



How to Age a Living Tree

Excerpts from the “Bicentennial Trees of Allegheny County” booklet, 1988, University of Pittsburgh Press.

“There is obviously a positive correlation between girth and tree age. Growth rate, however, varies considerably between species. Tree health, soil, climate, and site conditions also have a significant effect on rate of annular growth. A fairly good estimate can be made, however, using the following simple formula published by the International Society of Arboriculture. It is based on actual ring counts of cut trees.

First measure the tree’s circumference in inches $4\frac{1}{2}$ feet (54 inches) above ground level. This is called CBH or circumference at breast height. Then determine the diameter by dividing the circumference by 3.14 (π). Then multiply the diameter in inches by the appropriate factor to determine the estimated tree age. For example, a white oak with a CBH of 126 inches would have a diameter of about 40 inches, which multiplied by the white oak’s factor of 5 would equal the approximate age of 200 years.”

The following information was compiled in 2016 and updated 2021, utilizing multiple internet resources and the above-mentioned booklet.

<i>Abies concolor</i> - White Fir - 7.5	<i>Picea abies</i> - Norway Spruce - 5
<i>Acer campestre</i> - Hedge Maple - 4	<i>Picea pungens glauca</i> - Colorado Blue Spruce - 4.5
<i>Acer negundo</i> - Boxelder Maple - 3	<i>Pinus nigra</i> - Austrian pine - 4.5
<i>Acer nigrum</i> - Black Maple - 5	<i>Pinus resinosa</i> - Red Pine - 5.5
<i>Acer platanoides</i> - Norway Maple - 4.5	<i>Pinus strobus</i> - Eastern White Pine - 5
<i>Acer rubrum</i> - Red Maple - 4.5	<i>Pinus sylvestris</i> - Scots Pine - 3.5
<i>Acer saccharinum</i> - Silver Maple - 3	<i>Platanus occidentalis</i> - American Sycamore - 4
<i>Acer saccharum</i> - Sugar maple - 5.5	<i>Populus deltoides</i> - Common Cottonwood - 2
<i>Aesculus octandra</i> - Yellow Buckeye - 5	<i>Populus grandidentata</i> - Bigtooth Aspen - 2
<i>Aesculus hippocastanum</i> - Common Horsechestnut - 4 to 8*	<i>Populus tremuloides</i> - Quaking Aspen - 2
<i>Betula alba</i> - European White Birch - 5	<i>Populus spp.</i> - Poplars - 2
<i>Betula nigra</i> - River Birch - 3.5	<i>Prunus serotina</i> - Black Cherry - 5
<i>Betula papyrifera</i> - American White Birch - 5	<i>Pseudotsuga menziesii</i> - Douglas Fir - 5
<i>Betula pendula</i> - European Weeping Birch - 5	<i>Pyrus calleryana</i> - Bradford/Callery Pear - 3
<i>Carpinus caroliniana</i> - Ironwood - 7	<i>Pyrus spp.</i> - Pears - 1.5
<i>Carya glabra</i> - Pignut Hickory - 4	<i>Quercus alba</i> - White Oak - 5
<i>Carya ovata</i> - Shagbark Hickory - 7.5	<i>Quercus bicolor</i> - Swamp White Oak - 2
<i>Catalpa spp.</i> - Catalpa - 1.5	<i>Quercus coccinea</i> - Scarlet Oak - 4
<i>Celtis occidentalis</i> - Hackberry - 2	<i>Quercus imbricaria</i> - Shingle Oak - 6
<i>Cersis canadensis</i> - Redbud - 7	<i>Quercus macrocarpa</i> - Bur Oak - 5
<i>Cornus florida</i> - Flowering Dogwood - 7	<i>Quercus palustris</i> - Pin Oak - 3
<i>Cymnocladus dioicus</i> - Kentucky Coffee Tree - 3	<i>Quercus rubra</i> - Northern Red Oak - 4
<i>Fagus grandifolia</i> - American Beech - 6	<i>Quercus shumardii</i> - Shumard Oak - 3
<i>Fagus sylvatica</i> - European Beech - 4	<i>Quercus velutina</i> - Black Oak - 4
<i>Fraxinus americana</i> - White Ash - 5	<i>Salix nigra</i> - Black Willow - 2
<i>Fraxinus pennsylvanica lanceolata</i> - Green Ash - 4	<i>Sassafras albidum</i> - Sassafras - 3 to 4.5*
<i>Ginkgo biloba</i> - Ginkgo - 2.5	<i>Taxodium distichum</i> - Baldcypress - 1.5
<i>Gleditsia triacanthos</i> - Honey Locust - 3	<i>Tilia americana</i> - American Basswood - 3 to 4*
<i>Juglans nigra</i> - Black Walnut - 4.5	<i>Tilia cordata</i> - Little Leaf European Linden - 3
<i>Liquidambar styraciflua</i> - Sweetgum - 4	<i>Tsuga canadensis</i> - Eastern /Canadian Hemlock - 6
<i>Liriodendron tulipifera</i> - Tuliptree - 3	<i>Ulmus americana</i> - American Elm - 4
	<i>Ulmus pumila</i> - Siberian Elm - 2

*Conflicting data for these species, therefore, the range of tree age factors are listed.