ECU

Tree Trail Guide

An Educational Guide to Trees on the Campus of East Carolina University

ECU

Established in 1907, East Carolina University has grown from 43 acres to almost 1,600 acres. During this expansion, ECU has fostered a commitment to environmental stewardship by protecting and preserving our valuable natural resources on campus.

Campus features are accented with diverse plantings incorporating existing majestic giants, evidence that celebrating our collection of native and naturalized trees has long been a part of ECU Pirate™ history. ECU was designated a Tree Campus USA® in 2016 and is one of fewer than two dozen colleges and universities to earn this distinction in North Carolina. The ECU Tree Trail offers an opportunity to appreciate these efforts with a reflective journey through our Main Campus.

The 1.5-mile loop begins at the Leo W. Jenkins Fine Arts Center and guides you first through Wright Circle, along the Memorial Walk and National Pan-Hellenic Council Garden, followed by a view of the iconic grassy Mall with its cupola, and ending with a stop at the Student Memorial Garden. As you tour, consider this a natural laboratory offering educational opportunities and benefits to our students for generations to come.

The 45 trees featured on the trail are identified by sequentially numbered plaques, which correspond to the numbers in this guide. The ECU Tree Trail also has an accompanying app for navigational ease. You can access the app online:

go.ecu.edu/trees

American Holly *Ilex opaca* 1

An iconic native evergreen, the American holly is known for its spiny green leaves and red berrylike fruits that highlight the landscape during the winter season. This tree has separate female and male trees; both are required to make fruits. It is visited by a variety of pollinators, and its fruits are eaten by many native birds. The leaves, berries and bark were once used by Native American tribes to treat a variety of discomforts and illnesses.

White Oak *Quercus alba* 2

A giant in the landscape, this drought-tolerant deciduous tree can live for centuries and readily reaches 80 feet in height. It can be identified by its lobed leaves and deeply ridged light gray bark. Prized for its impermeability, white oak wood is used in shipbuilding, as well as in barrels for wineries and distilleries. A medicinal tea can also be made from its bark to treat arthritis, ease cold symptoms and aid digestion.

Southern Magnolia *Magnolia grandiflora* 3

The southern magnolia is a large native evergreen that has immense presence and charm. Its spectacular flowers are pleasantly fragrant, reaching up to 12 inches across. Bright red seeds attract small mammals and birds, including the wild turkey. Its bark and flowers have been used medicinally in many ways, from reducing inflammation to cancer prevention.

Black Gum *Nyssa sylvatica* 4

The black gum, also called the black tupelo, is a deciduous native tree that is admired for its hardiness and vibrant fall colors. It has delicate greenish-white flowers that attract honeybees and produce edible bluish-black fruits. Historically, the fruits were eaten by Native Americans, who also used the bark for medicinal purposes.

Water Oak *Quercus nigra* 5

The water oak, a large deciduous tree native to the eastern and south-central United States, is a fast-growing shade tree and is often hard to find in nurseries. This oak is readily identified by its leaves, which have a lobe resembling a drop of water hanging from the leaf's end. Its abundant acorn bounty is a coveted food source for native wildlife such as small mammals, white-tailed deer and many bird species.

Golden Rain Tree *Koelreuteria paniculata* 6

Native to eastern Asia, the golden rain tree was first introduced to America in 1763. A medium-sized deciduous tree, it is cultivated for its appealing compound leaves, flowers and lantern-shaped seed pods. Its bright yellow flowers are pollinated by bees, and its berries, leaves and young shoots can be eaten when roasted.

Yaupon Holly *Ilex vomitoria* 7

This small evergreen tree, native to coastal plains and maritime forests from Virginia to Texas, is found growing on the coastal dunes of North Carolina. It is the only known North American plant that contains caffeine. Its red berrylike fruits are eaten by a variety of birds as well as armadillo, black bear and white-tailed deer.

