



Problem-free Trees for Virginia Landscapes

Mary Ann Hansen, Department of Plant Pathology, Physiology, and Weed Science, Virginia Tech

Alex Niemiera, Department of Horticulture, Virginia Tech

Eric Day, Department of Entomology, Virginia Tech

Many of the tree species commonly planted in Virginia landscapes suffer from disease and insect problems. Although some diseases can be cured, most must be controlled on a preventative basis, and insect problems are best controlled before populations reach high levels. The best option for new plantings is to choose species that have a low risk of developing disease.

Pictured below, in alphabetical order, are some choices of problem-free trees for Virginia landscapes. Additional recommended tree species for Virginia are listed in Table 1. All suggested trees in this article (with or without photos) are relatively pest and disease-free at the time of article publication (July 2016). These species are recommended both for their desirable horticultural characteristics, as well as their reduced susceptibility to diseases and insect pests. However, because non-native pests and pathogens continue to enter our landscapes, it is possible that some of these tree species would succumb to a pest

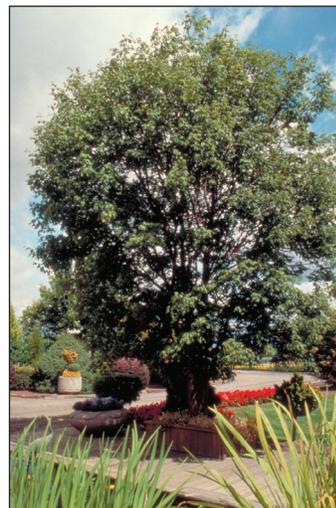
or disease in the future. Although some of the trees listed may suffer sporadic damage from Japanese beetles or defoliating caterpillars, the trees generally recover from damage by these pests. No tree species is completely immune from disease or insect feeding, and the trees listed in this fact sheet are no exception. Minor problems are noted for individual species.

Many of the species listed are available in a variety of cultivars. Check for cultivars that vary in flower or leaf color, growth habit, or cold hardiness. Some species that are regarded as pest-prone may have a cultivar that is resistant to particular insects or diseases. Consult your local nursery personnel or Extension agent for recommendations on the latest cultivars.

Plants marked with an asterisk (*) are native to the eastern U.S. All photographs, unless noted, were taken by the second author (Niemiera).

Problem-free Trees

***Acer griseum* (paperbark maple)** is a slow-growing, small (<25 ft) tree that is suited to small lot sizes. It has beautiful exfoliating bark and is adaptable to a variety of soils. Although many species of maple are susceptible to the lethal disease, *Verticillium* wilt, or other diseases, paperbark maple is relatively trouble-free.



www.ext.vt.edu

Produced by Communications and Marketing, College of Agriculture and Life Sciences, Virginia Tech, 2016

Virginia Cooperative Extension programs and employment are open to all, regardless of age, color, disability, gender, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, genetic information, veteran status, or any other basis protected by law. An equal opportunity/affirmative action employer. Issued in furtherance of Cooperative Extension work, Virginia Polytechnic Institute and State University, Virginia State University, and the U.S. Department of Agriculture cooperating. Edwin J. Jones, Director, Virginia Cooperative Extension, Virginia Tech, Blacksburg; M. Ray McKinnie, Interim Administrator, 1890 Extension Program, Virginia State University, Petersburg.

VT/0416/450-237/PPWS-70P

***Cladrastis kentukea** (American yellowwood)** is a medium-size, vase-shaped tree. It has attractive, smooth bark and a showy display of white, pendulous flowers in May. This species, native to the central and southern states, tolerates dry and alkaline soils. American yellowwood does require pruning in youth to develop a good branch structure since it has a tendency to produce numerous branches that have a poor angle of attachment. (photo courtesy of R. E. Lyons)



