

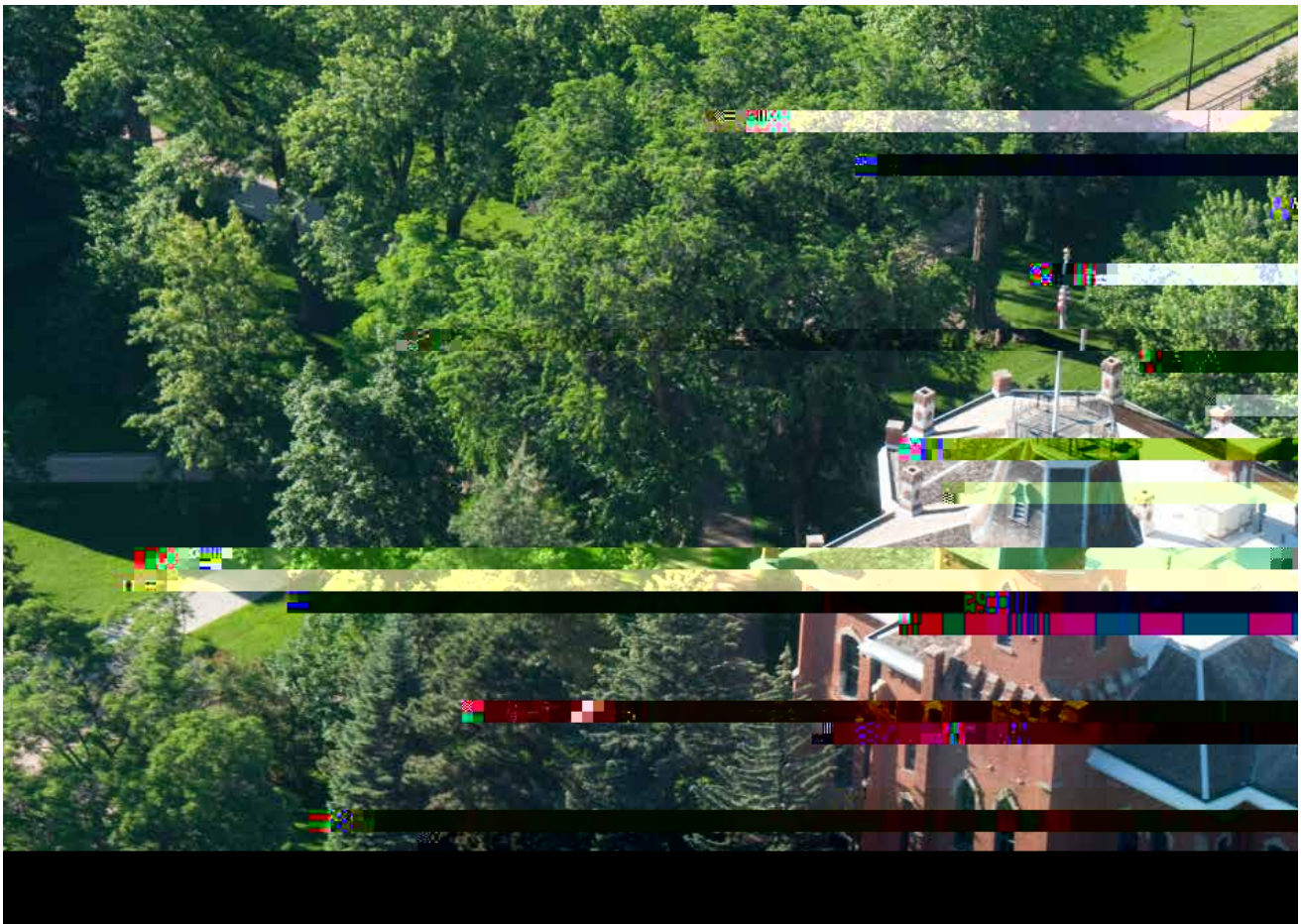
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The University of Colorado at Boulder was founded in 1876 on a treeless plain. Almost immediately, students, staff and faculty began to plant trees, determined to build a campus landscape like those they knew from the East and Midwest. Some trees were collected from the Boulder Creek floodplain, some were purchased from local nurseries, and others were shipped here on “tree trains”. A number of trees on campus are volunteers (they seeded themselves).