Crape Myrtle "Muskogee" *Lagerstroemia x 'Muskogee'*

8 Widely used in landscaping, this small ornamental cultivar is a hybrid between the crape myrtle and Japanese crape myrtle, both native to eastern Asia. It is deciduous, with beautiful showy flowers that are a long-lived food source for bees during summer and autumn months. The crape myrtle is cultivated for a variety of bloom and bark colors. Its smooth bark, which is mottled with pink, mahogany or gray, provides winter interest for tree enthusiasts.

Loblolly Pine *Pinus taeda*

9 Native to the southeastern United States, this large evergreen pine is a quick-growing timber tree characterized by a broad, straight trunk that can reach 90 feet in height. This long-lived loblolly pine is pictured in the earliest photographs of ECU's campus. It provides winter refuge and food resources for many birds and small mammals. This tree is also the host of the eastern pine elfin butterfly.

Flowering Cherry *Prunus x yedoensis*

10 Also known as the Yoshino cherry, this beautiful ornamental tree offers numerous delicate white or pink flowers in spring. A natural hybrid occurring in Japan, the fruit of this flowering cherry is an edible black drupe ripening in late summer, attracting both mammals and birds. The fruit of trees in this genus are known to be high in antioxidants and antiviral properties.

Live Oak *Quercus virginiana*

11 This semi-evergreen native shade tree can live for hundreds of years and reaches heights of 80 feet. Its slender, elongated leaves are glossy and remain until spring, when new leaves emerge. The live oak is often draped picturesquely with Spanish moss and is highly attractive to birds and mammals that enjoy its acorns. Its bark is also known to have astringent properties and has been used to treat dysentery, among other ailments.

Washington Hawthorn *Crataegus phaenopyrum*

12 The Washington hawthorn is a small ornamental tree native to the southeastern United States. It is often used in hedgerows due to the menacing thorns that line its branches and a colorful display of leaves that emerge red-purple, change to green, then orange to scarlet-purple in the fall. Small white flowers provide nectar for bees and yield abundant red berrylike fruits that attract birds. It is also a host plant to the gray hairstreak and viceroy butterflies.

Ginkgo *Ginkgo biloba*

13 The ginkgo, one of the oldest living tree species, is also known as the maidenhair tree. It is native to China and is often used in landscaping as an ornamental and shade tree. It is tolerant of urban environments, and its fan-shaped leaves have beautiful yellow-gold fall color. It is widely used medicinally, and its extract has long been touted as a memory aid.

Ohio Buckeye *Aesculus glabra*

14 Native to the Great Plains and midwestern states, the Ohio buckeye is traditionally an understory tree. It is named for its toxic nut, which resembles the eye of a deer. In the spring, its showy red flowers are attractive to many pollinators, including the eastern tiger swallowtail butterfly. It also offers beautiful fall colors, shedding bright orange compound leaves during autumn. The lightweight wood of this tree is also used in the manufacture of artificial limbs.

Sweetbay *Magnolia virginiana*

15 This small semi-evergreen magnolia is an elegant addition to landscaped areas. The sweetbay is native to the southern United States and was nicknamed "beaver tree" by trappers who used its tender shoots to entice beaver into their traps. It has dark green leaves with silvery undersides that are browsed by caterpillars of tiger swallowtail butterflies and sweetbay moths. Creamy white flowers emerge in late spring, followed by its red-seeded fruit, which matures in late summer and attracts many bird species.

Black Gum *Nyssa sylvatica*

16 The black gum before you is an older specimen than seen earlier on the trail. This native tree's range extends from Ontario to Florida and west to Texas. Its typical form is an oval or pyramidal shape, with oval-shaped leaves that allow light to penetrate the canopy. It is highly adaptable, with a resistance to air pollution and susceptibility to only a very few natural pests.

