

TRAIL PLANNING AND IMPLEMENTATION

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UNIVERSITY OF
NORTHERN COLORADO

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UNIVERSITY OF NORTHERN COLORADO

CAMPUS TREE GUIDE

3 TRAIL LOOPS • 106 TREES



UNIVERSITY OF
NORTHERN COLORADO

UNIVERSITY OF NORTHERN COLORADO CAMPUS TREE GUIDE

Welcome to the University of Northern Colorado campus, recognized as a Tree Campus USA for its commitment to tree preservation, care and community involvement.

Each day, visitors, students and community members travel the sidewalks of UNC's landscape and pass by trees that have grown here for decades, sheltering and shading the many who have walked this way before. One silver maple, planted in the early 1900s, has literally grown with the campus, standing sentinel through UNC's history.







With nearly 3,400 trees gracing UNC paths, this guide of three tree tours will help you find and learn about some of the most unique species growing here. Whether you're walking the trails beneath the leafy green canopies of summer, the bright shades of autumn, the bare-branched trees of winter or the blossom-laden trees of spring, we hope you'll enjoy the long-standing and continuing commitment UNC has for its green spaces, landscapes and natural beauty.

Emerald Ash Borer Threat in Colorado

As of 2019, 157 ash trees have been removed on campus due to the threat of Emerald ash borer. The overall goal is to reduce the ash population to 225 trees.

For more information about UNC's trees, log on to unco.edu/treetour

TREE GUIDE ICONS

-  Tree Leaf Shape
-  State Champion Tree
-  Colorado Native Tree
-  Central Campus: Trail of Champions*
-  University Center/Campus Commons Trail
-  West Campus Trail

*UNC's state champion trees found on this loop

BY THE NUMBERS

1895 the year it's believed the first tree, possibly an **American Elm**, was planted on campus
(It was a gift from the graduating class)



246 ACRES
of campus canvassed on foot to identify and catalog the trees



57 DAYS
it took McDonald and Engel to take tree inventory in 2013

\$19.6 MILLION
estimated value of campus tree population



1,269 trees on campus in 1988



3,695 trees on campus as of 2013

4 STATE CHAMPION TREES

judged by their size, from the Colorado Tree Coalition:



Amur cork tree



Kentucky coffee tree



Pecan tree



Silver Maple tree*

*Silver Maple is a former State Champion Tree



293
green ash trees the most of any species on campus



34%
(1,255) are native Colorado species

CENTRAL CAMPUS

38 TREES • 1 HOUR WALKING TIME

TRAIL OF CHAMPIONS

CENTRAL CAMPUS: TRAIL OF CHAMPIONS

1. Eastern Redbud (*Cercis canadensis*)
Planted 2017
2. English Oak (*Quercus robur*)
Planted 1996
3. Northern Catalpa (*Catalpa speciosa*)
Planted 1990
4. Black (Austrian) Pine (*Pinus nigra*)
Planted c. 1913
5. Callery Pear 'Redspire' (*Pyrus calleryana* 'Redspire')
Planted 1996
6. McIntosh Apple (*Malus 'McIntosh'*)
Planted c. 1953
7. Hackberry (*Celtis occidentalis*)
Planted c. 1940
8. **Kentucky Coffeetree** (*Gymnocladus dioica*)
Planted c. 1930*
9. Horse Chestnut (*Aesculus hippocastanum*)
Planted c. 1940
10. Blue Spruce (*Picea pungens*)
Planted c. 1930
11. Weeping Norway Spruce (*Picea abies* 'Pendula')
Planted 1994
12. Sugar Maple (*Acer saccharum*)
Planted 2007
13. Littleleaf Linden (*Tilia cordata*)
Planted c. 1975
14. Northern Red Oak (*Quercus rubra*)
Planted c. 1926
15. European Larch (*Larix decidua*)
Planted 2018
16. Tri-Colored Beech (*Fagus sylvatica* 'Roseo-Marginata')
Planted 2005
17. Black Maple (*Acer nigrum*)
Planted c. 1965
18. River Birch (*Betula nigra*)
Planted 2013
19. Norway Maple (*Acer platanoides*)
Planted 2011
20. Bur Oak (*Quercus macrocarpa*)
Planted c. 1934
21. Yellowwood (*Cladrastis lutea*)
Planted 2011
22. **Amur Cork Tree** (*Phellodendron amurense*)
Planted c. 1922*
23. White Fir (*Abies concolor*)
Planted c. 1968
24. Alpine Fir (*Abies lasiocarpa*)
Planted 2013
25. Ginnala Maple (*Acer ginnala*)
Planted c. 1918
26. Engelmann Spruce (*Picea engelmanni*)
Planted c. 1958
27. Ginkgo (*Ginkgo biloba*)
Planted c. 1938
28. Green Ash (*Fraxinus pennsylvanica*)
Planted c. 1930
29. Western Red Birch (*Betula occidentalis*)
Planted 2000
30. American Basswood (*Tilia americana*)
Planted c. 1930
31. **Pecan Hickory** (*Carya illinoensis*)
Planted c. 1908*
32. **Silver Maple** (*Acer saccharinum*)
Planted c. 1900**
33. Goldenrain Tree (*Koeleruteria paniculata*)
Planted 1998
34. Muhgo Pine (*Pinus muhgo*)
Planted c. 1928
35. Horse Chestnut 'Red Flowering' (*Aesculus x carnea* 'Briotii')
Planted 2011
36. Cottonwood (*Platanus deltoides*)
Planted c. 1930
37. Canada Red Chokecherry (*Prunus virginiana* 'Schubert')
Planted 1990
38. American Elm (*Ulmus americana*)
Planted c. 1918

