

Minnesota's Native

BIG Tree

Registry

PROGRAM INFORMATION &
APPLICATION FORM

Minnesota Department of Natural Resources
Division of Forestry



About the Program

Minnesota's 52 native tree species are listed in the Big Tree Registry. A nominee for species championship is judged on three measurements: the circumference in inches of its trunk 4½ feet above the ground, its height in feet, and one-quarter of its crown spread in feet.

The total of these measurements is the points awarded to that particular tree. A champion is one that has accumulated the most points for its species. If two trees of the same species have identical scores, the tree with the largest trunk circumference becomes champion.

Example: Eastern White Pine (*Pinus strobus*)



Photo: MN-DNR

Measurements:		
Circumference	214	inches
Height	103	feet
Crown Spread	84	feet
Points:		
Circumference	214	
Height	103	
Crown Spread	21	
<hr/>		
Total Points	338	

Everyone is invited to join the search for Minnesota's champion big trees. There are many unreported giants just waiting to be found. To nominate a champion big tree, just fill out the application form. Your nominations must be one of the tree species listed in the registry. All categories of required information must be completed for your application form to be accepted. Local federal, state, county, or city foresters can help you verify your tree's species and measurements. Try a local nursery or tree care company for help, too.

You will be notified in writing if your tree is the new champion. Nominated trees that do not surpass the recorded champion are filed as "contenders." When a champion falls, the largest contender of that tree species on file becomes the new champion. Nominations are accepted year-round, but an updated big tree list is produced once-a-year in the summer.

Did you know there is also a *National Register of Big Trees* that recognizes champion trees of 826 species and varieties? In fact, Minnesota's program is set up using much of the same criteria as this national program. For more information on the National Register of Big Trees, contact American Forests, P.O. Box 2000, Washington, DC 20013; 202-737-1944; www.amfor.org.

FUN FACT

The Norway pine (*Pinus resinosa*), Minnesota's state tree, has nothing to do with Norway—in fact, in most places this species is called the red pine. It may have been given its "Minnesota" name by English settlers, who thought it resembled the Norwegian scotch pine. Others speculate that it took its name from the town of Norway, Maine, another locale where red pine was observed by early settlers.



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www.mndnr.gov

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Cover photograph: www.richardhamiltonsmith.com

What Is a Tree?

A **tree** is any woody plant that can reach a height of 15 feet or more at maturity and is usually single-stemmed and has a crown or branched-out area at the top. This distinguishes trees from **shrubs**, which are woody but short and multi-stemmed, and from **vines**, which may be long and woody but lack a crown.

Minnesota's Own

To the 52 species of trees listed in the Big Tree Registry, Minnesota is home. These “native” species (also called indigenous species) grew naturally or spontaneously in the undisturbed forest vegetation before the arrival of Columbus or other Europeans.

Down to Basics

All of Minnesota's native species belong to one of two basic categories: gymnosperms or angiosperms.

Gymnosperms are trees whose seeds are not encased in a structure such as a fruit or nut. Most gymnosperms bear their seeds in cones, so they are also called conifers (“conebearers”), and have thin needlelike leaves that sometimes earn them the name needleleaf. Virtually all are evergreen, meaning they shed only a portion of their needles each year. People in the wood products industry often refer to coniferous trees as softwoods.

The second major kind of tree, the **angiosperm**, has covered seeds. Also known as deciduous or broadleaf trees, trees in this category drop their leaves each autumn. They are the ones that make the forests so colorful each year. These trees are sometimes referred to as hardwoods (even though their wood is not necessarily harder than that of softwoods!).

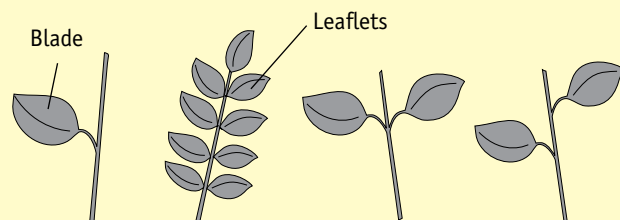
FUN FACT

Minnesota is the proud home of one of the rare exceptions to the “rule” that conifers are also evergreens. The tamarack, found in the sprawling peat bogs of the north, bears its seeds in cones but sheds all of its needles in the winter.



