

American Basswood or American Linden

Tilia americana, also *Tomentosa*

Tiliaceae or the Linden Family

Leaves: Alternate; simple; unevenly heart-shaped; 5" to 8" long and almost as wide; deciduous; coarsely serrate margin; pointed tip; glabrous; dark green above; paler beneath; petiole thin, 1" to 2" long.

Twigs/buds: Twigs usually zigzag; glabrous; green to red-gray. No terminal bud; lateral buds dark red or green, about 1/4" long, rounded, lopsided, usually with two visible scales.

Flowers/fruit: Flowers perfect; light yellow; 1/3" to 1/2" wide; arranged in bunches of 5 to 10 attached by stalks to a light green, 3" to 4" long, leafy bract; appearing in late June or early July. Fruit a nut-like drupe; round; 1/3" to 1/2" in diameter; clustered; covered with fine pubescence; the bract drying out and turning light brown when the fruit matures in late summer.

Bark: Smooth and gray-green on young stems; later turning gray-brown, furrowed, with narrow, scaly ridges.

Wood: Important; sapwood white to pale brown; heartwood pale brown; light; soft; growth rings fairly distinct; diffuse-porous; rays not visible without a hand lens; used for novelties, excelsior, containers, carving, etc.

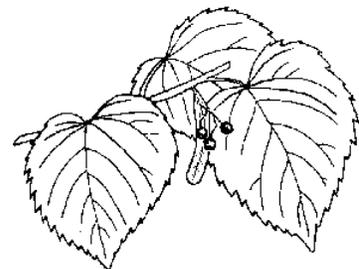
General: Native to most of the northern and eastern U.S. as far west as the eastern edge of the Great Plains. Does best in rich, moist woodlands and along river bottoms, and does well on soils with fairly high pH. Shade tolerant.

Landscape Use: A popular large shade tree, with nice, fragrant flowers and pleasing foliage. Planted mostly as the cultivar 'Redmond' because of its strongly conical crown form. I prefer the species, which has stronger branch attachment and a nice, wider crown; a number of these old trees can be seen in older parts of Logan and other Utah towns. Free of most serious pests, though aphids can be a nuisance in some years. Zones 2-9. Littleleaf European linden (*T. cordata*) is a European native similar in appearance to American linden, but with smaller leaves (up to 3" long), flowers, and fruit. It is a good quality landscape tree that is quite popular throughout Utah and the U.S., though weak branch attachment is a potential problem with some cultivars. Aphids also are a common problem. Mostly planted as cultivars with a strong conical habit and medium size at maturity. Crimean linden (*Tilia x euchlora*) is a hybrid of *T. cordata* and *T. dasystyla* with a looser, more graceful habit than littleleaf linden. Zones 3-7.



Comments & Limitations:

Sucker (sprout) growth can be a problem.



Chinkapin Oak
Quercus muehlenbergii
Fagaceae or the Beech Family

Leaves: 4" to 7" long; coarsely serrate margin with sharp teeth; thick; petiole 1" to 1-1/4" long.

Flowers/fruit: Fruit an acorn; short-stalked; 1/2" to 3/4" long, chestnut-brown to dark brown; shallow cap with hairy scales encloses 1/2 of the acorn; matures in one season.

General: Native to most of the eastern half of the U.S. east of the Great Plains. Typically found on dry, wooded sites. Intermediate shade tolerance.

Landscape Use: This is another good, introduced oak worth planting more in Utah. It makes an attractive specimen or can be planted in groups of a few to many in yards, parks, or along streets. Fairly nice yellow to orange-brown fall color. It is seldom planted here and will not be easy to find, but is worth the effort. Zones 4-7.

Comments & Limitations:

- Fruit and/or plant part can be a nuisances; use fruitless varieties if possible.



Ginkgo or Maidenhair Tree

Ginkgo biloba
Ginkgoaceae or the Ginkgo Family

Leaves: Broad; deciduous; fan-shaped; with or without notched margin; branching or dichotomous venation, gives appearance of long, flowing "maiden's hair"; spiral arrangement on young twigs; on older branches only occur on short, spur shoots; bright yellow-green; turn bright yellow in fall; petiole 2" to 4" long.

Twigs/buds: Twigs stout; light brown first year, becoming gray with stringy, peeling bark; short spur shoots on older twigs. Buds with overlapping scales, brown.

