

Utah Forest Facts

Utah State University
COOPERATIVE EXTENSION

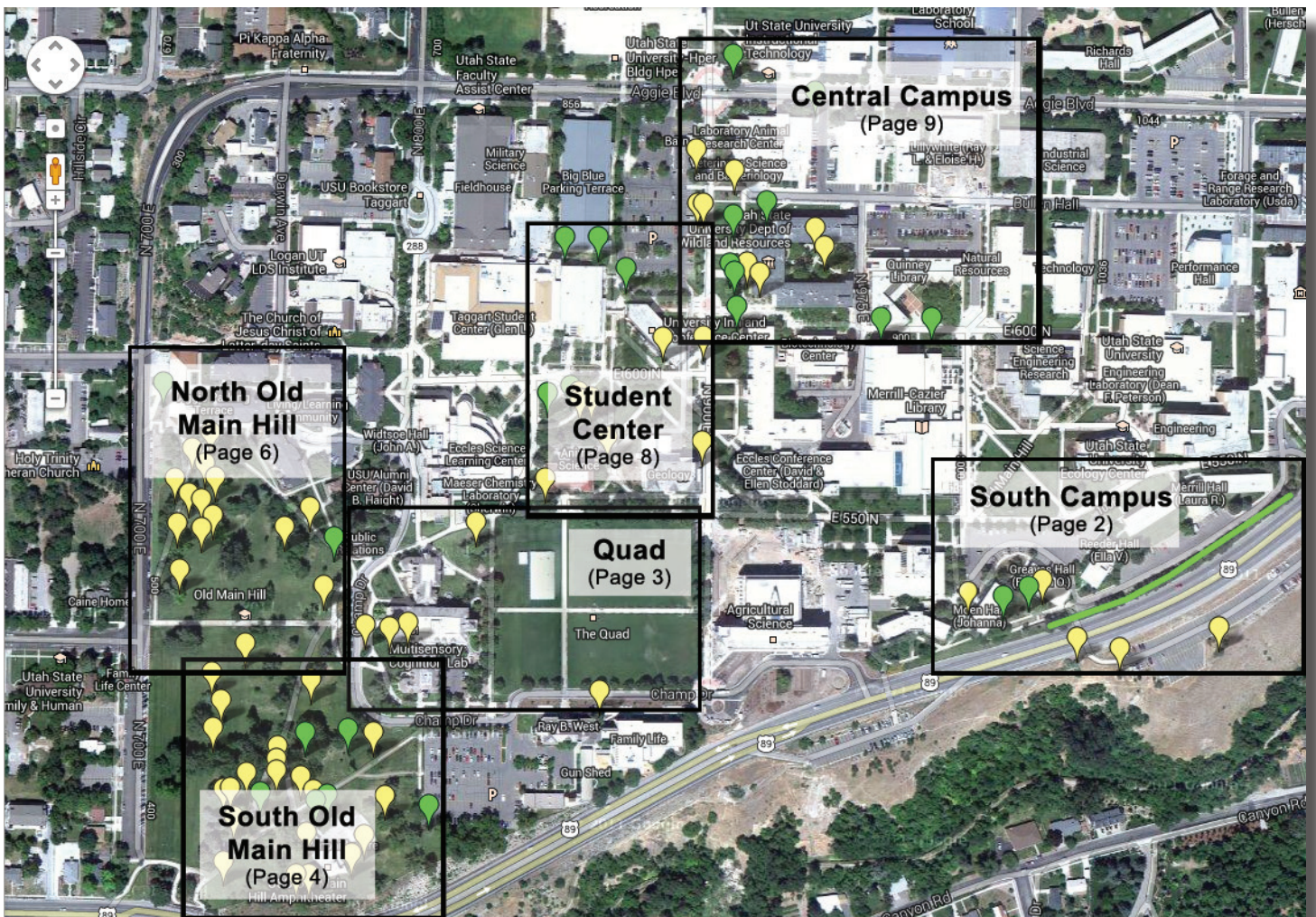
Urban Forestry

NR/FF/023

USU Campus Tree Identification Tour

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This is a tour of selected tree species present on the Utah State University campus. Notes about particular species also are included. Green markers indicate gymnosperms and yellow indicate angiosperms. Visit forestry.usu.edu or treebrowser.org for more tree information. Compiled spring 2012 by Dr. Michael Kuhns, Professor and Extension Forestry Specialist, Utah State University.





