Washington State Department of Agriculture
Citrus Longhorned Beetle Project

Deciduous Trees Suitable As Replacement Vegetation

June 2002

This list contains the names of trees suggested by homeowners in the Citrus Longhorned Beetle quarantine area as well as trees suggested by the city of Seattle and others. None of these trees are in genera known to be hosts of the Citrus Longhorned Beetle, however some of these trees such as *Caprinus*, *Sorbus* and *Zelkova* are in plant families known to be hosts of Asian Longhorned Beetle or Citrus Longhorned Beetle. Regardless, all must be considered "gray area" trees, meaning that data are not available to support whether they are potential hosts or not. If these trees are chosen as replacement trees under a voucher system for tree replacement and they become infested with Citrus Longhorned Beetle, they will have to be removed from planting sites and this list.

- Mountain ash
- Dogwood, including Kousa Dogwood
- Pacific Madrone (madrona)
- Redbud, Eastern Redbud
- Japanese tree lilac
- European hornbeam
- Smoke tree, Purple Smoketree
- Persian Parrotia, Persian Ironwood
- Sourwood, Lily of the Valley Tree
- American Sweetgum
- Japanese Zelkova
- Katsura, Katsuratree
- Tupelo tree, Sour Gum, Black Gum, Black Tupelo, Pepperidge
- Witchhazel, Common Witchhazel
- Japanese Stewartia
- Gingko, Maidenhair Tree
- Sassafras, Common Sassafras
- Indian Bean Tree

Prepared by C.L. Campbell. Information adapted from:

Landscape Plants: Images, Identification, and Information
Oregon State University, 2002
http://www.orst.edu/dept/ldplants/index.htm

Mountain ash
(*Sorbus spp.*) Native species also exist, here are two cultivated non-natives

Whitebeam Mountain Ash SOR-bus AR-e-a

- Deciduous tree, 35-45 ft (11-14 m), broad-pyramidal to ovoid.
- Leaves alternate, simple, leathery, shallow lobes, double serrate except at base, dark green above, lower leaf surface white-tomentose.
- White flowers (8 mm across) in 5-7.5 cm clusters in spring. Fruit orange-red (about 13 mm diam.) in early fall.
- Sun, does well on limestone soils in England, appears adaptable.
- Hardy to USDA Zone 5 Native to Europe, long cultivated.

European Mountain Ash SOR-bus aw-ku-PAH-ree-a

- Deciduous tree, 20-40 ft (6-12 m), spread 2/3's of this, upright oval in youth, gracefully open at maturity.
- Leaves alternate and pinnately compound, 13-23 cm long, leaflets 2-6.5 cm long, serrate. Terminal buds, woolly, 13 mm long, lateral buds have several scales.
- Fruit (6-9 mm diam.) yellow to red, in showy clusters.
- Sun to part shade, prefers acid soils. Does not do well in compacted soils and polluted atmospheres. High summer temperatures appear to limit growth.
- Hardy to USDA Zone 3 Nataive range from Europe to western Asia and Siberia

European Mountain Ash

Dogwood, including Kousa Dogwood
(*Cornus kousa chinensis*) KOR-nus KOO-sa

Kousa Dogwood

- Deciduous tree/shrub, 15-18 ft (4.5-5.5 m), vase-shaped in youth, strong horizontal lines with age, exfoliating gray, tan and brown bark.
- Leaves simple, 5-10 cm long, opposite, have a drawn out tip, hair in axil of veins, dark green in summer, purplish-red or scarlet in fall.
- Flower buds at end of stems, fattened and globose, two bud scales form sharp point. "Flowers" are creamy-white, taper-pointed bracts (4, each 2.5-5 cm), the true flowers are small and make up the central sphere of the bloom. The blooms appear after the foliage emerges, usually a few weeks after the start of flowering of *C. florida*.
- Fruit (drupe) are initially green but ripen to pink or red, are spherical (13-25 mm diam.), on a 5 cm pendulous stalk (late Aug.-Oct.), they are edible but bland, with a mealy texture. (Some of our avian friends apparently disagree with this assessment, for they quickly eat the fruit after it ripens.)
- Sun to light shade, needs acidic, well-drained soil. More drought resistant and possibly less disease susceptible than *C. florida*. (Dirr, 1998, p. 261).
- Hardy to USDA Zone (4) 5 Native to Japan, China, Korea.

