2013

Oaks for Nebraska

Justin R. Evertson

University of Nebraska - Lincoln, jevertson1@unl.edu

Follow this and additional works at: http://digitalcommons.unl.edu/arboretumpubs

Part of the Botany Commons, and the Forest Biology Commons

Evertson, Justin R., "Oaks for Nebraska" (2013). Nebraska Statewide Arboretum Publications. 1.
http://digitalcommons.unl.edu/arboretumpubs/1

This Article is brought to you for free and open access by the Nebraska Statewide Arboretum at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Nebraska Statewide Arboretum Publications by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.
Oaks for Nebraska

Justin Evertson, Nebraska Statewide Arboretum
arboretum.unl.edu or retree.nebraska.unl.edu

R = belongs to red oak group—acorns mature over two seasons & leaves typically have pointed lobes.
W = belongs to white oak group—acorns mature in one season & leaves typically have rounded lobes.

Estimated size range is height x spread for trees growing in eastern Nebraska.

A few places to see oaks: Indian Cave State Park; Krumme Arboretum in Falls City; Peru State College; Fontenelle Nature Center in Bellevue; Elmwood Park in Omaha; Wayne Park in Waverly; University of Nebraska Lincoln; Lincoln Regional Center Arboretum; Ehman Park in Gothenburg; Highland Park in Hastings; UNL Extension Center & Cody Park in North Platte; and UNL Extension Center in Scottsbluff.

Native Nebraska Oaks

**Black oak, Quercus velutina (R)**
Large growing native similar to red oak; leaves are glossy and dark-green above with velvety undersides; nice red-maroon fall color; should be planted more; 40-50’ x 40-50’.

**Bur oak, Quercus macrocarpa (W)**
Our most common native oak; big and majestic - tough and reliable; thick, corky bark helped it to withstand prairie fire; twigs can have very corky ridges; large, fat, fan-shaped leaves; named for large acorns with bur-like fringes; 50-70’ x 50-70’.

**Chinkapin oak, Quercus muehlenbergii (W)**
Narrow, chestnut-like leaves; flaky, gray-yellowish bark with maturity; tolerates high pH soils; should be planted more; 40-60’ x 30-50’.

**Dwarf chinkapin oak, Quercus prinoides (W)**
Variable habit from shrubby to tree form; prolific acorn producer; can have nice yellow fall color; national champion grows near Salem Nebraska; 10-25’ x 10-20’.

**Red oak, Quercus rubra (R)**
Very reliable native; rounded habit; 7-9 shallowly lobed leaves are dull-green in summer with nice red fall color; 50-60’ x 45-55’.

**White oak, Quercus alba (W)**
Native to eastern Great Plains and extreme southeast Nebraska; similar in stature to bur oak – majestic and inspiring; light gray, scaly bark; fewer acorns; good fall color; 55-65’ x 55-60’.

Blackjack oak, Quercus marilandica (R)
Shorter and slower growing than most oaks with distinctive tri-lobed leaves; can take on a very natural look with age; tough and underutilized; good fall color; 30-40’ x 25-35’.
Native U.S. Oaks

**Bear oak, Quercus ilicifolia (R):** Shrubby, multi-stem habit; native to northeastern US; leaves similar to red oak; slow grower; 10-20’ x 10-20’.

**Cherrybark oak, Quercus pagoda (R):** Similar to red oak but with rough, scaly bark that can resemble black cherry when mature; prefers moist, fertile soils; can be fast growing; 40-60’ x 35-50’.

**Chestnut oak, Quercus montana (W):** Bright green, chestnut-like leaf; prefers moist, fertile soils; distinctive ridged bark somewhat resembles an alligator’s back when mature; 45-60’ x 40-50’.

**Gambel oak, Quercus gambelii (W):** Native to southern Rocky Mountains; variable multi-stem habit – can be very shrubby in dry, difficult locations and more tree-like on better sites; very drought tolerant; 15-25’ x 10-20’.

**Northern pin (Hill’s) oak, Quercus ellipsoidalis (R):** Similar to pin oak but less prone to iron chlorosis; native to northern US; good red/maroon fall color; 40-50’ x 35-45’.