1 – Pistachio (*Pistachio vera*). Fleshy compound leaves with good orange-red fall color. Anacardiaceae (cashew and sumac) family. Usually grafted but these likely are not. Said to be good for zone 8-11, but are in zone 5 here. Dioecious.

4 – Colorado Pinyon (*Pinus edulis*). Pinyon with 2 short needles per bundle. Woody cones with large seeds without wings. Utah native.

5 – Japanese Zelkova (*Zelkova serrata*). Horizontal lenticels on bark. Fruit a small drupe. Red fall color. Probably ‘Green Vase’ cultivar. Ulmaceae.

6 – Limber Pine (*Pinus flexilis* ‘Vanderwolf’s Pyramid’). Utah native. Flexible branches. 5 needles per fascicle. Cultivar is an upright pyramid.

7 – Lacebark Pine (*Pinus bungeana*). Somewhat resembles Scots pine. Variegated bark. Planted in 1996.

8 – Black Maple (*Acer nigrum*). Very similar to sugar maple, but more heat and drought tolerant; some think they are the same species. Yellow fall color. Uncommon in Utah. Group of three young trees.

2 – Black Locust (*Robinia pseudoacacia*). Pinnately compound leaves with rounded leaflets. White fragrant flowers in bunches that hang down (racemes). Fruit a small pod (legume). Stipular spines. Interlacing bark. Super tough, but gets locust borers.



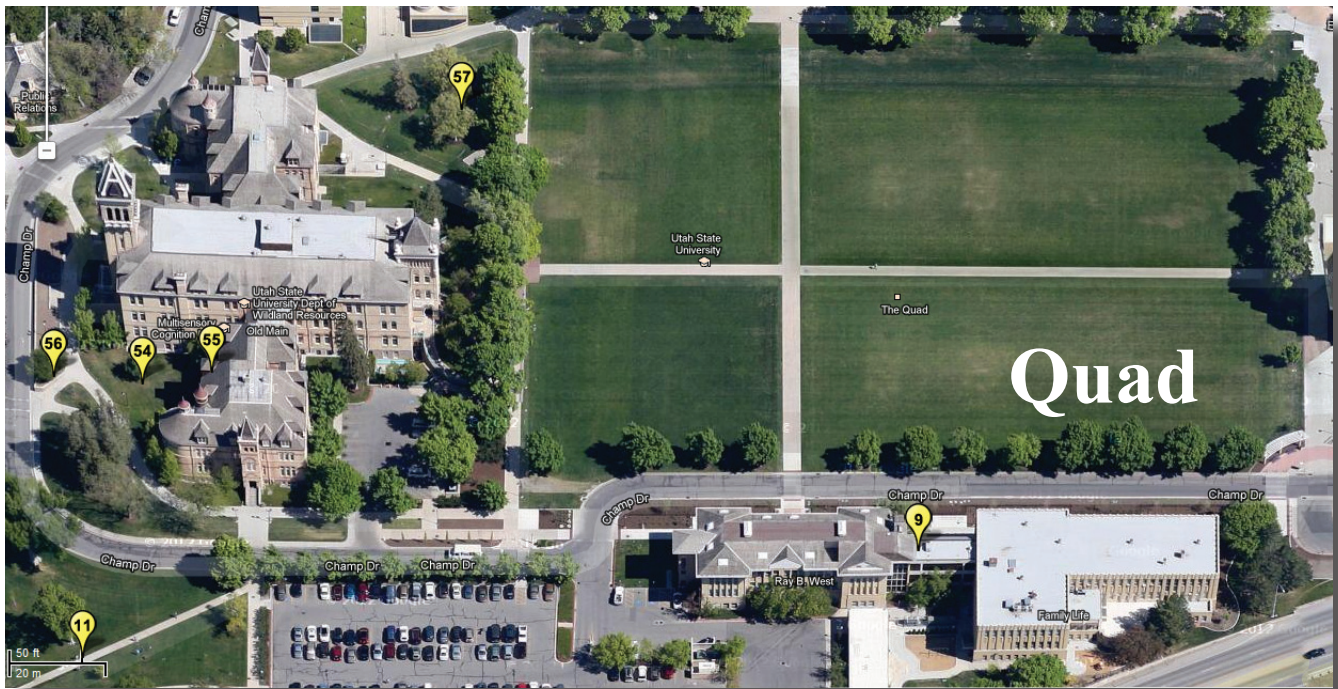
Black locust fruit, flowers

Black locust fruit, flowers hang down (racemes). Fruit a small pod (legume). Stipular spines. Interlacing bark. Super tough, but gets locust borers.