Pacific Madrone (madrona)

(*Arbutus menziesii*) ar-BU-tus men-ZEE-see-i

- Evergreen tree, 20-65 ft (6-20 m), mature bark reddish brown, exfoliating, bark on stems smooth and reddish.
- Leaves alternate, simple, oval, broad, 3.5-10 cm long x 4-7.5 cm wide, thick and leathery, lustrous dark green above.
- Flowers white, urn-shaped, 1 cm long; orange-red, berry-like fruit.
- Sun to part shade, sheds leaves and bark irregularly so rather messy in the garden
- Hardy to USDA Zone (7)8 Native to Pacific Northwest and California, narrow belt along the Pacific Ocean.

Redbud, Eastern Redbud

(*Cercis canadensis*) SER-sis kan-a-DEN-sis

- Deciduous tree, 20-30 ft (6-9 m), spreading, ascending branches, flattish top.
- Leaves alternate, simple, 7.5-13 cm across, heart-shaped (cordate), conspicuous swelling just below blade. Small (13 mm) rosy-pink flowers in spring before leaves appear, some produced on older limbs. Also a white flowered form, var. alba.
- Sun to part shade. Does well in many soil types, except permanently wet, adaptable to acid and alkaline.
- Hardy to USDA Zone (3) 4, some variation. Native from New Jersey to Florida, west to Missouri and northern Mexico. Its native range probably included only the most southernly part of Ontario, however it has become naturalized in a wider region.

Japanese tree lilac

(*Syringa reticulata*) si-RING-ga re-tik-u-LA-ta

- Deciduous shrub or small tree, stiff spreading branches, 2-30 ft (6-9 m) high. Smooth bark.
- Leaves simple, opposite, broad-ovate to ovate, 5-15 cm long, about half as wide, dark green above, and grayish green and reticulate below.
- Flowers white, in large clusters, showy, oder similar to that of privet flowers.
- Sun. More or less trouble free.
- Hardy to USDA Zone 3 Native to Japan.

European hornbeam

(*Carpinus betulifolius*) kar-PI-nus BET-u-lus

- Deciduous tree, 40-60 ft (12-18 m), pyramidal in youth, oval-round at maturity.
- Leaves alternate, simple, ovate-oblong, 5-13 cm long, sharply and doubly serrate, dark green in summer, yellowish in fall. Male and female flowers in separate clusters (catkins) on the same tree. Female flowers have conspicuous 3-lobed bracts.
- Best in full sun, tolerates light shade. Tolerates a wide range of soil conditions, but prefers well-drained soil. No serious pests or diseases.
- Hardy to USDA Zone 4 Native to Europe, Asia Minor, southeast England.

