

## **Trees Across Colorado**

### **Description of Trees for April, 2014**

Trees are listed in alphabetical order by Latin name.

References are Michel Dirr, Manual of Woody Landscape Plants, Fifth edition; Colorado Tree Coalition web page archive of Feature Trees at <http://www.coloradotrees.org/find.php>, the Colorado State University Extension Service Gardening Series No 7.229 found at <http://www.ext.colostate.edu/pubs/Garden/07229.html>; Drought- Tolerant Trees for Colorado Landscapes at <http://csfs.colostate.edu/pdfs/droughttrees.pdf> as well as web sites listed under specific trees.

**DROUGHT TOLERANCE:** All newly transplanted trees require careful watering in all seasons. Colorado's dry winters are very hard on trees. Once established (**three to four years after planting**) many of the trees on the 2014 list are considered drought tolerant, so please check the information below.

**BAREROOT TREES MUST BE PLANTED IMMEDIATELY--ROOTS CANNOT DRY OUT:** Although dormant upon arrival, their roots cannot be allowed to dry out or the hair roots (the small roots critical to getting nutrients and water from the soil) will break, endangering the tree's survival. Bareroot trees may seem more vulnerable but actually, if handled correctly, have as good or better chance of survival than balled & burlaped (B&B) trees. B&B trees lose much more of their root system when dug for transplant than bare root trees. Our survival rate is higher for bare root than balled and burlaped, partly because some of the balled and burlaped varieties are harder to transplant whether by professionals or community volunteers.

**TREES IN AIR PRUNED CONTAINERS MUST BE WATERED DAILY UNTIL PLANTED:** At the nursery, these trees are grown in a patented system of a porous container within a larger solid container designed to prevent girdling roots so common in container grown trees. The inner container has many small; funnel-like bulges with holes at the end exposed to air. As the roots reach the wall of the inner container, they are guided into the bulges and when the roots reach the hole they stop growing, encouraging the tree to produce more roots elsewhere. The tree grows many more fibrous roots inside the container resulting in a mass of smaller more fibrous roots that will absorb more soil nutrients and foster quicker establishment, once the porous container is removed during planting. However, during transport and while waiting to be planted, the tree is in a porous container and **MUST BE WATERED DAILY**. Storing them in damp mulch that is kept damp while being stored is best. Unloading them onto hot asphalt without a layer of damp mulch underneath them will dry out the roots. Please visit [www.supertrees.com](http://www.supertrees.com) for pictures of how these trees are grown and for instructions on planting. The trees grown in air-pruning containers will be about 1¼ inch in caliper, between 6 – 12 feet tall, and weigh no more than 80 pounds. The container snaps off and must be removed during planting. They are more expensive due to higher labor costs. People who have planted these trees say a higher survival rate with quicker early growth results from the extensive fibrous root system.

**HEIGHT AND WIDTH OF TREES** are estimated in the descriptions below and adjusted for this zone, and thus may differ from figures given in sources based on other areas.

**Hedge Maple** (*Acer campestre*) (BR) Bare root which must be ordered in multiples of 5 by groups/cities; also (B&B) Balled and burlaped weighing about 50 pounds and (APC) grown in container that air prunes the roots; weighs no more than 80 pounds.

This excellent small tree reaches a height of about 25-30 feet and an equal spread with a dense oval to rounded outline. The leaves are handsome glossy, stiff leathery dark green in the summer holding late into the fall, sometimes turning a clear "butterfly" yellow, other times freezing and turning light brown. It will grow in almost any soil, tolerating dry, alkaline, compacted conditions, and is essentially pest and insect free.

The name "Hedge Maple" refers to the tree's tolerance of severe pruning. It is often used as a high hedge in

**Bigtooth or Wasatch Maple** (*Acer grandidentatum*) also known as Western Sugar Maple or Canyon Maple. (APC): grown in container that air prunes the roots; weighs no more than 80 pounds.