**Pin oak, Quercus palustris (R):** Beautiful, tall, upright habit with descending lower branches; good fall color; heavy acorn producer; very prone to iron chlorosis and should only be planted on acidic soils (pH <7.0); 50-70’ x 40-50’.

**Post oak, Quercus stellata (W):** Tough, corky bark; medium rounded tree; distinctive, cruciform leaves; native into southern Iowa and eastern Kansas; 25-35’ x 25-35’.

**Overcup oak, Quercus lyrata (W):** Large bur oak-like leaves; acorns nearly covered by cap; 40-50’ x 35-45’.

**Scarlet oak, Quercus coccinea (R):** Similar to pin oak; scarlet fall color; avoid high pH soils; 45-60’ x 40-50’.

**Shingle oak, Quercus imbricaria (R):** Distinctive narrow, smooth-edged leaves that are held through winter; tan-yellow fall color; 40-50’ x 35-45’.
Shumard oak, *Quercus shumardii* (R): Very similar to red oak in habit and leaf shape; good heat and drought tolerance; reliable red fall color; should be planted more; 40-50’x 40-50’.

Swamp chestnut oak, *Quercus michauxii* (W): Similar to chestnut oak; native to wetter soils of southeastern US; scaly-grayish bark similar to white oak; 40-50’x 40-50’.

Swamp white oak, *Quercus bicolor* (W): One of the most popular oaks for planting; attractive glossy leaves with silvery underside; good for wet or dry soils; can be chlorotic on high pH soils; 60’x 50’

Texas red (Buckley) oak, *Quercus buckleyi* (R): Related to shumard oak but leaves smaller and more glossy; native to southern Great Plains; very good drought tolerance; bright red fall color; 25-40’x 20-35’.

Wavyleaf oak, *Quercus xundulata* (W): A naturally occurring hybrid of *Q. gambelii* and *Q. turbinella* from Rocky Mountains and SW US; semi-evergreen leaves; typically multi-stem and shrubby; 10-20’x 10-20’.

Japanese Emperor (Daimyo) oak, *Quercus dentata*: Similar to *Q. mongolica*; large, thick, fuzzy leaves held through winter making it somewhat prone to ice damage when young; 25-40’x 20-40’.

Liotung oak, *Quercus liaotungensis*: Native to China and similar to Mongolian oak; large leaves; 30-40’x 30-40’.

Mongolian oak, *Quercus mongolica* (W): Similar to Bur Oak in habit and adaptability though doesn’t grow as large; chestnut-like leaves; performing well in N. Dakota; 40-50’x 34-45’.

Non-native Oaks

Wavyleaf oak, *Quercus xundulata* (W): A naturally occurring hybrid of *Q. gambelii* and *Q. turbinella* from Rocky Mountains and SW US; semi-evergreen leaves; typically multi-stem and shrubby; 10-20’x 10-20’.

Swamp white oak, *Quercus bicolor* (W): One of the most popular oaks for planting; attractive glossy leaves with silvery underside; good for wet or dry soils; can be chlorotic on high pH soils; 60’x 50’

English oak, *Quercus robur* (W) Similar to white oak but with smaller, glossy-green leaves and long, abundant acorns; habit can vary from round and spreading to upright; tough and reliable; 60’x 50’.

Mongolian oak, *Quercus mongolica* (W): Similar to Bur Oak in habit and adaptability though doesn’t grow as large; chestnut-like leaves; performing well in N. Dakota; 40-50’x 34-45’.

English oak, *Quercus robur* (W) Similar to white oak but with smaller, glossy-green leaves and long, abundant acorns; habit can vary from round and spreading to upright; tough and reliable; 60’x 50’.
**Sawtooth oak**, *Quercus acutissima*: Fast growing oak from Asia; long, narrow leaves with sawtooth-like edges; upright growth when young; distinctive frilled acorn caps; 50-60’x 40-50’.

**Oak Hybrids, Varieties & Cultivars**

**Black-blackjack (Bush) oak**, *Quercus xbusii* (*Q. marilandica x velutina*), N: Very similar to blackjack oak; occurs naturally in southeast Nebraska; 20-30’x 20-30’.