Flowers/fruit: Green male flowers borne in 1" long catkins in spring; female flowers inconspicuous; dioecious. Fruit plum-like in shape and size; about 1" to 1-1/2" long; tan to orange; fleshy covering very messy and bad smelling.

Bark: Light gray-brown; tight ridges with darker furrows on older stems.

Wood: Unimportant.

General: A native of China and Japan, where it has long been cultivated in temple gardens. Thought of as a "living fossil," since it has likely been around in some form for 150 million years and once was native to North America. Ginkgo is one of the few broadleaved gymnosperms, and is the only one covered in this book. Tolerates a very broad range of soil and environmental conditions. Shade intolerant.

Landscape Use: Does very well in cultivated landscapes in Utah. Very strong, upright growth form. Tolerates urban environments including smoke, compacted soil, and salt. Does well in soils with high pH and tolerates heat. Only trees known to be male should be planted because of bad smelling, messy fruit born by females. Excellent golden fall color, though it doesn't last long. These are excellent landscape trees that should be planted more often. A number of cultivars are available that vary in crown shape, size, and fall color characteristics. Zones 3-9.

Comments & Limitations:

- Fruit and/or plant part can be a nuisances; use fruitless varieties if possible.



Hackberry or Common Hackberry

Celtis occidentalis

Ulmaceae or the Elm Family

Leaves: Alternate; simple; ovate to ovate-lanceolate; 2" to 4" long; deciduous; serrate margin; long acuminate apex; base uneven; glabrous or slightly rough above; glabrous beneath; light, dull green; "nipple galls" or green bumps often occur on underside of leaves; petiole up to 1/2" long.

Twigs/buds: Twigs slender; zigzag; red-brown; pith chambered. No terminal bud; lateral buds small, pointed, pressed against the twig.

Flowers/fruit: Fruit a drupe; 1/4" in diameter; round; dark-purple; one per stem; on stalks 1/2" to 3/4" long; flesh edible; ripen in September or October.

Bark: Gray-brown; smooth when young; develops characteristic corky warts or ridges when older; eventually becomes scaly.

Wood: Moderately important; sapwood pale yellow to green-yellow; heartwood yellow to light brown; growth rings distinct; ring-porous; rays visible to the naked eye; often sold as elm.

General: Native from the Great Plains east through most of the eastern U.S., excluding the extreme southeast; not Utah. Prefers moist, rich soils. Intermediate shade tolerance and will survive partial shade from other trees.

Landscape Use: This is one of the best non-native trees for planting throughout Utah. It has a medium-fast growth rate, a very nice crown form, unusual bark, and is adapted to moderate drought, heat, wind, and high soil pH. Fruit is not a problem since it dries or is eaten by birds before dropping and trees do not bear heavily. Often used in windbreaks but also good as a large landscape tree for specimen use, in parks, or along streets. Has proven itself in Utah and should be planted much more; becoming easier to get. Zones 2-9.



Northern Red Oak
Quercus rubra
Fagaceae or the Beech Family

Leaves: Alternate; simple; oblong to obovate; 5" to 8" long, 4" to 5" wide; deciduous; 7 to 11, coarse-serrate, pointed lobes on margin; dark green, glabrous, and lustrous to dull above; paler beneath but with occasional small tufts of hair where veins meet; deep red to red-orange fall color; petiole 1" to 2" long, yellowish, glabrous.

Twigs/buds Twigs moderately stout; red-brown to green-brown. Terminal buds 1/4" long, clustered, pointed, with many red-brown scales; lateral buds smaller.

Flowers/fruit: Fruit an acorn; 1" long, red-brown, inner surface of nut shell woolly; cap shallow, saucer-shaped, usually covering only the base of the nut; matures in two seasons.

Bark: Smooth on young stems; eventually brown to nearly black with shallow furrows and wide, flat-topped ridges.

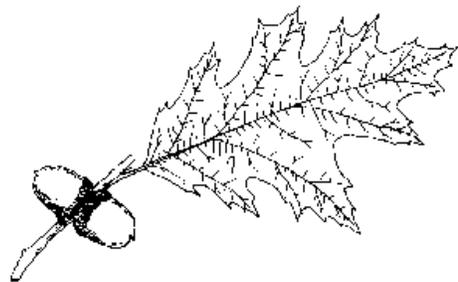
Wood: Very important; sapwood white to pale, red-brown; heartwood pink to light red-brown; growth rings very distinct; ring-porous; rays conspicuous to naked eye; valuable wood used for flooring, cabinets, and furniture.