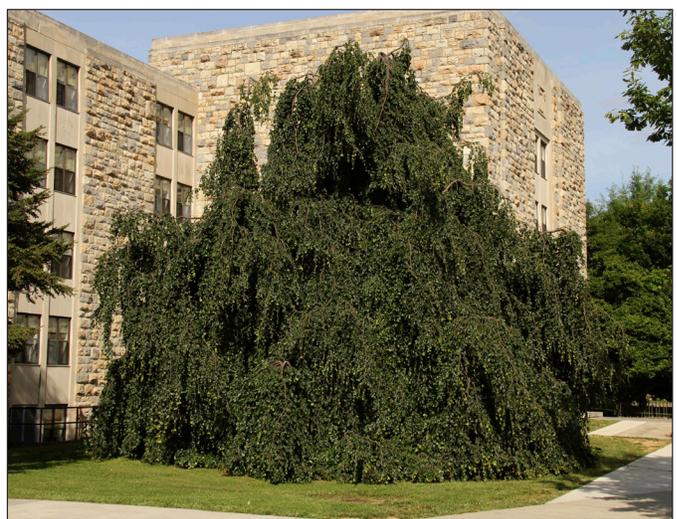
***Cornus kousa* (kousa dogwood)** is a small-size tree native to China and Japan. Although quite different in its flowering habit compared to the native flowering dogwood, *Cornus florida*, kousa dogwood has resistance to *Discula anthracnose*, the fungal disease that has killed many native dogwoods on the East Coast. Some cultivars of *C. kousa* are susceptible to the leaf spot phase of *Discula anthracnose*, but *C. kousa* does not develop the branch cankers that ultimately kill the native dogwood. Be aware that if you have *Cornus florida* in your landscape, infected kousa dogwood could potentially serve as a source of inoculum of the anthracnose fungus for these trees. (In fact, the *Discula anthracnose* fungus likely entered the U.S. on imported kousa plant material.) Kousa dogwood is also susceptible to powdery mildew, another disease of native dogwood. However, some cultivars of kousa dogwood have resistance to both of these diseases. Dogwood borers are not usually a problem on kousa dogwood unless the tree has been wounded (e.g., by a lawnmower). *C. kousa* blooms after *C. florida* and there are many cultivars in the trade.



***Fagus grandifolia** (American beech)** grows to a large size and should be given adequate space. It should not be planted in overly wet or compacted soils. This species is shallow-rooted, so it may be difficult to get grass to grow around the base of the tree, but it is generally disease-free. Beech bark disease, a widespread problem in forest beech trees, is currently not a problem in landscape beech trees in Virginia. A mature American beech is truly majestic due to its form, smooth gray bark, and handsome foliage.



***Fagus sylvatica* (European beech)** can be grown in a wider range of soil types than the American beech; however, it is sensitive to extreme heat and should not be grown in the eastern part of the state. Like the American beech, it is truly majestic when mature. Many cultivars are available, including ‘Asplenifolia’ (bottom left photo) and ‘Pendula’ (bottom right photo). The species is pictured on the top right. As noted for the American beech, beech bark disease, which is not currently a problem in the landscape, could become a problem on the European beech sometime in the future.



***Ginkgo biloba* (ginkgo)** is a species that has managed to survive since the age of the dinosaurs, so it is no surprise that it is very disease- and insect-resistant. It has also shown good resistance to air pollution. Some people object to the messy, smelly, fleshy seeds of the female tree, so it is best to plant male trees. Be sure to purchase a clone or a cultivar rather than a seedling tree to ensure that you are purchasing a male tree. The ginkgo grows to a large size and has beautiful, bright yellow fall foliage color.



***Koelreutaria paniculata* (goldenraintree)** is a medium-size tree that tolerates a wide range of soil types. This species has been reported as becoming weedy in the eastern portion of Virginia. Its beautiful, showy panicles of yellow flowers appear in July. Following flowering, trees are loaded with seed pods that look like Chinese lanterns. No significant diseases occur on this species in Virginia.



***Liquidambar styraciflua** (sweetgum)** is susceptible to a fungal disease called “bleeding canker,” but is otherwise disease-free. The fungus that causes bleeding canker is more of a problem on stressed trees, such as those grown on dry sites. Sweetgum requires deep, moist, slightly acid soil with plenty of root space. The main problem with the species and most cultivars is the fruit, which is quite messy. The fall foliage of this species, often a mixture of yellow, orange, red, and purple, is spectacular.



*Liriodendron tulipifera** (**tulip poplar**) is relatively disease-free as long as it is grown in adequate space in moist, well-drained soil. Verticillium wilt can occasionally be a problem, and aphids and scales, followed by sooty mold, are common. One of the nice things about tulip poplar is that it is not a preferred host of the gypsy moth. Tulip poplar grows to a large size and should be given adequate space. It does not thrive under dry soil conditions.



