

BIG TREES OF DELAWARE

Fourth Edition



Guidebook to the First State's Largest Trees

Delaware Forest Service

PROGRAMS AND SERVICES

Our Mission: *To conserve, protect, and enhance Delaware's forests through education, management, and professional assistance.*

Our Pledge: *Delivering quality services in a timely and professional manner with courtesy and integrity.*

To achieve our mission, the Delaware Forest Service maintains offices in all three counties in the First State. Our professionals provide a wide variety of services through several state and federally funded programs. These services are grouped into three main areas—Forest Conservation, Forest Protection, and Forestry Education. While the responsibilities and services of these programs often overlap, they are each unique and contribute to fulfilling our objectives.

The **Forest Conservation Program** helps Delawareans to better manage their forest resources. This program includes the following services:

- Forest management assistance to Delaware landowners
- Reforestation assistance, including low-cost tree seedlings
- Community forestry assistance and grants to cities and towns
- Marketing forest products

The **Forest Protection Program** helps both homeowners and landowners to monitor, maintain, and if possible, improve the health of Delaware's forests through several services:

- Wildland fire prevention and suppression
- Enforcement of forest protection statutes such as the Seed Tree Law and the Erosion and Sedimentation Law
- Forest pests—diagnosis and treatment recommendations

The **Forestry Education Program** helps educate Delawareans about the critical importance of our forests:

- Management of three state forests – Blackbird, Redden, and Taber – totaling more than 20,000 acres
- Education and information programs to increase public knowledge of forestry issues

We would be happy to help you learn more about our services or arrange a meeting with a forester to discuss your forest. Please visit one of our offices, call us at (302) 698-4500 or (800) 282-8685, or visit our website at: <http://dda.delaware.gov/forestry>.

Big Trees of Delaware, 4th Edition

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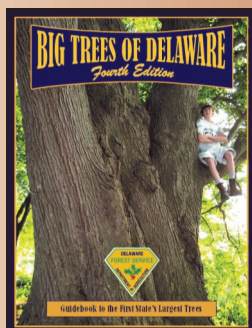
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ON THE COVER:

Tyler Culver of Dagsboro enjoys
the view from his family's state
champion red maple tree.



Introduction

What literally covers the State of Delaware from Claymont to Cape Henlopen? Trees of all kinds—from Atlantic white-cedar to zelkova! The largest specimens of many of these species are listed in this publication, *Big Trees of Delaware, Fourth Edition*. For instance, one can find the record of Delaware’s tallest tree, a yellow-poplar at Woodlawn in Wilmington that is 162 feet tall, as well as an American hornbeam in Felton that is 34 feet tall. While the American hornbeam is not as tall as the yellow-poplar, it is still the largest of its species reported in Delaware thus far; therefore it is listed and recognized as a Big Tree.



Delaware Forest Service forester Sam Topper measures a big tree candidate for the new book.

Over the years, people have organized lists of trees for various purposes. Some lists included historical trees, some were of notable trees associated with certain natural areas, and some were of Delaware’s Big Tree Champions. The first such list was recorded in William Taber’s book *Delaware Trees* in 1939.

In 1960 Walter Gabel started a list that included white oaks recognized as growing at the time of William Penn’s tenure in this area. Charles E. Mohr, a naturalist with the Delaware Department of Natural Resources and Environmental Control, published a list of 100 notable trees in 1973. This list combined historical and big tree specimens. The Delaware Forest Service published its first edition of *Big Trees of Delaware* in 1995, a second edition in 2000, and a third in 2006. Please read and enjoy this *Fourth Edition* as you continue searching for the biggest trees in the First State.

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How big trees are measured for size

Three separate measurements are used to compare trees of the same species:

1. Circumference
2. Height
3. Average Crown Spread

1. CIRCUMFERENCE

Circumference at Breast Height (or CBH as it is often referred) is measured in inches at a point on the tree trunk 4-1/2 feet above the ground. If a tree grows on a slope, the 4-1/2 foot point is determined from its uphill side. The tree must have a single trunk for a least 4-1/2 feet to be deemed a single tree. A tree that is forked below 4-1/2 feet is considered two trees. If there is abnormal swelling at that point, the measurement should be taken at a point lower on the trunk to reflect the normal size of the tree. If circumference is measured at a point other than at 4-1/2 feet, this fact should be noted. For example, a tree might be recorded as 75 inches at 3-1/2 feet. The objective should be to measure the circumference as near 4-1/2 feet above the ground as possible and yet show the tree's normal size. If you do not have a diameter tape to measure the circumference, use a non-stretching rope or cord to get around the tree, and mark it. Then lay the rope flat and measure the length in inches. One point is given for each inch of circumference.

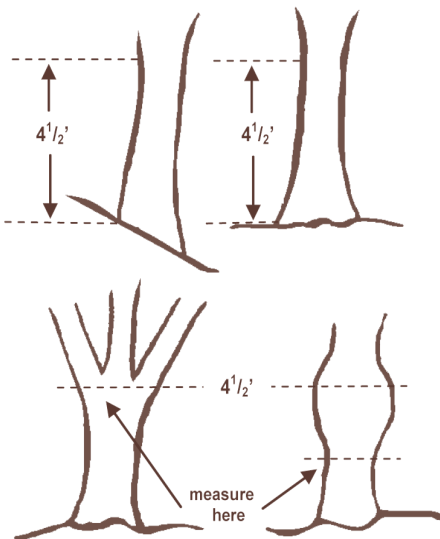


DFS forest health specialist Glenn 'Dode' Gladders uses a clinometer to determine a tree's height.

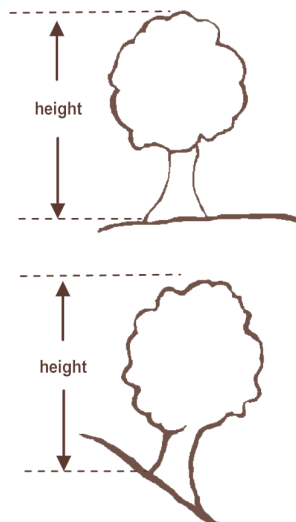
2. HEIGHT

Tree height is measured from the ground line to the highest point on the tree. If a tree grows on a slope, the line is determined from the uphill side. Height measurements are difficult to make without a proper instrument, such as an Abney level or a clinometer, but one can get a fairly good reading by using a straight stick. Hold the stick vertically (plumb), and be certain that the length of the stick above your hand equals the distance from your hand to your eye (usually about 24–25").

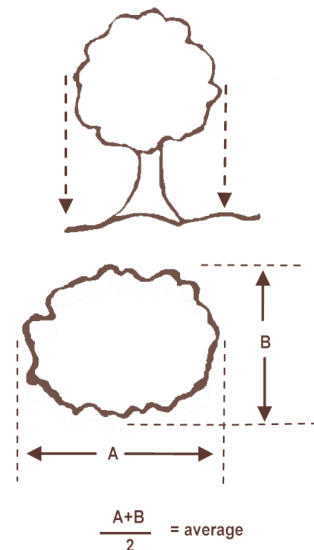
1. circumference



2. height



3. average crown spread



$$\text{Circumference (inches)} + \text{Tree Height (feet)} + \frac{1}{4} \text{ Avg. Crown Spread (feet)} = \text{Total Score (points)}$$

A big tree is interesting not only for its size, but also its uniqueness, appearance, age, and historical significance. For example, the dawn-redwood was once thought to be extinct, but was rediscovered in China and later introduced to Delaware.

This creates a right-angled triangle. Now move away from the tree, on level ground, and sight over your hand to align the base of the stick with the bottom of the tree and stop when the top of the stick is level with the top of the tree. (Do not move your head up and down, just your eye.) Now the distance from you to the tree is equal to the height of the tree. One point is given for each foot of height.

3. AVERAGE CROWN SPREAD

Two measurements are taken at the outer edges (drip line) of the spreading crown to measure its average spread. Measurements are recorded in feet at the widest point of crown spread and at the narrowest point. These two measurements are added together and divided by two to get the average crown spread. One-fourth of a point is given for each one foot of average crown spread (or one point for each four feet of spread).

Points from each measurement are added to determine a total point value. A co-champion tree is named if it is within five points of a champion. If you have difficulty measuring a Big Tree nominee, just measure it to the best of your ability. When submitting a tree, include a notation with your entry that the measurements need further verification. Three other items are necessary to complete a Big Tree nomination: the landowner's name and address, the nominator's name and address, and the tree's exact location. With these facts, your tree could appear in the next *Big Trees of Delaware*. Send the information to the following address:

**Big Trees of Delaware
2320 S. DuPont Highway
Dover Delaware 19901
302-698-4500 or 1-800-282-8685**

How the tree species were selected

The Delaware Forest Service selected the species of trees to be included in this book. A commonly accepted definition of a tree is a woody plant with a single, central stem that is capable of reaching a height of 30 feet. Forest Service staff used this definition to begin the selection process. Plants that did not meet this definition were not considered and are not included. For example, mountain-laurel is not included because, although common, it rarely exceeds 15 feet in height and lacks a central stem.

Invasive exotics are excluded from this edition because they present serious challenges to forest managers. These are plants that are not native to this region, but because they grow rapidly and typically produce abundant windborne seeds, they quickly spread once introduced. Invasive trees compete aggressively with the native trees of Delaware and are difficult to eradicate once established. This is now a serious forest health issue.

Examples of some invasive exotic trees that are excluded from this publication are widely-planted trees such as Norway maple, white mulberry, and

tree-of-heaven. Natural resource managers spend thousands of dollars annually to combat the spread of invasive exotics.

Many exotic trees, however, are not invasive. This list includes trees such as Norway spruce, ginkgo, and dawn-redwood that have been brought from other parts of the world and are widely planted throughout the state. Unlike invasive exotics, these trees do not reproduce aggressively or spread too rapidly, and therefore do not threaten the health of native forests. These well-known and handsome trees are important components of our urban landscapes, and are included in this edition.

There are, however, some species for which no official champions have been found, such as swamp white oak. Who knows? Perhaps your discovery might lead to the crowning of tomorrow's champion! While visiting a Big Tree can be an awe-inspiring experience, it should be enjoyable for everyone, including the tree's owner. Please respect an owner's rights and wishes by asking permission to view a tree. And good luck finding a Big Tree champion!

In addition to their natural beauty, trees can improve air and water quality, help increase property values, reduce energy costs, and provide habitat to wildlife.

Trees provide many valuable benefits

Who can put a value on an old shade tree? Many times the term “value” automatically evokes the idea of dollars and cents, but trees offer a diverse range of valuable benefits that are, quite simply, priceless. The many contributions trees make to society are often taken for granted, or maybe only the most obvious come to mind. But considering just a few of the most important benefits, it is possible to develop an even greater appreciation of trees.

1. SHADE OR COOLING EFFECT

Cities tend to be warmer than the surrounding countryside by an average of 1 to 2.5 degrees Fahrenheit. Trees and shrubs, used wisely, can help combat this warming effect in at least two important ways. The first involves how the tree deals with direct sunlight (solar radiation). In the summer, the leaves in the tree’s crown reflect and absorb solar radiation, thus creating a cooling effect on hot days. Conversely, in the winter, the leaves are gone from the tree and more solar radiation reaches the ground where we appreciate it on those cold winter days.

The second is the release of water into the atmosphere, a process known as transpiration. Research has shown that a single isolated tree can transpire approximately 88 gallons of water per day, providing there is sufficient soil moisture available. This can be compared to the cooling activity equivalent to five window-mounted air conditioners.

2. WIND REDUCTION - WIND BREAKS

The ability of trees to alter wind patterns has been recognized for years. The shelter belts that were planted during the dust bowl days were very effective as windbreaks. But how many of us have stopped to consider how conifers (such as pine trees) planted on a slope can impede the cold air that would normally flow to a low-lying frost pocket? Planting trees in the right places can provide many benefits.

It might be wise to remember that trees, which are not required to be taken down every summer, serve as natural snow fences. A few dense trees planted in the right place will reduce winter heating bills by blocking the passage of air into the house and reducing heat loss.

3. NOISE AND ODOR ABATEMENT

Leaves, twigs, and branches have been shown to absorb sound and reduce ambient noise. Trees are also an effective barrier to wind-driven odor.

4. POLLUTION ABATEMENT

Aside from the familiar carbon dioxide-oxygen exchange, trees definitely help give us cleaner, purer air. There is no denying the filtration value of leaves—just look closely at the leaves of a tree on a hot summer day and notice the dust and dirt that has collected. And once autumn leaves fall, they begin to function as a soil filter.

5. WILDLIFE HABITAT

It is easy to understand the value of habitat. Trees provide the two essentials for wildlife: food and cover. Depending on the amount, type, and spacing of the trees, you can attract many species of wildlife to your home, from songbirds to deer. Yet, stop and think, how many species of wildlife would you attract without trees and shrubs?

6. NATURAL BEAUTY

The aesthetic qualities of trees can make any house more visually appealing. Architecturally, plants are used to cut harsh lines, for traffic control, and for special effects around the home, and what about the imaginary jungles they spark in the minds of children? More broadly, trees provide breathtaking panoramas in our rural areas and create a rainbow of colors in our hardwood forests each fall. The world would be a mundane place without them.

