

***Celtis laevigata* Willdenow**
Sugarberry



Family: *Cannabaceae*

Synonyms: *Celtis laevigata* Willd. var. *smallii* (Beadle) Sargent

Description: Medium-large canopy tree up to 30 m high with somewhat of a pendulous appearance at maturity. Twigs slender; leaves alternate, lanceolate – oblanceolate, twice as long (2-5 inches) as wide (1-2 inches), entire or sparingly serrate (copiously serrate in variation *smallii*), smooth, glabrous and glossy, uniformly pale green on

both surfaces; bark variable, typically smooth, light gray with scattered warty patches on larger individuals; Fruit: drupe, ¼ - ⅜-inch in diameter, turning orange-red to purple at maturity, pedicels 6-15 mm long (Jones, 2005).

Flowering: April-May

Fruiting: August-September

Similar Species: *Celtis laevigata* is the rarest of the three *Celtis* species known to naturally occur in Ohio. *Celtis laevigata* is a large tree that can be distinguished from *Celtis occidentalis* and *Celtis tenuifolia* by a combination of characteristics stated above. *C. occidentalis*, also a large tree up to 30 m high, usually exhibiting rough, warty bark often peeling in long, vertical plates at maturity; leaves alternate, coriaceous, scabrous, gradually acuminate, 2-5 inches long, pale-dark green on both surfaces with sharp, serrated margins; drupes averaging 10 mm in diameter, turning dark purple – black when mature, pedicels 0.3-1.5 cm long. *C. tenuifolia* differs as being a fruiting, arborescent shrub – small tree (rarely exceeding 7.50 m high); leaves alternate, 0.75-3 inches long, grayish-green, pubescent beneath; occurring on dry, shallow soil where bedrock (usually limestone) is present at or near the surface (Braun, 1961).

Fernald (1950) states that the *Celtis* complex is excessively polymorphic as individuals pass freely from one variety to another. This statement no less true in Ohio as intermediates between *C. occidentalis* and *C. laevigata* have been recorded from Brown, Clermont, Licking, Scioto and Warren Counties. Based on their fruit characteristics, these are best treated as *C. occidentalis* “approaching *C. laevigata*”. Findings from multiple cross pollination studies suggest that interspecific hybridization within this highly plastic genus does not occur often or easily (Whittemore and Townsend, 2007).

Total Range: USA: AL, AR, MD, DC, GA, IL, IN, KS, KY, LA, MD, MO, MS, NC, OH, OK, SC, TN, TX, VA, WV.

Ohio Range: Clermont County

Ohio Status: <http://naturepreserves.ohiodnr.gov/>

Habitats: Rich, alluvial soils of floodplains, poorly-drained bottomlands and mesic woods.

Threats: Timber harvesting, development, and suppression by non-native, invasive species.

Conservation Potential: *Celtis laevigata* reaches its northern limit in southwestern Ohio. Mature individuals regularly produce abundant soft mast that is highly preferred by birds. Being adapted to various site conditions and given its similarities to common hackberry, this species has been overlooked until recently and is likely that additional populations may be found, especially within the Ohio River Valley.

Inventory guidelines: Collect mature fruiting specimens from the outer crown if possible. Avoid gathering samples from the lower crown as these tend to lack fruit and bear morphologically atypical “shade leaves” which often makes positive identification impossible. Note habitat, bark characteristics and approximate height.

Comments: *Celtis laevigata* was first discovered in July 2007 – a single, mature tree ascribed to variety *smallii* growing in the Ohio River floodplain in extreme southern Clermont County. Additional searches near the Ohio River from 2007-2009 turned up two additional populations, each belonging to variety *laevigata*.

It is unlikely that the existence of this species in southwest Ohio represents introduced or escaped populations given that all currently known individuals are located in remote, densely wooded areas within 1.50 miles of the Ohio River. The largest individual in Ohio occurs in a rich, mature woods on a slope above the Ohio River where it grows in association with *Celtis occidentalis*. As of 2009, this tree measured 75 cm in diameter at breast height and exceeded 25 m tall.

Prior to its discovery in Clermont County, the closest known natural population to Ohio occurred in Owen County, Kentucky, located just two counties south of the Ohio River (BONAP, 2013). Furthermore, *C. laevigata* is not and has never been widely planted as an urban tree in the north. Searches for cultivated trees in the vicinity of the first three known populations in Ohio have proved futile.

Selected References:

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Ohio Department of Natural Resources
Division of Natural Areas & Preserves
2045 Morse Road, Building C-3
Columbus, Ohio 43229
www.ohiodnr.com/dnap

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