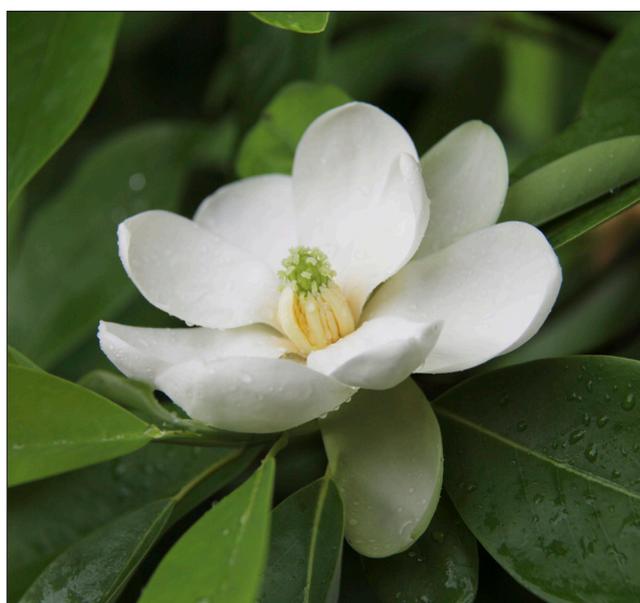
Magnolia species: The various species of magnolias tend to be disease-free, although the **southern magnolia** (*Magnolia grandiflora**) is prone to winter leaf scorch and some magnolias are susceptible to scale insects. The southern magnolia grows to a large size and produces large, showy, fragrant, cream-white flowers in June. It tolerates high soil moisture; however, it needs protection from winter winds in order to avoid leaf scorch. Several cold-hardy cultivars, such as ‘Edith Bogue’ and ‘Bracken’s Brown Beauty,’ are available. Watering deeply in the fall before the ground freezes or applying an anti-desiccant can help prevent winter injury.



M. stellata (**star magnolia, top photo**) is small in size and blooms very early (late February - early March). Many different cultivars, varying slightly in flower color (the norm is white) are available. Magnolia soft scale can, however, be a serious problem on this species. Sooty mold grows on the honeydew produced by the scales and can cause blackening of the foliage, but the sooty mold does not infect the plant.

Magnolia xsoulangiana (**saucer magnolia**) is another small magnolia commonly grown in Virginia. Cultivars vary widely in flower size, color, form, growth habit, and cold hardiness. Late spring frost damage to flower buds can be a problem.

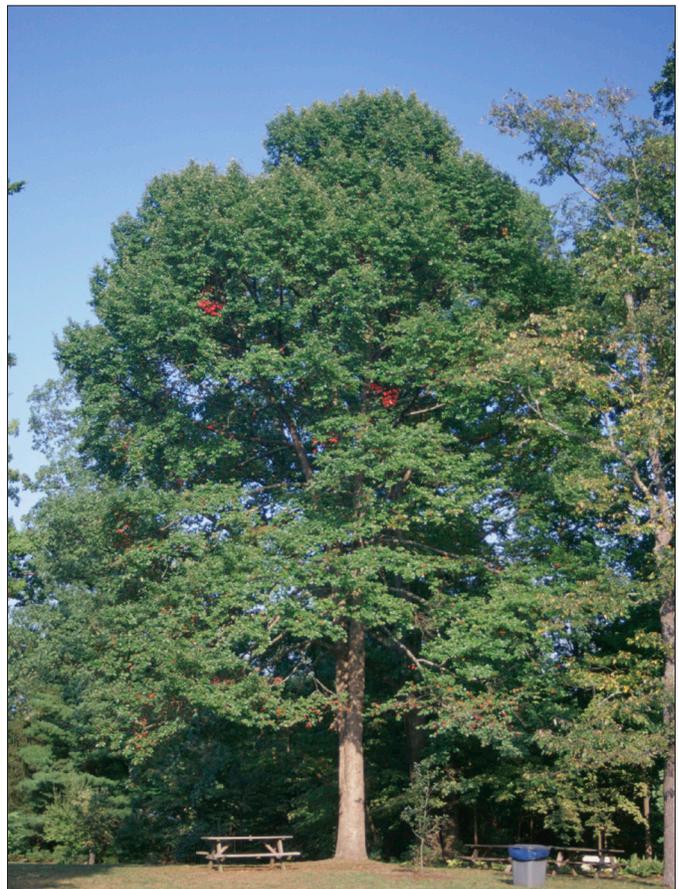
*M. virginiana** (**sweetbay magnolia, bottom photo**) tolerates shade and grows well in wet locations. Its blossoms appear from May to June and have a fragrant lemon scent.