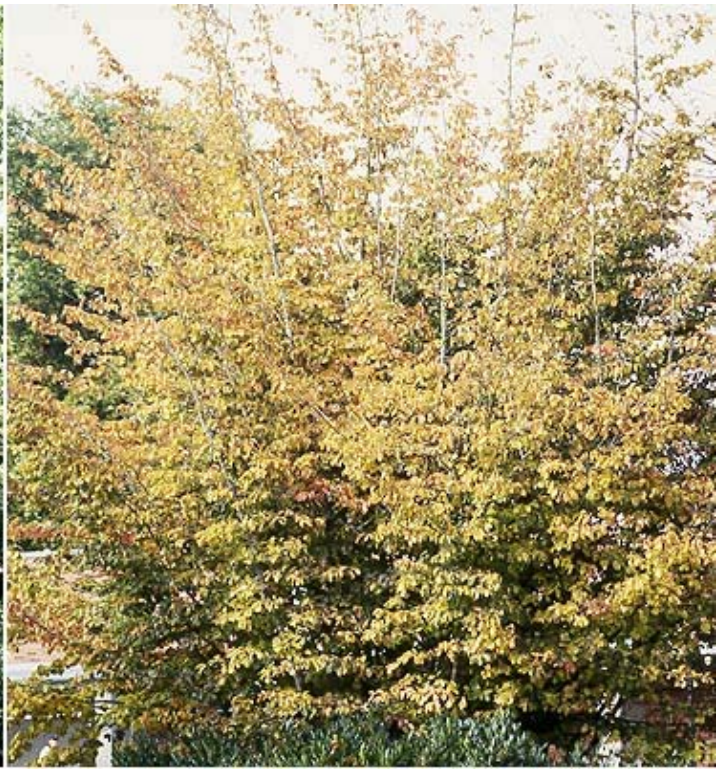
Smoke tree, Purple Smoketree
(*Cotinus coggygria* 'Royal Purple') ko-TI-nus ko-GIG-ri-a

- Foliage maroon-red in spring and darkening to purplish red, but may be greenish in late summer. The upper surface of leaves often with pink margin, underside is green. Inflorescences are purplish red.
- One of the less cold hardy cultivars.

Persian Parrotia, Persian Ironwood
(*Parrotia persica*) par-RO-ti-a PER-si-ka

- Deciduous tree/shrub, 20-50 ft (6-15 m) high, rounded, upright,wide spreading branches, often with several trunks.
- Leaves dark green in summer; yellow, orange to brilliant red in fall.
- Flowers without petals (apetalous), have showy red stamens, appear before leaves.
- Sun to light shade. Prefers well-drained, slightly acid, loam soils.
- Hardy to USDA Zone 5 Native to Iran, Iraq

Summer foliage



Autumn foliage

Sourwood, Lily of the Valley Tree
(*Oxydendron arboreum*) ok-si-DEN-drum ar-BO-re-um

- Deciduous tree, 25-30 ft (7.5-9 m), over 60 ft to even 100 ft in the wild, pyramidal.
- Leaves, simple, alternate, 7.5-20 cm x 4-9 cm , dark green, but sometimes a little yellow. Flowers/fruit on droopy panicles (reminiscent of the Lily of the Valley), which persist after leaf drop. May show good fall color, yellow, red, and purple.
- Sun to part shade, acid peaty soil, needs summer moisture, not very competative, therefore not great as a lawn tree.
- Hardy to USDA Zone (4) 5 Native from Virginia to North Carolina, Pennsylvania, Ohio to Kentucky and Tennessee, grows along stream banks.

Summer foliage

Autumn foliage

American Sweetgum
(*Liquidamber styraciflua* 'Worplesdon') li-kwid-AM-bar sti-ra-si-FLOO-a

- Deciduous tree, 60-75+ ft, (18-23 m), pyramidal to oblong crown (excurrent). Stems rounded to somewhat angled, often developing corky wings.
- Leaves alternate, simple, 10-18 cm wide, star-shaped (5-7 lobed), finely serrate lobes, deep glossy green, held late. Trees from seedlings have variable fall color, yellow, purple, or red. Mace-like fruit persist into winter.
- Sun, best in deep, moist, slightly acid soils. May take several years for root system to establish during which shoot growth is limited. Surface roots lift sidewalks. Fruit may be messy. Several clones available, including the round-leaved 'Rotundiloba'.
- Hardy to USDA Zone 5 Native from Connecticut to Florida, west to southern Ohio, Illinois, Texas and Mexico

