What is a Conifer?

Conifers are woody plants that produce separate male and female cones on the same tree. Male cones produce pollen and are often smaller than females. The male cones are usually found on the lower branches, enabling wind to carry the pollen to the female cones found higher on the branches. Seeds are produced in the female cones, which protect the seeds from cold temperatures, wind, birds, and other animals. Not all cones are woody; some resemble fruits or berries, like those found on junipers and yews.

The leaves of conifers are often referred to as needles and function like other plant leaves. Conifer needles have some advantages over other leaves. The waxy coating protects them from drying out, they can capture sunlight all year, and they are difficult for insects and animals to eat. Most conifers are evergreen, but some are deciduous and lose their needles in autumn.

Use needles and cones to identify conifers

**PINES**

Needles are in clusters of 2 to 5. Cones are woody and rigid. Counting the needles in each bundle is the first clue to identifying pines. Images courtesy VA Department of Forestry.

**SPRUCE**

Needles have sharp points and attach singly to the stem on short stalks. Cones dangle from the branches and fall to the ground whole. Spruces are hard to shake hands with. You might come away with a few scratches.

**FIRS**

Needles are flat and blunt and attach directly to the stem. Cones are upright and disintegrate and fall to the ground in pieces. Firs are easier to touch as their needles are softer than spruces.

A Guide to the Conifer Walk

The State Arboretum of Virginia at the University of Virginia's Blandy Experimental Farm

Birds and Conifers

Several species of birds are frequent visitors to the conifers at Blandy. Pine Warblers are summer residents that nest almost exclusively in pines and feed on insects. Pine Siskins migrate to Virginia forests from the northern part of North America in winter and feed on conifer seeds. Cedar Waxwings are beautiful and unique-looking birds that feed on juniper “berries,” which are really a type of cone.

Your Support Matters

The Conifer Walk is supported by the Foundation of the State Arboretum. Become a member of FOSA and help preserve the conifers and other trees. Other benefits include discounts at other gardens across the country. Visit our website blandy.virginia.edu and click on the “Support” tab for more information.

**CONTACT US**

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**FOLLOW US**
Exploring the Conifers

The Arboretum’s conifer collection includes about 1,400 specimens from North America and around the world. There are several State Champion trees found along the Conifer Walk. The stops provide opportunities to learn more about each tree through signage, and some of the trees tell their own stories accessible through QR codes or phone numbers. To access these stories by phone, dial 1-540-837-1758 and the appropriate extension.

1. Japanese umbrella pine (Sciadopitys verticillata) 
Native to southern Japan, the unique needles are arranged like the spokes of an umbrella. Virginia State Champion.

2. Bald cypress (Taxodium distichum) 
A deciduous conifer native to wetlands in the southeast US, needles turn bronze and fall from the tree in autumn. Ext. 261

3. Incense cedar (Calocedrus decurrens) 
Native to the western US. Ext. 262

4. China fir (Cunninghamia lanceolata) 
This unusual tree in appear-4. China fir (Cunninghamia lanceolata) 
Native to China in the 1940s. Now widespread planted throughout the world. Ext. 267

5. Japanese cedar (Cryptomeria japonica) 
Native to Japan and southern China, this tree has been harvested for timber and cultivated for centuries as an ornamental.

6. White fir (Abies concolor) 
A dominant tree in the western US that can reach 250’ tall. Indigenous people used the pitch from the pine to construct homes, totem poles, canoes, instruments, and tools. Ext. 266

7. Balsam fir (Abies balsamea) 
Currently being decimated by the balsam woolly adelgid, a tiny insect accidentally introduced from Europe that feeds on the tree’s sap.

8. Blue Atlas cedar (Cedrus libani) 
A popular landscape tree prized for its blue needles and attractive form.

9. European larch (Larix decidua) 
Native to the Alps and other European mountains, the needles of this deciduous conifer are arranged in a spiral along the shoots. Ext. 264

10. Norway spruce (Picea abies) 
The most planted ornamental spruce in the US. Its drooping branches are its most distinct feature.

11. Cedar of Lebanon (Cedrus libani) 
Once used to build ships, temples, and palaces. Harvested extensively in its native Turkey and Lebanon, but restoration efforts are underway. Ext. 265

12. Sawara cypress (Chamaecyparis pisifera) 
An important timber tree in Japan known for its strong, fragrant wood. A relative of the native American arborvitae.

13. Eastern hemlock (Tsuga canadensis) 
Once an important member of eastern forests, these trees are threatened by the hemlock woolly adelgid, an accidentally introduced pest. Ext. 265

14. Douglas fir (Pseudotsuga menziesii) 
The needles and cones of Douglas fir are eaten by rabbits and grouse, and the seeds are a favorite of red squirrels.

15. White pine (Pinus strobus) 
True pines hold their needles in bundles, counting the number of needles in the bundle is the first step to telling the pines apart. How many needles does it have per bundle? Virginia State Champion. Ext. 269

16. Ponderosa pine (Pinus ponderosa) 
A dominant tree in the southwestern US. A drought-tolerant native with awl-shaped needles and small, flower-like cones. Ext. 268

17. Western redcedar (Thuja plicata) 
A unique native conifer with awl-shaped needles and small, flower-like cones. Ext. 268

18. Long leaf pine (Pinus palustris) 
Currently one of the most endangered forested eco-systems in the US. Critical habitat for several wildlife species. Restoration efforts are underway in Virginia and some of the southeastern states. Ext. 268

19. Himalayan white pine (Pinus wallichiana) 
This pine is widely used for timber and a source of turpentine in its native range. How many needles does it have per bundle? Virginia State Champion.

20. White spruce (Picea glauca) 
Native to the northern forests of the US and most of Canada. The needles are eaten by rabbits and grouse, and the seeds are a favorite of red squirrels.

21. Arizona cypress (Hesperocyparis arizonica) 
A drought-tolerant native of the southwestern US. A good landscape specimen even in our area. Virginia State Champion. Ext. 266

22. Dawn redwood (Metasequoia glyptostroboids) 
“A living fossil” thought to be extinct by western science until found growing in China in the 1940s. Now widely planted throughout the world. Ext. 267

23. American arborvitae (Thuja occidentalis) 
A unique native conifer with awl-shaped needles and small, flower-like cones. Ext. 267

Nurture your conifer curiosity as you explore the walk, taking note of the different shapes, colors, textures, and scents.