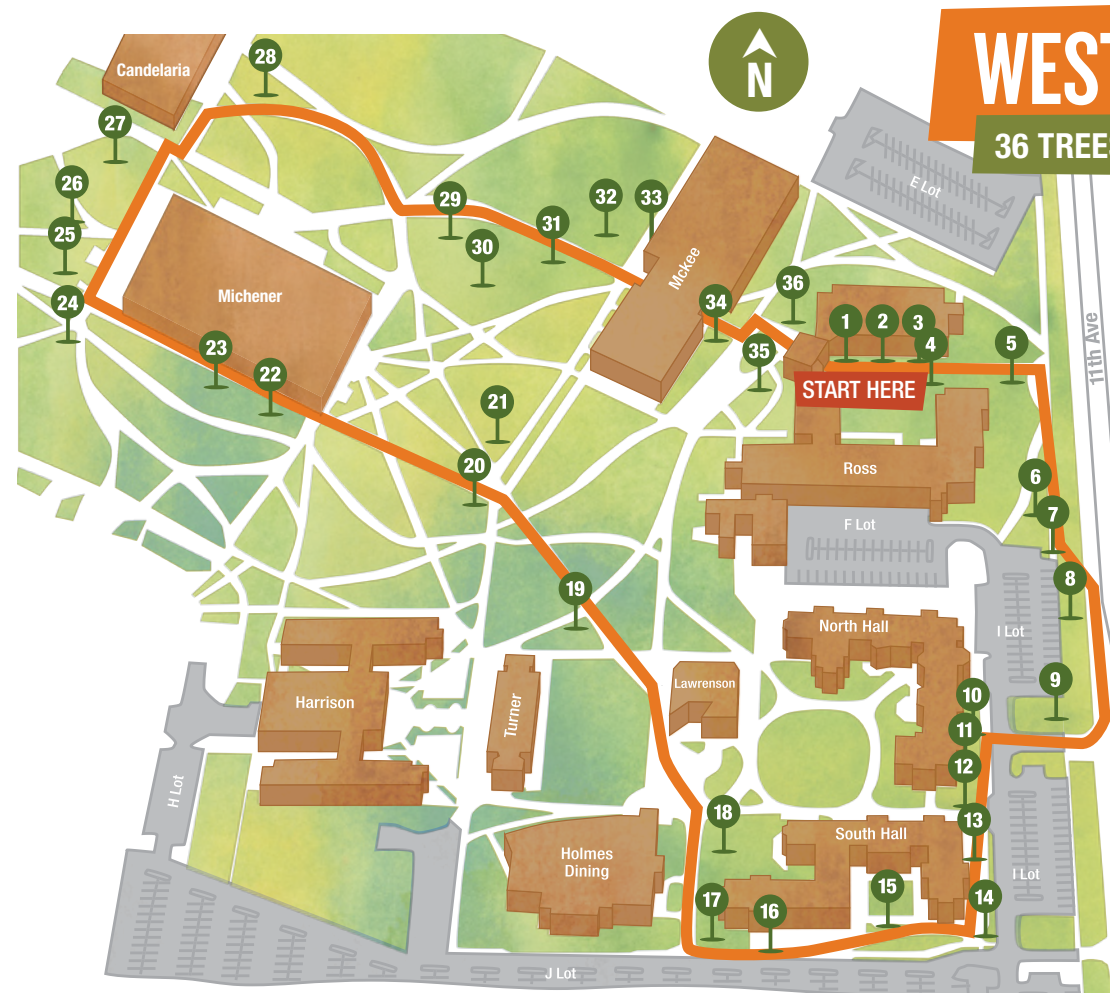


*State Champion Trees
**Former State Champion Tree



UNIVERSITY CENTER

32 TREES • 1 HOUR WALKING TIME



WEST CAMPUS

36 TREES • 1 HOUR WALKING TIME

UNIVERSITY CENTER TRAIL

- | | | |
|--|---|--|
| <ol style="list-style-type: none"> 1. Eastern Redbud (<i>Cercis canadensis</i>)
Planted 2013 2. White Fir (<i>Abies concolor</i>)
Planted 1964 3. Bur Oak (<i>Quercus macrocarpa</i>)
Planted 1964 4. Kentucky Coffeetree (<i>Gymnocladus dioica</i>)
Planted 1964 5. American Sycamore (<i>Platanus occidentalis</i>)
Planted c. 1964 6. Scots Pine (<i>Pinus sylvestris</i>)
Planted 1964 7. Flowering Crabapple 'Eleyi' (<i>Malus 'Eleyi'</i>)
Planted c. 1964 8. Black (Austrian) Pine (<i>Pinus nigra</i>)
Planted c. 1964 9. Engelmann Spruce (<i>Picea engelmannii</i>)
Planted c. 1964 10. Japanese Weeping Cherry Tree (<i>Prunus subhirtilla 'Pendula'</i>)
Planted 2012 11. Japanese Pagoda Tree (<i>Styphnolobium japonicum</i>)
Planted 2004 | <ol style="list-style-type: none"> 12. Cherry Plum (<i>Prunus cerasifera</i>)
Planted c. 1964 13. Cottonwood (<i>Populus deltoides</i>)
Planted c. 1965 14. Blue Spruce (<i>Picea pungens</i>)
Planted c. 1964 15. Pecan Hickory (<i>Carya illinoensis</i>)
Planted c. 1964 16. Thornless Honey Locust 'Moraine' (<i>Gleditsia triacanthos inermis 'Moraine'</i>)
Planted c. 1964 17. Downy Hawthorn (<i>Crataegus mollis</i>)
Planted c. 1964 18. Goldenrain Tree (<i>Koelreuteria paniculata</i>)
Planted c. 1964 19. Swamp White Oak (<i>Quercus bicolor</i>)
Planted c. 1964 20. Pinyon Pine (<i>Pinus edulis</i>)
Planted c. 1964 21. Greenspire Linden (<i>Tilia cordata 'Greenspire'</i>)
Planted 2018 22. Mountain Frost Pear (<i>Pyrus ussuriensis 'Mountain Frost'</i>)
Planted 2018 | <ol style="list-style-type: none"> 23. Flowering Crabapple 'Thunderchild' (<i>Malus 'Thunderchild'</i>)
Planted 2018 24. Northern Red Oak (<i>Quercus rubra</i>)
Planted 2018 25. Flowering Crabapple 'Prairifire' (<i>Malus 'Prairifire'</i>)
Planted 2018 26. Flowering Crabapple 'Red Baron' (<i>Malus 'Red Baron'</i>)
Planted 2018 27. Horse Chestnut 'Red Flowering' (<i>Aesculus x carnea 'Briotii'</i>)
Planted 2018 28. Flowering Crabapple 'Spring Snow' (<i>Malus 'Spring Snow'</i>)
Planted 2018 29. Ginkgo (<i>Ginkgo biloba</i>)
Planted 2018 30. Bristlecone Pine (<i>Pinus aristata</i>)
Planted 2018 31. Northern Catalpa (<i>Catalpa speciosa</i>)
Planted 2018 32. American Basswood (<i>Tilia americana</i>)
Planted c. 1964 |
|--|---|--|

WEST CAMPUS TRAIL

- | | | |
|---|--|--|
| <ol style="list-style-type: none"> 1. Gambel Oak (<i>Quercus gambelii</i>)
Planted 2001 2. Horse Chestnut, Red (<i>Aesculus x carnea</i>)
Planted 2001 3. Limber Pine (<i>Pinus flexilis</i>)
Planted 2001 4. Red Maple 'Autumn Blaze' (<i>Acer x freemanii 'Autumn Blaze'</i>)