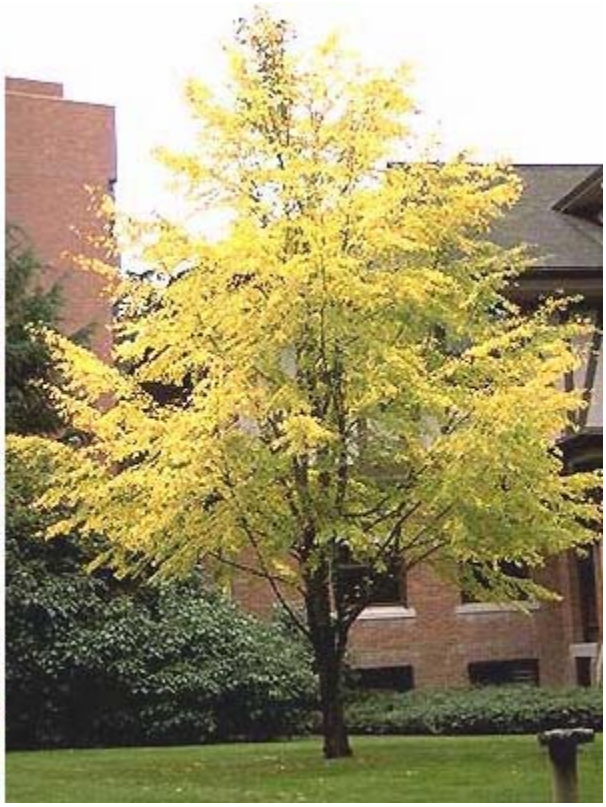
Japanese Zelkova
(*Zelkova serrata*) zel-KO-va ser-RA-ta

- Deciduous tree, 50-60(80) ft [15-18(24) m], vase-shaped, low branched.
- Bark smooth-gray initially.
- Leaves simple, dark green and somewhat rough above (similar to a small-leaved elm, and related to *Ulmus*).
- Sun, prefers moist, deep soil, pH adaptable; once established, wind and drought tolerant.
- A very good substitute for American elm since it is resistant to Dutch-elm disease. Relatively slow growing.
- Hardy to USDA Zone 5 Native to Japan

Katsura, Katsuratree
(*Cercidiphyllum japonicum*) ser-si-di-FIL-um ja-PON-i-kum

- Deciduous tree, 40-60(100) ft [12-18(30) m] high, pyramidal when young.
- Leaves purplish when unfolding, then finally bluish-green, are rounded, heart-shaped (resembling *Cercis canadensis*), 5-10 cm long, neatly spaced in pairs (opposite or subopposite) along arching branches. Supposedly develops a "soft apricot-orange color" in fall, but not spectacular in Corvallis, OR.
- Dioecious, i.e., male and female plants. Male and female flowers appear before leaves, neither is showy. Fruit (pod) 2.5 cm long.
- Sun, but probably best in light shade. Grows best in moist well-drained soil, pH adaptable, but supposedly has better fall color in acid soils, needs supplemental watering. Bark splitting and sun scald may occur. In Corvallis, OR they frequently observe deformed young leaves for a period in the spring, frost is suspected..
- Hardy to USDA Zone 4 Native to China and Japan.

Summer foliage



Autumn foliage

Tupelo tree, Sour Gum, Black Gum, Black Tupelo, Pepperidge (*Nyssa sylvatica*) NIS-a sil-VAT-i-ka

- Deciduous tree, 30-50 ft, (9-15 m), pyramidal to irregular rounded, variable.
- Leaves alternate, ovate, glossy (waxy) upper and dull lower surface, good fall color, often bright red.
- Dioecious, fruit, small, green, then blue-black, drupe (12 mm long).
- Sun or partial shade. Difficult to transplant because of taproot. Prefers moist, well-drained, acid soils. Does not tolerate high pH. Shelter from wind.
- Hardy to USDA Zone 3 Native from Maine, Ontario, Michigan to Florida and Texas.

