



A FALL MINI-WALK IN KENDAL CROSSLANDS ARBORETUM, KENDAL CAMPUS

Enjoy the splendor of autumn by taking a short walk from Kendal's Parking Lot #9 to Parking Lot #13 where 12 trees are highlighted (see back page for map). It is hard to predict the exact dates of fall foliage color. For maximum fall color, a tree must be healthy and well-watered. It also needs an ideal combination of cool nights and sun-filled days. Finally, the tree must possess a genetic coding that predisposes it to show color. As the leaf's chlorophyll breaks down, the green color disappears, and yellow to orange colors become visible. At the same time other chemical changes may occur through the development of red pigments. If all these factors come together, there should be a colorful display. The ripening of fruit also adds to the color and textures of fall as well as the sense of smell when approaching a Katsura-tree. NOTE: Autumn highlights are underlined.



Quercus coccinea (Scarlet Oak)
Kendal Center Entrance

#10 *Acer palmatum* (Amoenum Group) 2 Trees C-08
Japanese Maple Japan/Korea/China

- **Notable Feature:** Particularly noted for its vibrant, crimson red fall color. However, it is the leaf shape that separates this particular maple from other Japanese maple groups. Each palmate leaf is cupped at the base and has five to seven serrated lobes.
- **Habit:** This deciduous, upright tree with a rounded crown typically grows to 15 to 25 feet tall and about 10 to 15 feet wide.
- **Flower:** Species is monoecious (male and female flowers occur separately on same tree); females flowers are small, reddish purple, in terminal hanging clusters in mid to late spring. The flowers are rather attractive close up, but are not particularly showy from a distance.
- **Foliage:** Leaves are 1 ½ to 2 ½" long with serrated edges and remain a deep purple throughout the growing season. In autumn the foliage turns a deep scarlet red and when backlit by the low rays of the sun, the leaves glow as if on fire.

- **Fruit:** Flowers are followed by two-winged seed pods (samaras) which ripen in September to October.
- **Interesting Fact:** Caltech professor David Lentink states "The twirling fruit (samaras) of maple trees spin like miniature helicopters as they fall to the ground. The leading edge of the spinning seeds provides lift by generating a tornado-like vortex. Because the seeds descend slowly as they swirl, they can be carried aloft by the wind and dispersed over great distances".

#23 *Cedrus atlantica* (Glauca Group) 2 Trees

C-07

Blue Atlas Cedar

Morocco/Algeria

- **Notable Feature:** The needles of those in the Glauca Group are noticeably blue especially when seen against a background of snow.
- **Habit:** Loosely pyramidal when young with long spreading branches, these large, evergreen conifers, which are 40 feet to over 100 feet tall and up to 45 feet wide, become more flat-topped with age.
- **Flower:** Monoecious -- male and female flowers appear separately in cone-like structures on the same tree in spring. In autumn the males send clouds of yellow pollen up to the females in higher parts of the tree.
- **Fruit:** The female cones (2 to 4" long and 2" wide) sit upright on the higher branches, are thick and purplish, and ripen in the fall after two years.
- **Foliage:** Tufted clusters of 1" long, blue to silvery blue needles curve upward. The blue color intensifies as the cool nights of fall set in.
- **Interesting Fact:** These large trees, native to the Atlas Mountains in North Africa, are often grown as bonsai because of their architectural growth habit.

#24 *Franklinia alatamaha* 5 trees in center of courtyard

D-07

Franklinia

Southeastern U.S.A.

- **Notable Feature:** Three-inch wide, camellia-like, sweetly fragrant, white flowers feature egg-yolk yellow center stamens. The flowers appear in late summer/early fall at a time when few other flowering trees are in bloom.
- **Habit:** Deciduous. Grows as a single-trunked tree, 20 feet or more high, or as a multi-stemmed shrub with a rounded crown. The smooth gray bark is marked by white stripes and becomes fluted with age, adding winter interest.
- **Flower:** Species has perfect (bisexual) flowers. In late summer, cup-shaped, 3-inch wide, sweetly fragrant, 5-petaled white flowers with conspicuous, yellow stamens bloom and continue blooming sporadically into the fall.
- **Fruit:** In autumn, nearly round, ¾" across, woody capsules form, initially green and turning brown when ripe. The capsule splits 5 ways from the base, giving a unique zigzag appearance.
- **Foliage:** Narrow, oblong-obovate, glossy, dark green leaves, are up to 5" long. The foliage turns striking shades of orange, red, and purple in autumn.