**Bur-chinkapin (Deams) oak**, *Quercus xdeamii* (*Q. macrocarpa x muehlenbergii*), N: Occasionally found in southeast Nebraska; a nice specimen grows on Peru State College campus; 40-60’x 40-50’.

**Bur-gambel oak**, *Quercus macrocarpa x gambelii*: Great heat and drought tolerance makes it a good choice for western Great Plains; abundant acorns at a young age (4yrs); 25-40’x 25-45’.

**Bur-swamp white (Schuette) oak**, *Quercus xschuettei* (*Q. bicolor x macrocarpa*): Vigorous habit; glossy, dark green leaves resist lace bugs; good acorn production; 50-60’x 50-60’.

**Bur-white (Bebbs) Oak**, *Quercus xbebbiana* (*Q. alba x macrocarpa*): Great looking tree; very hardy and a vigorous grower; good fall color on some trees; 50-60’x 50-60’.

**Red-pin oak**, *Quercus xcolumnaris* (*Q. palustris x rubra*): Fairly common hybrid in nature and in nursery industry; many nice, large trees grow in Lincoln; avoid high pH soils; 50-60’x 40-50’.

**English oak Cultivars**

‘Clemons’ (Heritage) Oak, Bur-English oak cross: *Quercus xmacdanielii* (*Q. macrocarpa x robur*): Vigorous grower with abundant acorn production; glossy leaves resist mildew; 50-60’x 30-40’.

‘Crimson Spire’ oak, White-English cross, *Quercus xbimundorum* (*Quercus alba x robur*): Possesses a narrow-growing habit and red fall color; 40’x 15’.

‘Regal Prince’ (Ware) oak, Swamp white-columnar English, *Quercus xwarei* (*Q. robur var fastigiata x bicolor*): Regal Prince Oak has a very attractive, upright habit with glossy foliage.

**Potential Oaks**

*(need further testing or special siting)*

**Chinese cork oak**, *Quercus variabilis*: Leaves and habit similar to sawtooth oak; corky bark; 40-60’x 35-55’.

**Downy oak**, *Quercus pubescens*: Attractive small, leathery leaves that emerge pubescent, thus its common name; short, irregular habit; doing well in Waverly; 20-30’x 20-30’.

**Hungarian oak**, *Quercus frainetto*: Native to Balkan Peninsula; white oak family; attractive glossy leaves with silvery undersides; doing well in Waverly; 35-45’x 30-40’.

**Mohr (shin) oak**, *Quercus mohriana*: Native to New Mexico, west Texas/Oklahoma; shrubby, multi-stem habit; distinctive leaves with silvery pubescent undersides; tolerates dry, alkaline soils; 15-25’x 10-20’.

**Oriental white oak**, *Quercus aliena*: Little know oak from China; glossy, chestnut-like leaves; nice fall color; doing well in Waverly; 40-50’x 30-40’.

**Shrub live oak**, *Quercus turbinella* (W): Shrubby habit; semi-evergreen; best for western Great Plains; 15’x 15’.

**Southern red oak**, *Quercus falcata*: Somewhat similar to red oak but with distinctive turkey-foot like leaves that have wider lower lobes; maroon fall color; good on dry sites; does well in eastern Kansas; 30-40’x 30-40’.

**Water oak**, *Quercus nigra*: Very distinctive tip-heavy leaves somewhat like blackjack oak; prefers moist, well-drained soils; 30-40’x 30-40’.

**Nuttall oak**, *Quercus nuttallii*: Similar to shumard oak; native to lower Mississippi drainage basin; tolerates poorly drained soils; red fall color; 40-60’x 35-50’.

**Turkey oak**, *Quercus cerris* (I): Native to Europe and Asia Minor, including Turkey; leaves similar to white oak; tolerates alkaline soils; 40-60’x 40-50’.

**Willow oak**, *Quercus phellos*: Narrow willow-like leaves; pin-oak like habit and siting requirements; 45’x 40’.

Send comments or suggestions to: Justin Evertson, 402.472.5045, jevertson1@unl.edu