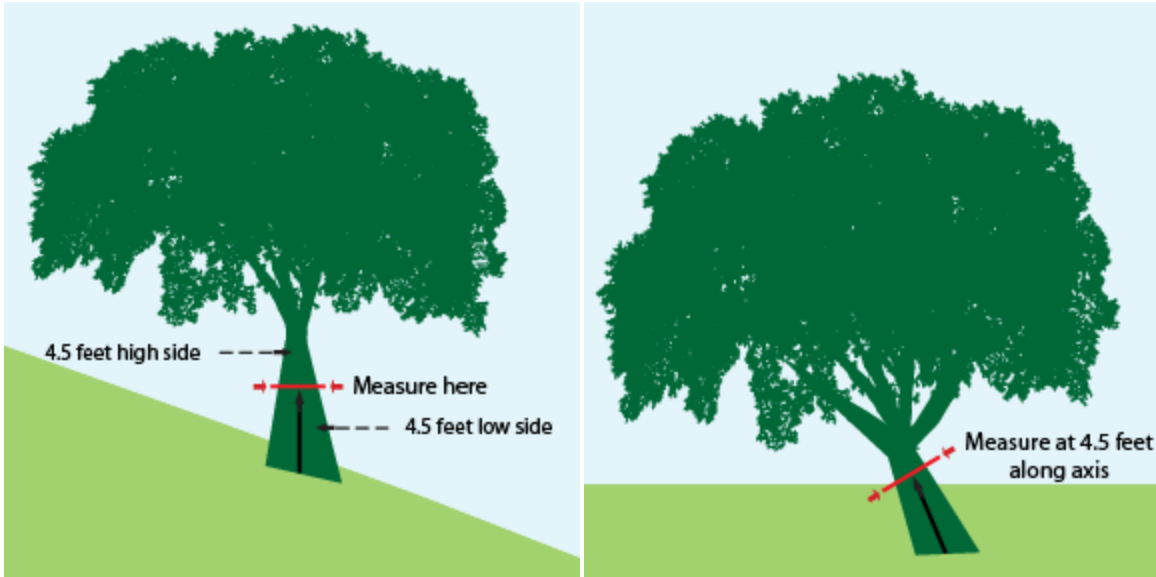
Trunk Circumference (inches) + Height (feet) + $\frac{1}{4}$ Average Crown Spread (feet) = Total Points.

A tree must be re-measured at least every 10 years to maintain its champion status.

Trunk Circumference

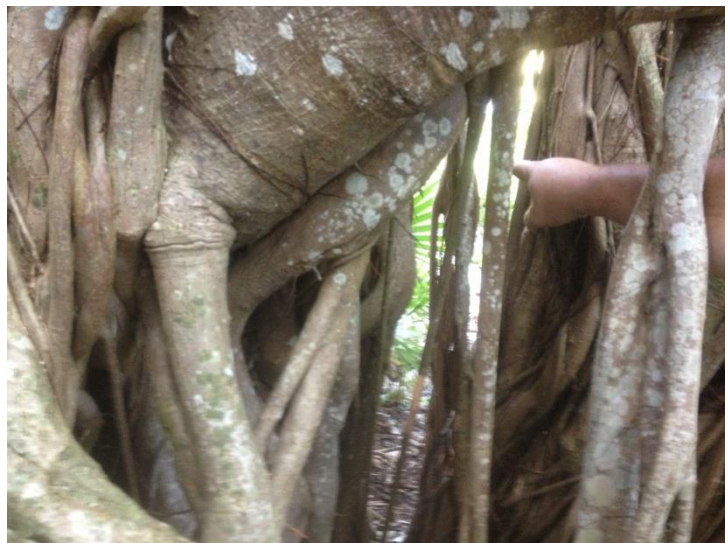
- Measure the distance around the trunk of the tree, in inches, at 4 ½ feet above ground level. This point is often used to measure the diameter at breast height (dbh), but in this case we will be measuring the circumference.
- If the tree forks at or below 4 ½ feet, record the smallest trunk circumference below the lowest fork. Record the height at which the measurement was taken. Trees should be considered separate if the circumference measurement below the lowest fork places the measurement on the ground.
- If the tree is on a slope, measure 4 ½ feet up the trunk on the high and low sides of the slope. The dbh is the average between both points. If the tree is on a steep slope, take the measurement at 4 ½ feet above the midpoint of the trunk.
- If the tree is leaning, measure the circumference at 4 ½ feet along the axis of the trunk. Make sure the measurement is taken at a right (90 degree) angle to the trunk.