How to grow and maintain healthy trees

Trees face many stresses from construction damage, insects, disease, fire, pollution, and even drought. Therefore, it is vital to properly care for trees to ensure they stay vigorous and healthy for many years to come.

A few simple tree care practices can do wonders for a tree by improving its overall health. The most commonly neglected part of the tree is the root system. The majority of a tree's roots are located within the top 12 to 18 inches of soil. Additionally, a tree's roots may spread up to three times as far from the trunk as the crown width of the tree. This is "the root zone." The following are several precautions to take to protect the health of a tree's roots:

- a) Do not cut or remove soil in the root zone. This exposes tree roots to drying or sun damage.
- b) Do not add more than two inches of fill dirt in the root zone. This limits the gas and water exchange, effectively smothering a tree's roots.
- c) Roots grow in a radial pattern outward from the tree's trunk. Never trench across this radial root pattern, as a devastating number of roots will be severed. If trenching is required for utilities or other reasons, attempt to route trenches away from the root zone. If this is not possible, consider boring under the root zone rather than trenching through it.
- d) Avoid vehicle traffic, parking, or pedestrian traffic in the root zone. Each can cause soil compaction, which is detrimental to tree roots.
- e) Use caution when applying fertilizers or pesticides in the root zone. Many products designed for turf can be very harmful to trees.

MULCHING

Mulching, when done properly, serves three beneficial functions for trees:

1. Mulch controls tree stress by stabilizing soil temperature and holding moisture in the soil.
2. Mulching prevents damage from trimmers and lawnmowers by keeping them away from a tree.
3. Mulch reduces competition to trees from turf and weeds.

Ideally, mulch should be placed two to four inches thick over the entire root zone. If not possible, mulch as far out from the trunk as practical.

Keep mulch one to two inches away from the trunk of the tree, as contact with the trunk may promote decay. Do not place mulch greater than four inches thick. This interferes with gas exchange in the soil.



PRUNING

Pruning may be necessary or desirable to remove dead, diseased, or insect-infested branches, or to improve tree structure, enhance vigor, or maintain safety. Pruning of mature trees should be performed by professional arborists. When pruning, try to keep these basic rules in mind:

1. No branch should be removed without a reason.
2. When removing an entire branch, make the cut just outside the branch collar.
3. Avoid major pruning after the spring growth flush.
4. Minor pruning when the tree is young might prevent major pruning years later.
5. Remove dead or damaged limbs and limbs that rub or cross one another.
6. **NEVER** top a tree! This practice is extremely detrimental to tree health.

SELECTING AN ISA-CERTIFIED ARBORIST

Always check to ensure that an arborist is licensed, insured, and can provide references. The International Society for Arboriculture sponsors its Certified Arborist Program for three main reasons:

1. To improve the technical competency of tree care industry personnel.
2. To create incentives for those in tree care to continue their professional development.
3. To provide a means for the public to identify those professionals who have demonstrated, through rigorous education and exams, a thorough knowledge of tree care practices.

Conifers

Conifers belong to the group of trees classified as **gymnosperms**, which are cone-bearing seed plants. Most conifers are trees but there are also a small number of shrubs. Conifers include cedars, cypresses, firs, junipers, kauri, larches, pines, hemlocks, redwoods, spruces, and yews. While many conifers are **evergreen**, a few are **deciduous**, meaning they lose their leaves in winter.



Conifers dominate large areas of land on Earth, particularly the forests of the northern hemisphere. First appearing around 300 million years ago, conifers evolved biological features such as wind-based pollination and the unique ability of their needles to retain moisture and reduce water loss. Many conifers are able to survive harsh winter conditions because their conical shape and downward-sloping limbs help shed snow. Conifers also can adjust their internal chemistry to resist freezing, a process called “hardening.” The world’s conifer forests constitute the world’s largest collective carbon sink and therefore help to make our planet a better place to live. Conifers also hold tremendous economic value, primarily for timber and paper production. The wood of conifers is known as **softwood**.



Atlantic white-cedar has flat and scale-like leaves. Its thin bark and leaves are prone to fire damage and its shallow roots make it vulnerable to high winds.

Atlantic white-cedar

Though not a true cedar (really a cypress), this conifer is often found adjacent to streams and in wet, boggy areas, particularly in southern Delaware. Its wood is light, soft, fragrant, durable, and is often used for boats, shingles, and decoys. This columnar-shaped tree has bluish-green leaves. Seldom seen in most areas, it does well in gardens but also has appeal for wetland reclamation purposes. It is not as common as it once was due to stream drainage and channelization.

Atlantic white-cedar

Chamaecyparis thyoides

Location	Points	C.B.H.	Height	Crown
NW of 36 & 626, Milford	174	91	76	27
417 North Walnut St., Milford	169	87	72	42
322 W. State St., Millsboro	163	80	77	23



Baldcypress leaves are flat, linear, and light-green with one-inch round cones that occur singly or in clusters of two or three. The cones are used for food by squirrels and ducks.

Baldcypress

As Delaware’s only truly native deciduous conifer, baldcypress is often found in swamps and ponds in southern Delaware. Its broadly-flared trunks and root-like knees help to identify this stately tree, which is well-suited for parks and large estates, especially in wet areas. Its wood is light and durable and used for shingles and boats. One of the northernmost natural stands of baldcypress in the United States is located at Trussum Pond near Laurel.

Baldcypress

Taxodium distichum

Location	Points	C.B.H.	Height	Crown
Delaware Ave., Laurel ¹	368	258	91	75
Cubalo Park, Millsboro	352	238	94	78
Trussum Pond, Laurel ²	301	167	115	76

¹ behind R.J. Riverside Restaurant ² across from spillway





Dawn-redwood

Once thought extinct, dawn-redwood is native to Asia and is considered one of three conifers classified as redwoods (the others are the giant sequoia and coast redwood trees in the western United States). Capable of heights over 100 feet, dawn-redwood has a conical crown and a large straight trunk. Well-suited for long drives or streets, it can be found in urban areas and estates throughout Delaware.



Dawn-redwood has flat leaflets arranged opposite one another. It is one of the few conifers to shed its needles during winter (the others are baldcypress and larch).

Dawn-redwood

Metasequoia glyptostroboides

Location	Points	C.B.H.	Height	Crown
Winterthur, Wilmington	314	195	104	59
Mt. Cuba Center, Hockessin ¹	284	148	121	58
212 Clayton Ave., Clayton	272	168	90	54

¹ near front entrance



Eastern hemlock

Native to northern New Castle County, hemlock is a slow-growing conifer that is a favorite ornamental for landscapers because it makes a great evergreen hedge. It is often found on moist sites due to its preference for shade, however hemlock also adapts well to other soil types and to pruning. However, it is susceptible to the hemlock woolly adelgid, an exotic insect that can kill the tree.



Eastern hemlock has flat, round-tipped needles with two pale lines. Its oval cones hang on short stalks at the tips of branchlets, and often remain on the tree until spring

Eastern hemlock

Tsuga canadensis

Location	Points	C.B.H.	Height	Crown
701 Delaware Ave., Wilmington ¹	177	95	70	46
Holy Cross Church, Dover	163	84	68	44
1381 South State St., Dover	159	74	74	42

¹ Brandywine Cemetery



Eastern redcedar

Eastern redcedar is Delaware's only native juniper, however, it is not a true cedar. Its red and white wood is known for being lightweight, aromatic, and durable, and it is often used to line closets and chests. Although it grows slowly, redcedar is still a very desirable landscape planting useful for windbreaks and screens. Shade-intolerant, it grows well in adverse conditions and its small blue berries are favored by birds.

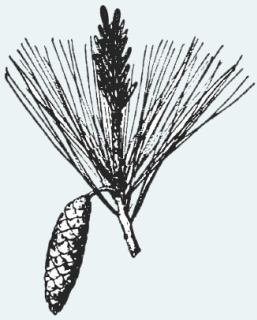


Eastern redcedar can expand its range because its berries provide food for birds. Studies have shown that seeds digested by birds germinate more readily than ones that have not.

Eastern redcedar

Juniperus virginiana

Location	Points	C.B.H.	Height	Crown
971 Cloverfield La., Houston	192	123	60	34
379 Stockley Rd., Millsboro	189	121	57	43
Routes 9 & 518A, Georgetown	180	110	59	44



Eastern white pine

Most of Delaware's native pines are in its south, but white pines are planted throughout the First State. Eastern white pine is a long-lived soft pine that is capable of reaching heights above 200 feet and diameters of four feet. Its wood is light, straight-grained, easy to work, but not strong. It is often used in cabinetry, interior finishes, and for lumber.

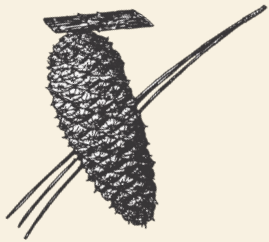
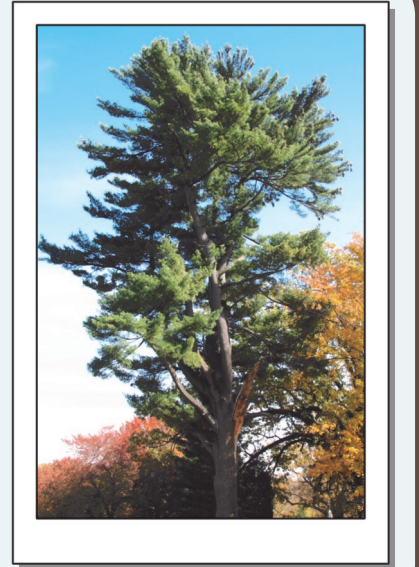
Eastern white pine needles come in bundles of five, each of which is 3 to 5 inches long. Rich in economic and historical significance, the tree is very good for reforestation and landscaping uses.

Eastern white pine

Pinus strobus

Location	Points	C.B.H.	Height	Crown
701 Delaware Ave., Wilmington ¹	259	139	102	73
Bannister Hall, Smyrna	228	110	105	53
Bellevue State Park, Wilmington	228	110	105	52

¹ Brandywine Cemetery



Loblolly pine

Loblolly pine is considered the principal commercial species in Delaware and it is predominantly found in the southern part of the state. Adaptable to a variety of sites, it seeds into open areas readily. Loblolly seeds are sometimes eaten by wild turkeys, squirrels, and some songbirds. On good sites the tree can reach over 100 feet in height with a trunk diameter of two to three feet.

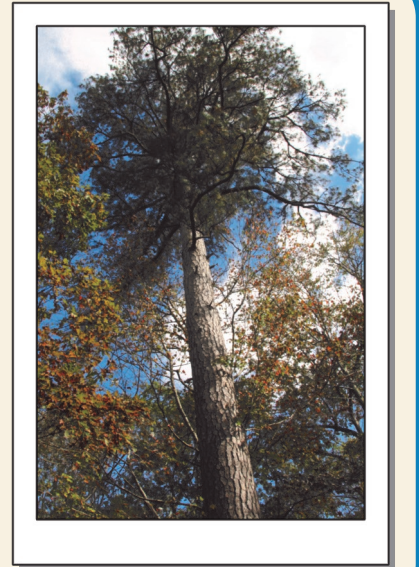
Loblolly pine commonly has three needles (but sometimes two) which are usually 6 to 9 inches long.

Loblolly pine

Pinus taeda

Location	Points	C.B.H.	Height	Crown
Redden State Forest, Georgetown ¹	234	116	103	58
9 Eagle Way, Rehoboth	232	108	111	52
Redden State Forest, Ellendale ²	231	106	111	57

¹ Headquarters Tract ² Jester Tract



Pitch pine

Pitch pine usually grows 50 to 60 feet tall with trunk diameters of two to three feet. Its branches are often contorted, which can give it a ragged but picturesque crown. The tree's coarse-grained wood is very durable and can thus be used for lumber, but it is more likely to be used for fuel or other products. A very unusual trait of the tree is the presence of needles growing directly from the trunk.

Pitch pine needles are 2.5 to 5 inches long with three twisted needles per bundle.

Pitch pine

Pinus rigida

Location	Points	C.B.H.	Height	Crown
Redden State Forest, Georgetown ¹	187	84	93	38
Redden State Forest, Georgetown ²	171	74	88	36
Redden State Forest, Georgetown ³	153	62	83	33

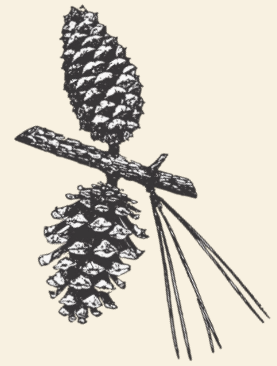
^{1,2,3} Headquarters Tract





Shortleaf pine

Shortleaf pine is a hard pine that can grow to heights of 80 to 100 feet on favorable sites, with diameters of two to three feet. Its slender branches can often form a pyramid-shaped crown. Like other southern yellow pines, the wood of shortleaf pine is moderately heavy, hard, and shock-resistant, and used mainly for various building materials. Its symmetrical cones are ovoid in shape and its seeds provide food for wild turkey, squirrels, and some birds.



Shortleaf pine needles grow in clusters of two or three, each 3 to 8 inches long. The cones are 1 to 4 inches in size and wider at the base than at the tip.