Witchhazel (*Hamamelis spp*.), Common Witchhazel (*Hamamelis virginiana*) ham-a-MAY-lis ver-gin-i-A-na

- Deciduous tree, 20-30 ft (6-9 m), upright, open.
- Leaves simple, alternate, 7.5-15 cm long, 5-7.5 cm wide, obovate or elliptic, coarsely crenate, dentate.
- Flowers in fall, yellow, fragrant, with four strap-like crumpled petals, each 1.3-1.7 cm long.
- Sun or shade. Somewhat tolerant of city conditions; prefers a moist soil, avoid extremely dry situations.

Hardy to USDA Zone 3 Native from eastern Canada to Georgia, west to Nebraska and Arkansas.

Japanese Stewartia
(*Stewartia pseudocamelia*) stu-AR-ti-a soo-do-ka-MEL-ee-a

- Deciduous tree, 20-40 ft (6-12 m), pyramidal to oval.
- Bark, flaky but smooth underneath, red-gray.
- Leaves alternate, simple, elliptic to elliptic-lanceolate, 5-9 cm long, dark green; yellow, red, purple in fall.
- White, camellia-like, flowers in mid-summer, 6 cm wide with orange anthers. Fruit, 2.5 cm long, nearly spherical (ovoid).
- Best in light shade, at least in hottest part of summer. Prefers moist, cool, humus-rich, slightly acid soil, with good drainage.
- Hardy to USDA Zone (4)5 Native to Japan.

Summer foliage

Autumn foliage

Gingko, Maidenhair Tree
(*Gingko biloba*) GINK-go bi-LO-ba

- Deciduous tree, 50+ ft (15+ m), usually pyramidal, excurrent, but variable.
- Leaves alternate, simple, fan-shaped, 3-7.5 cm long and wide, in clusters of 3-5 per spur or alternate on long shoots.
- Dioecious. "Fruit" on female plants is actually a naked seed (gymnosperm), plum-shaped (ca. 2.5 cm diam.), green then tan or orange, extremely messy and malodorous. Twenty or more years before a seedling flowers. Seedless (male) cultivars available.
- Sun. Transplants easily. Prefers sandy, deep, moderately moist soil but grows in almost any situation. A durable tree for difficult landscape situations.
- Hardy to USDA Zone 3 Native to eastern China, long cultivated, but unknown in the wild.

Sassafras, Common Sassafras
(*Sassafras sp.*) SAS-ah-fras AL-bi-dum

- Deciduous tree, 30-60 ft (9-18 m), irregular shape, especially when young, may become flat-topped and broad at maturity, may root sucker and form thickets.
- Leaves alternate, simple, entire, ovate to elliptic, 3-7 inches (8-18 cm) long, some are mitten-shaped or 3-lobed, medium green in summer then yellow, orange or scarlet in fall.
- Flowers usually dioecious, develop before leaves, they are yellow and are borne in terminal racemes. Dark blue fruit, 3 cm long, ripen in early fall, eaten by birds.
- Full sun or light shade. Difficult to transplant from the wild because of a deep tap root. Tends to be free of problems.
- Hardy to USDA Zone 4 Native from Maine to Ontario and Michigan, south to Florida and Texas.

Indian Bean Tree
(*Catalpa spp.*) ka-TAL-pa spe-see-OO-sa

Including **Northern Catalpa, Western Catalpa** (*Catalpa speciosa*)

- Deciduous tree, 40-60 ft (12-18 m), irregular oval crown, coarse.
- Leaves opposite or whorled, simple, very large, entire, ovate to ovate-oblong, 15-30 cm x 7.5-20 cm, long acuminate, glabrous above, densely pubescent below.
- White tube-shaped flowers borne in large upright terminal panicles. Long fruit pods, > 40 cm long, 1.5 cm wide, thick walled, persist.
- Sun and partial shade. Very tolerant of soil type, but prefers deep, moist, fertile soil. Withstands wet or dry and alkaline conditions and extremely hot, dry environments. Short lived, 50 years above average.
- Hardy to USDA Zone 4 Native to Illinois and Indiana to western Tennessee and northern Arkansas.

Caltalpa speciosa