Trees are constantly changing and responding to a variety of both human natural influences. Disease, pests and insects all take their toll. Dutch Elm Disease, for example, killed more than one thousand American elms on campus during the 1960s and 1970s.

The life of a tree on the Boulder campus is not an easy one. Extreme weather causes damage, especially the moisture-laden snow that comes with our late spring storms. Boulder is well known for high winds that further injure campus trees. Construction and work staging present challenges as well. Trenching and excavation create major stress for trees that is often not evident for several years. Drought puts additional strain on our trees, particularly newly planted ones.

Over the years, many people have contributed to the planting and tending of the four thousand or more trees under the care of CU’s Facilities Management and the one thousand maintained today by the Housing Department. Enjoy your time on campus and enjoy our trees. They represent a unique, valuable, and aesthetically pleasing resource for all of us.



TREE DESCRIPTIONS

1. **Norway Maple** (*Acer platanoides*)

This Eurasian maple is widely used in the U.S. as a shade tree. Classified as one of the hard maples, it grows moderately fast, is dust and pollution tolerant, and disease and insect resistant. Its leaves are similar to those of the sugar maple but darker and thicker and have a milky juice; they appear earlier and last longer than those of our native maples.

2. **Tatarian Maple** (*Acer tataricum*)

This small maple is native to Southeast Europe and Western Asia. It is close in form and overall appearance to the more common ginnala maple, but does not have ginnala's consistent fall color. Both ginnala and tataricum can be pruned to tree form or can be maintained as a multi-stemmed shrub.

3. **Buckthorn** (*Rhamnus cathartica*)

Buckthorn, one of the many names of this tree, is usually found in the Pacific Northwest growing from sea level

9. **American Elm** (*Ulmus americana*)

American elm was once very abundant in the United States. Due to the devastating effects of Dutch Elm Disease (a bark beetle borne fungus), this inverted vase-shaped tree has been significantly reduced in number. The CU campus used to contain about one thousand American elm trees until Dutch Elm Disease ravaged the Boulder area. The campus now has fewer than forty American elms remaining.

10. **Hackberry** (*Celtis occidentalis*)

Hackberry is a Colorado native and varies in size from short and shrubby to more than 100 feet tall. It has serrate (toothed) leaves and small, dark purple pitted fruit eaten by birds. Hackberry trees are susceptible to a mite parasite called a psyllid, which causes the formation of galls on its leaves. It is heavily textured, warty, bark provides interest in the winter. It is an excellent tree to plant in water restricted areas because it is drought tolerant.

11. **Rocky Mountain Juniper** (*Juniperus scopulorum*)

This shrub-like tree is native to Colorado. It can grow to over 40 feet tall but its growth is often stunted in poor soils and drier areas of the Rocky Mountains. Its leaves are thin and pointed when young and develop an overlapping-scale pattern as they age. Juniper wood is very fragrant and the slowly maturing cones are used to flavor gin.

12. **American Basswood/American Linden** (*Tilia americana*)

Like the little-leaf linden, the American basswood has heart-shaped leaves but are much larger. It is often planted as an ornamental or shade tree, but when harvested, its wood has many uses and is prized by wood-carvers. The Linden's fragrant blooms appear in early to mid-summer, helping to produce prized honey valued by beekeepers.

13. **Sugar Maple** (*Acer saccharum*)

Sugar Maple is one of our most valuable trees. Its strong, hard wood is very durable and important for a wide range of commercial uses. Its sap is used to make maple syrup. An important ornamental, the sugar maple is colored brilliantly in fall. Its seeds are consumed by many kinds of birds and rodents. This maple is difficult to grow in Colorado because it prefers rich, moist soil.