Shortleaf pine

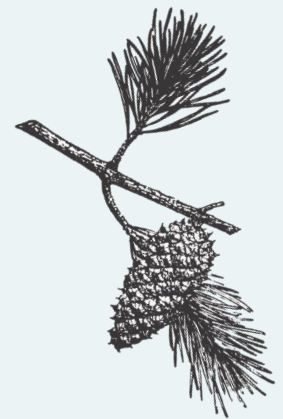
Pinus echinata

Location	Points	C.B.H.	Height	Crown
Austin Short's Farm, Georgetown	165	67	89	34



Virginia pine

Virginia pine is commonly a small or medium-sized tree that is useful for reforesting abandoned and cutover lands and is also a source of pulpwood and lumber. However, there are a few record trees that have measured over 100 feet in height. Virginia pine tends to do best in moderately well-drained to well-drained soils and is less tolerant of wet sites and impeded drainage than either pitch or loblolly pines.



Virginia pine has two needles per bundle, each of which is about 1.5 to 3 inches long.

Virginia pine

Pinus virginiana

Location	Points	C.B.H.	Height	Crown
Redden State Forest, Ellendale ¹	185	72	103	38
Redden State Forest, Georgetown ²	163	72	82	34
Field edge south of C.R. 241, Milton	156	78	70	33

¹ Jester Tract ² Bailey Tract



Hardwood trees differ from conifers (**softwoods**) in several important ways. Hardwood trees belong to a class of trees known as **angiosperms**, which means they produce seeds with some type of outside covering. This might be a fruit, such as a pear or an apple, or a nut with a hard casing such as an acorn or a pecan. By contrast, conifers are part of the class of trees known as **gymnosperms**, which means they produce seeds (cones) with no covering. Also, unlike conifers, hardwood trees typically have broad leaves (not needles), some type of flower, and are usually **deciduous**—meaning their leaves drop in the colder months. While these rules apply in most cases, not all hardwoods are necessarily deciduous (the American holly is an **evergreen**, for example) and, likewise, not all conifers are evergreen (baldcypress, dawn-redwood, and larch all drop their needles). Hardwood trees offer valuable benefits to society (e.g., aspirin was originally derived from willow bark), timber products, energy savings, as well as food for people and wildlife.

Hardwoods



Green ash has a compound leaf with 5 to 9 leaflets. It is one of a few trees (buckeye, dogwood, and maple are some others) that feature an opposite branching pattern.

Green ash

Green ash is a hardy tree that grows well in wet areas and is the most widely-distributed of the ashes, although it comprises a small percentage of the total trees in Delaware. Widely planted in cities and towns, ash trees of all types are susceptible to diseases and invasive pests such as the emerald ash borer, an exotic insect from Asia that can kill the tree. Ash wood is both strong and durable, which is why it is often used for furniture and tool handles.

Green ash

Fraxinus pennsylvanica

Location	Points	C.B.H.	Height	Crown
12 Millwright Rd., Newark	327	195	110	90
Hagley Museum, Wilmington	325	162	151	48
Killens Pond State Park, Felton	199	91	96	48



White ash is the largest and most common ash. Its leaves are 8 to 12 inches long with 5 to 9 (but often 7) oblong leaflets each 3 to 5 inches long.

White ash

Not often found in swampy areas, white ash can grow well on rich, moist, well-drained soils but is adaptable to other soil types. Like other ash trees, white ash wood is tough, strong, and highly resistant to shock. Thus it is sought after for handles, oars, and baseball bats. Its winged seeds also provide food for many kinds of birds.

White ash

Fraxinus americana

Location	Points	C.B.H.	Height	Crown
Brandywine Creek State Park, Wilmington	327	194	106	109
Brandywine Creek State Park, Wilmington	270	155	92	93
DuPont Experimental Station, Wilmington	258	138	102	70



American basswood has heart-shaped leaves with hard, round fruits that are suspended in clusters below its paper-thin bracts.

American basswood

Native to northern Delaware (though not common), American basswood prefers deep, rich soils but can also be planted in urban areas. Because it is a nice shade tree that can reach heights of 80 feet or more, basswood should only be planted in large spaces. The wood is soft, lightweight, and used for carving. Basswood has fragrant flowers and produces a small nut favored by many animals.

American basswood

Tilia americana

Location	Points	C.B.H.	Height	Crown
19 Wrangler Rd., Newark	334	209	106	75
5620 Kennett Pk., Centreville	253	145	93	60
7851 Westville Rd., Wyoming	221	152	56	52





Littleleaf Linden

The linden is widely grown as an ornamental tree throughout its native Europe and is the national tree of the Czech Republic. The tree is also widely cultivated in North America as a substitute for the American basswood, which has a larger leaf and is coarser in texture. The family of Swedish botanist Carolus Linnaeus, called the “Father of Taxonomy” for popularizing “binomial nomenclature” as a way to classify living things (including trees), was named after a linden tree.



Littleleaf linden leaves are smaller than the American basswood but otherwise have similar shape and structure.

Littleleaf linden

Tilia cordata

Location	Points	C.B.H.	Height	Crown
Ross Mansion, Seaford	288	192	80	63
Nylon Blvd., Seaford	192	103	73	63



American beech

More common in northern Delaware, beech is easily identified by its smooth, gray bark. Beech grows on a variety of soil types and its thick canopy can form a dense shade. Its nuts are a favorite of various wildlife species, but its wood is not valuable and is used for pallets and railroad ties. Its long life, beautiful shape, and great size make it an excellent specimen tree for planting in large spaces.



American beech leaves have prominent parallel veins and usually turn a copper color in the fall. The leaves can persist well into the winter.

American beech

Fagus grandifolia

Location	Points	C.B.H.	Height	Crown
1700 N. DuPont Hwy., Dover ¹	301	154	121	105
618 Silverside Rd., Wilmington	276	162	90	98
Beaver Dam Rd., Ellendale	234	128	80	104

¹ wooded lot behind Cedar Chase Apts.



European beech

European beech is a large tree ranging up to 160 feet in height but usually between 80 and 115 feet tall with trunk diameters up to 5 feet. It can live from 150 years to as old as 300 years. Beech nuts are an important food for birds and other forms of wildlife. In its native Europe, a dense beech forest is dark and few plant species are able to survive there because the sun barely reaches the ground.

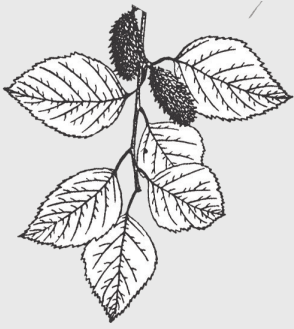


European beech leaves are alternate, simple, and entire with 6 to 7 veins on each side of the leaf. The leaves can remain on the tree until spring due to a process known as marcescence.

European beech

Fagus sylvatica

Location	Points	C.B.H.	Height	Crown
1 Great Barn La., Greenville	378	270	84	97
3000 Creek Rd., Yorklyn	349	240	87	87
49 Hazel Rd., Dover	293	211	67	60



River birch

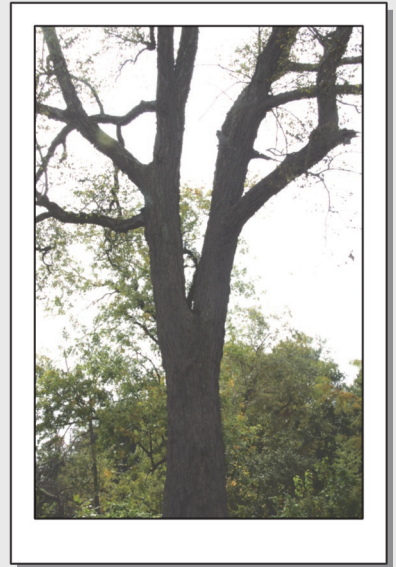
Birch trees in Delaware are usually found along streams and ponds, and are easily identified by their curling bark. Very hardy, birches can thrive in a wide range of conditions; therefore, they are often planted in urban areas and wetlands. Birch seeds can be eaten by wildlife. While some birches have wood with close-grained properties that are valued for furniture and flooring, this is not true of river birch.

Birch leaves are usually oblong with pointed, sharp-toothed edges. Birch beer is a popular carbonated drink made from the bark.

River birch

Betula nigra

Location	Points	C.B.H.	Height	Crown
Memorial Park, Dover	215	130	68	69
971 Cloverfield Lane, Houston	204	111	78	59
Paradise Alley Rd., Felton	201	112	73	65



Blackgum

Blackgum is a member of the tupelo family native to Delaware. It is one of the last trees to leaf out in the spring and one of the first to lose its leaves in the fall. Its dark blue fruit (called a drupe) is preferred by many birds and other wildlife. Its gray bark is usually divided into rectangles by black fissures. Known for its hardiness, its leaves turn a fiery-red in autumn.

Blackgum leaves are roughly oval with short, blunt points, and its fruit is round, dark blue and clustered on stalks up to 1.5 inches long.

Blackgum

Nyssa sylvatica

Location	Points	C.B.H.	Height	Crown
Coverdale Farm, Yorklyn	275	155	98	86
Rockwood Museum, Wilmington	259	159	82	71
St. John's Holy Church, Hartly	201	104	81	65



Buckeye

Buckeye is not native to Delaware (although a certain state in the Midwest is well-known as the "Buckeye State") but it is widely planted because of its showy flowers and its vibrant fall color. Its leaves have a distinct palm shape with five leaflets, however its timber lacks commercial value.

Buckeye leaves are compound with five narrow oval leaflets. The fruit is a spiny capsule that contains two dark-brown, shiny seeds— each with a distinct "eye."

Ohio buckeye

Aesculus glabra

Location	Points	C.B.H.	Height	Crown
1082 Old Lancaster Pk., Hockessin	202	117	73	49

Horse-chestnut

Aesculus hippocastanum

Location	Points	C.B.H.	Height	Crown
Bellevue State Park, Wilmington	208	123	71	55
4185 St. George's Rd., St. Georges	194	131	49	56





Buckeye

DuPont buckeye is a hybrid cross between *Aesculus glabra* and *Aesculus pavia* created by E.I. duPont in the mid-1800s. The DuPont buckeye's leaves are dark-green in summer and turn yellow to orange-red in fall. The fruit is a nut about two inches in diameter with a prickly shell.



Buckeye nuts are slightly poisonous and should not be eaten directly from the tree.

Sweet buckeye

Aesculus octandra

Location	Points	C.B.H.	Height	Crown
Hagley Museum, Wilmington	221	116	93	46

DuPont buckeye

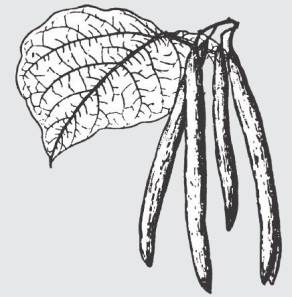
Aesculus x duPontii

Location	Points	C.B.H.	Height	Crown
Hagley Museum, Wilmington	231	137	80	55



Catalpa

While not native to Delaware, catalpa is found in yards and other urban areas throughout the state because it is tolerant of many soil conditions. Also known as the cigar tree due to its long seed pods, the catalpa has large heart-shaped leaves and showy white flowers. The wood is soft and brittle and is sometimes used for carving.



Catalpa leaves provide dark shade and good shelter for birds. Catalpa fruit resembles long bean pods with a number of small flat-shaped seeds with tiny papery wings that aid wind dispersion.

Catalpa

Catalpa speciosa

Location	Points	C.B.H.	Height	Crown
10027 N. Old State Rd., Lincoln	243	160	68	59
Holy Cross Church, Dover	226	133	80	50
10027 N. Old State Rd., Lincoln	204	122	72	40



Black cherry

Common throughout the state, the native black cherry is found in abandoned fields, hedgerows, and immediately after timber harvests. Many cherry hybrids can endure urban conditions and are used as street plantings in cities. Black cherry fruit is a food staple for many bird species throughout Delaware and cherry wood is highly valued for furniture and cabinets.



Cherry flowers appear from April to June and fruit ripens from early to late summer. Cherry trees can host eastern tent caterpillar and fall webworm infestations.

Black cherry

Prunus serotina

Location	Points	C.B.H.	Height	Crown
513 West Spruce St., Seaford	280	202	62	65
6702 Marshall St., Milford	278	182	78	73
113 3rd St., Wyoming	253	175	66	49



Sweet cherry

Sweet cherry is often cultivated as a flowering tree. Its size makes it more suited for a park tree than a street or garden tree. The bark is smooth purplish-brown on young trees and thick dark black-brown on old trees. In the fall, the leaves turn orange, pink or red before falling. The hard, reddish-brown wood is used for woodturning, cabinets and musical instruments.

Cherry trees produce beautiful flowers in spring. The leaves are alternate, simple and ovoid, 3 to 6 inches long and 2 to 3 inches wide.

Sweet cherry

Prunus avium

Location	Points	C.B.H.	Height	Crown
14 Milltown Rd., Wilmington	264	184	66	56
Hagley Museum, Wilmington	230	120	92	72
613 Andover Rd., Talleyville	217	135	70	46



Dogwood

Common in both forests and urban areas, the native flowering dogwood is a small tree (up to 40 feet) that is known for the beautiful white bracts found around its flowers in the shape of a cross. The red berries of the dogwood are a favorite of birds. However, anthracnose fungus has killed many dogwood trees throughout Delaware in recent years. The wood is very hard and was once used for tool handles.