Purple-Leaf Plum *Prunus cerasifera*

17 Native to southeastern Europe, this deciduous ornamental has attractive reddish-purple leaves and can grow up to 30 feet tall. Small pink or less commonly white flowers appear in early spring and are visited by bees. The edible fruit of this tree resembles a cherry and ripens, attracting birds, between July and September.

Darlington Oak *Quercus hemisphaerica*

18 This stately semi-evergreen giant can grow as tall as 115 feet, although more commonly reaches around 65 feet. Native from Virginia to Texas, the Darlington oak is fast-growing, providing dense shade year-round. Its narrow leaves are displaced by new leaves emerging each spring. A bounty of small acorns matures after 18 months, attracting squirrels, white-tailed deer and wild turkeys.

Red Maple *Acer rubrum*

19 The red maple is one of the most common and widespread deciduous trees of eastern and central North America. When healthy, this tree has spectacular fall color. Also known as swamp maple or water maple, this tree prefers "wet feet," often struggling to survive when planted in parking lots or landscapes that do not receive consistent water. This specimen is growing on the banks of Greens Mill Run and exemplifies the tree's need for a constant water source.

ECU Tree Trail Guide

20

Bald Cypress *Taxodium distichum*

In the same family as redwoods, the bald cypress is a native deciduous conifer that can grow as high as 125 feet. Native to coastal areas — particularly swamps — from Maryland to Texas, this tree is well known for its knobby root growths, called "knees." Historically, its rot-resistant timber has been used to make barrels, railroad ties and shingles. Medicinally, its cones, leaves, bark and seeds have been used to treat malaria, heart disease and other illnesses.

21

Hackberry *Celtis occidentalis*

The hackberry is a deciduous native tree that reaches heights of between 40 and 70 feet. It is often recognized by its distinctive, warty bark and has edible dark red-purple fruits that mature in midautumn. The fruit is popular with birds such as the cedar waxwing, mockingbird and robin. Its flexible wood was used by pioneers in barrel hoops and as cabin flooring. It is also attractive to several butterfly species, including the American snout, hackberry emperor and tawny emperor.

22

Sweet Gum *Liquidambar styraciflua*

Native to the eastern United States and Mexico, the sweet gum is a deciduous shade tree that can grow as high as 80 feet tall. It has spikey round balls of seed that attract many bird species and small mammals. The sap obtained from its wood has also been used for centuries to treat skin ailments, coughs and ulcers.

23

Swamp Chestnut Oak *Quercus michauxii*

This large deciduous oak is common in bottomland forests but is somewhat difficult to find in nurseries. Native to the southeastern United States, this tree can reach 100 feet in height and provides dense shade and red fall color. It has distinctive light gray bark and can be recognized by large oval leaves with shallowly lobed edges. Its 1-inch acorns are eaten by white-tailed deer, wild hogs, black bear and squirrels.

24

Southern Red Oak *Quercus falcata*

Also called Spanish oak, this large deciduous tree is native to upland areas in the southeastern United States. It can reach heights of 80 to 100 feet and presents a red-brown leaf color in the fall. Native Americans ate the small acorns of this oak and used it medicinally to treat indigestion, fever and more.

25

Swamp White Oak *Quercus bicolor*

Native to floodplain woodlands in the northeastern United States, this deciduous tree grows to 60 feet tall and can live for hundreds of years. It has stunning yellow and bronze fall colors. The swamp white oak is a host plant to hairstreak and duskywing skipper butterflies. Its medium-sized acorns are eaten by squirrels, raccoons, wood ducks and black bear.

26

Overcup Oak *Quercus lyrata*

The overcup oak is named for its acorn, which is almost entirely covered by its cap. It is a hardy native deciduous tree that was heavily sought after for its strong wood. The acorns of this oak are the top food for small rodents and squirrels, as well as wild turkeys and white-tailed deer.

