

Dotted Blue Path

From the art gallery in Covington to to the art gallery at 214 Tyler Avenue



1. Crape Myrtle (*Lagerstroemia indica*). This non-native species was introduced from India, hence the specific epithet *indica*; it is found throughout southeast Asia. This is a multistemmed tree



grown for its copious summer blooms and attractive, rust-colored, exfoliating bark. There are many cultivated varieties with flower colors of red, pink, white or purple. It is a common ornamental tree in the southern U.S.

Continue to the Bonnie Hurlburt Plaza and go right to enter the Governor's Quad between Trinkle Hall & Peery Hall.



2. Little-leaf Linden (*Tilia cordata*). *Cordata* refers to the heart shaped leaf). There are two rows of little-leaf lindens here in the Governor's Quad. This is a European species that is planted as an ornamental in the eastern U.S. It is in the same genus as the basswoods on campus (#13); both have the oval leaf-like bract that subtends the cluster of flowers, and thus the



fruits as well. The bract acts as a wing and aids in the dispersal of the fruits.



3. Japanese Zelkova (*Zelkova serrata*). Zelkova is in the Elm family and is a popular ornamental as it is resistant to the Dutch elm disease which devastated populations of the American Elm. Zelkova has a similar branching pattern to the American Elm. The trunk splits into many upright branches, so that it looks like an umbrella



that's been turned inside out. The specific epithet '*serrata*' refers to the serrated edges of the leaves. The interesting bark and fall color also contribute to its desirability as an ornamental tree. The bark is grayish with exfoliation revealing orange patches. In autumn its leaves may turn yellow, orange, and red.

4. American Holly (*Ilex opaca*) is a medium-sized tree native to the southeast U.S. Its glossy, evergreen leaves and red fruits make it a desirable ornamental. Its red fruit-festooned foliage is often used for Christmas wreaths. Fruits and pollen are produced on separate



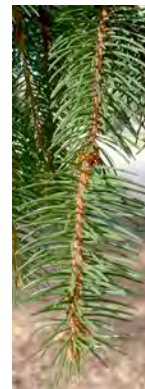
trees, so it is important to get a fruiting tree if one wishes to have the red berries. Pollen-producing trees have to be somewhere in the neighborhood to ensure the development of fruit. The fruits are poisonous to humans, but are eaten by many species of birds. Birds generally don't eat the berries until late in the winter. On the RU campus, nomadic flocks of robins and cedar waxwings often partake of the berries in January and February. There are also hundreds of holly cultivars in the nursery trade and several dot the RU campus.



Walk between Whitt Hall and Heth Hall.

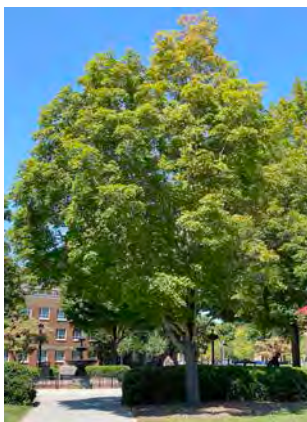


5. Norway Spruce (*Picea abies*). This species is native to Norway, Poland, and the mountains of central Europe. Its seed cones and secondary branches are pendant. The pollen cones are less than an inch long, but the seed cones are up to 17 cm (just over 6 inches). In the fall, you can see seed cones with the scales nibbled off by squirrels lying on the ground. A common ornamental in the U.S., it is also cultivated for its lumber, which is used to make



soundboards for stringed instruments. There are a dozen Norway Spruce on campus.

Go around the fountain (surrounded by sugar maples). Then take the sidewalk between Madison and Jefferson Halls.



6. Sugar Maple (*Acer saccharum*, the specific epithet refers to sugar). This maple is named for the syrup-making properties of its sap. Although all sap contains sugar, the sugar maple's sap flavor makes it the favorite of maple syrup producers. The sap only runs during a few weeks in late winter when the temperatures vacillate above and below freezing. Forty gallons of sap is boiled down to make 1 gallon of syrup. Very productive trees, a.k.a. 'sap cows,' might produce 2



gallons of sap per day. Humans are not the only animal that uses the sap. Note the rows of holes in the bark of this tree. They were made by yellow-bellied sapsuckers, a woodpecker that visits this elevation in the winter, taps the maples and other trees, and drinks the sap.