3 – Mahaleb Cherry (*Prunus mahaleb*). A small shrubby tree with small white flowers and small, almost black fruit (cherries). Small leaves, curved along midrib. Used as a rootstock for grafted sweet and sour cherry trees, which is probably how it got to Utah. Now naturalized in Logan and probably elsewhere.



Lacebark pine with variegated bark



9 – Silver Linden (*Tilia tomentosa*). Similar to littleleaf linden but leaves somewhat larger with undersides densely covered with fine white hairs. On Utah Big Tree list.

11 – Sugar Maple (*Acer saccharum*). Has rounded teeth on leaves rather than jagged teeth. Bark is distinctive; ridged. Similar appearance to bigtooth maple.

54 – Red Horsechestnut (*Aesculus x carnea* ‘Briotii’). Palmately compound, opposite leaves; 5 leaflets, dark green and smaller than *A. hippocastanum*, buds smaller and less sticky. Red flowers. Small tree. Somewhat prickly husk on fruit. Planted in 1995.



Tree #54 – Red horsechestnut

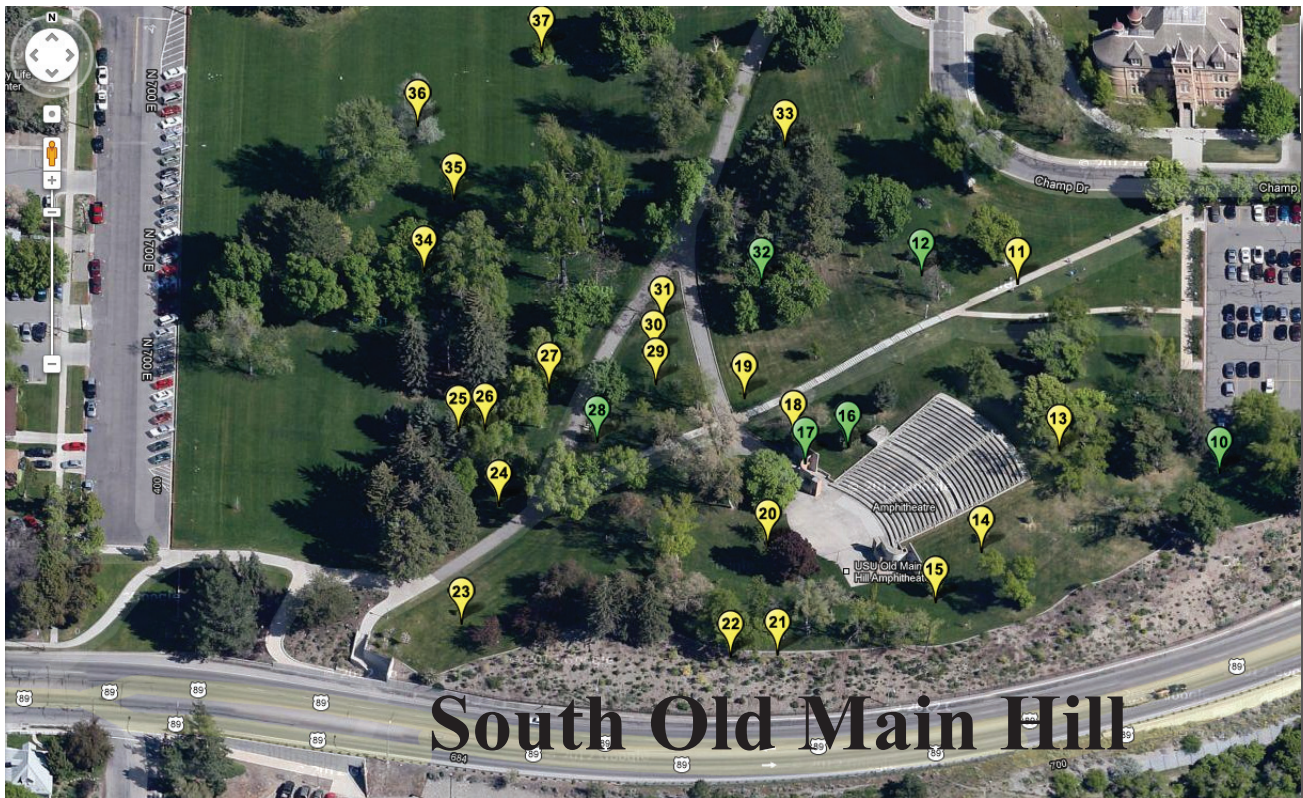
55 – Saucer Magnolia (*Magnolia x soulangiana*). Large, deciduous, entire leaves. Large (5-10”) white, pink, or purple flowers. Hybrid of *M. quinquepetala* (5) and *M. heptapeta* (7). Hairy buds, stipular scars, and smooth gray bark like all magnolias. Gets to be fairly large. On Utah Big Tree list.