Planted 2001 5. White Fir (<i>Abies concolor</i>)
Planted 2001 6. Japanese Tree Lilac (<i>Syringa reticulata</i>)
Planted 1984 7. Northern Catalpa (<i>Catalpa speciosa</i>)
Planted 2003 8. Green Ash 'Marshall's Seedless' (<i>Fraxinus pennsylvanica 'Marshall's Seedless'</i>)
Planted 2003 9. Washington Hawthorn (<i>Crataegus phaenopyrum</i>)
Planted 2003 | <ol style="list-style-type: none"> 10. Columnar European Hornbeam (<i>Carpinus betulus 'Fastigiata'</i>)
Planted 2010 11. White Pine (<i>Pinus strobus</i>) – Planted 2009 12. Eastern Redbud (<i>Cercis canadensis</i>)
Planted 2017 13. Blue Spruce (<i>Picea pungens</i>)
Planted 1984 14. Greenspire Linden (<i>Tilia cordata 'Greenspire'</i>)
Planted 2018 15. American 'Liberty' Elm (<i>Ulmus americana 'American Liberty'</i>)
Planted 2008 16. Red Sunset Maple (<i>Acer rubrum</i>)
Planted 2009 17. Russian Hawthorn (<i>Crataegus ambigua</i>)
Planted 2001 18. London Plane Tree 'Bloodgood' (<i>Platanus x acerfolia 'Bloodgood'</i>)
Planted 2009 | <ol style="list-style-type: none"> 19. Thornless Honeylocust 'Moraine' (<i>Gleditsia triacanthos inermis 'Moraine'</i>)
Planted c. 1968 20. Littleleaf Linden (<i>Tilia cordata</i>)
Planted c. 1973 21. Cottonwood (<i>Populus deltoides</i>)
Planted c. 1973 22. Sugar Maple 'Green Mountain' (<i>Acer saccharum 'Green Mountain'</i>)
Planted 2010 23. Hackberry (<i>Celtis occidentalis</i>)
Planted 2003 24. Silver Maple (<i>Acer saccharinum</i>)
Planted c. 1972 25. Green Ash (<i>Fraxinus pennsylvanica</i>)
Planted c. 1972 26. American Elm 'Valley Forge' (<i>Ulmus americana 'Valley Forge'</i>)
Planted 2018 27. Kentucky Coffeetree (<i>Gymnocladus dioica</i>)
Planted 2018 28. Muhgo Pine (<i>Pinus muhgo</i>)
Planted 1974 29. Flowering Crabapple 'Radiant' (<i>Malus 'Radiant'</i>)
Planted 2012 30. Japanese Tree Lilac 'Ivory Silk' (<i>Syringa reticulata 'Ivory Silk'</i>)
Planted 2012 31. Buckthorn (<i>Rhamnus cathartica</i>)
Planted 1973 32. Ponderosa Pine (<i>Pinus ponderosa</i>)
Planted c. 1969 33. Red Maple 'Armstrong' (<i>Acer rubrum 'Armstrong'</i>)
Planted 2012 34. Ginkgo (<i>Ginkgo biloba</i>)
Planted 1990 35. Lodgepole Pine (<i>Pinus contorta</i>)
Planted 1989 36. Flowering Crabapple 'Spring Snow' (<i>Malus x 'Spring Snow'</i>)
Planted 2003 |
|---|--|--|

TREE DESCRIPTIONS

3 TRAIL LOOPS • 110 TREES

-  Tree Leaf Shape
-  State Champion Tree
-  Colorado Native Tree
-  Central Campus: Trail of Champions
-  University Center Trail
-  West Campus Trail



Alpine Fir

(Abies lasiocarpa)

This is one of several tree varieties planted to help complete UNC's Colorado native collection. Known as the alpine fir or Rocky Mountain fir, it's commonly found at and immediately below the tree line. Some Plateau Indian tribes drank or washed in a subalpine fir boil for purification or to make their hair grow.