This small to medium tree is native to interior western North America and has a spreading, rounded crown reaching an average height of about 20 to 30 feet (sometimes reaching 50 feet) with an almost equal width. Although shade tolerant, it prefers full sun, and is slow growing when young. The leaves have 3 or sometimes 5 lobes, are about 4 inches in diameter and nearly round with several blunt teeth around the edges. The early spring, small yellowish flowers appear only every 2-3 years. Fall leaf color is yellow, orange and red. This tree grows in many soil types and is reasonably drought tolerant and alkaline adaptable, although it does not tolerate slow draining soils. It does not have many pests. Because it is closely related to the northeastern sugar maple, it can be used as a source of sugar and syrup.

Sources: [www.colostate.edu/Depts/CoopExt/4DMG/Trees/Wasatch.htm](http://www.colostate.edu/Depts/CoopExt/4DMG/Trees/Wasatch.htm);  
[extension.usu.edu/range/Woody/bigtoothmaple.htm](http://extension.usu.edu/range/Woody/bigtoothmaple.htm);  
[aggie-horticultural.tamu.edu/ornamentals/natives/acergrandidentatum.htm](http://aggie-horticultural.tamu.edu/ornamentals/natives/acergrandidentatum.htm)

**Hot Wings Tatarian Maple** (*Acer tataricum* ‘GarAnn’) (BR) bare root which must be ordered in multiples of 5 by groups/cities, and (B&B) Balled and burlaped weighing no more than 80 lbs maximum.

This graceful, upright spreading small tree grows into a broad rounded shape, reaching 20-25’ high and 12-20 feet wide. Its cream green flowers in spring are followed by bright red samara (fruit) in July, ¾ to 1 inch long, with almost parallel wings. Sometimes, the color of the samaras is such a vivid red that, when set against the green summer leaves, the tree almost appears to be in flower. This cultivar was patented by Fort Collins Nursery from seeds collected from Tatarian Maples in the Cheyenne Wyoming Arboretum chosen for their consistently bright red samaras and bright red fall leaves. Its summer leaves are medium green.

Tatarian Maples will tolerate drought and alkaline soils better than Amur Maple (*Acer ginnala*) to which its leaves, size and shape are often similar, although Tatarian Maples are more uniform in shape. It is listed as a moderately low water demand tree, once established. Dirr; CTC web page;

<http://www.ext.colostate.edu/pubs/Garden/07229.html>

**Pacific Sunset Maple** (*Acer truncatum* x *A. platanoides* ‘Warrenred’) (BR) Bare root which must be ordered in multiples of 5 by groups/cities and (APC) grown in air pruning containers where air prunes the roots; weighs no more than 80 pounds

This medium sized faster growing cross between Shantung Maple and Norway Maple matures into an upright spreading tree 25-30 feet tall and 20-25 feet wide. Its leaves emerge reddish purple, turn a glossy, dark green in summer and then yellow-orange to red in the fall, particularly if in full sun. It is adaptable to different growing conditions, is heat and drought tolerant.

Sources: Dirr; <http://oregonstate.edu/dept/ldplants/1plants.htm#ac-trpl>

**Fastigate European Hornbeam** (*Carpinus betulus* ‘Fastigiata’) (APC) grown in air pruning containers where air prunes the roots, weighs no more than 80 pounds

This cultivar grows to 30 – 40 feet tall, 20 to 30 feet wide with an oval vase shape. The dark green leaves fade to yellow in the fall. A relatively slow grower, this tree has very hard strong wood that was used by American pioneers for oxen yokes. It has distinct fan-ribbed branches without a central leader with foliage growing all along the branches. It makes a good screen summer and winter because of the dense, close-knit ascending branches. The tiny hard brown fruit attract birds and are not a litter problem.

European Hornbeams are relatively free of insect and disease problems, tolerate a wide range of soil conditions from light to heavy, acid to alkaline, but prefer good draining soil and are drought tolerant. They require little pruning.

Source: Dirr; University of Florida IFAS Extension: <http://edis.ifas.ufl.edu/st119>

**Western or Northern Catalpa** (*Catalpa speciosa*) (APC) grown in air pruning containers where air prunes the roots, weighs no more than 80 pounds

This large tree (40-60 ft in height with a 20 to 40 foot spread) grows fairly quickly to an upright, coarse and distinct form that provides interesting winter character. Its large leaves (6 – 12 inches long, 3 – 8 inches wide) are bright green in summer, turning yellow-green to brown but often falling before turning. It showy, large

white flowers appear in May to June followed by seed pods 8 – 12 inches long that persist into fall and winter. This tree should be pruned for strong branches because its brittle wood can break in early or late snow storms or high wind. It tolerates different soil types and handles alkaline soil and has few insect and disease problems. It is on the list of moderately low water-use trees.