Photo: MN-DNR

A QUICK GUIDE TO LEAF TYPES



Simple leaves have only one leaf blade.

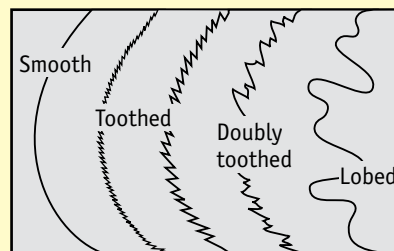
Compound leaves have many leaflets.

Opposite leaves grow directly across from one another, in pairs.

Alternate leaves grow singly along a branch, with space between each leaf.

Leaf Edges

Smooth leaves have smooth edges. Toothed leaves have jagged edges. Lobed leaves have rounded sections.



Illustrations: Amy Beyer, MN-DNR

References

To obtain more information about trees and their identification and care, try these places and resources:

Minnesota's Bookstore

660 Olive Street
St. Paul, MN 55155
651-297-3000 (Metro)
1-888-657-3757 (Toll free)
www.minnesotasbookstore.com

Minnesota Extension Service Distribution Center

University of Minnesota
Room 20, Coffey Hall
1420 Eckles Avenue,
St. Paul, MN 55108-6069
1-800-876-8636
www.extension.umn.edu

Trees of Minnesota, stock number 9-1, is a pocket-size, spiral-bound field guide to Minnesota's native tree species.

A Beginners' Guide to Minnesota Trees, BU-06593 and *Minnesota Trees*, BU-00486 are also excellent resources for identifying Minnesota trees.

Available At Most Bookstores

Trees and Shrubs of Minnesota, written by Welby R. Smith, provides comprehensive coverage, color photographs, and habitat description for 250 species of trees and shrubs.

Sizing Up a Minnesota Tree

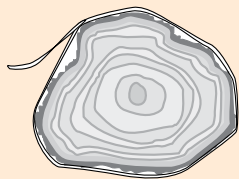
Trees submitted as nominees for the Big Tree Registry must be measured with circumference in inches, and height and crown spread to the nearest foot. Follow these guidelines for measuring:

Around the Middle

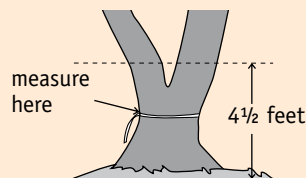
Measure, to the nearest inch, the distance around the tree at a point $4\frac{1}{2}$ feet up from the ground to get the circumference. A flexible tape measure is a good tool to use.



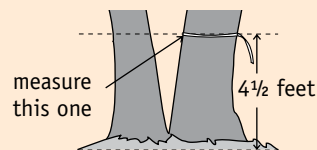
HERE'S HOW TO FIND THE CIRCUMFERENCE OF HARD-TO-MEASURE TREES:



1. When a tree has deep convolutions or indentations, measure without pressing into the indentations.

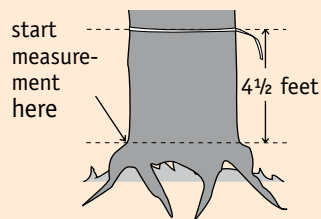


2. If a single tree has a double stem that forks below $4\frac{1}{2}$ feet above the ground, measure at the narrowest place below the fork.

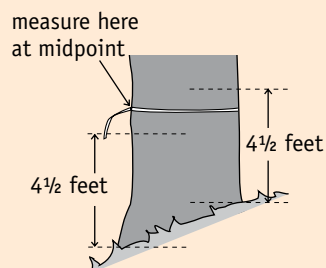


If the tree forks at ground level, measure the largest stem at $4\frac{1}{2}$ feet.