American Basswood

(Tilia americana)

Also known as North America lindens, both of these trees are excellent specimens. Honeybees love the blossoms as a nectar source, and in early fall the abundant seeds twirl in the air as they fall. A terrific shade tree that is relatively problem free, there are 51 American basswood trees on campus. Tree 30 on the Central Campus loop is nearly 90 years old.



American Elm

(Ulmus americana, 'Libertas,' and 'Valley Forge')

This tree lined most American city streets by 1900. The arrival of Dutch elm disease in the 1960s was devastating, and this tree largely disappeared from urban American landscapes. On Central Campus, tree 38 is the largest elm on campus; on West Campus loop for tree 15, which is a nice example of the elm cultivar 'American Liberty,' named after the famed "Liberty Tree" which was an elm that stood in Boston during the American Revolution. Tree 26 is the elm cultivar 'Valley Forge' the most Dutch Elm Disease-resistant variety tolerant of de-icing salts and air pollution.



American Sycamore

(Platanus occidentalis)

Paleobotanists have dated sycamore trees as far back as 100 million years. An American sycamore tree can often be easily distinguished from other trees by its mottled, exfoliating bark which flakes off in great irregular masses, leaving the surface mottled and greenish-white, gray and brown (earning sycamores the name "ghost trees.") This is the only American sycamore on campus.



Amur Cork Tree

(Phellodendron amurense)

This tree is native to northern China and Manchuria, and known for its picturesque side branching, which adds all-season landscape interest. This state champion tree is the largest amur cork tree in Colorado.



Black (Austrian) Pine

(Pinus nigra)

Most university campuses across the nation can lay claim to this popular ornamental. It does have a few shortcomings, including susceptibility to the disease Diplodia Tip Blight in moister, more humid climates. Tree 4 is one of our campus giants on the Central Campus loop and is over 100 years old.



Black Maple

(Acer nigrum)

The black maple is closely related to the sugar maple and identification can be confusing due to the two species' tendency to form hybrids. The black maple's geographic range is slightly more limited than the sugar maple, and it encompasses much of the Midwest and portions of the eastern United States.



Blue Spruce

(Picea pungens)

When the Colorado Horticultural Society gave Colorado schoolchildren the chance to vote on a tree to represent the state, they chose the blue spruce. There are 267 blue spruce trees on campus. Growing to 49 feet tall by 16 feet wide, this conical evergreen conifer has scaly grey bark and waxy blue to grey-green leaves. The Navajo and Keres Native Americans used this as a traditional medicinal plant and ceremonial item.



Bristlecone Pine

(Pinus aristata)

Bristlecone pines are the oldest single living organisms known (though some plants form clonal colonies which may be many times older). The oldest bristlecone pines are single plants that have been alive for a little less than 5,000 years. These very old trees are of great importance in dendrochronology or tree-ring dating.



Buckthorn

(Rhamnus cathartica)

Buckthorns are a deciduous shrub or small tree, with gray-brown bark and spiny branches. The leaves are elliptic to oval, and green, turning yellow in autumn. The insect-pollinated flowers are yellowish-green, with four petals, and the fruit is a black drupe, containing two to four seeds. It's mildly poisonous for people, but readily eaten by birds, which disperse the seeds in their droppings.



Bur Oak

(Quercus macrocarpa)

The bur oak is a drought- and pollution-tolerant tree. A slow growing tree that stands the test of time, bur oaks commonly live to be 200 to 300 years old, and some may live up to 400 years. Many of UNC's older giant silver maple and green ashes are being replaced with these mighty oaks. Tree 20 on the Central Campus loop is more than 80 years old.



Callery Pear 'Redspire'

(Pyrus calleryana 'Redspire')

'Redspire' is an attractive Callery pear cultivar. Its large showy blossoms are larger than other ornamental pear flowers and a dramatic snowy white. New leaves grow in a deep purple. They mature to glossy green with a hint of red, then light up your garden in the autumn as they turn yellow, purple and crimson.



Canada Red Chokecherry

(Prunus virginiana 'Schubert')

Canada red chokecherry is a pyramidal tree that grows 20 to 30 feet in height, or as a shrub. It has moderate water needs and prefers full sun and well-drained soil. The fruit, while astringent, can be used to make jellies. Suckering tends to be a problem with this species and tent caterpillars love this tree.



Cherry Plum

(Prunus cerasifera)

The cherry plum is native to Europe and Asia. Among the first European trees to flower in spring, cherry plums often start budding in mid-February. The flowers are white with five petals. Like peaches, cherries and plums, the edible fruit is called a "drupe." It's yellow or red in color, reaching maturity from early July to mid-September.