27

Pin Oak *Quercus palustris*

Useful as a shade tree, the pin oak is native to the lowlands of the Midwest and the mid-Atlantic states. Prior to pins being made from steel, they were made from this oak, hence the name. It grows in an upright pyramidal habit, as tall as 70 feet, and highlights the landscape with bright yellows, oranges and reds in the fall. Amazingly, it may take up to 15 to 20 years for the first crop of acorns to appear.

28

Sugar Maple *Acer saccharum*

Native to the northeastern United States and eastern Canada, the sugar maple is a large deciduous tree that can reach 80 feet tall. It is appreciated in landscaping for its great orange-red fall color. Sensitive to heat and dry conditions, this tree is difficult to grow in the Coastal Plain. The sugar maple is the primary source of maple syrup and is attractive to birds and small mammals for food and nesting.

29

Longleaf Pine *Pinus palustris*

This tree is a very large evergreen with iconic presence in the southeastern coastal plains. Once covering 90 million acres from Virginia to Florida, the fire-adapted longleaf pine now is estimated to occupy only 2% of its former extent. More than 30 endangered and threatened species, including red-cockaded woodpeckers, rely on these trees for habitat. In addition to providing shelter and food for many animals, these trees historically were tapped to produce pitch, tar and turpentine.

30

Upright Hornbeam *Carpinus betulus*

Also known as European hornbeam, this ornamental tree grows between 40 and 60 feet tall. The branches ascend in an upright fashion, perfect for tight spaces when height is preferred. In landscaping, it is used in medians and street planting or is pruned into a tall hedge. The distinctive dark green leaves of the upright hornbeam provide forage for the case-bearer moth, and then turn a brilliant yellow-orange in the fall.

31

Japanese Maple *Acer palmatum*

Japanese maples are small, deciduous ornamental trees that inspire bonsai artists with their unique growth habit. Native to Japan, Korea, China and southeast Russia, these trees grow to a modest height of 15 to 25 feet. Its red, winged seeds, also called samaras, are food for squirrels, chipmunks and many birds. One of its most remarkable qualities is the spectacular fall display of its reddish-purple palmate leaves.

Eastern Redbud *Cercis canadensis*

32 The eastern redbud is a small deciduous ornamental tree native to eastern and central North America. Often with multiple trunks, this understory tree typically reaches 20 to 30 feet tall. This tree has bright green heart-shaped leaves that turn yellow-orange in the fall. Its showy lavender flowers provide nectar for bees, particularly the blueberry bee, in the spring. In the legume family, its fruits resemble brown pea pods.

Swamp White Oak *Quercus bicolor*

33 A larger specimen than seen earlier on the trail, the swamp white oak is a distinctive tree with attractive ridged bark. It exemplifies its scientific name, bicolor, with its two-toned leaves, dark green on the surface and a white-colored side underneath.

Nuttall Oak *Quercus nuttallii*

34 The Nuttall oak is a large, deciduous tree native to the south-central United States. A great shade tree, it quickly grows 40 to 60 feet tall. In the fall, it displays bright reds and maroons. It is tolerant of many soil types and is gaining popularity in landscaping as a patio, lawn or street tree. Its acorns are food for native wildlife, including wood ducks and white-tailed deer.

Post Oak *Quercus stellata*

35 Also called iron oak, this regal giant is a slow-growing deciduous shade tree. Native to the southeastern United States, the post oak has strong wood that is often used for railroad crossties, posts and construction timbers. Its acorns are an important food source for woodpeckers, blue jays and several butterfly species including northern hairstreak and Horace's duskywing.

Pecan *Carya illinoinensis*

36 Native to the south-central United States, this impressive deciduous shade tree reaches 100 to 140 feet in height. Pecan trees are cultivated for their edible nuts, which are high in vitamin E, a nutrient known to enhance immunity and cell repair. Medicinally, Native Americans used the crushed leaves to treat ringworm, and a tea made from the bark was used in the treatment of tuberculosis. The nuts are also popular with squirrels, fox, raccoons and numerous birds.