3. When the base of a tree is "heaved" (tree roots exposed usually due to the effects of erosion, along with tree movement and growth patterns), the measuring point begins where the root mass ends and the tree trunk begins.



4. If a tree is growing on a slope, measure $4\frac{1}{2}$ feet above the midpoint of the different ground levels.

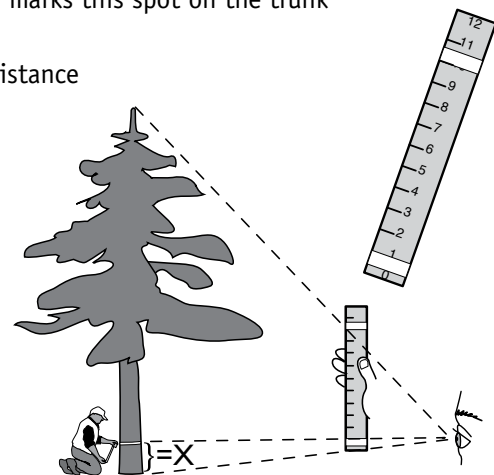


How High

Height is the hardest measurement to obtain. The most reliable method uses a hand level or hypsometer. If these instruments are unavailable, use a ruler.

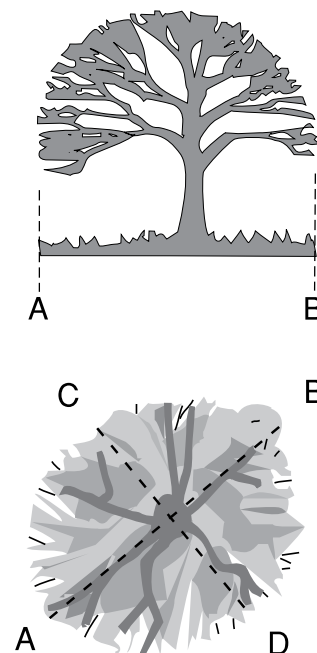
Take a 12-inch ruler and mark the 1-inch and 10-inch lines on the ruler with tape. Work in pairs. One person stands at the base of the tree. The other holds the ruler in front of his or her own eyes at arm length and moves back until he or she can see the whole tree from top to bottom between the 0-inch and the 10-inch mark on the ruler. He or she then moves the ruler until the base of the tree is exactly at 0 inches and the top of the tree is sighted exactly at 10 inches. Then he or she sights out from the 1-inch mark to a point on the trunk above the base. The partner marks this spot on the trunk with tape.

Measure the distance from the base of the tree to the 1-inch mark (X). Multiply by 10 to get an approximate idea of the height of the tree.



Crown Size

Set 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 on an imaginary line passing through the center of the tree (B). Next, set stakes marking the **shortest** diameter of the crown passing through the center of the tree (C and D). Measure both distances to the nearest foot with a tape measure. Add the two measurements together and divide the sum by two to find the average crown spread.



Minnesota's Big Tree Registry Application Form

Coniferous:

Deciduous:

(Please supply full name. For example, it must be sugar maple, red maple, etc., not just maple.)

County where found: _____ Closest city: _____

Condition of tree: Good Fair Poor

Comments:

Legal description or

address where tree is located: _____ Section: _____

Township: _____

Range: _____

Directions to tree (*be as specific as possible*):

Circumference of the tree in inches at 4 ½ feet above the ground: _____

Vertical height of the tree to the nearest foot: _____

Crown spread of the tree to the nearest foot: _____ divided by four: _____

([Measuring a tree](#) for instructions on how to measure circumference, height, and crown spread.)

Owner: _____

Address:

Nominator: _____

Address:

Date measured: _____

Completed forms can be emailed to bigtreeregistry.dnr@state.mn.us or mailed to the address below. If you have questions or need additional information, write to the address below, email bigtreeregistry.dnr@state.mn.us, or call (651) 259-5285. You may also fax your application or inquiry to (651) 296-5964.

Mail to: Minnesota's Native Big Tree Registry
DNR Forestry
500 Lafayette Road
St. Paul, Minnesota 55155-4044