Columnar European Hornbeam

(Carpinus betulus 'Fastigiata')

This dense, conical shaped tree has attractive gray bark and oblong, deeply ribbed, dark green leaves that turn golden yellow in the fall. Catkins emerge with the leaves to produce long papery fruits in late summer. They tolerate most soils, transplant well and seldom show any dieback from stress.



Cottonwood

(Populus deltoides)

One of a number of native trees on campus, cottonwoods grow quickly. The leaves serve as food for various types of caterpillars. Tree 36 is the second-largest tree on campus and is nearly 90 years old. Cottonwoods (with their cottony wind-borne seeds) are no longer planted on campus due to their suckering tendency and susceptibility to storm damage.



Downy Hawthorn

(Crataegus mollis)

This tree is popular for its white flowers, which are borne in clusters at the end of the branches in spring. The bright red edible fruit ripens in late summer and early fall and falls soon after. This species is a target of gypsy moths, and leaf rusts and fire blight are among the many foliage diseases to affect this species. The sharp thorns are a hazard.



Eastern Redbud

(Cercis canadensis)

A flamboyant spring show-off, this large deciduous shrub or small tree is native to eastern North America. In the wild, eastern redbud is a frequent native understory tree. Its flowers — light to dark magenta pink clusters — appear from spring to early summer.



Engelmann Spruce

(Picea engelmannii)

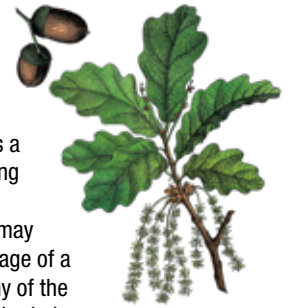
Also called white spruce, mountain spruce or silver spruce, this species of spruce is native to western North America, and mostly a high altitude mountain tree, growing at altitudes of 2,952 to 11,975 feet. This tree can reach heights of 125 feet and is often found growing with blue spruces and ponderosa pines.



English Oak

(Quercus robur)

A long-lived tree, the English oak has a large wide-spreading crown of rugged branches. While it may naturally live to an age of a few centuries, many of the oldest trees are pollarded or coppiced — pruning techniques that extend the tree's potential lifespan and health. Planted for forestry and its desirable, durable heartwood, English oaks were made famous as the tree of choice by Robin Hood in Sherwood Forest.



European Larch

(Larix decidua)

European larch is a great choice for specimen plantings or in groups for parks and large areas. Unlike most conifers, it drops its needles in winter. Bright green foliage in spring changes to medium green throughout summer, turning a golden yellow in fall. It is very cold-tolerant, able to survive winter temperatures down to at least -50 °C, and is among the tree-line trees in the Alps.



Flowering Crabapple 'Prairiefire'

(Malus 'Prairiefire')

Beautiful reddish-magenta blossoms cover an upright, spreading tree in spring followed by maroon, cone-shaped fruit. This cultivar is fairly disease-resistant and the showy, bright red berries provide a good winter food source for birds.



Flowering Crabapple 'Eleyi'

(Malus purpurea 'Eleyi')

Raised and named before 1920 for Charles Eley of Suffolk, England, this tree has dark red flowers, dark purple foliage and purple fruit. It's a very common crabapple tree and was prevalent in the 1960s. This is a heirloom crabapple and no longer readily available. These trees were planted in 1964-65 after the construction of the University Center.

29

Flowering Crabapple 'Radiant'

(*Malus 'Radiant'*)

A 'Radiant' crabapple, also called a flowering crabapple, is of the *Malus* species and is related to common variety apple trees. Any type of crabapple tree, in comparison with an apple tree, is smaller in all respects. 'Radiant,' known as the "jewel of the landscape" because it produces flowers, often serves an ornamental purpose and bears edible fruit.

26

Flowering Crabapple 'Red Baron'

(*Malus 'Red Baron'*)

A beautiful accent tree covered in abundant deep red flowers in spring followed by persistent deep red fruit and brilliant orange leaves in fall, its distinctive narrowly upright form is ideal for smaller landscapes; needs well-drained soil and full sun.

28 36

Flowering Crabapple 'Spring Snow'

(*Malus 'Spring Snow'*)

The 'Spring Snow' flowering crabapple tree is loaded with white flowers in early spring. Mature trees reach a height of 20 feet with a spread of 10 feet. The tree is almost sterile with negligible fruit production. It has recently become a very popular ornamental tree in Colorado.

23

Flowering Crabapple 'Thunderchild'

(*Malus 'Thunderchild'*)

Rapidly becoming one of the most popular landscape ornamentals, the 'Thunderchild' has fragrant lavender flowers with pink overtones in spring, and attractive deep purple foliage all season long. The small ruby-red fruit are attractive to birds.

1

Gambel Oak

(*Quercus gambelii*)

Named after the American naturalist William Gambel (1823–1849), there are some 54 of these trees on campus. Although its wood is hard and dense, its branches are irregular and crooked, making them flexible enough to bend without breaking when covered with heavy snow. The bark is rough and brownish-gray. The leaves are generally 3 to 5 inches long, turning orange and yellow during autumn.

27 34 29

Ginkgo

(*Ginkgo biloba*)

The ginkgo is a unique species of tree with no close living relatives. Often referred to as the "living fossil tree," fossils of ginkgo leaves date back about 270 million years, and this tree was considered extinct until 1691. Native to China, the tree is widely cultivated and was introduced early to human history. It has various uses in traditional medicine and as a food. Tree 27 on the Central Campus loop is more than 80 years old.