56 – Katsuratree (*Cercidiphyllum japonicum*). Leaves opposite, with rounded teeth. Elongated red buds on thin stems. Small to medium sized tree. Two groups on the north and south ends of this planter. Planted in 1995.



White oak leaves with deep lobes and acorns

57 – White Oak (*Quercus alba*). Deep lobes; rounded ends. Warty acorn cap covering less than one third of the nut. Like all oaks in the white oak group, they germinate in the fall and have furry inner shells.



10 – White Spruce (*Picea glauca*). Short needles, small cones with rounded scales, narrow crown. Leans to the west due to canyon winds. On Utah Big Tree list.

11 – Sugar Maple (*Acer saccharum*). See entry on previous page.



Bristlecone pine cone and needles with resin

a prickly capsule with 1-3 kernels. Can get very large.

14 – Yellowhorn (*Xanthoceras sorbifolium*). Alternate, compound leaves with 9 to 17 leaflets. Beautiful, showy white flowers with yellow and pink spot in the middle. Shrub to small tree. Fairly rare

12 – Great Basin Bristlecone Pine (*Pinus aristata*). 5 needled, soft pine. Resin specks on needles.

13 – Horsechestnut (*Aesculus hippocastanum*). Leaves with 7 large leaflets (Ohio buckeye has 5); opposite arrangement. Flowers white to light yellow with red spots. Fruit

tree. Same family as goldenraintree (Sapindaceae). From northern China.

15 – European Hornbeam (*Carpinus betulus* var. 'Fastigiata'). Fruit a nutlet with distinctive 3-lobed bract in loose clusters. Bark smooth and stem is sinewy.

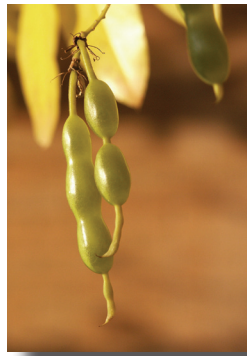
16 – Baker or Modoc Cypress (*Cupressus bakeri*). True cypress (not a juniper; in Cupressaceae family). Dark green to blue green leaves. Branchlets not flattened like *Thuja*. Cones globular with several wrinkled scales. Monoecious. On Utah Big Tree list. Planted in 1998.



Tree #16 – Baker or Modoc cypress

17 – Eastern Redcedar (*Juniperus virginiana*). Very similar to Rocky Mountain juniper but usually not blue-colored. Often purplish in winter. Cones small, waxy; dioecious; mature in one year. Old trees have uneven crowns.

18 – Japanese Pagodatree or Scholar-tree (*Sophora japonica*). Large, broad-crowned tree. Fruit a small legume with several wrinkled seeds. Nice, creamy white flowers appearing in June.



Japanese pagodatree legume

19 – Lavalley Corktree (*Phellodendron lavalleyi* var. 'Longenecker'). Opposite leaves; pinnately compound. Dioecious; fruit a round, 1/2" diameter, strong-smelling drupe. Thick, corky bark. Nice fall color. Planted in 2010.

20 – Burenglish Oak (*Quercus macrocarpa* x *robur*). Hybrid oak. Red fall color. Like English oak, leaves have "earlobes." Acorn cap fringed.

21 – Hackberry (*Celtis occidentalis*). Large. Look for nipple gall. Leaves narrower lanceolate than netleaf hackberry. Leaves serrate (netleaf nearly entire). Fruit dark purple (netleaf yellow to orange-red). Warty, ridged bark. Ulmaceae.

22 – Crimean Linden (*Tilia* x *euchlora*). Group of 2 trees. Similar to littleleaf European linden, but more graceful habit; not as stiff and upright. Hybrid of *T. cordata* and *T. dasystyla*.



Tree #23 – Weeping European larch

23 – Weeping European Larch (*Larix decidua* var. 'Pendula'). Strongly weeping. Deciduous conifer.

24 – Painted Maple (*Acer mono*). Possibly a subspecies of *A. truncatum*. ID may be wrong because leaves don't look right. Planted in 2005.

25 – Manchurian Maple (*Acer mandshuricum*). Leaves trifoliate; red fall color. Smooth bark into old age, like beech. Small to medium-sized tree. Planted in 2005.