7. Japanese Flowering Cherry (*Prunus* sp.). This is a common cultivated, ornamental cherry from Japan. Cherry flowers naturally have five petals per flower, but this variety has been selected to have more petals per flower. This tree provides a splash of pink when it blooms in the early spring. This is a "weeping" variety of this



species. Weak branches that can't support themselves, and thus droop, are grafted on to a normal trunk. You can see



this tree looks like three branches were grafted to the supporting base at about three feet from the ground.



8. Pin Oak (*Quercus palustris*; 'palustris' means 'of the swamps'). This native oak has leaves with deep sinuses between the lobes and bristles at the tips of the lobes. Like all the oaks, its fruit is an acorn, a valuable food for wildlife, including the blue jays and squirrels on campus. Oaks have a heavy crop of acorns every few years. Producing thousands of acorns takes a lot of energy, so after a heavy year of production, the tree takes a



few years to store up enough energy to make another crop. Pin Oaks naturally occur from Delaware and New Jersey to the Midwest, so Radford is just outside its natural range. However, Pin Oak does well in many habitats and is one of the most common ornamental oaks. There are 20 on campus.



9. Japanese Maple (*Acer palmatum*). There are hundreds of cultivated varieties of the Japanese maple. All have palmately-lobed leaves with several lobes, but the number of lobes,



the size, the margin, and the color of the leaves vary. Habit varies from tree to shrub, and pruning regimens vary as well. This is a popular non-native ornamental. There are about a dozen specimens of this species on campus.



10. Deodar Cedar (*Cedrus deodarus*). There are many plants that have 'cedar' as part of their common name, but this tree is among the 'true cedars': genus *Cedrus*. Deodar Cedar is native to the Himalayan mountains, but is a widespread ornamental. Look for the



cones high in the tree and note how they sit upright on the branches, rather than being pendant like in many conifers. When mature, the cones fall apart while they are still on the tree, so triangular cone scales are often seen on the ground underneath this tree.

Proceed to the second small courtyard between Walker Hall and Norwood Hall.



11. Katsura Tree (*Cercidophylm japonicum*). The generic name refers to the leaf of *Cercis canadensis* (redbud) which also has a heart-shaped leaf. Katsuras are native to China and Japan. The leaf color varies from purplish when they emerge in spring, to green in summer, to yellow in fall. The leaves



emit a caramel-like aroma when they decompose in the fall.

Continue on to the parking lot to the right.



12. Lacebark Elms (*Ulmus parvifolia*; 'parvifolia' refers to its small leaves). There are several lacebark elms that line the campus side of Tyler Avenue. 'Lacebark' refers to its bark, which has a mottled, multi-colored pattern. This species is from eastern Asia, and



is a common ornamental because of its tolerance of myriad environments. Because of this tolerance and the small leaves, this species is commonly used in bonsai horticulture. There are 13 lacebark elms on campus.



13. White Basswood [a.k.a. American Linden]. *Tilia americana* var. *heterophylla* ('heterophylla' refers to the bract which is a long oval, and thus very differently shaped from the leaves). The name 'Basswood' is derived from 'bastwood,' named for the bast fibers, which are fibers from the stem, from the inner layer of bark, that can be used to make



cordage. (Linen and Hemp are both bast fibers from the stems of their respective plants). These two basswoods can be seen better from across the street.

Cross the street to RU Art Museum on Tyler (214 Tyler Ave.)

Dotted Red Path

From the Tyler Avenue gallery to the gallery in the Covington Arts Center



14. American Beech (*Fagus grandifolia*). The very smooth light-gray bark is a distinctive feature. Leaves have toothed edges and prominent



pinnately-arranged veins. The seeds are triangular in cross section and are inside a spiny

capsule. Beechnuts are eaten by squirrels, turkey, bear, deer, and other wildlife. The seeds are sometimes roasted and eaten by humans. This species is native to eastern North America. The word 'book' is thought to have derived from a Germanic word, 'bok,' meaning 'beech.' Beech wood tablets were a common writing material in Germanic societies before the development of paper.