25

Ginnala Maple

(*Acer ginnala*)

Tree 25 on the Central Campus loop is the largest Ginnala maple on campus and more than 100 years old. This tree is native to northeastern Asia, from easternmost Mongolia to Korea and Japan, and north to southeastern Siberia in the Amur River valley. It is a small maple that leafs out early in the spring and is sometimes grown as a garden subject or boulevard tree.

33 18

Goldenrain Tree

(*Koelreuteria paniculata*)

This small to medium-sized deciduous tree reaches heights of about 23 feet, with a broad, dome-shaped crown. The flowers are yellow, with four petals, growing in dramatic, large terminal panicles 8 to 16 inches long. The fruit is a three-part inflated bladder-like pod, first green, then ripening orange-to-pink in autumn, and containing several dark brown to black seeds.

28 25 8

Green Ash

(*Fraxinus pennsylvanica*, 'Marshall's Seedless')

This is the most abundant tree planted on campus. Of the 20 largest trees on campus, six of them are green ash. It is a hardy tree and at maturity becomes an impressive shade and street tree. The autumn-colored leaves are brilliant gold-yellow, and very striking. Gibson, Fender and Ibanez guitar companies use green ash wood for their guitars. Tree 28 on the

Central Campus loop is more than 90 years old. Tree 8 on the West Campus loop is a green ash of the cultivar 'Marshall's Seedless.'

21 14

Greenspire Linden

(*Tilia cordata 'Greenspire'*)

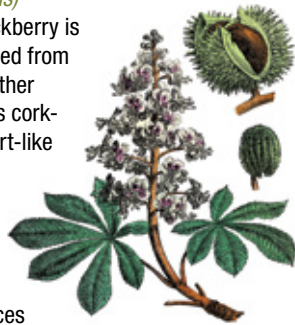
One of 115 trees planted upon the construction of the Campus Commons Building. Greenspire linden is a magnificent shade tree with a strong, spire-like shape throughout its life and fragrant yellow flowers in early summer when few trees bloom. It is very tidy and low-maintenance, adaptable, and makes an excellent lawn or street specimen, or by a pool or deck. It has dark green foliage throughout the season. The heart-shaped leaves turn an outstanding gold in the fall.

7 23

Hackberry

(*Celtis occidentalis*)

The common hackberry is easily distinguished from elms and some other hackberries by its cork-like bark with wart-like protuberances. The leaves are asymmetrical and coarse-textured. The hackberry produces small berries that turn orange-red to dark purple in the autumn, often staying on the trees for several months.



9

Horse Chestnut

(*Aesculus hippocastanum*)

This tree is native to the Balkan region and has large white flowering panicles. There are many cultivars developed from this species and the red-flowering varieties are very popular in the landscape. This tree is subject to drought injury and leaf scorch. After the leaves fall, leaf scars on the tree have a distinct horseshoe shape with seven "nail holes."

35 27 2

Horse Chestnut, Red Flowering

(*Aesculus x carnea*, 'Briotii')

This tree is an artificial hybrid between a red buckeye and a horse chestnut. Its origin is unknown, but it probably first appeared

in Germany before 1820. The hybrid grows between 67 and 83 feet tall, intermediate between the parent species in most respects, but inheriting the red flower color from the red buckeye. It's a popular tree in large gardens and parks. Trees 35 on the Central Campus loop, and 2 on the West Campus loop are the 'Briotii' cultivar.

6 30

Japanese Tree Lilac

(*Syringa reticulata*)

The Japanese tree lilac is native to eastern Asia. It is a deciduous small tree, growing to a height of up to 45 feet, with a trunk up to a foot in diameter. The largest species of lilac, it's the only one that regularly grows as a small tree rather than as a shrub. Tree 30 on the West Campus loop is the cultivar 'Ivory Silk.'

11

Japanese Pagoda Tree

(*Styphnolobium japonicum*)

Commonly called Japanese Pagoda Tree or Chinese Scholar Tree, is native to China and Korea, but not Japan. It is a medium to large deciduous tree that typically matures to 50 feet to 75 feet (less frequently to 110 feet) tall with a broad, rounded crown. It is generally cultivated for its attractive compound foliage and fragrant late summer flowers. Planted by the Japanese Culture and Aname Club.

10

Japanese Weeping Cherry Tree

(*Prunus subhirtella 'Pendula'*)

Japanese weeping cherry trees are popular ornamental trees because of the profusion of blooms that appear in the spring. They belong to one of the largest families of plants, Rosaceae, which also includes roses, blackbrush, thornapples, hawthorns, flowering quince, blackberry and raspberry.

8 4 27

Kentucky Coffeetree

(*Gymnocladus dioica*)

Pioneers used the coarse-grained wood in cabinetry and roasted the Kentucky coffeetree's seeds to use as a coffee substitute. The "coffee" name is in reference to the dark coffee-colored seed that is found in its pod. The leaves, seeds and pulp are poisonous and toxic to livestock,

humans and pets. It's a very good shade tree and generally problem free. Tree 8 on the Central Campus loop is the largest Kentucky coffeetree on campus and is a state champion.

3

Limber Pine

(*Pinus flexilis*)

The limber pine is popular as a windbreak tree or an ornamental tree due to its drought tolerance. It's also grown as a Christmas tree, with soft needles but with stiffer branches than an eastern white pine. These trees are typically high elevation pines, marking the tree line in subalpine areas, and they are known for their long lifespans. A limber pine in Oregon's Eagle Cap Wilderness has been documented as more than 2,000 years old.