General: Native throughout most of the eastern U.S. Usually found naturally on fairly good sites. Intermediate shade tolerance.

Landscape Use: This is a good oak for planting in Utah where soil pH is not too high. It is a good alternative to pin oak because it is more tolerant of high soil pH and less likely to exhibit iron chlorosis. It is fairly tough and free of problems but needs more water than bur oak. Has a large, broad crown and very nice branch structure; grows at a medium rate and gets large. Very good red fall color. Zones 4-8.

Comments & Limitations:

- Fruit and/or plant part can be a nuisances; use fruitless varieties if possible.



Sycamore Maple

Acer pseudoplatanus

Aceraceae or the Maple Family

Leaves: Five lobed with many rounded teeth; 3" to 6" wide; dark green above and lighter beneath, with some pubescence on veins; leathery; petiole 2" to 4" long; yellow to brown fall color.

Twigs/buds: Twigs with prominent lenticels; glabrous; brown; slightly four-angled. Buds remain green throughout the winter.

Flowers/fruit: Fruit a samara; 1-1/4" to 2" long; wings angled at about 60 degrees from one another; fall maturing.

Bark: Gray and reddish-brown to orange; scaly, flaking off and exposing orange inner bark.

General: Native to Europe and western Asia. Tolerates a wide variety of soil and environmental conditions, including considerable salt tolerance. Intolerant to moderately shade tolerant.

Landscape Use: A large tree somewhat similar to Norway maple. Heavily planted in Europe and very adaptable. I have seen it doing well in a park in Utah County. Needs considerable pruning to keep it in good shape. Zones 4-7.



Yellow-poplar or Tuliptree or Tulip-poplar

Liriodendron tulipifera

Magnoliaceae or the Magnolia Family

Leaves: Alternate; simple; 4" to 6" across; deciduous; usually 4-lobed; leaf base and tip flat, leaf shape very distinctive; entire margin; glabrous; bright green with nice yellow fall color; petiole 2" to 4" long; .

Twigs/buds: Twigs fairly stout; red-brown; pith divided into chambers. Terminal buds about 1/2" long, covered with 2 duck-bill like scales; lateral buds much smaller.

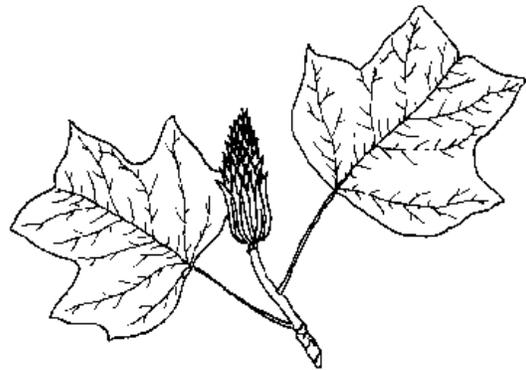
Flowers/fruit: Has large, green-yellow flowers that appear in May or June after the leaves are open. Fruit an aggregate of deciduous samaras; 2-1/2" to 3" long; held upright.

Bark: Dark green and smooth on young stems; becoming thick, ash-gray, furrowed, with rough ridges.

Wood: Very important; light yellow sapwood; light yellow to dark brown heartwood; even-textured; diffuse-porous; used for furniture, interior finish, boxes, pallets, crates, plywood, etc.; commonly available in lumber yards where it is usually called poplar.

General: Native to the southeastern U.S. as far north as southeast Missouri, and as far northeast as Vermont. Not a true poplar. Shade intolerant.

Landscape Use: Large tree that is not common in Utah but has been planted enough to have proven itself. Has a good, strong, pyramidal habit and bright green, unusually shaped leaves, and nice fall color that make the tree very attractive. The flowers and fruit are interesting but the seeds can be a messy. Zones 4-9.



Kentucky Coffee Tree

Scientific Name: Gymnocladus dioicus

Coffee tree, American coffee berry, Kentucky mahogany, nicker tree, or stump tree

Foliage: Broadleaf deciduous. Kentucky coffee tree has a alternate, twice-pinnately compound leaf; 1 to 3 feet long, with 40 or more leaflets. Each leaflet is 2 to 3 inches long with an entire margin. Honeylocust is the only other native tree with twice-pinnately compound leaves; its leaflets are much smaller and the twigs are usually armed with branched thorns.

