

Anatomy of a Tree

Branches
Extend from the trunk, with larger branches called boughs and smaller branches called twigs. Branches support the growth of foliage.

Leaves
Convert carbon dioxide and water into oxygen and sugar through photosynthesis. Leaves release oxygen into the atmosphere and can provide shade, reduce wind force, and filter out dust and other particles.

Trunk
The main stem of the tree that provides structural support. It also provides the pathways by which the tree transports water and nutrients.

Roots
Roots anchor the tree, absorb water and nutrients from the soil, and store energy.

Inside the Trunk

Bark
Comprised of two parts, the outer bark protects the tree from pests, disease, and damage. The inner bark, called *phloem*, transports nutrients and sugars from the leaves.

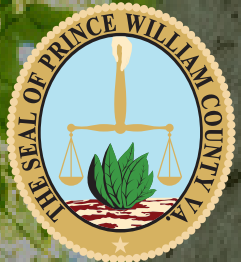
Sapwood
The sapwood is the outer, living portion of a tree's wood that transports water and nutrients gathered by the roots.

Cambium
Under the bark is the cambium, a thin layer of dividing cells which are responsible for a tree's growth in diameter.

Heartwood
As the tree grows, older sapwood cells closest to the center of the tree die and become heartwood. This layer provides the primary structural support for the tree.

Pith
The soft core of a young tree or new growth. In mature trunks, it dries out or gets replaced by heartwood.

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Red maple: Robert L. Anderson, USDA Forest Service, Bugwood.org
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Beech tree courtesy of Guy Bryant, Adobe
Stock. The tree species' selected were found
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more information, visit: bit.ly/PWCitree*

A guide to Native Trees

in Prince William County

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White Oak *Quercus alba*

Identifiable by pale, flaky bark, this oak can reach heights of up to 100 feet. As one of the most important wildlife-supporting tree species in the country, it provides food and habitat for over 500 species of butterflies and moths. Sapling growth is declining due to poor land management and competition with invasive species.

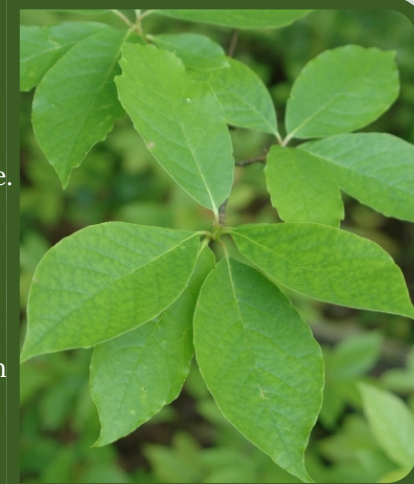
Eastern Juniper *Juniperus virginiana*

This slow-growing coniferous evergreen can live for over 900 years. Highly drought-tolerant and a pioneer species, often among the first plants to establish in disturbed habitats. The berries provide an essential food source for many native bird species. Also known as red cedar, despite no relation to true cedars, this tree is susceptible to bagworms and cedar-apple rust.



Black Gum *Nyssa sylvatica*

Also known as black tupelo, this tree provides food and habitat for a variety of wildlife. Glossy leaves transition from purple to bright red in autumn, a striking seasonal display. With a lifespan exceeding 650 years, this species faces challenges from climate change and habitat disruption.



Tulip Tree

Liriodendron tulipifera

The tallest hardwood tree species in the eastern United States, this slender, fast-growing tree often remains branchless until reaching 80 feet in height. In spring, yellow, tulip-like flowers emerge, adding to its distinctive appearance. While generally resistant to insect pests, this species can be affected by yellow-poplar weevils and cankers.



American Beech *Fagus grandifolia*

The most abundant tree in Prince William County and the only species of beech tree native to North America. Tolerant of shade and often found in the understory, the beech nuts produced are an important food source for wildlife. Currently under threat from beech leaf disease.



Red Maple *Acer rubrum*

Among the most numerous and widespread tree species in the country, this tree thrives in a variety of habitats and soil conditions. The leaves turn a brilliant scarlet in autumn, while the buds, flowers, and samaras also display a red hue. Frequently affected by scale insects, such as gloomy scale, which can change the color and texture of the bark and cause dieback.



Virginia Pine *Pinus virginiana*

Generally a slow-growing, medium-sized tree, this species thrives in poor soils and disturbed sites, making it a pioneer species. Often cultivated for wood pulp and commonly used as Christmas trees, this species is vulnerable to pine conk fungus. Infection leads to heartwood rot, making the wood unsuitable for lumber.

American Hornbeam *Carpinus caroliniana*

A small tree often found in understories and along streams, known for smooth gray, muscle-like bark and hard, dense wood, used in tool handles. Other names include musclewood or ironwood. The leaves, twigs, and fruit are valued food sources for wildlife. Resistant to most tree diseases, though occasionally affected by twig blight.