13 20

Littleleaf Linden

(*Tilia cordata*)

Littleleaf lindens are widely grown as ornamental trees throughout their native range in Europe. In the 17th and 18th centuries, littleleaf linden was frequently planted to form avenues, and Sarajevo's streets used to be lined with them. While many communities plant linden trees along streets due to its rapid growth rate and dense, symmetrical crown, littleleaf linden is sensitive to road salt. Honeybees love this tree as a nectar source.



35

Lodgepole Pine

(*Pinus contorta*)

Lodgepole pines (so named because Native Americans used this species when building tipis and lodges) are known to reach heights of up to 160 feet, with a diameter of up to 7 feet. The lodgepole pine, as a species, is very dependent on fire as a mode of replacing itself. The bark of the lodgepole pine is fairly thin, minimizing the defense the tree has to fire. The stands are so densely populated that the trees self thin, or out-compete each other, leaving dead trees in the stand.

18

London Planetree 'Bloodgood'

(*Platanus x acerfolia 'Bloodgood'*)

This is one of the first cultivars to be selected for anthracnose resistance. A rounded tree with deep green leaves, 'Bloodgood' tolerates poor cultural conditions, including heat, drought and poor soil. Recent observations indicate susceptibility to ozone.

6

McIntosh Apple Trees

(*Malus 'McIntosh'*)

Although not a desirable ornamental tree for a university campus due to the apple drop and its respective mess, these two apple trees produce a very desirable eating and baking apple, much to the delight of the resident squirrels.

22

Mountain Frost Pear

(*Pyrus ussuriensis 'Mountain Frost'*)

Mountain Frost Pear is blanketed in stunning clusters of white flowers with purple anthers along the branches in mid-spring, which emerge from distinctive shell pink flower buds. It has dark green foliage throughout the season. The glossy oval leaves turn an outstanding burgundy in the fall. The fruits are showy yellow pomes displayed in early fall.

34 28

Muhgo Pine

(*Pinus mugo*)

Muhgo Pine 34 on the Central Campus loop is more than 90 years old and our largest specimen of this multi-stemmed pine. This tree was damaged by a snowstorm in October 2011. Muhgo pines are popular ornamentals originating from the mountains of southern Europe, with extremely resilient branches that can typically withstand large amounts of wet snow. The extraordinarily heavy 2011 snowstorm proved to be beyond this tree's limits.

3 31 7

Northern Catalpa

(Catalpa speciosa)

The northern catalpa is a medium-sized tree with brown to gray bark. The leaves are large, heart-shaped and pointed at the tip, and the trumpet-shaped flowers are white with yellow stripes and purple spots inside. The leaves generally don't color in autumn before falling and instead either fall abruptly after the first hard freeze, or turn a slightly yellow-brown before dropping off. Widely planted as an ornamental tree, catalpas prefers moist, high pH (alkaline) soil and full sun, but will grow almost anywhere in North America.



14 24

Northern Red Oak

(Quercus rubra)

The northern red oak is one of North America's most important oaks for timber production. Quality red oak is of high value as lumber and veneer. Northern red oak is easy to recognize by its bark, which features bark ridges that appear to have shiny stripes down the center. A few other oaks have similar bark in the upper tree but the northern red oak is the only tree with the striping all the way down the trunk. Tree 14 on the Central Campus loop is more than 90 years old.

19

Norway Maple

(Acer platanoides)

This maple is native to Europe and many cultivars exist from this species. Many purple-leaved maples are Norway maple cultivars. Very thick canopies make them excellent shade trees. They are susceptible to a soil-borne virus called verticillium wilt.

31 15

Pecan Hickory

(Carya illinoensis)

Pecan tree 31 on Central Campus loop is more than 110 years old, and this tree is under consideration for state champion status by the Colorado Tree Coalition. Since Colorado's dry climate doesn't allow the pecans to fully develop, a nut harvest is unlikely. This tree

is more adaptable to the moister climates of the southern United States, and it is one of Colorado's most unique trees.

20

Pinyon Pine

(Pinus edulis)

The Pinyon (piñon) pine grows as the dominant species on 4.8 million acres in Colorado, making up 22 percent of the state's forests. The pinyon pine has close ties to agriculture, as strong, pinyon wood "plow heads" were used to break soil for crop planting at the state's earliest known agricultural settlements.

32

Ponderosa Pine

(Pinus ponderosa)

The bark on ponderosa pines helps to distinguish it from other species. Mature specimens have cinnamon-red bark with black crevices and younger trees have black to reddish-brown bark. The tree can often be identified by its characteristic long needles that grow in tufts of two to four (or five) depending on subspecies. Opinions differ on the scent. Some state that it has no distinctive scent while other sources note that the bark's furrow smells like vanilla.

33

Red Maple 'Armstrong'

(Acer rubrum 'Armstrong')

This fast growing, upright tree becomes 50 to 75 feet tall and retains a narrow form. New foliage emerges vibrant red and turns dark green in the summer. Fall color is usually orange-red to yellow-orange (in warmer climates) but not as brilliant as other varieties. It has smooth, silver-gray bark that becomes deeply ridged with age. Showy red flowers precede foliage on intriguing reddish branches. This tree is native to the eastern U.S.

4

Red Maple 'Autumn Blaze'

(Acer x freemanii 'Autumn Blaze')

Autumn Blaze is the fastest growing maple tree, prized for its hardy nature and brilliant color. This tree will turn blazing red during the autumn months, adding to the campus' changing fall landscape. This tree's bark always has dark striping on its gray-silver surface.