- **Interesting Fact:** When Philadelphia botanist John Bartram found a rare specimen near the Altamaha River in Georgia in 1765, he named it to honor his friend Benjamin Franklin. It has been extinct in the wild since the early 1800s and all now existing *Franklinia* derive from the seed he collected.

#22 *Crataegus viridis* 'Winter King' 2 Trees

D-07

Winter King Hawthorn

Southeastern U.S.A.

- **Notable Feature:** A feast for your eyes as well as for the birds! Dangling red, small, crabapple-like fruits begin to ripen in early fall, and when fully ripe are devoured by cedar waxwings in just a few hours, indeed a sight to behold!
- **Habit:** Growing up to 25 feet tall and just as wide with a rounded outline, its peeling gray bark reveals a colorful inner orange layer and its silvery gray branches have an interesting crisscrossing habit. Deciduous.
- **Flower:** Species has perfect (bisexual) flowers; 2-inch clusters of white flowers appear in mid-May after its glossy green leaves fully emerge.
- **Fruit:** A rounded pome, ¼ to ½" in diameter. The brilliant red fruit starts forming in late September or early October and covers the tree in abundance, persisting through the winter months.
- **Foliage:** The clean and disease-free foliage is glossy green with toothed edges and emerges in early spring; fall foliage color ranges from purples to deep reds.
- **Interesting Fact:** 'Winter King' is a selection of our native green hawthorn; it is a small, tough, and highly ornamental tree that ranks among the best of the many hawthorn varieties for landscape use. Unlike most other hawthorns, it remains relatively free of pests and diseases such as scab and rust, and its fruits are considerably larger than those of the common green hawthorn.

#26 *Cercidiphyllum japonicum*

D-07

Katsuratree

Japan/China

- **Notable Feature:** A magnificent, deciduous, large tree from China and Japan. Its size, form, and foliage make it a stand-out in the landscape especially in a spacious area where it can grow to maturity as a grand specimen.
- **Habit:** Deciduous. Full and dense as a young tree, however with age the tree may be wide and spreading to more upright and pyramidal, ranging from 40 to 60 feet high with a 20 to 30-foot spread; the female tree tends to spread more than its upright male counterpart.
- **Flower:** Flowers are dioecious with male and female flowers borne on different trees. Emerging before the tree leafs out, the flowers are inconspicuous and non-ornamental.
- **Fruit:** Papery thin, winged seeds are borne in small, banana-shaped pods.
- **Foliage:** Leaves are heart-shaped and resemble those of a *Cercis* (Redbud). They emerge as bronzy purple and become green as the season progresses. In the fall, as the leaves turn pure yellow and drop to the ground, they release a sugary aroma that has the unmistakable scent of cotton candy. Some liken it to caramel or even brown sugar.

- **Interesting Fact:** The Pennsylvania champion tree and likely the largest in North America lives at the Morris Arboretum in Chestnut Hill. Planted early in the 20th century it is now 67 feet tall and 90 feet wide. The early fall sweet scent is a tell-tale sign that a Katsuratree is nearby. The scent is caused by the compound maltol, released as the leaf breaks down, and is the same compound released when sugar is burnt to become caramel. It is not known for what purpose, if any, there is for the Katsuratree to release this alluring aroma. Interestingly, not everyone is able to detect this scent.

#27 *Cornus mas*

D/E-07

Cornelian Cherry Dogwood

Europe/W. Asia

- **Notable Feature:** This small tree is exceptional for its flowering time. In late winter, usually in early March, flowers decorate the plant in the usually barren, late winter landscape. Early flowers as well as its mottled, flaky bark make it an eye-catching specimen.
- **Habit:** A large, deciduous, multistemmed shrub or a small tree with oval-rounded outline, usually branching low to the ground. Mature size is around 25 feet high with a 20-foot spread. Dark gray to reddish brown bark is scaly, curling, and exfoliates in patches.
- **Flower:** Small, 1-inch umbels contain showy, yellow flowers in late winter and remain ornamental for at least 3 weeks or longer. Species has perfect (bisexual) flowers and the numerous, yellow clusters appear before the leaves in early spring.
- **Fruit:** A bright cherry red drupe appears in July and ripens in late summer. After the fruit falls from the tree it is truly ripe and at that stage becomes edible. The elongated ½ to ¾-inch long fruits can be used to make preserves.
- **Foliage:** Opposite, ovate and 2 ½ to 5" long. Bright green and somewhat glossy during summer; fall color can be a reddish purple in years where good weather gives colorful leaves.
- **Interesting Fact:** Common name refers to the cherry-like fruits which resemble in color the semi-precious gemstone carnelian.