Sources: Dirr; CTC web page; CSU Gardening Series No. 7.229

**Hackberry** (*Celtis occidentalis*) (B&B) Balled & burlaped weighing 50 lbs. and (APC) grown in air pruning containers where air prunes the roots, weighs no more than 80 pounds

The open appearance of this large rounded tree results from widely spread branches and medium to bright green foliage that turns yellow-green in the fall. It is hardy in all areas and in all soils, including difficult alkaline soil conditions. The trunk bark on a mature tree is corky. It will reach a mature height of 50-60 feet and 30-35 feet in width.

Hackberry trees grow in wet to very dry areas once established. It is listed as a low water use tree. The growth rate is moderate to rapid and in its first ten years, the pruning of the scattered branch growth can direct a central trunk and encourage good shape. Some cities are using Hackberries to replace American Elms because they are hardy and relatively disease resistant.

The tiny berries of this tree are flavored like dates and relished by birds. The leaves can be disfigured by nipple-gall, small bullet-like appendages under the leaves that are not visible except close up and do not affect the growth of the tree or leaves.

Sources: Dirr; CTC web page; watersaver.org

**Hackberry Chicagoland** (*Celtis occidentalis* 'Chicagoland') (APC) grown in air pruning containers where air prunes the roots, weighs no more than 80 pounds.

It is a cultivar of Hackberry that grows with a central upright leader.

Source: Dirr

**Redbud** (*Cercis canadensis*) (B&B) Balled & burlaped weighing 50 lbs. and (APC): grown in container that air prunes the roots; weighs no more than 80 pounds.

This spring flowering tree reaches a height of 25 feet and equal width with a spreading to flat-topped crown, sometimes requiring pruning to maintain a tree form. The flowers bloom along the stems in April and are perfect reddish purple in bud and open into a rosy pink with a purplish tinge, lasting two to three weeks depending on the weather. It does best planted in a protected area and thrives in shade. Although it prefers well drained soils, it can adapt to our alkaline conditions. In Colorado, it has few insect and disease problems.

Sources: Dirr; CTC web page

**Turkish Filbert or Hazelnut** (*Corylus colurna*) (B&B) Balled and burlaped weighing about 50 pounds and (APC) grown in container that air prunes the roots; weighs no more than 80 pounds.

One of the top street tree selections in Europe, this tree has a strong broad pyramidal form, clean foliage and tolerance to alkaline urban conditions. It grows to 40-50 feet tall and 25-30 feet wide. The insect free leaves are handsome dark green in the summer in spite of heat, sometimes turning yellow and persist late into fall. The nuts are ½ - 5/8 inches in diameter and are edible in the fall. Turkish Filberts thrive in hot summers and cold winters and although a well-drained soil is preferable, they tolerate both acid and alkaline soils but won't do well in heavy clay that remains saturated. When first establishing the tree, do not over-water it. It will probably leaf sparsely the first year: DO NOT ASSUME THAT MORE WATER WILL HELP IT. The first few summers it needs careful watering, but once established, it is quite drought tolerant.

Sources: Dirr, CTC web page

**Thornless Cockspur Hawthorn:** *Crataegus crusgalii* var. *inermis*: (APC) grown in container that air prunes the roots; weighs no more than 80 pounds

This short (15 - 18 feet tall), spreading (20-25 feet wide) thornless tree has dense horizontal branches making it hard to grow grass in its shade. The leaves are 1 - 4 inches long and 1/3 to ½ inches wide and turn from glossy

green in summer to bronze-red to purplish in the fall. Clusters of simple creamy white flowers in May have an unpleasant odor. The small deep red berries ripen late in September and October and stay on into the winter because birds don't like them.

This drought resistant (once established) tree will tolerate clay soils but prefers soils with good drainage. It has no major insect or disease problems here in Colorado and is listed as a low water-use tree.