26 – Three-Flower Maple (*Acer triflorum*). Leaves trifoliate; red-orange fall color. Small tree. Peeling bark on young stems. Flowers in groups of 3. Planted in 2005.

27 – Purpleblow or Shantung Maple (*Acer truncatum*). Star-shaped leaves; lobes without teeth; shiny; leaves start out purplish; fall color orange-red. Small tree.

28 – Incensecedar (*Calocedrus decurrens*). Scaly foliage clasping and flattened along stem in fours; 1/4" long on youngest twigs, 1/2" long on older twigs; lateral pairs hide facial pairs. Cones 3/4" to 1-1/2" long with 6 (5 apparent) scales; 2 scales elongated and look like duck's bill. Somewhat narrow-crowned when mature.

29 – American Yellowwood (*Cladrastis kentukea*).

Large, pinnately compound leaves. Nice white flowers in large panicles. Fruit a legume.



American yellowwood leaves and bark

Smooth gray bark, even when mature. Fairly unusual and very desirable.

30 – Seven-son Flower (*Heptacodium miconoides*). Small tree. Flowers in groups of 7; borne in August and September. Leaves simple, opposite. Fairly rare, especially in Utah. Fruit a capsule; attractive. Exfoliating bark. Family Caprifoliaceae. Planted in 2010.



Kentucky coffeetree legumes

31 – Kentucky Coffeetree (*Gymnocladus dioica*). Female (dioecious or polygamodioecious).

Fruit a fairly large legume with large seeds (1/2"). Twice pinnately compound leaves; dark blue-green. Somewhat narrow crown. Coarse texture in winter. Many in this area.



Tree #32 – Jeffrey pine

32 – Jeffrey Pine (*Pinus jeffreyi*). Long-needled pine similar to ponderosa pine. Needles in threes. Cones large with a sharp prickle on each scale, though these cones seem to be half as long as native trees. Very unusual in Utah or in planted landscapes. Native mainly to the Sierra Nevada in California. On Utah Big Tree list.

North Old Main Hill – Trees 37 through 53

37 – American Hornbeam (*Carpinus caroliniana*). Simple, doubly-toothed leaves, alternate. Fruit a nutlet at the base of a 3-pronged bract. Bark smooth and stem sinewy; also called musclewood. Rounded conical crown. Fairly small. On Utah Big Tree list.

38 – Northern Catalpa (*Catalpa speciosa*). Large, bright green leaves; entire margins; whorled arrangement. Showy white flowers. Fruit a large (10-20 inches long) capsule with winged seeds inside. Gets large.

39 – European Linden (*Tilia x europaea*). Large tree; pyramidal at first, then becoming more rounded. Similar to *T. cordata*. Hybrid of *T. cordata* and *T. platyphylos*.

40 – American Smoketree (*Cotinus obovatus*). Flowers tiny; fruit a small drupe. Flowers and fruit showy; in clusters 6” to 8” across with hairy whitish stalks. In the Anacardiaceae family, which includes pistachio, sumac and cashew. Bigger trees and more tree-like than *C. coggryia*. Planted in 2005.



American smoketree flowers

41 – Chinese Chestnut (*Castanea mollissima*). Toothed, alternate leaves. Gets fairly large. Source of commercial chestnuts. Planted in 1997.

42 – Chinese Toon or Chinese Cedrela (*Toona sinensis*). Large, alternate, compound leaves. Coarse twigs. Peeling bark. Grows fast and gets large. Meliaceae (soapberry) family.

43 – Black Cherry (*Prunus serotina*). Elliptical, serrate leaves. Usually brown, downy hairs along bottom of midrib near petiole. Younger bark with horizontal lenticels. Older bark scaly. Planted in 1998.

33 – European Beech (*Fagus sylvatica* var. ‘Purpurea Pendula’). Contorted. Entire leaves or very small teeth. Zigzag twigs. Smooth gray bark. Small nut in 4-part capsule (present). Planted in 1995.

34 – Sycamore Maple (*Acer pseudoplatanus*). Bark scaly and gray, flaking off to expose orange inner bark. Leaves sharply toothed dark green. Samaras in 6-12” long, drooping panicles.

35 – Yellow-poplar or Tuliptree (*Liriodendron tulipifera*). Leaves 4-lobed with flat base and tip. Large yellow-green flowers becoming a tulip-shaped fruit (aggregate of samaras). Diaphragmed pith. Magnoliaceae.