Exception to Trunk Circumference Measurement

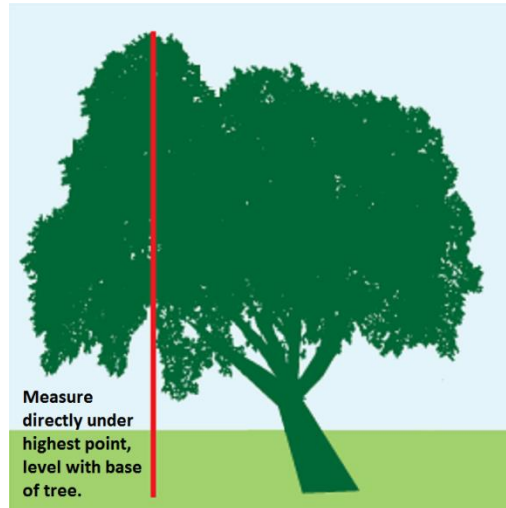
Certain *Ficus* spp., typically only found in south Florida, have many aerial roots that help support the weight of the tree. As they grow against each other over time, these roots can obscure the trunk, making it very difficult to determine where the original trunk ends and the roots begin. For these species only, the measurement shall always be taken at 4.5 feet above mean ground level. The tape shall be passed through any gap occurring at that height to obtain the minimum circumference measurement at breast height. The images below illustrate this procedure:



The drawing represents a cross-section of the stem and roots of a *Ficus* spp. The photo to the right shows the actual point of measurement on the current National Champion Shortleaf Fig.

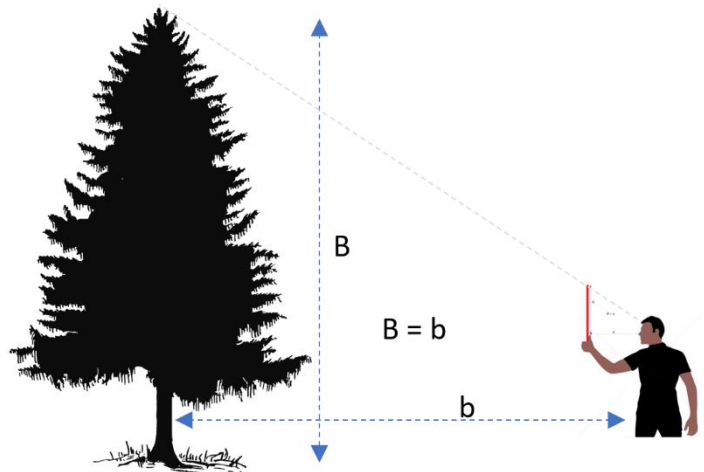
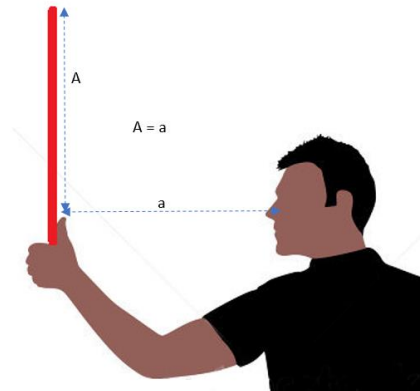
Tree Height

Measure the vertical distance, in feet, between the ground (level with the base of the trunk) and the topmost twig. Height is accurately measured using a clinometer, laser hypsometer, or other specialized tools. If these tools are not available, height can be estimated using the “stick method.”



Stick Method

- 1. Find a straight stick or ruler.
- 2. Hold the stick vertically at arm's length, making sure that the length of the stick above your hand (A) equals the distance from your hand to your eye (a).
- 3. Walk backward away from the tree. Stop when the stick above your hand is the same length as the tree.
- 4. Measure the distance from the tree to where you are standing (b). Record that measurement to the closest foot as the height of the tree (B).



Average Crown Spread

The formula for measuring crown spread of a Champion Tree nominee is:

$$((x + y) / 2) / 4$$

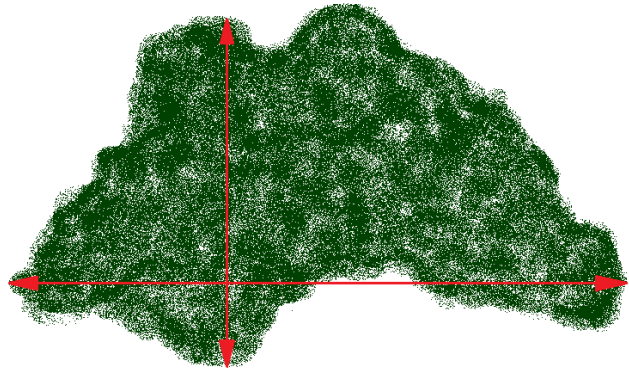
Or

$$(x+y)/8.$$

Where “x” is the widest point of the crown and “y” is a measurement taken perpendicular to “x”. The steps below are revised from the American Forests Big Tree Measuring Guidelines:

Two measurements of the crown spread are taken and recorded, in feet, at right angles to one another.

1. Measure the widest crown spread (x), which is the greatest distance between any two points along the tree’s drip line. The drip line is the area defined by the outermost circumference of the tree’s canopy where water drips to the ground.
2. Next, find the widest crown spread (y) that is perpendicular to the first measurement (x).
3. Use the two measurements and the formula above to calculate the average crown spread. Round your answer to the nearest whole number.



Example of crown spread measurements. The horizontal line represents the widest crown spread (x). The vertical line represents the second widest crown spread perpendicular to the first (y).