Sources: Dirr, CTC web page, watersaver.org

**Autumn Gold Ginkgo** (*Ginkgo biloba* 'Autumn gold') "Maidenhair Tree" (B&B) Balled & burlaped weighing 50 pounds.

This male cultivar of the slow growing ginkgo tree develops a broad conical form with a very regular shape, reaching a height of 50 feet with a 30 ft spread. Adequate water and fertilizer can make ginkgos grow quite fast. Ginkgo trees are among the oldest on earth and were native in North America at one time. They prefer sandy, deep, moderately moist soil but will grow in almost any soil situation and are very pH adaptable. In Colorado, they should be planted out of full sun and do not tolerate hard cold. There are a few beautiful mature specimens in Denver, one at East High School. They are extremely free of pests.

The leaf color is bright green on both surfaces in summer turning to a beautiful yellow in the fall. This cultivar is known for its excellent fall golden color. Frost can cause the leaves to drop almost overnight whether they have changed color or not.

Dirr

**Skyline Honeylocust** (*Gleditsia triacanthos inermis* 'Skycole') (BR) bare root so must be ordered by cities/groups in multiples of 5.

This thornless and podless Honeylocust develops a strong central leader and has a broad pyramidal form with ascending branches. The open spreading crown and small leaves result in a filtered shade in the summer that easily lets grass grow under it. Its dark green leaves turn bright golden yellow in the fall. It grows to 40' -45' in height and 30' - 35' in width. It is a relatively fast growing tree when young and is relatively tolerant of high pH soils and drought. Skyline Honeylocusts are among the most cold hardy honeylocust cultivars.

Sources: Dirr, CSU Gardening Series No. 7.229

**Kentucky Coffeetree** (*Gymnocladus dioica*) (B&B) Balled & burlaped weighing 50 lbs.

This unusual tree goes through a transition of textures, very light, graceful and airy in summer, changing to a stark, very coarse picturesque tree in winter. At maturity, they reach 50-60 feet in height and 35-40 feet in width. Kentucky Coffeetrees greatly increase in beauty with age, starting out looking very sticklike. They tolerate higher alkaline soils and are low water use trees, once established. They have no serious disease or insect problems. The bi-pinnately compound leaves with pointed leaflets 1 ½" long come out late in spring with new leaves tinged pink to purplish, gradually changing to dark green almost dark bluish green in summer and then yellowish in fall. The shade of this tree is filtered because of the open shape and small leaflets. The only drawback of this tree are the brown pods on the female tree, 5-10" long, in the fall. They hang on into winter and give the tree an even more interesting winter appearance. Early Kentucky settlers made coffee from the pods which if eaten raw in large numbers may cause illness.

Sources: Dirr, CTC web page, CSU Gardening Series No. 7.229

**Goldenraintree** (*Koeleruteria paniculata*) (B&B) Balled & burlaped weighing about 50 pounds.

This smallish tree reaches 30 feet in height and width. It has a regular rounded outline with spreading, ascending branches. Adaptable to a wide range of soils, it will tolerate our high alkaline soil as well as drought, wind and air pollutants. It is considered a moderately low water use tree. It prefers full sun.

The leaves unfold purplish red, turning bright green in the summer. Fall leaf color varies from yellow to golden yellow to orange-yellow. New leaves may be injured by late spring frosts.

The tree flowers in July, ½ inch wide yellow flowers on a 12"-15" panicle that is very showy, and when the flowers drop, the ground appears to be covered with golden rain.

The fruit appears in August, a papery, 3-valved capsule 1 to 1 ½ inches long, changing from green to yellow to brown and looks like a Japanese lantern. There is a small black, hard seed about the size of a pea inside.

Goldenraintrees have no serious disease or insect problems.

Sources: Dirr; CTC web page

**Spring Snow Crabapple** (*Malus 'Spring Snow'*) (BR) Bare root so must be ordered in multiples of 5 by groups/cities; (B&B) Balled and Burlaped weighing about 50 pounds..