16

Red Sunset Maple

(Acer rubrum 'Franksred')

Red sunset maple has strong wood and is a vigorous, fast-grower, reaching a height of 50 feet with a spread of 25 to 35 feet. This tree is preferred over red maple, silver maple or boxelder when a fast-growing maple is needed. The newly emerging red flowers and fruits signal that spring has come. Leaves retain an attractive high gloss throughout the growing season, and the fall show is breathtaking, with red and orange leaves blending to give a sunset effect. The seeds of Red Sunset Maple are quite popular with squirrels and birds.

18

River Birch

(Betula nigra)

River birch is native to the eastern U.S., and while it's commonly found in flood plains or swamps, this tree will also grow on higher land. Its bark is distinctive, making it a favored ornamental tree for landscape use. Native Americans used the boiled sap as a sweetener similar to maple syrup, and the inner bark as a survival food.

17

Russian Hawthorn

(Crataegus ambigua)

The Russian hawthorn is a species of thorn (hawthorn) native to Western Asia and Eastern Europe, including Armenia, Iran, Russia and Turkey. It grows as a shrub or tree up to about 35 feet in height. The fruit is dark red to purple or black, with one or two stones, and the bark's characteristic gold-bronze color provides winter-interest.

6

Scots Pine

(Pinus sylvestris)

This species of pine is native to Europe and Asia. It has orange-colored bark and is often used in the Christmas tree industry. The species can live up to 300 years.



32 24

Silver Maple

(Acer saccharinum)

Valued at more than \$97,000, this former state champion is the oldest and largest tree on campus. The species was commonly planted in the Greeley region around 1900. Because of its massive water needs it's now a prohibited tree. Prone to storm damage, silver maples also have a very shallow root system that makes mowing a challenge.



12

Sugar Maple

(Acer saccharum)

This maple tree — known for its sugary sap used to produce maple syrup — isn't common on campus and efforts are being made to plant more of this species. It takes about 40 gallons of sap-water to produce one quart of syrup. This tree is also famous for its brilliant gold, orange and orange-red fall colors.

22

Sugar Maple 'Green Mountain'

(Acer saccharum 'Green Mountain')

The Green Mountain sugar maple has all of the sugar maple's positive characteristics (like strong limbs and gorgeous fall color) but the seeds are inconspicuous for less mess. That no-fuss characteristic makes the Green Mountain sugar maple a good choice for wide lawns, screens, and shade and as a specimen tree. It's also a good, durable street tree, and the leathery leaves are heat- and drought-resistant.

19

Swamp White Oak

(Quercus bicolor)

The swamp white oak is a medium-sized tree of America's north central and northeastern mixed forests. It has a very large range and can survive in a variety of habitats. It grows rapidly and is long-lived, reaching 300 to 350 years in age. It's not a large tree, typically about 65 to 80 feet tall, with the tallest known reaching 95 feet.

16 19

Thornless Honey Locust 'Moraine'

(Gleditsia triacanthos inermis 'Moraine')

These tough, fast-growing trees tolerate flooding, seasonal extremes, acidic and alkaline soils, highway salts and city pollution. They also resist wind damage and tolerate drought once established. Their long narrow pods have a sweet gummy sap which inspires the common name, honey locust. Their roots can break pavement — problematic when planted close to a road or sidewalk.

16

Tri-Colored Beech

(Fagus sylvatica 'Roseo-Marginata')

The tri-colored beech tree, is a lesser-known variety of beech tree but can be a better choice for a small yard than the other beeches, which can often grow quite large. Many shades of pink, green and gray can be seen on this tree's leaves.

9

Washington Hawthorn

(Crataegus phaenopyrum)

Widely grown as an ornamental, Washington hawthorns reach up to 33 feet in height. The small, red, berry-like fruit grow closely together in large clusters and are food for squirrels and birds. They have a mild flavor and can be eaten raw or cooked. As with other species of hawthorn, the wood is hard and can be used to make tools.

11

Weeping Norway Spruce

(Picea abies 'Pendula')

This is another "one-of-a-kind" specimen on campus. Saved from construction and replanted at this site in 1994, this tree is one of many cultivars of the Norway spruce tree. It's normally a very large tree with pendulous branches that have a curtain-like growth habit.

29

Western Red Birch

(Betula occidentalis)

Water birch, also known as red birch, is native to western North America. It typically grows along streams in mountainous regions, and is a deciduous shrub or small tree growing to 35 feet high, usually with multiple trunks. The smooth bark is dark red-brown to blackish.

23 2 5

White Fir

(Abies concolor)

White fir is native to the mountains of western North America, found at elevations of 2,952 to 11,154 feet. This medium-to-large evergreen coniferous tree can reach heights of nearly 200 feet. Popular as an ornamental landscaping tree and Christmas tree, the white fir species offers a perfect combination of strength, versatility and beauty.

11

White Pine

(Pinus strobus)

White pines prefer well-drained soil and cool, humid climates, but can also grow in boggy areas and rocky highlands. In mixed forests, this dominant tree towers over all others, including the large, broadleaf hardwoods. It provides food and shelter for numerous forest birds, such as the Red Crossbill, and small mammals, such as squirrels.

21

Yellowwood

(Cladrastis lutea)

Native to eastern U.S. forests, this tree is widely grown as an ornamental tree for its attractive, fragrant flowers. It draws its name from the color of its heartwood, thrives in full sunlight and in well-drained soil and tolerates high pH soils as well as acidic situations. The yellowwood can withstand urban settings and is attractive to birds.