36 – Russian-olive (*Elaeagnus angustifolia*). Attractive but weedy tree. Very tough. Silvery foliage. Foliage, fruit, and twigs covered by shield-shaped scales. Leaves simple, alternate. Thorns. Flowers yellow, sweet-smelling. Drupe-like reddish fruit. On Utah Big Tree list.



Tree #36 – Russian-olive



47 – Persimmon (*Diospyros virginiana* var. ‘Meader’). Yellow to red fall color. Fruit a large, orange berry. Blocky older bark. Ebenaceae family. Planted in 1996.

48 – Chinkapin Oak (*Quercus muehlenbergii*). Leaves shallowly toothed rather than lobed. 1/2” to 3/4” long acorn with cap covering about 1/2 of nut. Planted in 1996.

49 – Oriental Spruce (*Picea orientalis*). Very short needles (1/4” to 1/2”), 4-sided, blunt; not white underneath like *P. omorika*. Narrow pyramidal crown. Planted in 2007.

50 – Blue Ash (*Fraxinus quadrangulata*). Leaves somewhat similar to green ash, but with 5 to 11 leaflets and darker green. Four

ridges on twigs, making them look square in cross-section. Inner bark turns blue on exposure to air. ID on this tree unclear. On Utah Big Tree list.

51 – Common Hoptree (*Ptelea trifoliata*). Alternate leaves; trifoliolate. Fruit a round, flat samara, 1/2” to 1” in diameter. Utah native. Small tree.

52 – Subalpine Fir (*Abies lasiocarpa* var. *arizonica*). Curved needles, flat in cross-section. Cones 2” to 4” long; upright on the upper branches; cones don’t fall off whole, but scales fall off, releasing the seeds. Var. *arizonica* has a denser crown and a more blue-green color. Planted in



Tree #52 – Subalpine Fir

53 – Cucumbertree Magnolia (*Magnolia acuminata*). Tree-sized magnolia. Leaves 6” to 10” long. Yellow flowers, 2” to 3” across; not very showy because of foliage.

44 – American Sycamore (*Platanus occidentalis*). Large, alternate leaves, but smaller than London planetree. Smooth whitish/grayish bark with rougher bark patches that often peel off. Fruit a bristly ball of achenes; borne one to a stalk (2 or more in London planetree). Large tree. Tends to develop sycamore anthracnose more severely than London planetree.

45 – Turkey Oak (*Quercus cerris*). Leaves with fairly deep lobes; lobes pointed at tips. Acorn cap with elongated scales that make it look hairy or fringed, covering most of nut. Unusual tree. Planted in 1999.

46 – Japanese Snowbell (*Styrax japonicus*). Alternate, simple, ovate leaves. Beautiful white flowers that hang down. Marginally cold-hardy in Cache Valley.



Japanese snowbell flowers

58 – Norway Maple (*Acer platanoides*). Milky sap (not so much in the late summer). Samaras with widely spreading wings. Tight, ridged bark. On Utah Big Tree list.

59 – Weeping Baldcypress (*Taxodium distichum* var. ‘Cascade Falls’). Deciduous, alternate leaves (needles). Weeping variety. Planted in 2008.

60 – White Fir (*Abies concolor*). Fir cones upright (near tree top), disintegrate. Needles flat; white fir has longer needles than subalpine fir.



Kousa dogwood flowers

61 – Kousa Dogwood (*Cornus kousa*). Leaves entire (no teeth), elliptical. Resembles flowering dogwood but white bracts are elongated into a point. Fruit 1/2” to 1” in diameter, bright red.

62 – Corneliancherry Dogwood (*Cornus mas*). Leaves similar to *C. kousa* but flowers are small and yellow; flowers somewhat similar to those on red-stemmed dogwood. Fruit 5/8” long; bright orange-red, turning darker as it matures; edible.

63 – Eastern Redbud (*Cercis canadensis*). Small tree with heart-shaped leaves with entire margins. Pink, pea-like flowers. Fruit a flattened legume 2”-4” long. Gray to cinnamon-colored bark.

64 – Japanese Tree Lilac (*Syringa reticulata*). Opposite leaves; more ovate than shrub lilacs. White flowers; don’t smell quite as good as shrub lilacs. Small to medium-sized trees; often multi-stemmed. Bark somewhat cherry-like; shiny; horizontal lenticels.

65 – Japanese Maple (*Acer palmatum*). Japanese maples have highly variable leaves; palmately lobed. Small, usually brightly-colored, paired samaras.