Height: 50-70 feet

Spread: 40-50 feet

Shape: Oval, irregular

Growth Characteristics: Fast-growing when young, moderate- to slow-growing as it ages. An unofficial state tree of Kentucky, the Kentucky Coffee Tree is closely related to the honeylocust. Known as a tough, messy tree, it is ideal as a shade tree on larger, ungroomed properties. It got its name because early North American colonists used the large seeds to make coffee. When eaten raw, the seeds are poisonous. The double compound leaves measure up to 3 feet in length and 2 feet wide. The bark is deeply furrowed and dark brown in color. It adapts well to urban conditions.

Zone: 3-8

Light: Full sun

Moisture: Tolerates drought and occasionally flooding

Soil Type: Widely adaptable

Care

Fertilize with formulations that promote woody, strong growth rather than excessive foliar growth. Longer, weaker branches should be pruned when young to promote a stronger structure.

Problems

Relatively pest-free. Messy habit. Kentucky coffee tree should be used more in the landscape. It will grow on a wide range of soils from limestone, clay, and soils which may be droughty. It is relatively free of insect and disease pests. Eventually, the landscape industry will provide propagated male selections of this species for use in the urban environment.



Homestead elm

Scientific Name: Ulmus americana 'Homestead'

Foliage: Alternate, simple leaves; yellow fall color .

Height: 50 to 80' feet

Spread: —feet

Hardiness Zones: 5-8

Habit: Deciduous

Growth Rate: Rapid

Site Requirements: Sun; well drained soil

Texture: Medium

Form: Symmetrical; slightly pyramidal to oval arching; dense foliage

Flower/Fruit: Nonshowy flowers and fruit

Comments: A hybrid elm with resistance to Dutch elm disease

'Pioneer' Elm

Scientific Name: Ulmus parvifolia

Width: 50 feet

Height: 50 feet

Shape: Round

Leaf color: Yellow (F)

Regal Elm

Scientific Name: Ulmus carpinifolia 'Regal'

A hybrid elm suitable for use as a specimen shade tree and for lining streets, develops a strong central leader with an open growth habit. Resistant to the Dutch elm disease.

Size: Fast growing to about 50 feet in height with a spread of about 25 feet

Shape: Pyramidal-oval

Fall Color: Its fall color is not always great, but what it lacks in color is made up in bark quality. As far as its usefulness, it's practically unlimited. Its middle name is tough. Very tolerant of drought, poor soils, heat and cold. It can withstand the harshest conditions and negligence, and still thrive. Trees on campus were planted in 1993 and haven't developed the bark that Lacebark's are known for. Rated zones 4 to 9.

Other Attributes: Dutch elm disease resistant.

Growing Conditions: Plant in full sun in moist, well-drained soil.

Foliage: It has upright, single leader growth and dark green leaves. Alternate, simple, about 2 1/2 " long, 1 1/4" in width. Spinach green in color with a fall color that is somewhat reddish-purple. Can hold leaves quite a bit longer than average, often into late November.

Bark: Highly ornamental, often a combination of mottled gray, green, orange and brown tones. Exfoliates in irregular thin flakes. This is the most attractive trait. Begins to be noticeable after about 10 years.

Pests and Diseases: None, an extremely tough tree.

Landscape Use: Has multiple uses, but I think its greatest asset will be to sites which require a very durable tree in more than demanding conditions such as street trees and parking lot islands for municipalities and commercial sites. They are in parking lot islands which are subject to the extremes of everything, ie; poor soil, confined roots, heat, drought, and wind. Develops a good central leader and has a limited spread. Makes a nice shade tree in the residential landscape. It should not be confused with Siberian Elm, *Ulmus pumila*, which is one of the worlds worst trees.



Street Trees

Why is it important to preserve and protect street trees in my neighborhood? Street trees are a valuable community asset that contribute significantly to the visual and environmental character of a neighborhood. Mature street trees help soften the landscape in urban areas and tree lined streets serve to enhance the ambiance of a neighborhood. In addition, studies have shown that trees increase property values.

To ensure trees in your area are preserved, minimize contamination and compaction of soils around trees, excavation and damage of roots and prevent mechanical injuries to the trunk and main branches of the tree.