14. **Pin Oak** (*Quercus palustris*)

The pin oak is named for the short, tough shoots that grow out of its branches but do not flower. It has a unique three-dimensional pattern of branching (branches at the top of the tree grow upward, branches in the middle

25. **Ailanthus/Tree-of-Heaven** (*Ailanthus altissima*)

Native to eastern Asia, the Ailanthus appears in many large cities throughout the United States because it is tolerant to pollution and harsh conditions. This tree has an interesting reproductive strategy- its male and female flowers are on separate trees (these flowers are called dioecious). The tree is well known for the unpleasant fragrance emitted from the male trees in the summertime. They grow quickly and, as a result, are subject to frequent damage by storms.

26. **Douglas-fir** (*Pseudotsuga menziesii*)

This long-lived, very large conifer grows from the Rocky Mountains to the Pacific Coast. Although it closely resembles a true fir in name and in form, the Douglas-fir has many distinct characteristics that set it apart. The most notable of these differences is its strange looking cone with protruding, paper bracts. These bracts, to some, appear to be the two back legs and tail of a mouse. This Colorado native produces the most timber of all American tree species and is commonly used as a Christmas tree.

27. **Mugo Pine** (*Pinus mugo*)

The Mugo pine is native to the Swiss mountains. It is a small pine, but its size varies greatly from two to eighty feet tall. The dwarf versions of Mugo pine are often used in landscaping because it lacks a deep taproot that makes other trees difficult to move and replant. This is an unusually large specimen for Colorado.

28. **American Chestnut** (*Castanea dentata*)

This small, multi-stemmed tree is an American chestnut, a once-important part of America's timber trade. Its nuts were an important source of food. Today, the American chestnut is almost extinct. In the early 1900s a fungus called Chestnut Blight nearly wiped out all of the chestnuts in the United States. Standing dead trees became infected with insect borers and when sawn provided wormy chestnut lumber. Root sprouts like these persist from many former trees but rarely survive for more than a few years.

29. **Northern Red Oak** (*Quercus rubra*)

The northern red oak grows moderately fast and displays outstanding fall color. Its straight trunk and strong wood make it a highly valued tree. Red oak is a commonly planted tree species in Boulder.

30. **Yellow Buckeye** (*Aesculus flava*)

Native to the Appalachians and the Ohio and Tennessee river valleys, the Yellow Buckeye is one of the larger growing Buckeye trees. It produces large yellow flowers on wide panicles, the ensuing fruit are two inches diameter, smooth and pear shaped, containing two buckeye nuts. Our specimen has a pendulous and weeping structural form as well as an interestingly plated bark texture.

31. **Boxelder** (*Acer negundo*)

The boxelder is one of the hardiest maples. Short-lived and fast growing, the boxelder is found in a wide range of habitats across the country. It is a common volunteer and reproduces readily by seed and root sprout. It is seldom planted as an ornamental (it is not very decorative) and its soft, weak wood has few commercial uses. Boxelder is the only maple with a compound leaf.

32. **Catalpa** (*Catalpa speciosa*)

Called the northern catalpa, or hardy catalpa, this tree grows in a variety of soils and conditions. In harsh conditions it can develop a crooked trunk. Its large, heart-shaped leaves and long, thin, bean-like fruits, called capsules, are seen on the tree throughout the winter, make the catalpa distinctive. Showy, fragrant, and erect clusters of faintly spotted white blossoms, produced in June, are the reason for the tree's designation as *speciosa*, or ornamental.

33. **White Ash** (*Fraxinus americana*)

The white ash is the largest and most commercially important of the ashes. It has hard durable wood used to produce furniture, railroad ties, tool handles, and athletic equipment. This tree is often planted as a street or shade tree, in part, because of its lovely fall color. This tree is more than 100 years old.

34. **Cottonwood** (*Populus saragentii*)

Cottonwoods usually have rounded triangular leaves and light, fluffy seeds which can be seen floating through the air during the spring. The *P. saragentii* species found on campus is native to Colorado. Most of the large cottonwoods on campus were planted by students in 1876. Despite their large size, cottonwoods are surprisingly short-lived, so many of the trees planted in 1876 have been removed.