Continue to McConnell Library.



15. Ironwood, Musclewood, Blue Beech (*Carpinus caroliniana*). Named musclewood because its bark is smooth, with rounded longitudinal ridges, reminiscent of a contracted muscle. Ironwood refers to its hard wood, used for mallets and tool handles. Blue beech



is another name, because it is in the Beech family with grayish-bluish bark. In the spring, two types of catkins hold the male and female flowers, respectively. The male catkins drop once the pollen has been dispersed, and the female catkins, which contain the fruits, mature into what look like small pendulous pine-cones. Common in the understory throughout Virginia.



16. Saucer Magnolia (*Magnolia x soulangeana*). This is a hybrid of two Chinese species. It was produced in 1820, when one of Napoleon's retired officers, Etienne Soulange-Bodin, produced it on his property near Paris. It is a popular ornamental



due to its saucer-sized pink and white flowers. It blooms early in the spring before the tree has leafed out, and provides a welcome sign that winter is about to end. Unfortunately, it often blooms before the last frost, so enjoy the flowers when you can because a frost will turn them brown and droopy.



17. Tulip Poplar or Yellow Poplar (*Liriodendron tulipifera*, which means "tulip bearing beautiful tree"). Of course, it doesn't bear tulips, but its yellow and orange cup-shaped, 6-petaled flower reminded Linnaeus (who named it) of a tulip. Because of its fast-growth and straight, columnar trunk, it is a valuable timber species. The leaves are food for the caterpillar of the tiger swallowtail, the state insect of Virginia. This is the only tulip poplar on campus, but the species is common throughout Virginia.

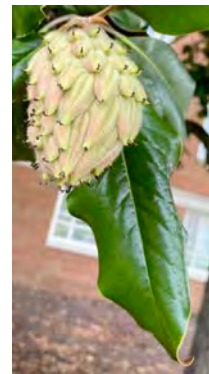


18. Hawthorn (*Crataegus sp.*). Although this genus is relatively easy to recognize, species identification of the hawthorns is difficult, and botanists (some "splitters" and some "lumpers") disagree about how many species of *Crataegus* there are. Delineations vary from 100 to 200 species. Hawthorns, like apples, are in the Rose family and have small apple-like fruits, known as

pomes. The fruits (in many species they are smaller than what is seen here) are eaten by many species of birds. Humans have used the fruits to make jellies. These are thorny trees, sometimes called thornapples, and are often the first to colonize an unused pasture. Clusters of white flowers in the spring and the red pomes make it a desirable ornamental and there are many cultivated varieties.



19. Southern Magnolia (*Magnolia grandiflora*; 'grandiflora' refers to its large flower). This species is native to the coastal plain of the southeastern U.S. There are other magnolia species on campus but this is the only North American native and the only one that is evergreen. The flowers are the size of a dinner plate and are white, aromatic and draw many pollinators –



flies, wasps, and beetles feed on the nectar and pollen. Because of the flowers and the glossy foliage, this is a common ornamental tree throughout the southern U.S. There are 34 on campus.

Look down to the parking lot.



20. Willow Oak (*Quercus phellos*). Native to the southern U.S., in Virginia it is only native to the coastal plain, but this species is commonly planted as an ornamental and shade tree. Unlike the lobed leaves of many oak species, the leaf is a narrow oval to about 12 cm long. "Willow" Oak refers to the leaf shape being similar to a willow leaf. The acorns it produces are a source of food for wildlife. When wildlife biologists speak of "hard mast," they are talking about acorns, hickory nuts, and beechnuts. These fruits can lie on the forest floor through the winter and may provide a steady source of food. There are a dozen willow oak here in the main parking lot and 31 on campus.



Go around Young Hall and pick up the path at #4 and follow it to #1. Enter Covington Center – the gallery is at the rear right of the oval atrium.

Tree descriptions by John Kell (RU Biology Department).



Covington Center



214 Tyler Avenue