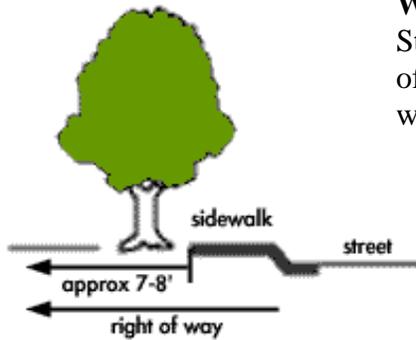


Figure 1.

What are street trees?

Street trees are trees located within the public road right of way. In cases such as in Figure 1, where the right of way extends 7' to 8' from the back of the sidewalk. In cases such as in Figure 2, the right of way usually extends 1' to 2' up to 8 feet in newer developments from the back of the sidewalk. The area between the curb and sidewalk is known as the parking strip or park strip. In areas where there are no sidewalks, the right of way generally extends 30' from the center of the paved roadway.

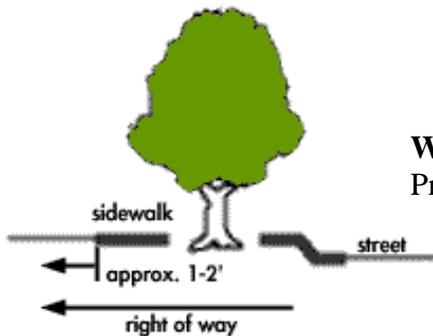


Figure 2.

Property owners are responsible for determining the exact location of the right of way fronting their property. This can be done by exposing stakes at the property corners or by hiring a surveyor to locate property boundaries.

Who maintains street trees?

Property owners are responsible for the maintenance (watering, feeding, pruning, etc.) of street trees fronting their property. The Department of Engineering prunes and trims trees to ensure visibility of traffic signs and proper clearance for pedestrians and vehicles. In the case of an emergency or dangerous condition where a tree requires immediate action for the safety of life or property, the Department of

Engineering may remove a tree. In case of an emergency, private property owners may also remove a tree, but it is the responsibility of the owner to demonstrate that any tree removed was irreversibly diseased, substantially damaged or presented an imminent danger to life or property.

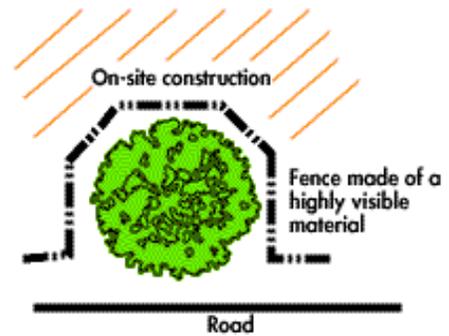
What can I do to protect street trees during on-site construction?

The following is a listing of some techniques that will help save trees during construction:

- Erect temporary fences or barricades around trees using material that is highly visible around trees. Ideally, position the fence outside the canopy area or as far away as possible /

practicable from the trunk of the tree. However, fences should not block pedestrian traffic along the sidewalk.

- Do not place or store construction equipment, materials or debris against the trunk of the tree or within the canopy area (where possible) of the tree to minimize compaction of soil above the tree roots.
- Avoid grading and drainage changes beneath the canopy area.
- Keep trees free of nails, screws and other fastening devices. Use posts, not trees for signs, electrical wires etc.
- Do not alter soils with chemicals, fuels or paint products within the canopy area of the trees. If space is a restraint, spread heavy plastic tarp when paint or concrete is mixed.
- Route utilities outside of tree canopy or as far away as possible from trunk to prevent severance of tree roots. When that is not possible, use alternative methods such as tunneling to minimize damage.
- Most importantly, commit to preserving trees during construction and communicate your desire to preserve trees to everyone involved in the construction activity including the architect, builder, painter, construction equipment operators and other construction workers. The goal of tree preservation can only be achieved through the cooperative efforts of all people involved in the project.



How can I plant a new street tree?

Contact the Department of Engineering at 435-843-3160 before you plant a street tree or to do any work within the public roads right of way. Contact the Department of Engineering for a list of approved street trees. The county encourages replanting street trees that have been removed.

For more information and to report tree damage...

For immediate action to stop illegal removal of a street tree within a county road right of way, contact the Department of Engineering and report the violation. To report damage to street trees or for questions regarding right of way limits, contact Department of Engineering at (435) 843-3160.

For more information on street trees, contact County Planning Office at (435) 843-3160.