66 – Ginkgo (*Ginkgo biloba*). Leaves with dichotomous venation which gives them a spreading shape; golden fall color; on short spur shoots. Does well in compacted and high pH soil and with pollutants. No insect and disease problems. Was gone from nature but cultivated in Chinese temples for thousands of years, which preserved it. Dioecious; female trees have foul-smelling fruit. One of few broad leaved gymnosperms. Group of 2.



Ginkgo leaf

67 – Chinafir (*Cunninghamia lanceolata*). Long curved needles; bright green. Cones 1-1/2” across. Can get large. Tree is showing chlorosis. In Taxodiaceae family (baldcypress, sequoia).

68 – Monkey Puzzle Tree (*Araucaria araucara*). Evergreen, triangular, sharp-pointed leaves; spirally



Student Center



Tree #68 – Monkey puzzle tree

arranged; bright green; leaves cover the stems, leading to the tree's common name. Gets very large in coastal Pacific Northwest. Trees in Seattle get frost damaged at times, yet this tree is doing well, though very slow-growing. This tree was transplanted in May 2012.

84 – Turkish Tree

Hazel (*Corylus colurna*). Large, toothed, simple, alternate leaves. Small nuts in burs held in large clusters. Pyramidal shape when young. Betulaceae family (birch, alder, etc.). Planted in 2001.

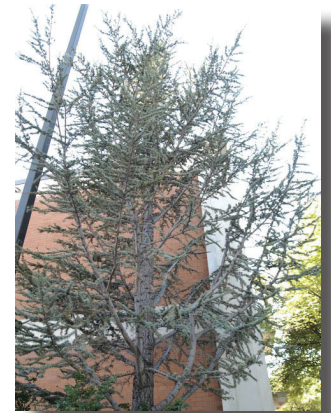
85 – Paperbark Maple (*Acer griseum*). Trifoliate leaves; dark green on top and pale beneath; red in fall. Peeling orange bark. Planted in 2001. Group of 7.

Central Campus – Trees 69 through 87

69 – Austrian Pine (*Pinus nigra*). Medium long needles in fascicles of 2. Fairly large woody cones

without prickle. Buds white. Bark gray-brown and not scaly. It is a hard or red pine. Cones take 2 years to mature, fascicles with sheath. White or soft pines take 1 year, no sheath. Hard pine. Historic tree.

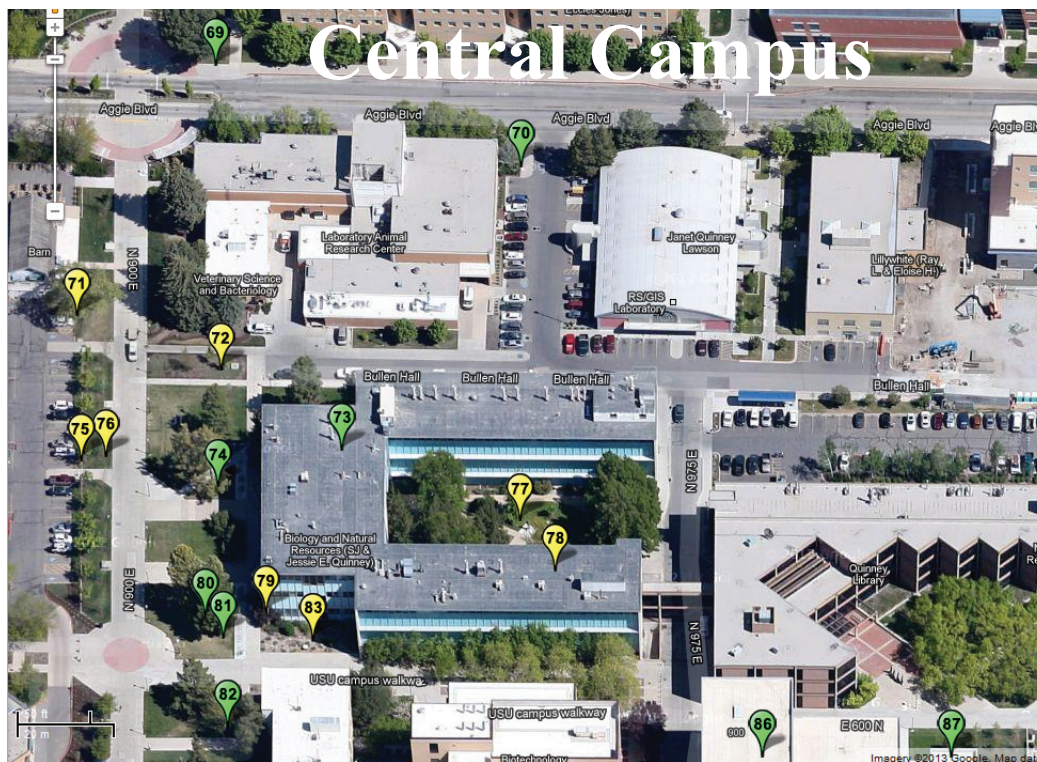
70 – Atlas Cedar (*Cedrus atlantica*). Blue foliage; needles on spurs in groups of 30 to 40 (Deodar cedar has groups of 15 to 20 and cedar-of-Lebanon has green rather than blue foliage). This species may be marginally cold hardy in Cache Valley.