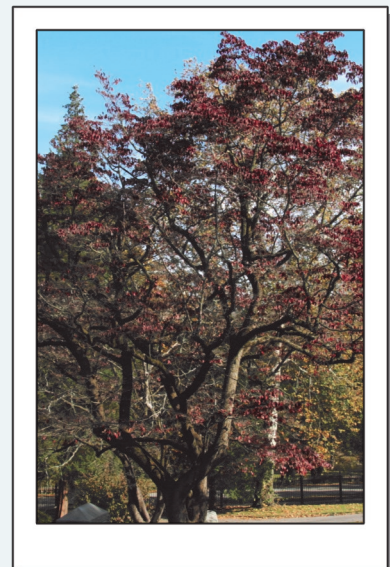
Dogwood flowers often appear in early spring. Clusters of bright-red fruit arrive in October. The "true" flower of the dogwood tree is in the center of the cross-shaped bracts.

Flowering dogwood

Cornus florida

Location	Points	C.B.H.	Height	Crown
701 Delaware Ave., Wilmington ¹	128	84	34	39
4010 Valley Green Rd., Greenville	106	62	36	32
Forest Presbyterian Cemetery, Middletown	106	58	37	44

¹ Brandywine Cemetery



American elm

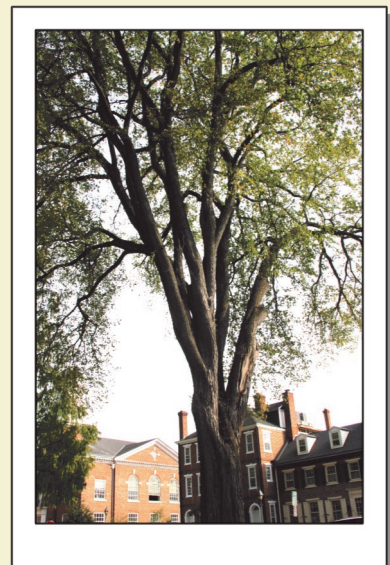
Once an important species, the American elm has virtually disappeared due to Dutch elm disease. Other elm species less susceptible to the disease are still planted in urban areas and disease-resistant cultivars are becoming more available in the nursery trade. Elms are favorite landscape trees due to their popular umbrella-like shape and their massive size; however, the wood is not commercially valuable.

Elm leaves are similar to the leaves of the zelkova. Dutch elm disease is a fungal disease spread by elm bark beetles. It was first identified in the Netherlands in 1921.

American elm

Ulmus americana

Location	Points	C.B.H.	Height	Crown
The Green, Dover	374	226	122	104
1191 Boyds Corner Rd., Middletown	309	183	97	114
112 Delaware Ave., Dover	267	154	90	92





Slippery elm

Slippery elm is a fast-growing tree characterized by its “slippery” inner bark. Native Americans and early settlers derived a diverse range of versatile medicines from slippery elm, which was listed as an official drug in the United States from 1820 to 1936. Because the tree’s mucilage acts as an effective cough suppressant, many herbal throat lozenges contain slippery elm. According to several sources, the yoke of the Liberty Bell was reportedly made from slippery elm.



Slippery elm has leaves similar to American elm but its twigs and branches are coarser. It can live up to 200 years

Slippery elm

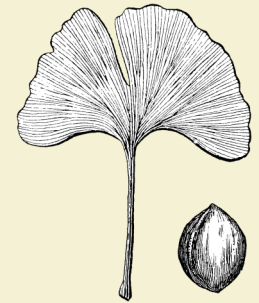
Ulmus rubra

Location	Points	C.B.H.	Height	Crown
2401 East Mall Rd., Wilmington	198	90	90	70



Ginkgo

Considered a “living fossil,” ginkgo is the oldest tree species in the world and a link between conifers and pre-historic plants. It is often planted in parks, gardens, along streets, and in urban areas because it is very hardy and resistant to disease. Male ginkgos are preferable because the fruit of female trees is messy and emits an offensive odor. Ginkgo is easily identified by its fan-shaped leaves that turn a brilliant yellow in the fall.



Ginkgo leaves have a unique fan shape. Extracts from ginkgo trees are sold as herbal supplements claiming to improve mental function and memory.

Ginkgo

Ginkgo biloba

Location	Points	C.B.H.	Height	Crown
959 Hazletville Rd., Wyoming	302	227	58	69
State Housing Authority, Dover	302	196	86	78
201 Quintynnes Dr., Wilmington	278	162	95	84



Hackberry

Scattered throughout the state, hackberry prefers moist soils but tolerates poor, sandy soils. It is a good tree for parks and large open areas because it can withstand dry, windy conditions. Hackberry leaves are extremely variable but the tree can be identified by the corklike ridges and warts on its bark. Its wood is not valuable, but its fruit, a small berry, is eaten by many birds and mammals.

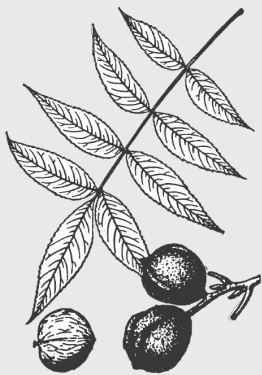


Hackberry fruit is round and dark-purple, ripening in September and persisting through the winter to provide much-needed food to wildlife. The leaves are oval with sharp-toothed margins.

Hackberry

Celtis occidentalis

Location	Points	C.B.H.	Height	Crown
Pilottown Road Cemetery, Lewes	204	140	46	72
Cubalo Park, Millsboro	186	98	72	63
Federal St., Milton	152	75	65	47



Bitternut hickory

Bitternut hickory is one of four hickory species (along with mockernut, pignut, and shagbark) that are common in Delaware. In general, hickory trees are identifiable by their alternate, compound leaves. Much like other hickories, bitternut displays brilliant yellow fall color. Hickory wood is durable, very hard, and commonly used for tool handles. As the name implies, bitternut hickory has nuts that taste bitter.

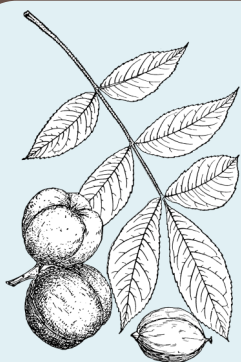
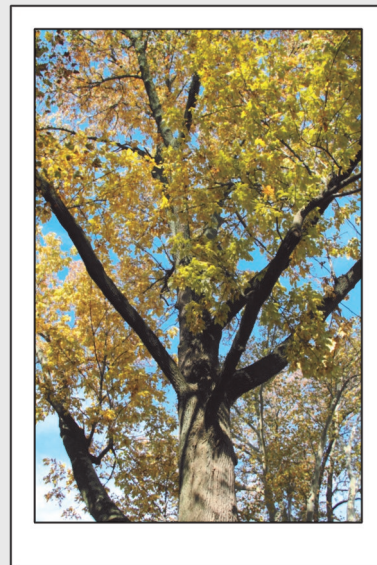
Bitternut hickory has leaves 6 to 10 inches long with 7 to 9 oval leaflets. The tree has a straight trunk and can grow to over 100 feet.

Bitternut hickory

Carya cordiformis

Location	Points	C.B.H.	Height	Crown
Brandywine Park, Wilmington	223	101	107	58
701 Delaware Ave., Wilmington ¹	211	106	87	71

¹ Brandywine Cemetery



Mockernut hickory

Mockernut hickory is considered one of the most abundant hickory trees and is often found on drier soils of ridges and hillsides. Unlike bitternut, it produces nuts that are sweet. It is also called white hickory due to the light color of its wood. An excellent source of fuel wood, mockernut is similar to other hickories because its wood is well-suited to applications that require strength, hardness, and flexibility.

Mockernut hickory leaves are 8 to 12 inches in length with 7 to 9 thin, sharp-pointed, finely-toothed leaflets that are dark-green on top and hairy orange-brown on the underside.

Mockernut hickory

Carya tomentosa

Location	Points	C.B.H.	Height	Crown
Brandywine Park, Wilmington	215	90	110	62
Dover Air Force Base, Dover	213	91	111	45
Dover Air Force Base, Dover	196	69	118	34



Pignut hickory

Pignut hickory is a common but not an abundant species in the oak-hickory forest association in the Eastern United States. Other common names for this tree are sweet pignut, coast pignut hickory, smoothbark hickory, swamp hickory, and broom hickory. Its pear-shaped nut ripens in September and October and constitutes an important part of the diet of many wild animals. The wood is used for a variety of products, including fuel for home heating.

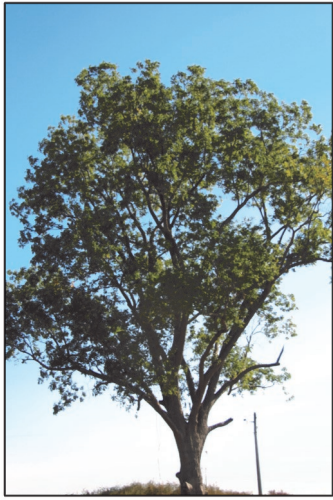
Pignut hickory leaves are 8 to 12 inches long with 5 (rarely 7) finely-toothed and sharply-pointed leaflets. As it matures, the tree's dark-gray bark forms into deeply-fissured diamond-shaped ridges.

Pignut hickory

Carya glabra

Location	Points	C.B.H.	Height	Crown
4976 Wheatleys Pond Rd., Smyrna	259	126	116	70
Dover Air Force Base, Dover	236	111	110	63
Brandywine Park, Wilmington	215	109	90	63





Pecan

Pecan is one of the better-known hickories. The early settlers who came to America found pecans growing over wide areas. Farmers harvest the nuts after they have fallen from the tree because nuts on the tree are still growing. In addition to the commercial edible nut it produces, the pecan provides food for wildlife. Pecans are excellent for the home landscape, providing a source of nuts, furniture-grade wood, and aesthetic value.

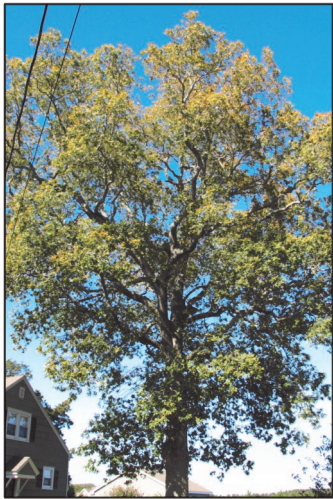


Pecan is a member of the walnut family and its leaves grow in groups of 11 to 17. The pecan nut is long and pointed with a thin shell.

Pecan

Carya illinoensis

Location	Points	C.B.H.	Height	Crown
Conrail Rd., Seaford	294	176	92	103
Odd Fellows Lodge #27, Laurel	282	150	107	101
24943 Broadkill Rd., Milton	282	174	86	87



Sand hickory

Sand hickory is an unusual tree well-suited to dry, sandy upland soil. It can make a great specimen or shade tree. Like other hickories, it displays a beautiful yellow color in the fall, which is when the nuts mature inside the splitting husks. Experts recommend preserving and cultivating this tree if found in the landscape.



Sand hickory has a compound leaf with 5 to 9 (but usually 7) leaflets. Its flowers appear from April to May as leaves unfold.

Sand hickory

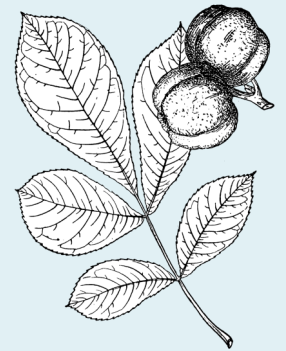
Carya pallida

Location	Points	C.B.H.	Height	Crown
Zoar Rd., Georgetown	215	121	76	73



Shagbark hickory

Common in Eastern forests, shagbark hickory gets its name from its distinct bark, which separates into long strips that give the tree a "shaggy" look. Like other hickories, its wood is strong and hard and can be used as a smoke wood for meats. Shagbark hickory is often found amongst oak trees and grows best in well-drained soils. It has both male flowers (which grow in bundles called catkins) and female flowers (in clusters known as petallets).



Shagbark hickory leaves are both compound and alternate, growing up to 10 inches long and 5 inches wide.

Shagbark hickory

Carya ovata

Location	Points	C.B.H.	Height	Crown
Marl Pit Rd., Middletown	261	150	95	62
Land of Henry DuPont, Ashland	244	113	113	72
Commerce St. & Main St., Kenton	218	116	89	51



Shellbark hickory

The nuts of the shellbark hickory are a favorite of wildlife because they are both sweet and edible and the largest of all the hickories. In addition to tool handles, the tree's hard and durable wood is also ideal for fuelwood and charcoal. The common name refers to the mature bark that peels away like a shell, although in strips like the shagbark hickory. Shellbark hickory is a slow-growing tree often found on deep bottomland soils near rivers and creeks. It is also more resistant to forest pests and pathogens than other hickories.

Shellbark hickory trees usually have 7 to 9 leaflets with a terminal leaflet somewhat larger than its lateral leaflets.