Metasequoia glyptostroboides (dawn redwood) is a deciduous conifer that performs best in deep, moist, well-drained, slightly acid soils, but can also grow in extremely wet soils. With age, trunks of this species will develop a rather stunning, fluted appearance. Dawn redwood is susceptible to fall frost damage and should be planted on a hill rather than in a low area if possible. This is a fast growing species in moist sites. Disease problems are rare. Dawn redwood may be difficult to find in nurseries, however.



*Nyssa sylvatica** (black gum) is a large, native tree with beautiful, red fall foliage color. It will grow in a variety of soil types, and, at least until recently, has had few serious diseases or insect problems. A fungal disease, black gum anthracnose, has recently been observed in forest black gums growing at high elevations in shade near dogwoods with *Discula anthracnose*. The potential of this disease to become a problem in the landscape is unknown.



***Parrotia persica* (Persian parrotia)** is a medium to large tree with a wide growth habit. It prefers well-drained, slightly acid soils and full sun, but will do well in light shade. It has attractive, mottled bark. Parrotia is disease-free and withstands drought, heat, wind, and cold temperatures. The very showy fall foliage color varies from yellow to orange to purple.



***Pinus bungeana* (lacebark pine)** is usually a multi-trunk tree. With age, the bark takes on a patchy, camouflage-like appearance, which is quite beautiful. The multi-trunk characteristic can be a liability in wet snow or ice storms that can cause trunks to split apart.



Platanus xacerifolia (**London planetree**) is a good urban tree because it withstands poor soils and pollution. Several cultivars of this hybrid, including 'Bloodgood,' 'Columbia,' and 'Liberty,' show good resistance to anthracnose, the most common disease of the related American sycamore (*Platanus occidentalis*). The London planetree is susceptible to damage by lacebugs, although it is less damaged than sycamore by this pest. A disease called bacterial scorch, for which there is no control, can also be a problem.



Styphnolobium japonicum (**Japanese pagoda tree**) is a medium-sized tree with an upright, spreading habit. It produces showy, white flowers at a relatively late time of year (August). Green seed pods, about six inches long, resemble a string of pearls. This species is relatively drought-tolerant but has not performed well in the heat of Zone 7b or higher. This plant was until recently known as *Sophora japonica*.



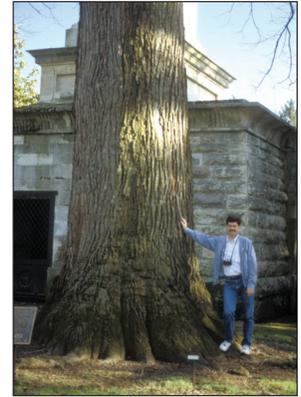
Styrax japonicus (**Japanese snowbell**) is a dainty, low-branched, small tree that is amazingly trouble-free. It produces numerous, pendulous, fragrant white flowers in May.



*Taxodium distichum** (**baldcypress**) is a native, deciduous conifer that grows to a large, pyramidal tree. It grows well in wet or dry soils, but it should be grown in acid soil to avoid chlorosis. Bald cypress is a fast-growing species in moist soils. When growing in water or near a stream bank, this species will send up “knees” or woody peaks from the root system; the function of these is a matter of speculation. The knees are an interesting addition to a natural area.



Tilia americana* (American linden) produces wonderfully fragrant flowers in mid to late June. Although several diseases are reported on this species, diseased lindens are rarely submitted to the Virginia Tech Plant Disease Clinic, and most landscape specimens appear very healthy, even on the Virginia Tech campus where trees tend to suffer a lot of abuse. American linden will grow on drier, heavy soils, and even on rocky soil, but it grows to a large size and needs adequate space.



Ulmus parvifolia (lacebark elm), in contrast to the American elm (*U. americana*), has resistance to Dutch elm disease. It also has resistance to elm leaf beetle and Japanese beetle, both of which can cause significant damage to other elm species. The species varies considerably in growth habit, with the habit of some of the cultivars resembling the American elm's desirable vase-shape. *U. parvifolia* develops an interesting exfoliating bark, which reveals a lighter bark underneath the darker, outer bark. Breakage from wind, ice, and snow can be a problem when the tree is young.