White Oak *Quercus alba*

37 The white oak's native range extends throughout eastern and central United States. This specimen is a larger example than seen earlier on the trail. One of the most important timber trees, the white oak has the nickname "stave oak" from its extensive use in barrel making.

Southern Red Oak *Quercus falcata*

38 This towering giant is a larger example of the southern red oak displayed earlier in the trail. Its leaves are lobed, often resembling a turkey foot. These trees are an integral part of the ecosystem, stabilizing soils as well as providing habitat and abundant food resources for native wildlife.

Tulip Poplar *Liriodendron tulipifera*

39 The tulip poplar tree is one of the largest of the native trees of eastern North America, known to grow over 140 feet tall. Often planted to provide shade, this rapid-growing tree flowers in May and yields large quantities of nectar, attracting butterflies and hummingbirds. Native Americans used this tree for building canoes and the inner bark as a medicine for cough and cholera.

American Elm "Valley Forge" *Ulmus americana*

40 A new addition to campus, this American elm is a different cultivar than seen earlier. The "Valley Forge" cultivar has a resistance to Dutch elm disease and is popular in landscaping. Elm trees have oval-shaped leaves with saw-toothed edges. In its mature form, the trunk of an elm often forks, creating a vase-shape that is treasured by landscapers.

Saucer Magnolia *Magnolia x soulangeana*

41 The saucer magnolia is an elegant deciduous ornamental tree with goblet-shaped purple flowers, emerging in the spring. This small tree is a hybrid between the lily magnolia and the Yulan magnolia, both native to China. The seeds of this tree are eaten by small mammals and various birds, including quail.

Flowering Dogwood *Cornus florida*

42 The flowering dogwood offers a visual display for all seasons. Native to central and eastern North America, this small deciduous ornamental tree is widely appreciated for its showy white flowers in the spring and leaves that turn red-purple in the fall. Its fruit, glossy red drupes, are very attractive to birds in the winter months. In the past, Native Americans used its bark medicinally to treat malaria.

Crape Myrtle "Natchez" *Lagerstroemia x 'Natchez'*

43 This hardy crape myrtle cultivar has attractive cinnamon bark and showy white flowers for several months in the summer. A hybrid, this tree is one of several mildew-resistant varieties developed by the National Arboretum in Washington, D.C., all of which were given the names of Native American tribes.

Japanese Zelkova *Zelkova serrata*

44 Although traditionally used in bonsai, this ornamental shade tree reaches 50 to 80 feet in height. In the elm family, the Japanese zelkova is native to eastern Asia. It tolerates urban conditions well and displays pleasing yellows, oranges and reds in the fall.

Deodar Cedar *Cedrus deodara*

45 A large evergreen, the deodar cedar is known for its graceful pendulous branches and blue-green needles. This cedar's name, derived from deodar in Sanskrit, translates to "timber of the gods." Native to the Himalayas, this tree can grow as tall as 250 feet, although more commonly reaches 70 feet in height. This tree produces an aromatic oil that deters insects and provides nesting sites, cover and food for mammals and birds.

The ECU Tree Trail, established in 2019, was made possible by the support of alumnus Mike Bunting and is part of a continued effort to preserve and celebrate our natural campus resources. For additional tree attractions, visit our campus arboretum. For more information about the ECU Tree Trail, email gillj@ecu.edu.

Special acknowledgement goes to Gene Stano, former campus arborist, and Ashley Dow, biology graduate student, whose valuable contributions have helped bring the ECU Tree Trail project to fruition.

"If you think in terms of a year, plant seeds;
if in terms of 10 years, plant trees;
if in terms of 100 years, teach people."

— Guan Zhong

TREE CAMPUS USA®
An Arbor Day Foundation Program

The information presented in this guide is for educational purposes only and is not an endorsement of any medical or health use.

C.S. 25-0045 ♻ Printed on 30% post-consumer recycled content paper.
500 copies of this public document were printed at a cost of $913.85, or $1.827 per copy.