Shellbark hickory

Carya lacinos

Location	Points	C.B.H.	Height	Crown
Brandywine Park, Wilmington	245	118	108	76



American holly

The native American holly is easily identified by its dark green, thorny leaves and smooth bark. Holly has both male and female trees, with females producing ornamental red berries that are a favorite food for birds. The American holly was named Delaware's official tree in 1939 when the state was the leading exporter of holly Christmas wreaths. The wood is cream-colored and can be used as decorative inlay on furniture.

Holly was big business in Delaware in the 1920s and 1930s. As the year's last cash crop, holly wreath production boosted farm income until imported plastic wreaths put an end to the boom by the 1950s.

American holly

Ilex opaca

Location	Points	C.B.H.	Height	Crown
302 Clinton St., Delaware City	178	111	59	33
191 Deakyneville Rd., Townsend	157	103	42	46
S. of Lake Forest High School, Felton	140	71	59	41



American hornbeam

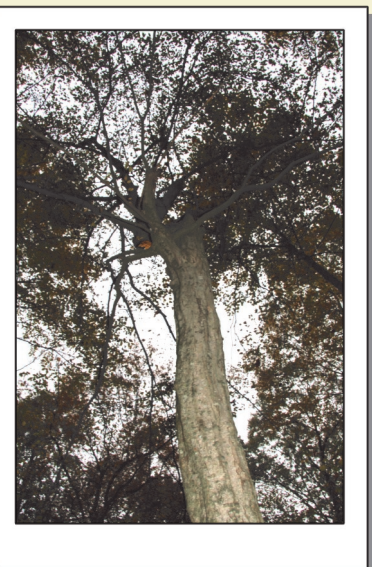
American hornbeam, also known as blue-beech, ironwood, or musclewood, is a small, native tree that seldom exceeds 30 feet in height. Its fruit is a small, egg-shaped nut. Its main distinguishing characteristic is its smooth, blue-gray bark (similar to a beech) that often appears twisted or contoured like muscles. Though not seen often in landscape settings, this flood-tolerant tree is common in Delaware's forests.

Hornbeam has flowers that appear along with the leaves around April. It produces a small egg-shaped nut eaten by forest rodents and birds. Hornbeams can be attractive ornamentals with beautiful fall color.

American hornbeam

Carpinus caroliniana

Location	Points	C.B.H.	Height	Crown
7320 Burnite Mill Rd., Felton	82	41	34	27
Hagley Museum, Wilmington	73	34	29	38





Kentucky coffeetree

While not native here, Kentucky coffeetree is the only member of its genus native to North America. A member of the legume family, it has sometimes been called the “dead tree” as it lies dormant for six months of the year (*gymnocladus* means “naked branch”). Its seeds (said to resemble coffee beans) grow in pods on female trees, which can be a nuisance in urban areas when they drop to the ground. Its wood quality is good but not widely used.



Kentucky coffeetree seeds are toxic to humans and animals. Its long leaves contain many leaflets that are pointed but not toothed.

Kentucky coffeetree

Gymnocladus dioicus

Location	Points	C.B.H.	Height	Crown
NW corner of the Green, Dover	212	113	82	69
Kent Co. Levy Court Parking Lot, Dover	179	131	31	68



Black locust

Locust refers to certain trees in the legume family. Black locust is native to the eastern United States and, though not naturally found in Delaware, is widely planted as a shade tree. However, in some parts of the United States, the tree is considered invasive due to its aggressive growth and root system. Because it is hard and durable, locust wood is valued for fence posts, firewood, and furniture.



Black locust leaves are pinnately compound with 7 to 21 small, round leaflets per leaf. Leaflets are typically 1.5 inches long.

Black locust

Robinia pseudoacacia

Location	Points	C.B.H.	Height	Crown
507 S. Walnut St., Milford	180	97	70	51



Honeylocust

Honeylocust is a fast-growing tree that tolerates poor soil conditions and is useful for establishing shade trees in new housing developments or parks. The fruit of the honeylocust is a flat legume (pod) that matures in early autumn. The pulp on the inside of its pods is edible, unlike the black locust, which is toxic. Honeylocusts produce a high quality, rot-resistant wood that polishes well, but the tree rarely grows in numbers to support its widespread use.



Honeylocust branches often have distinct thorns. The pinnately compound (older trees) or bipinnately compound leaves (on younger trees) turn a brilliant yellow color in the autumn.

Honeylocust

Gleditsia triacanthos

Location	Points	C.B.H.	Height	Crown
100 Reese Ave., Harrington	234	138	82	56
Brandywine Park, Wilmington	176	107	57	47
Brandywine Park, Wilmington	173	90	72	42



Bigleaf magnolia

Magnolias are among the oldest flowering trees and are very popular for landscaping uses because they have highly fragrant flowers and birds and rodents often like to feed on the tree's small, bright-red seeds. Bigleaf magnolia is a medium-sized deciduous tree known for its large leaves and large flowers. It has a relatively fast rate of growth and does not need full sun to survive once established. Like other magnolia trees, it is relatively free of problems but needs monitoring during a period of extended drought to ensure that it receives sufficient water to survive and thrive.

Bigleaf magnolia leaves are 12 to 32 inches long and 7 to 12 inches wide in the wild, but somewhat smaller in landscapes. The leaves are bright green above with a fuzzy, silver-grey underside.

Bigleaf magnolia *Magnolia macrophylla*

Location	Points	C.B.H.	Height	Crown
Rockwood Museum, Wilmington	154	94	46	58



Cucumber magnolia

Cucumber magnolia is a deciduous flowering tree with dark-brown, furrowed, and very scaly bark. Its wood is light and soft but not strong or durable. It is used in furniture and cabinet-making, and occasionally for flooring. This tree often has a pyramid-shaped crown, small branches, and a straight trunk.

Cucumber magnolia has deciduous leaves that are 6 to 8 inches long and 4 to 8 inches wide. They have an oblong-oval shape with smooth, often wavy margins and sharp-pointed ends.

Cucumber magnolia *Magnolia acuminata*

Location	Points	C.B.H.	Height	Crown
Zoar Rd., Georgetown	303	184	102	69
Ferris School, Elsmere	300	190	90	81
Scull Mansion, Dover	299	188	87	96



Saucer magnolia

Saucer magnolia is a medium-sized deciduous tree that gets its name from the saucer-shaped flowers that bloom in early spring: pinkish-purple on the outside and white on the inside. A fast grower with a good tolerance for pollution, the tree features foliage that maintains a high quality throughout the season. In the spring, its leaves are reddish-bronze in color before turning green in summer and eventually a yellow-brown in autumn.

Saucer magnolia has leaves that are usually 3 to 7 inches long and about half as wide. They are elliptical in shape with sharply-pointed tips.

Saucer magnolia *Magnolia soulangeana*

Location	Points	C.B.H.	Height	Crown
Hagley Museum, Wilmington	106	61	36	38





Southern magnolia

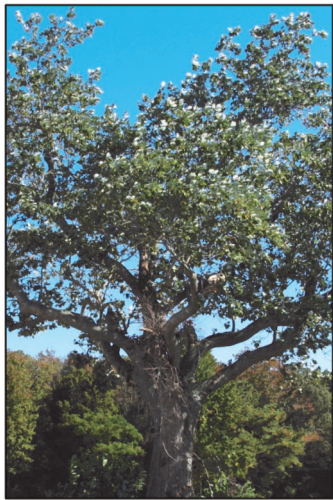
Southern magnolia is a large, striking evergreen tree. Like other magnolias, it is considered easy to grow and generally free of pests. The Latin term “grandiflora” literally means “big flower.” The tree’s beautiful white flowers measure from 7 to 8 inches across. Experts believe magnolia flowers evolved at a time when bees did not exist, and therefore developed to encourage pollination by beetles. Trees in this genus date back roughly 95 million years.



Southern magnolia leaves are shiny-green on the upper surface with a leathery, rust-color fuzz below. Oblong in shape and bluntly pointed, they are 5 to 8 inches long and 2 to 3 inches wide.

Southern magnolia *Magnolia grandiflora*

Location	Points	C.B.H.	Height	Crown
410 South Walnut St., Milford	216	139	65	49
Buena Vista, New Castle	138	74	52	47



Sweetbay magnolia

While there may be several species of magnolia planted in Delaware, only sweetbay magnolia, more commonly found in wet areas of southern Delaware, is actually native. Deciduous in the northern part of its range, it can reach over 60 feet tall on ideal sites. Its wood is soft and used occasionally for minor products such as handles, novelty woodenware, and lower-grade furniture.



Sweetbay magnolia has creamy white flowers that are very fragrant. Its deciduous leaves are 4 to 6 inches long and oblong in shape.

Sweetbay magnolia *Magnolia virginiana*

Location	Points	C.B.H.	Height	Crown
Bacons Rd., Laurel	145	96	39	40
Austin Short's Farm, Georgetown	115	46	64	18
Delaware State University, Dover	88	29	52	29



Red maple

While several maple species occur here, only red maple is common (in fact, it is the most numerous tree in Delaware). Planted in urban areas for its colorful fall foliage, red maples adapt easily to most environments. Red maple produces reddish-colored flowers in springtime before the leaves appear. This is followed by the winged, V-shaped fruit (samara) that ripens in late spring or early summer.



Red maple leaves have 3 to 5 lobes with coarsely-toothed edges. They turn a brilliant scarlet, orange or bright yellow color in fall.

Red maple *Acer rubrum*

Location	Points	C.B.H.	Height	Crown
32164 Townsends Rd., Dagsboro	333	227	83	93
24 Southern Blvd., Wyoming	278	202	65	44
Redden State Forest, Ellendale ¹	272	166	94	48

¹ Owens Tract



Silver maple leaves are bright green above and silvery-white underneath with deep narrow sinuses. The buds and samaras are a food source for squirrels.

Silver maple

Silver maple is a fast-growing shade tree that prefers wet areas but is very adaptable and can do well in urban areas. However, its wood is brittle and often damaged by storms. Silver maple also does not have autumn color comparable to other maples and its leaves often turn a pale yellow before falling. On mature trees the bark is gray and shaggy, with strips that pull loose at the ends. On young trees the bark is smooth and silvery gray.

Silver maple

Location

3554 Barley Mill Rd., Ashland

18 William St., Selbyville

412 North Bradford St., Dover

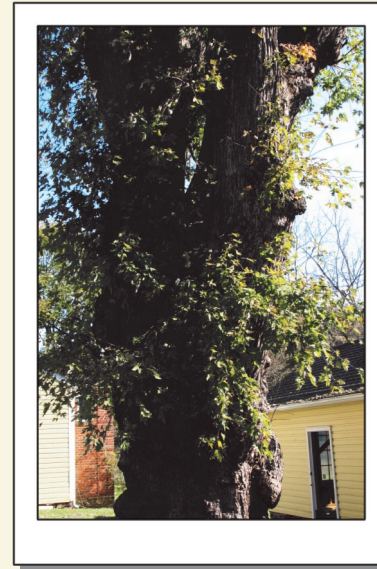
Acer saccharinum

Points C.B.H. Height Crown

374 274 80 81

343 250 72 82

326 210 98 71



Sugar maple leaves have 5 lobes separated by rounded, shallow sinuses. They produce colorful autumn foliage in varying shades of orange, yellow, or scarlet.

Sugar maple

Sugar maple is a valuable hardwood tree. It provides high-quality lumber that is heavy, strong and shock-resistant, useful for both furniture and hardwood flooring. Maple wood is especially suitable for bowling alleys and dance floors. The sap of the sugar maple is used to make maple syrup and maple sugar. The familiar gutter-clogging samaras make their appearance in springtime. In addition to its many other uses, sugar maple is also a popular shade and ornamental tree.

Sugar maple

Location

Hagley Museum, Wilmington

Forest Presbyterian Cemetery, Middletown

Route 15, Canterbury

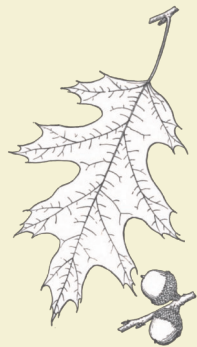
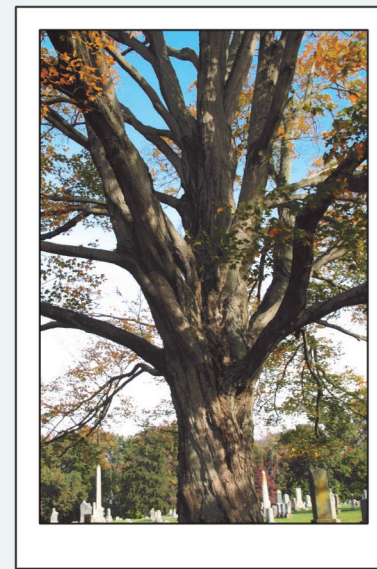
Acer saccharum

Points C.B.H. Height Crown

264 161 85 71

264 162 80 89

252 147 82 92



Black oak leaves are variable in form with 7 toothed lobes (can be 5) that are sometimes divided nearly to the midrib by rounded sinuses.

Black oak

Black oak is a common tree on the dry uplands of eastern forests. Like most other red oaks, it has spiny, pointed lobes. Its acorn is oval or rounded and enclosed for about half its length in a deep, scaly, bowl-shaped cup. In spring, its unfolding leaves are a deep red and then turn silvery within a few days. Older trees can have thick, black bark that is deeply divided into broad, rounded ridges.