#28 *Cornus florida*

E-06

Flowering Dogwood

E. & C. North America

- **Notable Feature:** This small tree beautifies the landscapes and woodlands of eastern North America. Considered the aristocrat of native trees because of its flower, fall color, and habit.
- **Habit:** Horizontally tiered branching offers an attractive silhouette admired in all seasons, especially in winter. A deciduous, understory tree that can reach up to 20 to 30 feet or more in height with an equal spread.
- **Flower:** Clusters of perfect (bisexual), small, yellow flowers are surrounded by 4 large, very showy bracts (usually white but sometimes pink). The blossoms, 2" in diameter, appear before the leaves emerge making them highly visible on the tree.
- **Fruit:** Glossy red, ¼ to ½-inch wide drupes occurs in clusters of 3 to 5; enjoyed by the birds in the early fall.

- **Foliage:** Opposite, simple, 3 to 5” long with deep veining. Leaves are dark green until fall at which time they turn a striking purplish red. It is one of the most reliable trees for consistent purple-red fall color year after year.
- **Interesting Fact:** Starting in the 1970s dogwoods began a period of decline as many became infected by fungal diseases – most notably dogwood anthracnose. Dogwoods seemed destined to disappear. Measures to combat this loss included close attention to cultural conditions, disease treatment, and the breeding of disease-resistant cultivars. Now survivors and replacements for lost trees grace our landscapes.

#29 *Oxydendrum arboreum*

Sourwood

E-07

E. & S.E. U.S.A.

- **Notable Feature:** Sourwood offers four seasons of interest: late spring blooms, glossy summer dark green foliage, amazing fall color, and winter seedpods.
- **Habit:** This deciduous, small to medium-sized tree is pyramidal in shape. In the wild trees may reach 50 to 75 feet tall although cultivated specimens typically are only 25 to 30 feet high. The bark is gray with a reddish tinge, deeply furrowed and scaly, and in older trees similar to a Persimmon tree.
- **Flower:** Small, white, urn-shaped flowers (1/4” in diameter) appear in mid-July. The perfect (bisexual) flowers are fragrant and held in terminal, nodding, elongated clusters that give the appearance of Lily in the Valley flowers.
- **Fruit:** Persistent, 1/3” long, dehiscent (splitting), five-sided capsules form after flowering and eventually turn brown in the fall.
- **Foliage:** Finely-toothed, glossy green leaves (5 to 8” long) are reminiscent of peach foliage. Leaves have a sour taste, hence the common name and produce consistently excellent fall color, typically turning crimson reds and oranges.
- **Interesting Fact:** Flowers are quite attractive to bees and the honey is a highly prized local product. A slow-growing tree, native to the southeastern United States as far north as Pennsylvania; most often found on well-drained soils above rivers or streams.

#35 *Acer saccharum*

Sugar Maple

E-07

E. North America

- **Notable Feature:** Sugar maple is best known for its brilliant and colorful fall foliage and for being the primary source of maple syrup (it takes 40 gallons of sap to make 1 gallon of syrup).
- **Habit:** Favoring cooler climates, this native hardwood tree attains its greatest size and growth potential in southern Canada and the New England states. A large, deciduous shade tree with dense foliage and branching that grows to well over 100 feet tall, however landscape size is around 60 to 75 feet high. The young, smooth bark develops thick, irregular, recurved plates with age.
- **Flower:** Light yellow-green, small, clustered, and hanging from a long, slender stem. The perfect (bisexual) flowers appear with or slightly before the leaves in early spring.