This dense upright oval variety of crabapple, considered a sterile version of 'Dolgo' crabapple, will reach a height of 15-20 feet and almost equal width. It blooms between mid-April and mid-May with large fragrant white flowers that last three to four weeks depending on weather. This type of crabapple does not produce fruit so it does not create a mess in the fall around sidewalks and high-use areas. Its bright green summer foliage turns yellow in the fall. It is only slightly susceptible to fireblight and should be planted in areas with full sunlight. All crabapples are considered drought tolerant trees.

Sources: Dirr, <http://www.ext.colostate.edu/pubs/garden/07424.html>

**'Bloodgood' London Planetree** (*Platanus acerifolia 'Bloodgood'*) (BR) Bare root so must be ordered by groups/cities in multiples of 5 and (APC) grown in container that air prunes the roots; weighs no more than 80 pounds.

This cousin of the American Sycamore, the London Planetree is believed to be a cross between American and European Sycamores. It is very common in London, hence its name. It is very tolerant of urban conditions, and withstands high pH conditions. It transplants easily but needs careful watering and mulching the first several years after transplant. The London Planetree generally is not nearly as susceptible to anthracnose as the American Sycamore. The 'Bloodgood' cultivar is considered more heat and drought tolerant than the species and is even more resistant to anthracnose.

Pyramidal in youth, it develops with age into a large open spreading outline with massive branches. It reaches a mature height of about 60 feet and a width of 40-45 feet.

Its green summer leaves turn yellow brown in the fall. Its patchy cream, olive green and light brown colored bark makes it a very handsome tree in winter.

Its fruit is a rounded syncarp of achenes ripening in October.

Sources: Dirr; CTC web page

**Canada Red Cherry** (*Prunus virginiana 'Shubert'*) (BR) Bare root so must be ordered by groups (cities) in multiples of 5) Zones 2 to 6.

This small tree grows to 20-25 feet tall and up to 18 to 22 feet wide with a wide open habit. The cultivar 'Canada Red' is similar to the 'Schubert' cultivar but grows faster, has a straighter trunk, brighter red leaves and a full rounded crown with well distributed branches. The leaves of 'Canada Red' emerge green and turn reddish-purple as they mature, creating a multi-colored look against other new leaves in the spring. Chokecherries have aromatic white flowers ½ to 3/5 inches across in late May to early June and an astringent fruit 1/3 inches in diameter that starts red and turns purple and is used for making jams, jellies, sauces, pies and wine. The fruit is also a favorite of wildlife.

This tree tolerates most soil types and a wide range of temperatures but does grow suckers from the root crown and roots which must be cut back to maintain the tree form. It is listed as a moderately low water demand tree.

Sources: Dirr, CTC web page; watersaver.org

**Chanticleer Pear** (*Pyrus calleryana 'Chanticleer'*) (B&B) Balled and Burlaped weighing about 50 pounds and APC: grown in container that air prunes the roots; weighs no more than 80 pounds.

This thornless, oval, upright-pyramidal pear tree has a compact form that makes it a good street tree and it has no litter. It reaches a height of 30-40 feet and width of 15 feet and has numerous white flowers in the spring. Its glossy green summer foliage turns reddish purple in the fall. It tolerates drought, heat and pollution, is adaptable to many different soil types including alkaline and clay, and prefers full sun. The tiny, pea sized fruit hangs on into winter and is popular with birds. Because it hardens off early compared to some other pear

cultivars, it may be less susceptible to early freezes and has good fireblight resistance.

Sources: Dirr; [www.colostate.edu/Dept/CoopExt/4dmg/Trees/chnticlr.htm](http://www.colostate.edu/Dept/CoopExt/4dmg/Trees/chnticlr.htm); [www.arborday.org/treeguide](http://www.arborday.org/treeguide)

**Swamp White Oak** (*Quercus bicolor*) (B&B) Balled and burlaped, weighing 50 pounds and (APC) grown in container that air prunes the roots; weighs no more than 80 pounds.

This very rugged and hardy oak has a much better drought tolerance than the name implies. It is listed as a moderately low water use tree, once established. It grows to 60 – 80 feet tall with an equal spread, forming a broad, open, round-topped crown. Swamp White Oaks tolerate a wide variety of soils and growing conditions. The summer leaves are a lustrous dark green on top with a velvety whitish-silver underside resulting in a bicolor affect in the breeze, hence the name *Quercus bicolor*. In fall the leaves usually turn yellow, but sometimes reddish bronze, and usually do not hold on into winter. Its 1” long acorn is usually paired.