Black oak

Location

Eden Hill Farm, Dover

705.5 Woodsdale Rd., Wilmington

801 West 20th St., Wilmington

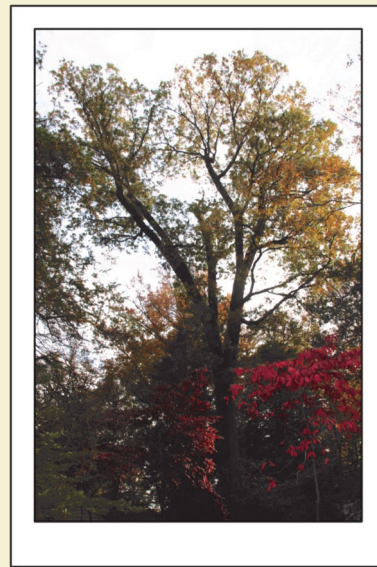
Quercus velutina

Points C.B.H. Height Crown

339 217 95 107

319 181 112 105

298 191 82 101





Laurel oak

Laurel oak is a rapidly growing tree usually found on sandy soils such as the edges of rivers and swamps. Its leaves are semi-deciduous, which means that the current year's leaves remain on the tree while those of the previous year will fall. Its acorns are small and dark-colored, with a flat, saucer-shaped cup that is covered with hairy scales. The tree is widely used as an ornamental and reaches maturity in about 50 years.



Laurel oak leaves are small, 2 to 4 inches long, pointed, and can have unevenly-lobed edges.

Laurel oak

Quercus laurifolia

Location	Points	C.B.H.	Height	Crown
2605 Newport Gap Pk., Wilmington	243	150	76	67



Northern red oak

Red oaks are usually distinguishable from white oaks by the pointed lobes on their leaves and the fact that their acorns are mostly bitter-tasting and don't mature until their second season. Red oak wood is hard, stiff, and high in shock resistance, but it is also extremely porous. While its wood is not as useful as white oak for constructing barrels or building ships, it is great for flooring.



Northern red oak leaves are 5 to 8 inches long and have 7 to 11 lobes. Each lobe is usually 3-toothed and sharply pointed with bristles on the points. The leaves usually turn red before dropping in autumn.

Northern red oak

Quercus rubra

Location	Points	C.B.H.	Height	Crown
Tatnall School, Wilmington	406	291	88	108
North Star Rd., Hockessin	331	181	126	97
Pleasant Hills, Rising Sun	271	131	117	90



Pin oak

Pin oak prefers deep, moist, rich soils such as those in bottomlands and the borders of swamps. Wood from pin oak takes special handling because of its tendency to split. Its acorn is quite round, about a half-inch in diameter, light brown with a thin, scaly, saucer-shaped cup. The trunk is covered with smooth, light gray-brown bark.



Pin oak leaves are divided into 5 to 7 lobes by wide, deep sinuses that are rounded at the bottom. The lobes are toothed and sharply pointed. Leaves turn red or scarlet in fall.

Pin oak

Quercus palustris

Location	Points	C.B.H.	Height	Crown
12 Courtney Rd., Wilmington	287	157	100	120
701 Delaware Ave., Wilmington ¹	264	151	88	100
Dover Air Force Base, Dover	245	126	105	57

¹ Brandywine Cemetery



Scarlet oak

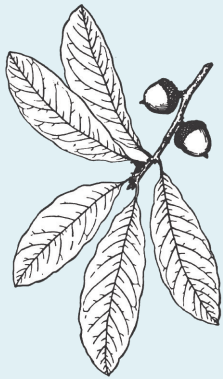
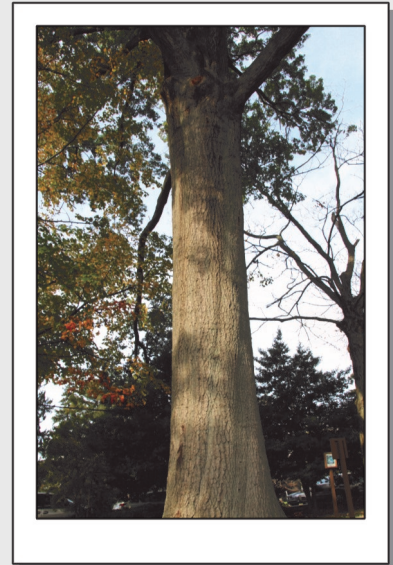
Scarlet oak is a native deciduous tree that can often be found on dry, sandy, acidic soils. The scarlet oak has comparatively small branches that spread to form a rather narrow, open, irregular crown. The acorn is one-half to 1 inch long, oval, and enclosed from one-third to one-half of its length in a deep, bowl-like cup. The tree is often planted as an ornamental because of its brilliant fall color.

Scarlet oak leaves are 5 to 8 inches long similar to the northern red oak, but have 5 to 9 pointed lobes deeply separated by wide sinuses that extend almost to the midrib. The leaves turn a brilliant scarlet in fall.

Scarlet oak

Quercus coccinea

Location	Points	C.B.H.	Height	Crown
Holy Cross Church, Dover	292	160	105	109
3000 Creek Rd., Yorklyn	289	161	104	97



Shingle oak

Unlike many other red oaks (except laurel and willow oak), shingle oak has simple and unlobed leaves that are usually 3 to 6 inches long and 1 to 1.5 inches wide. The tree's name derives from its use as a source of wooden shingles. Often taking on a pyramidal shape when young, it is known for its attractive, dark-green summer foliage. Its leaves usually turn a yellow-brown color in autumn and persist on the tree until winter.

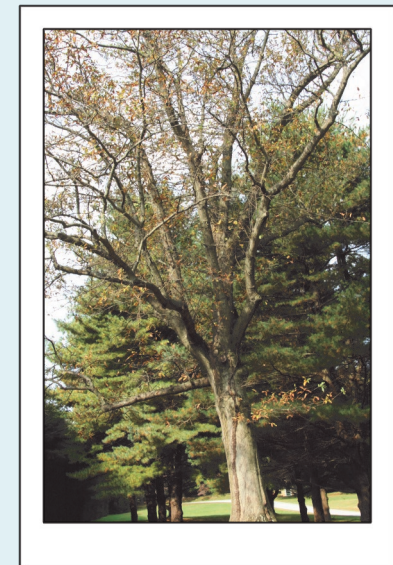
Shingle oak has simple and unlobed leaves that are arranged alternately. Its acorns are small and usually take two years to mature.

Shingle oak

Quercus imbricaria

Location	Points	C.B.H.	Height	Crown
Hagley Museum, Wilmington	205	96	90	78
Delaware State Univ., Dover ¹	179	93	67	75

¹ Baker Building



Southern red oak

Southern red oak is a medium-sized deciduous tree that has leaves identifiable by a distinctive inverted bell shape at the base and a long, narrow central lobe. Its acorns are round in shape with a scaly cup that covers about one-third of the fruit. Southern red oak tends to be an upland tree that grows on dry, sandy, or clay soils and can reach over 80 feet in height.

Southern red oak leaves are identified by a central lobe that is somewhat narrower and longer than the others with 3 to 7 deeply separated lobes.

Southern red oak

Quercus falcata

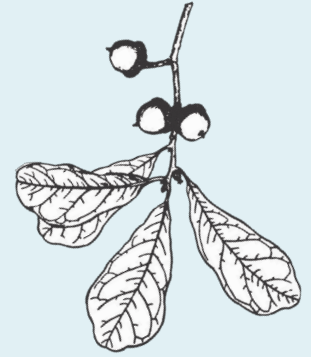
Location	Points	C.B.H.	Height	Crown
East of Routes 13 & 14, Harrington	362	251	87	98
Tressler Mennonite Ch., Greenwood	334	238	72	96
6613 Carpenter Bridge Rd., Frederica	308	200	84	96





Water oak

Water oak is a bottomland species that will also grow on upland sites. Its leaves are variably shaped but usually exhibit three indistinct lobes. The tree is easily damaged or killed by fire. On good sites the tree has a slender, straight trunk and can occasionally reach heights of 100 feet or more. Its acorn is small and almost black in color, often a half-inch or less in length. Its wood is not considered very suitable for finished lumber.



Water oak has deciduous leaves that are small, 2 to 4 inches long, and much more broad at the apex than at the base.

Water oak

Quercus nigra

Location	Points	C.B.H.	Height	Crown
Redden State Forest, Ellendale ¹	258	166	77	61

¹ Appenzellar Tract



Willow oak

Willow oak is so named because of its willow-like deciduous leaves. High-quality trees tend to be found on bottomland soils where they can grow from 80 to 100 feet tall. Willow oak can be almost evergreen in the southernmost portion of its range, but not in Delaware. Its trunk is often short and covered with blackish, deeply furrowed bark. It is a good choice as an ornamental shade tree.



Willow oak has narrow, smooth-edged leaves tipped with bristle points that are usually 2 to 5 inches long. Its round acorns are small in size with a thin, flat cup.

Willow oak

Quercus phellos

Location	Points	C.B.H.	Height	Crown
1626 Williamsville Rd., Houston ¹	357	253	81	92
Hunn Property, Dover	318	212	87	75
Eden Hill Farm, Dover	313	210	80	91

¹ Garden hedge



Bur oak

Bur oak is named for its rounded fringed acorns, which are the largest of any oak in North America ("macrocarpa" means "large fruit" in Latin). A rather slow-growing tree that can live for hundreds of years, it is resistant to fire and drought due to its large taproot. Every few years, larger quantities of acorns are produced (a process known as "masting") to overwhelm wildlife's ability to eat them for food.



Bur oak has somewhat large leaves divided into 5 to 7 lobes with wide sinuses that can reach almost to the midrib. Its wedge-shaped leaves are 6 to 12 inches long and 3 to 6 inches wide.

Bur oak

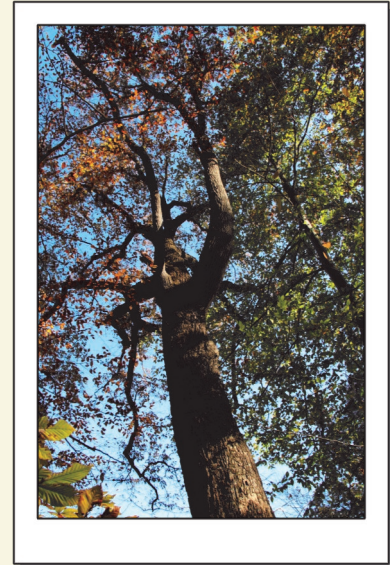
Quercus macrocarpa

Location	Points	C.B.H.	Height	Crown
Hagley Museum, Wilmington	210	108	80	86
Hagley Museum, Wilmington	209	110	82	69



Chestnut oak

Although common on dry, rocky soils, chestnut oak grows best in well-drained coves and bottomlands. As with most white oaks, its growth is slow on almost all sites. It can form pure stands on poorer sites of hillsides and mountain slopes, but is most often mixed with other species such as hickories, other oaks, and even pitch pines. The tree is a source of tannin, which can be used in the making of leather goods.

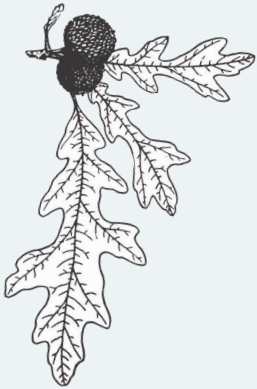


Chestnut oak leaves are deciduous, roughly-oval but often wider near the apex, and roughly-toothed. The shiny acorn is 1 to 1.5 inches long.

Chestnut oak

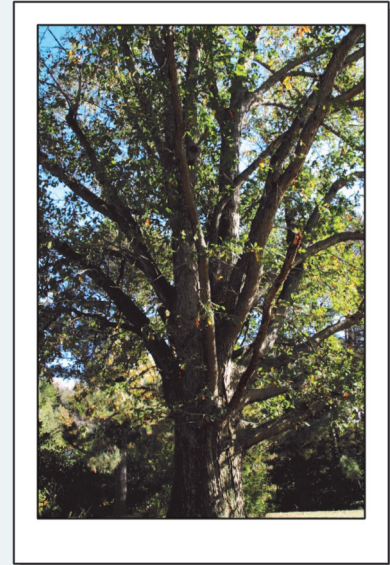
Quercus prinus

Location	Points	C.B.H.	Height	Crown
35510 East Line Rd., Delmar	333	213	96	95
Mount Cuba Center, Hockessin	291	144	129	70
56 Oakmont Drive, Wilmington	267	188	58	84



Overcup oak

Overcup oak gets its common name from its acorn, which is almost entirely covered over by its cup. It can take from 25 to 30 years before the tree produces acorns, and they are one of the few white oaks whose seeds do not germinate until spring. Predominantly found on poorly-drained bottomlands, it can reach up to 90 feet in height, but will usually be smaller. Its form and quality vary greatly throughout its range.

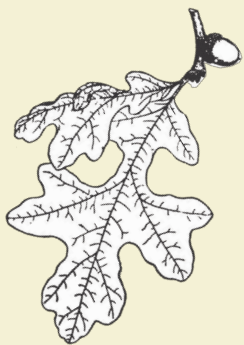


Overcup oak leaves are deciduous, 6 to 10 inches long, and separated into 5 to 9 rounded lobes by deep or shallow sinuses. Its acorns are fairly flat and one-half to 1 inch long.