Zelkova serrata (Japanese zelkova) is related to the elms but is resistant to Dutch elm disease, elm leaf beetle, and Japanese beetle. It has a vase-shaped habit, somewhat similar to the American elm. It is wind- and drought-tolerant and performs well in urban landscapes. If left unpruned, however, the branches tend to grow into each other ("V-branching").



Table 1. Additional recommended trees for Virginia.

| Name | Tree size* | Hardiness zones | Native to U.S. | Notes |
|--|-----------------|-----------------|----------------|---|
| <i>Acer buergeranum</i> – trident maple | Medium | 5 to 8 | No | Drought-tolerant species; attractive patchy tan/brown bark |
| <i>Betula nigra</i> – river birch | Medium to large | 3 to 9 | Yes | Fast-growing tree with showy tan/light brown flaky bark on branches/trunks less than 8-inch diameter; tolerates wet soils but languishes in alkaline soil; several cultivars in trade |
| <i>Calocedrus decurrens</i> – California incensecedar | Medium | 5 to 8 | Yes | Narrow conical conifer; tolerates drought and poor soils; slow to medium growth rate |
| <i>Carpinus betulus</i> ‘Fastigiata’ – European hornbeam | Medium | 5 to 7 | No | Symmetrical oval tree; drought-tolerant; very tolerant of pruning; often used as a hedge |
| <i>Carpinus caroliniana</i> – American hornbeam | Small | 3 to 9 | Yes | Tolerates wet soils and somewhat drought-tolerant; handsome, smooth, fluted bark; very tolerant of pruning and shade |
| <i>Cercidiphyllum japonicum</i> – katsura tree | Medium | 4 to 8 | No | Good fall foliage color; leaves in fall emit a charming cotton candy fragrance (burnt sugar); requires ample moisture |
| <i>Chamaecyparis nootkatensis</i> – Nootka falsecypress | Medium | 4 to 7 | Yes | Beautiful evergreen conical conifer with pendulous branchlets; several cultivars in trade |
| <i>Chamaecyparis obtusa</i> – hinoki falsecypress | Medium | 5 to 8 | No | Handsome evergreen conical conifer; the species is a worthwhile landscape tree; numerous cultivars that vary in size, shape, color, and growth rate |
| <i>Gymnocladus dioica</i> – Kentucky coffeetree | Medium | 3 to 8 | Yes | Quite tolerant of adverse conditions; large leaves and bold texture; male and female plants; should choose male plants to avoid mess from relatively large seed pods |
| <i>Halesia carolina</i> – Carolina silverbell | Medium | 4 to 8 | Yes | Showy white flowers in spring; requires acid, well-drained soil |
| <i>Ostrya virginiana</i> – American hophornbeam | Small to medium | 3 to 9 | Yes | Slow-growing small to medium tree; tolerates shade and drought |
| <i>Picea abies</i> – Norway spruce | Medium to large | 3 to 7 | No | Medium to large evergreen conical conifer; not suitable for small lot sizes; can develop fungal needle cast disease under stress |
| <i>Pistacia chinensis</i> – Chinese pistache | Medium | 6 to 9 | No | Excellent fall foliage color; heat- and drought-tolerant; can suffer low-temperature damage in zone 6 winters |

* Small tree = 25 feet and smaller; medium tree = 25+ to 50 feet; large tree = 50+ feet tall.

References

Dirr, M.A. 2009. Manual of Woody Landscape Plants, 6th ed. Stipes Publishing L.L.C., Champaign, Ill. 1325 pp.

Flint, H.L. 1983. Landscape Plants for Eastern North America. John Wiley & Sons, Inc., Hoboken, N.J. 677 pp.

Johnson, W.T., and Lyon, H.H. 1991. Insects that Feed on Trees and Shrubs, 2nd edition. Cornell University Press, Ithaca, NY and London, UK. 560 pp.

Sinclair, W.A., and Lyon, H.H. 2005. Diseases of Trees and Shrubs, 2nd edition. Cornell University Press, Ithaca, NY and London, UK. 660 pp.

Whitcomb, C.E. 1996. Know It & Grow It. Lacebark, Inc., P.O. Box 2383, Stillwater, Okla.