35. **Western White Pine** (*Pinus monticola*)

The western white pine is a large, long-lived 5-needle pine found in the mountains of the northwestern United States and Canada. It is a moderately fast growing species with cones that rarely are fertile before the tree is

41. **Green Ash** (*Fraxinus pennsylvanica*)

The green ash looks similar to the white ash with slightly smaller leaves and a smaller overall size. The tree often grows in swampy areas and along stream banks. Like the Ailanthus and the white ash, the flowers of the green ash are both dioecious and prolific producers of seeds. Green ash grows quickly and is damaged frequently by snow and wind storms.

42. **Crimson King Maple** (*Acer platanoides* 'Crimson King')

A variety of the Norway maple, the crimson king maple has maroon-colored leaves that do not change color in the fall. Although they often are the same in size, the bright red color of its leaves throughout the summer makes the crimson king more impressive than the Norway.

43. **Horse Chestnut** (*Aesculus hippocastanum*)

Native to the Balkan Peninsula in Europe and Asia, the horse chestnut is a coarse textured tree planted in the United States as a shade tree. The leaf is palmately compound with seven leaflets growing out from a central point where the leaf attaches to the twig. Each spiny fruit pod breaks open to release the large brown seed which resembles a true chestnut, but is poisonous if eaten.

44. **Arborvitae**

49. **White Fir** (*Abies concolor*)

Found in the Sierra Nevada region of the United States primarily, the white fir also grows in the Rocky Mountains. Capable of growing 150 feet tall, white fir can live more than 300 years. Its silver-blue or silver-green needles are thick, fat and bluntly pointed, usually curved, and can grow up to 3 inches in length on low branches. They are soft to the touch. The white fir's cones are smooth, oblong, and range in color from yellow to olive green to purple.

50. **Burr oak** (*Quercus macrocarpa*)

The burr oak's leaves and acorns are larger than any other oak, hence the name, macrocarpa (macro = large, carpa = seed or fruit). Its twigs have cork-like ridges that look like growths on the bark. Planted for lumber and as an ornamental the burr oak is highly resistant to drought and even more tolerant of city pollution than most oaks. Burr oak grows slowly and displays little fall color.

51. **Ponderosa Pine** (*Pinus ponderosa*)

The ponderosa pine has needles in bundles of two and three. It is native to the Rocky Mountains and Pacific Northwest. It is the most prevalent tree in the foothills west of CU's Boulder campus. This pine is a major part of the American timber trade and can grow over 200 feet tall with a trunk more than 6 feet in diameter. Ponderosa pine is drought-resistant and regenerates well after fire. The thick bark of older ponderosa pines has a distinctive vanilla scent and is good protection from low-intensity wild fire.

52. **Crab Apple** (*Malus* spp.)

Crab apples are a species of *Malus* (Apple) cultivated for their showy white, pink, and red flowers and ornamental fruit. Crab apple may be the most commonly planted ornamental in the United States, in part because there are so many different species. All of these species are small, shrubby trees, some of which produce small, very sour apples. The apples are used to make jams and jellies. This tree suffered extensive damage due to a utility project in 2005.

53. **Columnar American Hornbeam** (*Carpinus caroliniana*)