Overcup oak

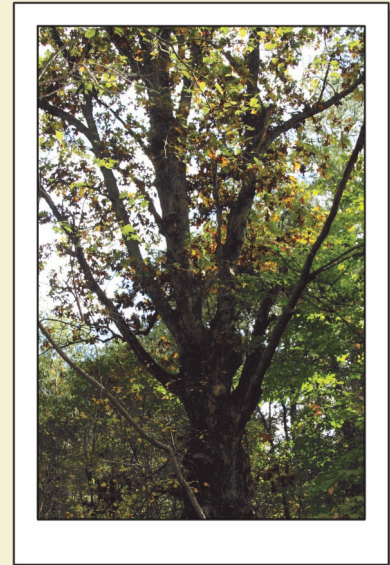
Quercus lyrata

Location	Points	C.B.H.	Height	Crown
8276 Shawnee Rd., Lincoln	212	126	65	82
8276 Shawnee Rd., Lincoln	203	115	72	65
8276 Shawnee Rd., Lincoln	182	103	66	51



Post oak

Post oak is a slow-growing deciduous oak with stout branches that often form a dense, spreading, round-topped crown. Recognizable by its leaves, which take the shape of a Maltese cross, it grows on a variety of soils and sites. Its heartwood is very heavy, hard, close-grained, and durable in contact with the soil. Its wide use for fence posts is the origin of its common name.



Post oak

Quercus stellata

Location	Points	C.B.H.	Height	Crown
Redden State Forest, Georgetown ¹	191	108	71	49
Redden Forest Lodge, Georgetown	168	93	61	56
Austin Short's Farm, Georgetown	145	65	73	30

¹ Jester Tract



Swamp chestnut oak

Swamp chestnut oak usually grows from 60 to 80 feet in height but can occasionally grow to 100 feet or more. The trunk is often free of branches for 50 to 60 feet. With stout branches that ascend at sharp angles, the tree often forms a round-topped crown. Its wood is hard, tough, very strong, and heavy. The wood of the swamp chestnut oak can be used in both flooring and construction, but is very difficult to kiln dry.



Swamp chestnut oak leaves are roughly oval, 6 to 8 inches long, 3 to 5 inches wide, and coated on the underside with thick silvery-white fuzz.

Swamp chestnut oak *Quercus michauxii*

Location	Points	C.B.H.	Height	Crown
Eagles Nest Landing Rd., Smyrna	331	215	86	119
Dover Air Force Base, Dover	221	100	108	53



White oak

A white oak tree can live for hundreds of years. The acorns of white oaks, larger and sweeter than red oaks, are more preferred by wildlife. The tree has a rounded spreading crown in the open and thrives on deep, well-drained loamy soils. Unlike those in the red oak group, its heartwood is resistant to decay and virtually impervious to liquids. White oak is ideal for flooring, kegs, and casks, and prized for shipbuilding.



White oak leaves are 5 to 9 inches long with 7 to 9 rounded lobes. The sinuses between the lobes vary in depth and the base narrows abruptly to form a wedge shape.

White oak *Quercus alba*

Location	Points	C.B.H.	Height	Crown
1217 Wilson Rd., Wilmington	356	239	90	109
Route 8, Dover	318	212	78	111
Hanby Outdoor Center, Wilmington	317	190	100	107



Osage-orange

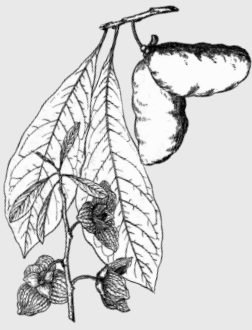
Osage-orange is native to the areas of the Great Plains historically inhabited by the Osage Indians. It was often planted in hedgerows to establish natural fences due to its stout branches and thorns. With a distinctive orange-brown bark, its large fruit resembles an orange and contains several nut-like seeds. Its very heavy, hard wood was once used for fence posts, wheels, and bows, hence its nickname "bow-wood."



Osage-orange leaves are 3 to 5 inches long and borne on thorny twigs, and have pointed-oval shapes and smooth margins. Its large green-yellow fruit ripens in fall and exudes a thick, milky juice.

Osage-orange *Maclura pomifera*

Location	Points	C.B.H.	Height	Crown
Hagley Museum, Wilmington	412	319	72	85
669 Southwood Rd., Hockessin	310	217	72	82
Walt Wagamon House, Milton	294	186	90	73



Paw-paw leaves are 6 to 12 inches long and half as wide. Its fruit usually appears in September and turns from light green to dark brown as it ripens. Paw-paw is said to derive from the Spanish "papaya" because its fruit bears some resemblance.

Paw-paw

Native to eastern North America, paw-paw is a large shrub or small tree up to 40 feet tall. As a shade-tolerant understory tree, paw-paw prefers moist, well-drained sites such as those near streams and swamps. The larvae of the Zebra Swallowtail butterfly are known to feed almost exclusively on its leaves. Its fruit, said to derive from the Spanish word for "papaya," ripens in September and can be from 3 to 5 inches in length.

Paw-paw

Asimina triloba

Location	Points	C.B.H.	Height	Crown
Hagley Museum, Wilmington	70	26	38	25
Winterthur, Wilmington	68	30	32	23



Persimmon leaves are 4 to 6 inches long and pointedly elliptical with wavy edges. Its fruit appears in October. Ripened by frosts, it has a rare sweet flavor.

Persimmon

Persimmons are found throughout the state but mostly in open areas or along the forest edge. Like the holly, persimmon trees are either male or female, with the female producing a seeded fruit 1 to 2 inches in diameter that sweetens as it ripens. Persimmon fruit is a staple in the diets of many animals. Its wood is hard, polishes easily, and is used for woodcarving and golf club heads.

Persimmon

Diospyros virginiana

Location	Points	C.B.H.	Height	Crown
221 Oak Rd., Seaford	201	119	68	54
235 Pine Valley Rd., Dover	174	100	60	57
5259 Little Mastens Corner Rd., Felton	129	63	59	27



Eastern cottonwood leaves are roughly triangular, toothed, pointed, 3 to 6 inches long, paler below than above, and with a flattened stem.

Eastern cottonwood

Eastern cottonwood is one of the fastest-growing commercial trees in North America. The bark of young trees and the upper stems of older trees is smooth and greenish. The bark on old trees is dark gray, heavily furrowed, and ridged. Its fruit consists of many bud-shaped capsules on short stems that hang from the branches in long, narrow clusters. Its lightweight wood is used for crates, boxes, and pulpwood for the manufacture of high-grade magazine and book paper.

Eastern cottonwood

Populus deltoides

Location	Points	C.B.H.	Height	Crown
Brandywine Park, Wilmington	246	130	96	78





Bigtooth aspen

Bigtooth aspen gets its common name from its leaf that features very conspicuous rounded teeth on the edges (*grandidentata* for “large teeth”). Its bark is thin, smooth, and light-gray to green on younger trees and upper parts of older trees. Near the base of older trees, the bark is dark brown with a tint of red and measures up to an inch in thickness. Its soft, light-colored wood is used for pulpwood.

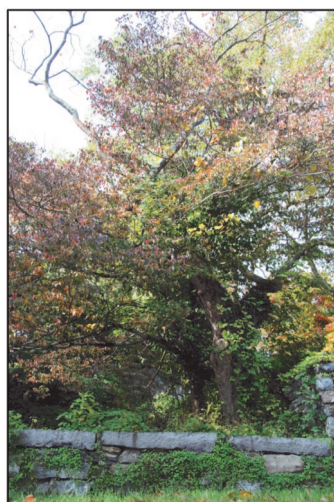


Bigtooth aspen leaves are 2 to 3 inches wide, roundish, pointed, and dark green in color on the upper surface with lighter green below.

Bigtooth aspen

Populus grandidentata

Location	Points	C.B.H.	Height	Crown
Mount Cuba Center, Hockessin	139	52	81	25
Mount Cuba Center, Hockessin	136	51	77	32
Taber State Forest, Burrsville	135	49	79	28



Redbud

Only native in extreme northern Delaware, this small tree is commonly planted in urban areas due to its abundant pink flowers and purple spring leaves. An excellent tree to plant near utility lines, redbud has little wildlife or timber value; however, the flower is a delicacy often eaten in soups or salads. The chief importance of the redbud lies in the ornamental value of its beautiful and abundant flowers, which appear in spring.



Redbud leaves have a distinct heart shape with smooth margins. After the flowers bloom, little bean pods appear. The leaves turn yellow before dropping in fall.

Redbud

Cercis canadensis

Location	Points	C.B.H.	Height	Crown
Hagley Museum, Wilmington	119	68	44	29
1125 Old Lancaster Pk., Hockessin	83	39	34	39



Sassafras

Common throughout Delaware, this tree is usually found on sandy soils but does not thrive in shade. It is easily recognized by its green twigs, variably shaped leaves (including mitten shapes), and spicy aroma. It is a great native tree for urban areas because of its fast growth and brilliant fall color. Sassafras roots are used for tea and many animals and birds eat the tree’s berries. While its orange-brown wood is light and durable, it seldom reaches a size suitable for lumber.



Sassafras leaves are very variable, some with no lobes or up to five lobes. The tree flowers in April and bears fruit in early fall. Its shiny dark blue berry (drupe) has an aromatic pulp covering a light brown seed.

Sassafras

Sassafras albidum

Location	Points	C.B.H.	Height	Crown
701 Delaware Ave., Wilmington ¹	219	152	55	47
Federal St., Milton	200	132	56	48
Blueberry Rd., Millsboro	189	75	104	38

¹ Brandywine Cemetery



Sweetgum has leaves shaped like a six-point star missing its bottom point. The reddish-brown fruit ("monkey ball") matures in October, and persists until early the next year.

Sweetgum

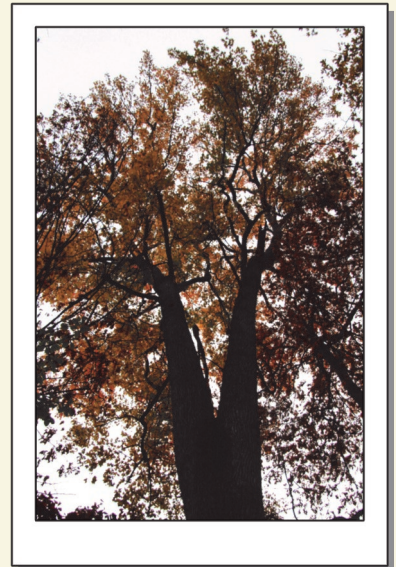
Both common and native in Delaware, sweetgum prefers wetter sites but will grow on many soils. Easily identified by its five-pointed, star-shaped leaves and its spiny "monkey balls," it is commonly planted in urban areas although its roots require a large area. Fall color can range from yellow to maroon to purple—all on one tree. Its wood is difficult to dry and has historically been used for low-value products such as peach baskets and ice cream spoons.

Sweetgum

Liquidambar styraciflua

Location	Points	C.B.H.	Height	Crown
Dover Air Force Base, Dover	247	110	121	64
3052 Andrews Lake Rd., Frederica	242	104	124	57
S. of Sawmill Rd., Georgetown ¹	210	101	95	56

¹ west of Bryans Store Rd.



London planetree leaves are similar to sycamore, but may be more deeply lobed. There can also be 2 to 3 seed balls per stem.

London planetree

London planetree is a non-native hybrid of the American sycamore that is also planted in Delaware. Because it is less susceptible to diseases and insect pests, it has become a popular roadside tree in urban areas. The bark commonly appears as either pale grey-green, smooth and exfoliating, or buff-brown and not exfoliating. On mature specimens, the tree's trunk can sometimes take on a warted appearance as it advances with age.

London planetree

Platanus x acerifolia

Location	Points	C.B.H.	Height	Crown
Winterthur, Wilmington	335	221	88	106
1191 Boyds Corner Rd., Middletown	320	205	95	80
2304 Delaware Ave., Wilmington	263	162	80	85



Sycamore leaves are 4 to 7 inches long with palmate venation and toothed edges. Its 3 to 5 lobes are divided by broad shallow sinuses. The one-inch round fruit breaks up when ripe.

Sycamore

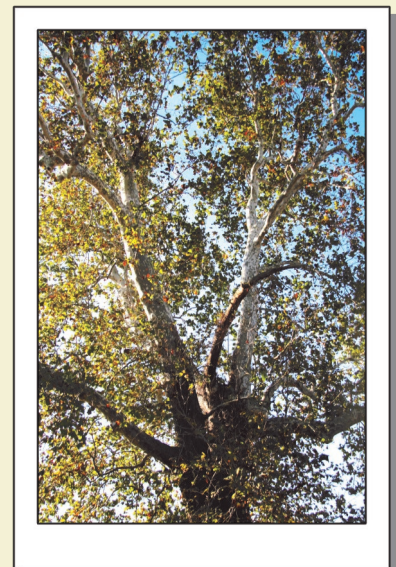
Sycamore, or American planetree, is a tree native to Delaware that can grow rapidly to reach great heights and massive sizes. It is found along streams and rivers but can also be planted in drier urban areas. It is easily identified by its mottled, multi-colored bark. The whitish bark that covers the upper trunk and branches falls off in irregular patches, exposing the bark underneath. Its wood is not very strong or durable but is used for furniture, cutting boards, and paper.