- **Fruit:** Samaras (winged fruits) are 1 to 1 ¾" long, and as a pair they form a horseshoe shape; mature to a brown color in fall.
- **Foliage:** The medium to dark green leaves are 3 to 6" long. They are 5-lobed, with the 2 basal lobes being smaller, and typify the well-known "maple leaf". The leaf color of the sugar maple incorporates a complete color wheel throughout the year, turning several shades of green from early spring to late summer, then onto yellows and oranges, and finally to brilliant shades of reds and purples through autumn.
- **Interesting Fact:** The wood has many uses and "birdseye maple" forms are especially valued. Maple is also the wood used for basketball courts, baseball bats, musical instruments, pool cues, and archery bows.

#31 *Cupressus arizonica* var. *glabra* 'Blue Ice'

Arizona Cypress

E/F-06

Southwestern U.S.A.

- **Notable Feature:** This conifer offers exceptional all season color interest in the landscape. When grown in sun it has a fine texture and showy, lacy, silvery grey-blue foliage in dense sprays. Reddish bark adds interest as well.
- **Habit:** Columnar growth habit, more tightly pyramidal in youth. Reaches a mature height of 40 to 50 feet and width of 15 to 20 feet.
- **Flower:** Male and female flowers occur on the same tree (monoecious) in spring. Male flowers appear as small oblong "cones", quickly dropping off, and the female flowers appear as small, rounded "cones" which mature into the fruiting cones in fall.
- **Fruit:** A small, rounded, brown cone, about 1" in diameter. The cones mature in autumn of the second season but persist on the tree for many years.
- **Foliage:** Evergreen, waxy, scale-like needles are spirally arranged. The glaucous, blue-gray needles are flecked with white resin and are soft-textured to the touch. This cultivar, 'Blue Ice', was selected for its blue foliage color that seems to intensify to an "icy blue" in cool weather.
- **Interesting Fact:** A bonus of this southwestern U.S. native is its drought tolerance and deer resistance.

#32 *Parrotia persica*

Persian Parrotia

F-06

Iran

- **Notable Feature:** Very attractive, mature bark that exfoliates in patches revealing pale grays, tans, and greens. The mottled bark provides good winter interest.
- **Habit:** Either a small, single-trunked, deciduous tree eventually growing 20 to 40 feet tall or a large, multi-stemmed shrub growing to 15 feet tall. Bark of mature trees exfoliates to show green, white or tan patches beneath.
- **Flower:** The small, perfect (bisexual) flowers, lacking petals, have dense, red stamens surrounded by brownish bracts and appear in late winter to early spring before the foliage emerges. The ½-inch flowers are attractive on close inspection, but are generally considered to be ornamentally insignificant.

- **Fruit:** The dry, woody, ½-inch long capsule splits when mature and contains 1 brown seed.
- **Foliage:** Reddish purple in spring, maturing to medium green in summer with good fall colors of red, yellow or maroon. The alternate, oval to oblong, wavy and toothed leaves are 3 to 5" long.
- **Interesting Fact:** This Iranian native is a member of the witch hazel family, which includes familiar woody plants such as *Hamamelis* (witch hazel), *Corylopsis* (winter hazel), and *Fothergilla* (witch alder). Parrotia was not named for the colorful tropical bird, but instead for Dr. F. W. Parrot, a German naturalist who in 1829 was the first European to climb Mount Ararat.

#33 *Poliothyrsis sinensis*

Chinese Pearlbloom Tree

F-06

Central China

- **Notable Feature:** A tree noted for its ivory-colored clusters of fragrant flowers that blanket the clean, green foliage. Blooming occurs in late summer when few other trees offer flower competition.
- **Habit:** A small, deciduous tree reaching 30 to 40 feet tall and 15 to 25 feet wide. Gray bark develops interesting furrows with age.
- **Flower:** Tiny, fragrant, creamy white flowers without petals are clustered in 6 to 8-inch, multi-branched panicles arising near the reddish stem tips in August into September. Flower buds open only slightly giving a pearl-shaped appearance. The flowers are perfect (bisexual).
- **Fruit:** Downy capsules, ½ to ¾" long, contain numerous, winged seeds.
- **Foliage:** Cordate, alternate leaves, 3 to 7" long, are bronze in spring, mature to emerald green, and turn yellow to yellowish burgundy in fall.
- **Interesting Fact:** This rare, small tree is native to the evergreen and deciduous forests of eastern and central China. Legendary plant collector E. H. Wilson first introduced this tree to U.S. gardens in 1908 by bringing seed from China to the Arnold Arboretum in Boston.

FALL MINI-LOOP WALK BETWEEN PARKING LOTS #9 & #13