Sources: Dirr; CTC web page; watersaver.org,

**Bur Oak** (*Quercus macrocarpa*) Both (B&B) Balled and burlaped weighing 50 lbs. and (APC): grown in container that air prunes the roots; weighs no more than 80 pounds

A fine, large specimen tree, also called Mossycup Oak (from its acorn), has been called inspiring because of its size and hardiness. Bur Oaks reach 60' in height and width. The weakly pyramidal to oval shape becomes a broad crown with stout branches at maturity. The rough dark gray to gray-brown bark becomes deep ridged and furrowed. It is believed that the thick bark helped Bur Oaks survive the heat of prairie fires. Bur Oaks are difficult to transplant but once established, grow well in various soil types and are very adaptable to city heat and pollutants, tolerating high pH soils. Regular watering (don't drown it!) increases the growth rate, although Bur Oak are drought tolerant, low water-demand trees, once established. Bur Oaks have lustrous green leaves in summer that turn yellow-green, yellow, and finally yellow-brown in fall.

Sources: Dirr, CTC web page, CSU Gardening Series No. 7.229

**Red Oak** (*Quercus rubra*); (APC) grown in container that air prunes the roots; weighs no more than 80 pounds.

This relatively fast growing oak prefers well-drained sandy soils and withstands urban pollution, but may develop chlorosis in high pH soils with outer branches dying back. It has a rounded form when young, becoming round-topped when older and reaching a mature height of 50-70 feet and 50-60 feet in width. Its unfolding leaves are pinkish to reddish, turning lustrous dark green in summer and then russet to bright red in fall. Its acorns mature and fall early. Red Oaks are basically free of insects and disease and transplant readily.

Sources: Dirr, CTC web page

**China Snow Tree Lilac** (*Syringa pekinensis* 'Morton') (BR) Bare root so must be ordered by groups (cities) in multiples of 5.

This upright spreading, small tree was found as a seedling at the Morton Arboretum. It reaches about 20 feet in height and equal width. Its dark green summer leaves turn yellowish in the fall and are slightly smaller than those of the Japanese Tree Lilac. The 'China Snow' cultivar has impressive creamy white flowers in 3”-6” panicles that appear in late May to mid June after the leaves appear and are popular with bees, butterflies and birds. Its handsome amber-cherry-red papery bark exfoliates in rich brown flakes or sheets. It is a tree form of Pekin Lilac.

Lilacs generally are adaptable to many soil types and will tolerate high pH soils. Pekin Tree Lilacs are listed as moderately low water use trees.

Sources: Dirr, 6<sup>th</sup> edition; watersaver.org

**Glenleven Linden** (*Tilia cordata* 'Glenleven') (also called littleleaf lime tree): (APC) grown in container that air prunes the roots; weighs no more than 80 pounds.

This linden develops an extremely straight trunk and has larger leaves, more open branching and faster growth than other littleleaf lindens. Its inconspicuous yellowish, mid-summer flowers are very fragrant.

Lindens are pH adaptable and pollution tolerant but prefer good draining soil. The dark green summer leaves turn yellow in fall. The gray-brown bark is ridged and furrowed on older trunks. Glenleven Lindens can reach a mature height of 45-50 feet and width of 35' in Denver. Lindens generally are hardy trees once established and maintain their pyramidal shape with minimal pruning.

Sources: Dirr, CTC web page (on *tilia cordata* generally)

**Frontier Elm** (*Ulmus americana* 'Frontier') APC: grown in container that air prunes the roots; weighs no more than 80 pounds

This hybrid elm is reported to be tolerant of Dutch Elm Disease and has been moderately resistant to elm leaf beetle in tests. It is a small to medium sized tree growing to 20-30 feet tall and 25-30 feet wide in an upright pyramidal form and a symmetrical shape. Its glossy green leaves turn burgundy in the fall. It rarely flowers and has no seeds. This elm tolerates a wide variety of soils.

Source: CTC web page