Sycamore

Platanus occidentalis

Location	Points	C.B.H.	Height	Crown
W. of Hickman Rd., Greenwood ¹	400	266	109	99
Valley Garden Park, Wilmington	374	221	122	124
805 Sycamore Lane, Centreville	363	215	120	110

¹ north of Scotts Store Rd.





Blackhaw viburnum

Several types of viburnum are native to the First State. While generally assuming a shrubby form, species such as maple-leaf viburnum and southern arrowwood are among the most recognizable and common understory species in our forests. One species, blackhaw, tends to have a central stem and can achieve small tree status. Viburnums have showy flowers, provide ample food for wildlife, and make attractive ornamentals for landscape planting.



Blackhaw viburnum

Viburnum prunifolium

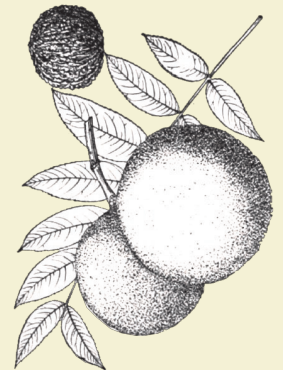
Location	Points	C.B.H.	Height	Crown
1472 Ashland Clinton School Rd., Yorklyn	58	32	20	23
Mount Cuba Center, Hockessin	53	20	25	30

Blackhaw viburnum has deciduous leaves that are small (2 to 4 inches long) and elliptical in shape.



Black walnut

Native to Delaware, walnut prefers deep, rich, moist soils. Walnuts are usually planted in open areas within an urban environment because they are allelopathic (produce toxins harmful to other plants). Walnuts develop best on deep, well-drained soils and black walnut trees are prized for their wood, which is used for veneer and furniture because it is durable and worked easily. Inside a yellow-green fibrous husk is the sweet and edible nut favored by many wildlife.



Black walnut

Juglans nigra

Location	Points	C.B.H.	Height	Crown
Holy Cross Church, Dover	332	218	90	95
416 Union St., Milton	301	186	95	81
1518 Gilpin Ave., Wilmington	266	158	87	82

Black walnut has compound leaves that are up to 24 inches long with 15 to 23 sharply-oval, toothed, and long-pointed leaflets.



Butternut

Butternut grows best on stream banks and on well-drained soils. It is not a common tree in any area but is a fast-growing species on favorable sites. However, the tree rarely attains more than 100 feet in height and often divides 20 to 30 feet from the ground into stout limbs that form the wide-spreading, round-topped crown typical of open grown trees. The wood is light and soft but not strong. It is most often used for interior finishes and furniture.

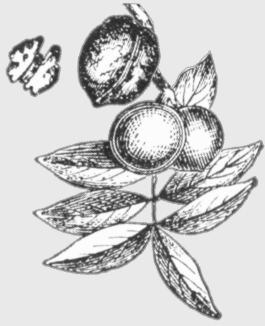


Butternut

Juglans cinerea

Location	Points	C.B.H.	Height	Crown
Mount Cuba Center, Hockessin	175	75	84	62
Hagley Museum, Wilmington	167	66	91	42

Butternut leaves are deciduous, alternate, and pinnately compound. Each leaf is 15 to 20 inches long with 11 to 17 oblong, fine-toothed, pointed leaflets, each 2 to 3 inches long.



English walnut

Unlike the black walnut, English walnut is a non-native tree that is the source of the thin-shelled and easily-opened type of walnut most commonly produced for human consumption. Fast-growing and attractive, it is a landscape tree with a rounded spreading crown that does well in full sun and rich deep soils. The wood of the English walnut is considered moderately durable and easy to work with a straight grain. It is commonly used for furniture, cabinets, paneling, and veneer.

English walnut leaves are alternately arranged and oddly-pinnate with 5 to 9 leaflets. Like all walnuts, its twigs contain a chambered pith with tiny brown air spaces.

English walnut

Juglans regia

Location	Points	C.B.H.	Height	Crown
39 South Main St., Camden	255	157	79	74



Yellow-poplar

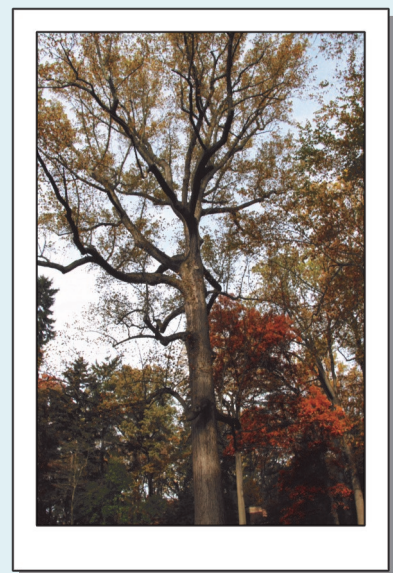
Not a true poplar (a member of the magnolia family), yellow-poplar is a valuable commercial tree because its wood is used for many products. Shade-intolerant and self-pruning, it features a remarkably straight trunk often devoid of lower branches. A rapid grower resistant to many pests and diseases, it is now a popular landscape tree. With a preference for deep, rich soils, it is one of the tallest tree species in Delaware. The tree is also known as tulip-poplar, named for the flower that resembles a tulip.

Yellow-poplar has leaves with a unique shape. Its fragrant flowers appear in spring and the leaves turn a clear yellow in the autumn.

Yellow-poplar

Liriodendron tulipifera

Location	Points	C.B.H.	Height	Crown
Winterthur, Wilmington	411	228	157	103
Woodlawn, Wilmington	394	204	162	110
Winterthur, Wilmington	386	209	152	98



Zelkova

Zelkova is not native, but it is currently the largest tree of any species found in Delaware. Found along many city streets in the First State, its vase-shaped crown makes it an attractive and popular urban tree. Also known as Japanese zelkova, the tree has been planted in many areas that were once occupied by the American elm tree. A deciduous species that can sometimes reach 100 feet in height, zelkova prefers sunny sites and has a moderate growth rate. Some unique specimens can develop massive trunks.

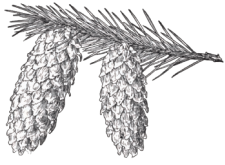
Zelkova leaves look much like the American elm (almost wiped out by the Dutch elm disease - both are in the Ulmaceae family). The leaves turn orange, yellow, or red in fall.

Zelkova

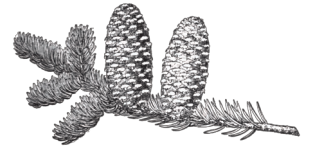
Zelkova serrata

Location	Points	C.B.H.	Height	Crown
C.P. Schutt Estate, Greenville	426	319	80	108





UNUSUAL TREES

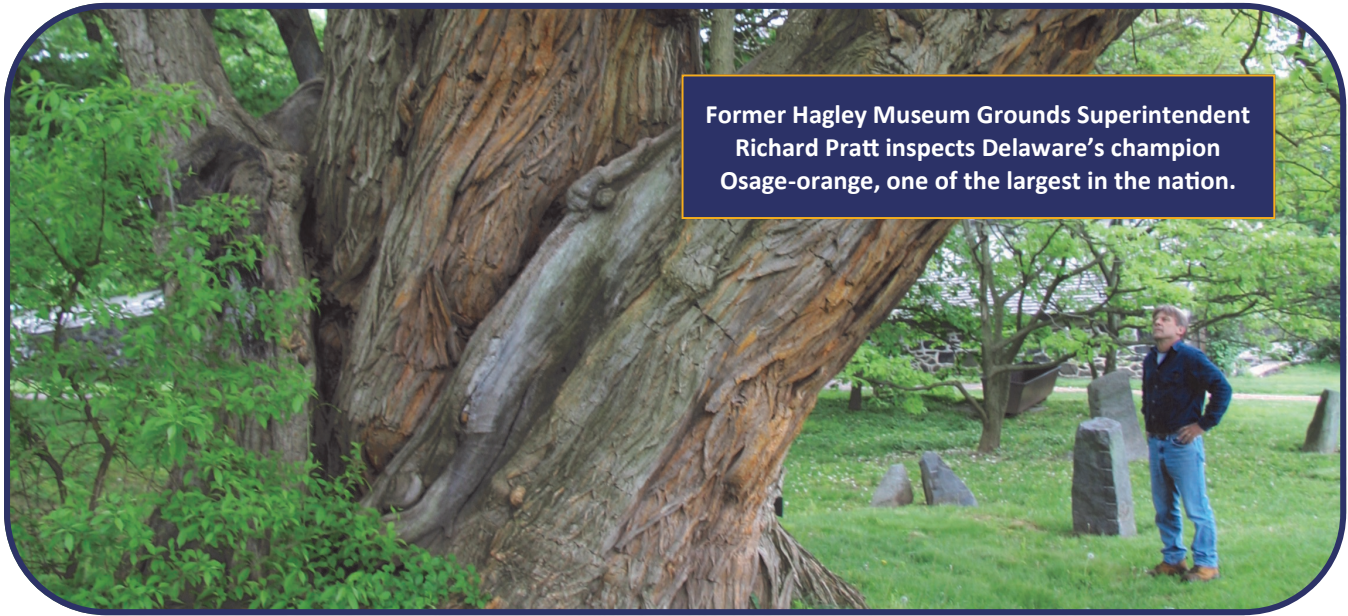


Each of the following tree species meet one of the following criteria:

1. They usually occur as shrubs in our native forest but very rarely will achieve tree size.
2. They are non-native but not invasive, and are sometimes reported to the Delaware Forest Service.
3. They are unusual species with only one or two known in the State.

Common Name, <i>Latin Name</i>	Location	Points	C.B.H.	Height	Crown
Atlas cedar, <i>Cedrus atlantica</i>	Rockwood Museum, Wilmington	217	141	59	68
Austrian pine, <i>Pinus nigra</i>	Hagley Museum, Wilmington	180	83	90	28
Balsam fir, <i>Abies balsamea</i>	Ross Mansion, Seaford	220	119	89	47
Cedar of Lebanon, <i>Cedrus libani</i>	Brandywine Cemetery, Wilmington	216	144	54	73
Colorado blue spruce, <i>Picea pungens</i>	Wilmington Country Club, Wilmington	145	80	60	18
Douglas-fir, <i>Pseudotsuga menziesii</i>	Belmont Hall, Smyrna	222	120	89	50
English yew, <i>Taxus baccata</i>	Christ Episcopal Church, Dover	227	160	51	62
European larch, <i>Larix decidua</i>	Brandywine Park, Wilmington	185	101	71	51
Fraser fir, <i>Abies fraseri</i>	4353 Summit Bridge Rd., Middletown	195	123	63	34
Giant sequoia, <i>Sequoiadendron giganteum</i>	Hagley Museum, Wilmington	277	178	89	38
Himalayan pine, <i>Pinus wallichiana</i>	Winterthur, Wilmington	286	176	94	62
Incense-cedar, <i>Calocedrus decurrens</i>	Marl Pit Rd., Middletown	246	149	90	29
Japanese umbrella pine, <i>Sciadopitys verticillata</i>	Bannister Hall, Smyrna	132	60	64	32
Nikko fir, <i>Abies homolepis</i>	Winterthur, Wilmington	177	94	74	36
Nordmann fir, <i>Abies nordmanniana</i>	Buena Vista, New Castle	264	168	86	39
Northern white-cedar, <i>Thuja occidentalis</i>	Baynard Farm, Clayton	149	83	60	22
Norway spruce, <i>Picea abies</i>	Hagley Museum, Wilmington	237	122	104	43
Pacific silver fir, <i>Abies amabilis</i>	Ross Mansion, Seaford	173	94	72	28
Red pine, <i>Pinus resinosa</i>	Bellevue State Park, Wilmington	152	73	70	37
Tamarack, <i>Larix laricina</i>	Buena Vista, New Castle	199	114	70	61
Witch-hazel, <i>Hamamelis virginiana</i>	Hagley Museum, Wilmington	63	25	30	32

"Big Trees of Delaware, 4th Edition" was compiled under the direction of Glenn "Dode" Gladders, DFS Forest Health Specialist, with the assistance of the following Delaware Forest Service staff: James Dobson, Marcia Fox, Michael Green, Matt Hansen, Kyle Hoyd, Henry Poole, William Seybold, Samuel Topper, and Daryl Trotman. Photographs by Taryn Davidson for the Delaware Forest Service.



Former Hagley Museum Grounds Superintendent Richard Pratt inspects Delaware's champion Osage-orange, one of the largest in the nation.



Delaware Forest Service Office of Information and Education 2320 S. DuPont Highway, Dover, DE 19901

Editing, layout and publication design by
John Petersen, DFS Community Relations Officer

DELAWARE FOREST SERVICE OFFICE LOCATIONS: MANY BRANCHES TO SERVE YOU

NEW CASTLE COUNTY
Blackbird State Forest
502 Blackbird Forest Rd.
Smyrna, DE 19977
(302) 653-6505

KENT COUNTY
Forest Service - Main Office
2320 S. DuPont Highway
Dover, DE 19901
(302) 698-4500

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Redden State Forest
18074 Redden Forest Drive
Georgetown, DE 19947
(302) 856-2893



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