Hopewell Valley Big Tree Contest Search for the Biggest Trees in Hopewell Valley

Sponsored by the Hopewell Township Environmental Commission

Can you find a really big example of a particular tree species? It might be growing in your yard, a neighbor's yard, a park, cemetery or school, along a fencerow, or maybe in nearby woodlands.

The Hopewell Township Environmental Commission (HTEC) wants to compile a list of the biggest example of every tree species growing in our Valley. So, we invite you to get outside and search for some big trees. We need your help because these trees could be growing almost anywhere. Keep in mind that some species of trees grow much larger than others so look for trees that are relatively large compared to others of the same species. While we are especially interested in large trees growing in Hopewell Township, we realize that the biggest examples of some tree species, especially ornamental or uncommon trees, may be found in Pennington or Hopewell Boroughs.

Did you realize that there are probably over 100 different tree species growing in Hopewell Valley? Long before people decided to create the Boroughs of Pennington and Hopewell within Hopewell Township, they were planting trees around their homes. Also, after the original farmers had cleared the land, many areas that were not so good for growing crops or pasturing animals were allowed to return to growing trees, so that today just over one-third of Hopewell Township is covered with trees. Many of those old trees are very big! Could one of these be the largest in the entire State: a State Champion?

How can I take part in the Search for the Biggest Trees?

Just get outside and look around; explore.

What equipment do I need?

A thin rope, tape measure, pencil or pen, nomination form(s), tree identification book, helper and camera (optional).

Where should I look for the biggest trees? Anywhere in Hopewell Valley (including Hopewell Twp, Pennington Borough and Hopewell Borough). Note: If you are looking somewhere other than in your yard or a public place, *just be sure you have the property owners' permission to trespass to look for big trees.*

What part of the tree should I measure? It is lucky for vegetation science that the most accessible part of the tree—the trunk—is also the best general indicator of tree size! Because trees grow so much larger than people, people who study trees most often refer to the size of an individual tree by discussing its "diameter at breast height". The diameter at breast height, or dbh, is just what it sounds like: the diameter of the tree's trunk at the height of the archetypal forester's chest (4.5 feet, or 1.37 meters) above ground level. However, diameter is difficult to measure directly, because the trunk gets in the way. Because tree trunks are usually almost circular in cross-section (lucky again!), vegetation scientists can indirectly calculate a tree's diameter by measuring its circumference. This can be done with an ordinary flexible tape measure (like the ones used by carpenters, dressmakers or surveyors). They can then calculate the diameter using the formula: Diameter = Circumference / 3.14159

How to measure the circumference of a Big tree: Measure the circumference of the tree at 4.5 feet off the ground, or if the tree sits on a slope, measure 4.5 feet from the uphill side. If the tree has a branch or abnormal swelling at 4.5 feet, take the measurement where the trunk returns to normal size. If you measure below 4.5 feet, make sure to include the actual height where the measurement was taken. For example: 182" circumference at 3 feet. See figures below for additional guidance.

Figure 1



The first step is to calibrate "breast height" on your body. This will save you lots of time in the field when trying to measure 4.5 feet from the ground each time.





Figure 2

You might be wondering why measure at breast height and not at the tree's true base. There are two reasons. The bad, but understandable, reason is that it is a lot more convenient to look at arm height rather than foot height. The good reason is that some tree trunks flare outwards towards the base (see photo). Trees of about the same biomass could have quite different diameters at true base if one tree's trunk is flared and another's is not. Most flaring, at least in temperate zones, occurs below breast height. In other words, diameter and cross-sectional area are more reliable measures of a tree's abundance when measured at breast height above any flaring. (*Note: remember to measure from the uphill side on sloping ground*)



Mountain hemlock (*Tsuga mertensiana*)

Figure 3



Unless your arms can reach all around the tree, or your tape measure has a good hook on the end, you will need a helper to hold the end of the tape at 4.5 feet above the ground on the uphill side of the tree. Then stretch the tape around the trunk, being careful to hold it at the same elevation as the end. You read diameter from the point that the tape overlaps zero on the tape. The photograph shows the process, which is really very simple. The diameter of this tree is 55.6 inches. (*Note that this tape is calibrated in tenths of an inch*)

Figure 4

Complete a Hopewell Valley Big Tree Nomination Form for each tree you nominate.

After you measure the tree's circumference, fill out the "Hopewell Valley Big Tree Contest Nomination Form" (pg. 5) which asks for basic information about you and the location of the tree. Try to determine what species of tree you are nominating using a field guide to trees (available from either a library or bookstore). If possible, take a picture of the tree with someone standing next to it for reference. A digital image (jpeg) is preferred. For each species, nominate just the one tree with the greatest circumference that you found.

Submit your entry: you may either, FAX the completed form(s) to (609)737-2770 - attention HTEC,

or Hand Deliver or Mail them to:

Hopewell Township Environmental Commission Big Tree Contest 201 Washington Crossing-Pennington Road Titusville, NJ 08560

What will the HTEC do with the nominations? We will compile an ongoing record of the biggest trees found growing in Hopewell Valley (i.e. in either of the two Boroughs or the Township), comparing them against the state record / champion trees, where they are located and who nominated each one. We will also create and maintain a display on the township's web site and municipal building's lobby. In addition, if someone finds a tree bigger than the largest known specimen in NJ, the HTEC will help you complete an official nomination form to send to the Division of Parks and Forestry. Whoever found the tree will then be given credit for finding the newest New Jersey State Record / Champion Tree.

Additional Information:

To view the current State Champion Tree list, visit the NJDEP Big Tree Registry web link @ www.state.nj.us/dep/parksandforests/forest/community/bigtree_registry.html

For a copy of the book <u>*Trees of New Jersey*</u>, contact:

NJ Forest Resource Education Center 370 East Veterans Highway, Jackson, NJ 08527 phone: 732-928-0029

OR

NJ Forest Service - Community Forestry Program 501 E. State St., PO Box 404, Trenton, NJ 08625-0404 phone: 609-292-2532

END

Hopewell Valley Big Tree Contest Nomination Form

(Note - use one form per tree species)

1. Nominator Informa	ation:		
Name:			
Address:			_
Home phone:	E-mail:		
2. Tree Information:			
Species (common name): Circumference: feet inches Date Measured:			
Location: Check one:	_ Hopewell Twp	Pennington	_ Hopewell Borough
Street Address		(or nearest	Road & Intersection)
3. Tree Owner Inform	nation:		
Name:			
Address:			_

4. Sketch a Map of the Tree's Location: Show: nearest road, buildings, landmarks, and approx. distances to Tree; North Arrow; areas of woods, fields, lawns etc.