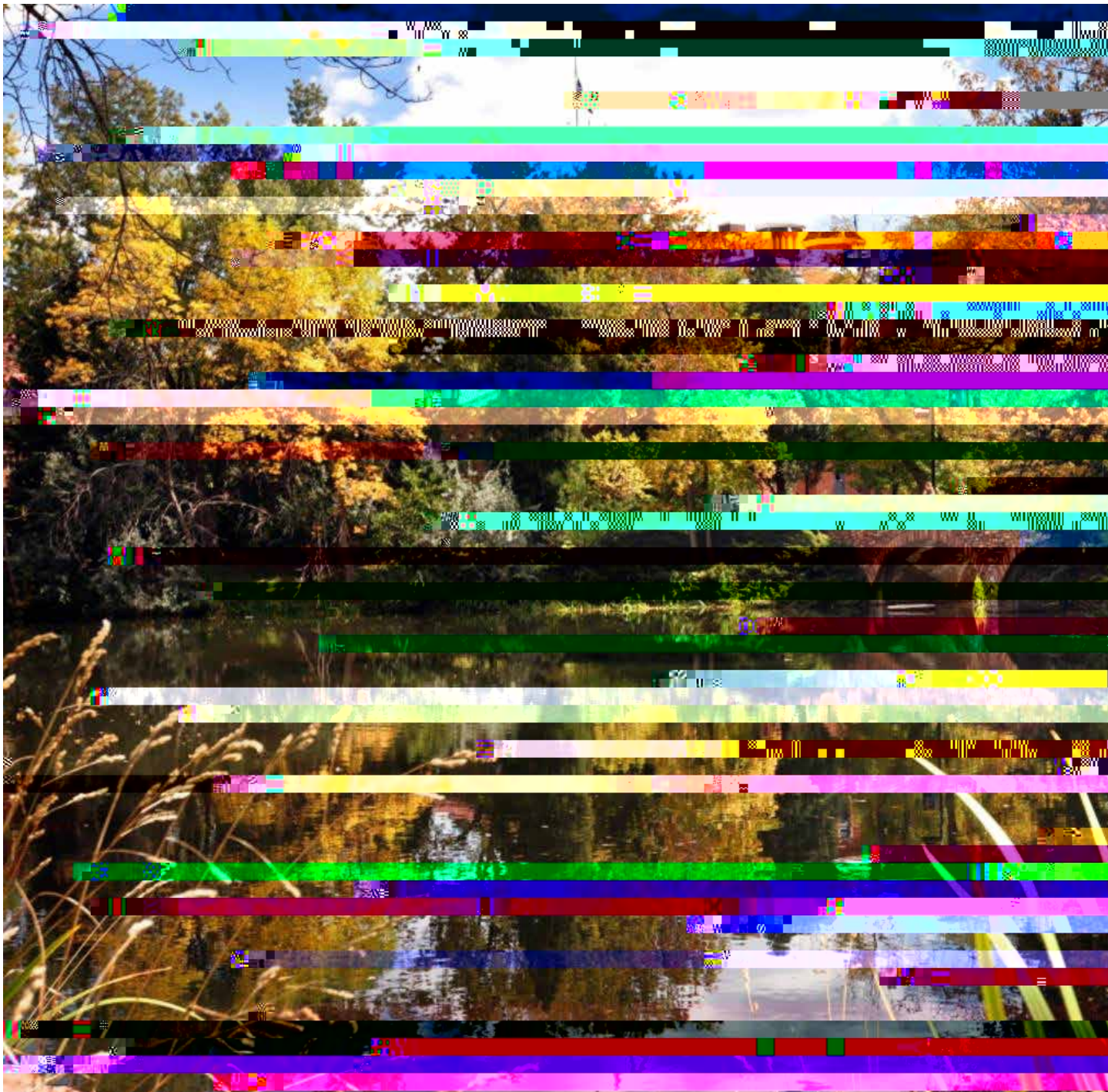
A member of the birch family, the American hornbeam is found in the eastern United States. It often is small and shrubby and grows best along the banks of streams or near swamps. Thin, smooth blue-gray bark and a fluted trunk are distinctive, and demonstrate why it is also known as the blue beech. The term columnar refers to this tree's straight and upright trunk, which makes this variety distinct from other American hornbeams.

54. **Scotch Pine** (*Pinus sylvestris*)

The Scotch pine is a non-native from Eurasia, currently naturalized in the northeast United States. It can be identified by its twisted, blue-green needles (1 1/2-3in. long) bundled in pairs, the orange color of the bark on young trees, and its open and irregular appearance. This pine is more widely planted than any other imported species, but it does not grow to be as strong and healthy as it does in its native habitat. Its tolerance to polluted conditions makes it a popular tree for urban plantings.

55. **Magnolia** (*Magnolia* spp.)

Magnolias comprise a large family of trees with 35 native species in North America and Asia. Many of the magnolias in the United States are cultivated Asian species. Its leaves are alternate, large, and deciduous, although leaves may persist into the winter. The large white blossoms make the magnolia a popular ornamental. The wood from some species of magnolia is used commercially. The large tree in this cluster of trees is a saucer magnolia. The two shrub-like trees are star magnolias.



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