Tree #70 – Atlas cedar

71 – Bur Oak (*Quercus macrocarpa*). Look for ridges on twigs, hairy acorn cap. Shallow lobes on upper part of leaf; leaf hairy and lighter colored underneath. Tree has heavy root damage. Planted in 1990s.

72 – Persian Parrotia or Persian Ironwood (*Parrotia persica*). Leaves alternate, simple; top half of leaf toothed, bottom entire; dark green leaves turning yellow-orange in fall. Attractive, peeling bark. Hamamelidaceae family (sweetgum, witch-hazel).



73 – Japanese Umbrella Pine (*Sciadopitys verticillata*). Very rare. Small and scaly leaves combined with flattened needles 2” to 5” long. This tree has been chlorotic but is looking better. Found occasionally in planted landscapes in Pacific Northwest. Can get quite tall.

74 – Scots or Scotch Pine (*Pinus sylvestris*). Butterscotch upper bark; twisted, blue-green needles, medium length; fairly small woody cones with no prickle.

75 – Tatarian Maple (*Acer tataricum*). Opposite, simple leaves; somewhat doubly serrate; usually not lobed; yellow-red fall color. Small red samaras. Small to medium-sized trees. Planted in 2001.



Tree #76 – Sweetgum

76 – Sweetgum (*Liquidambar styraciflua*). Star-shaped leaves; turns yellow, orange, red, or purple in fall, sometimes all at the same time. Fruit a ball-shaped bundle of capsules. Corky ridges on twigs. Pyramidal growth habit. Produces resin-like sap.

77 – Bigtooth or Canyon Maple (*Acer grandidentatum* var. ‘Rocky Mountain Glow’). Upright form. Grafted on sugar maple rootstock. Unreliable fall color.

78 – English Oak (*Quercus robur*). Non-fastigiata form. Look for “earlobes” near petiole. Acorns with long peduncle (stalk).

79 – Purple Giant Filbert (*Corylus maxima* var. ‘Purpurea’). Shrubby tree with large purple leaves. Good nuts.

80 – Ponderosa Pine (*Pinus ponderosa*). Long needles (8-10”) in twos and threes. Cones with prickle. Buds cinnamon brown. Bark scaly, furrowed, becomes platy and red. Hard pine. Planted by Bob Hope. Group of 2 trees.

81 – Austrian Pine (*Pinus nigra*). See entry on previous page.

82 – Baldcypress (*Taxodium distichum*). Leaves alternate (dawn redwood opposite), deciduous. Fruit a 1” diameter, round cone.

83 – Bigtooth Maple, etc. (*Acer grandidentatum*). This is a mostly native planting which includes bigtooth maple, curleaf mountain-mahogany, desertwillow and Arizona cypress.

86 – Eastern Hemlock (*Tsuga canadensis*). Flat, blunt needles; evergreen; whitish bands on underside. Small cones. Shade tolerant. Shouldn’t do well here but is so far. Planted in 2005.

87 – Giant Sequoia (*Sequoiadendron giganteum*). Large. Dense pyramid. Leaves 1/8-1/2” long. Usually awl-shaped or triangular, point forward, last 3-4 years. Cone woody, oval, 1-1/2 to 3” long. Spongy bark. This one is showing 1-2 years of winter damage. Planted in 2005.



Tree #87 – Giant sequoia

More Information

This tree tour can be found as an interactive Google map at <http://g.co/maps/ghnm4>

For definitions of botanical and tree-related terms, see the Tree and Botanical Glossary at <http://forestry.usu.edu/htm/treeid/tree-and-botanical-glossary/>

Visit the USU Tree Browser website for photos and identification information for over 240 tree species. The Tree Browser can be found at <http://treebrowser.org>

Check out this inventory of Utah State University’s campus trees: <http://earth.gis.usu.edu/trees/>

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