Invasive Plant Alert[1]

Sawtooth Oak

Quercus acutissima Carruthers

Sawtooth oak has escaped from plantings and become potentially invasive in wild areas. Though no strong evidence shows that it significantly changes the overall natural systems where it has become naturalized, some suspect that it is displacing native oaks, particularly because of its early acorn production – as early as 5 years from sprouting – that makes it popular for planting. Several studies suggest that sawtooth acorns are less nutritious than native acorns, which bodes poorly for the squirrels, deer, wild turkeys, and other wildlife that consume them. Hybridization of the sawtooth oak with native oaks is unlikely.

This species is native to eastern Asia; it was introduced to North America in 1862. It has only become widespread since it began to be incorporated into restoration projects. In recent years it has been planted for landscaping in areas like parking lot edges and highway medians, because it tolerates drought, compacted soil, poor drainage, and air pollution. It has been popularly planted because of its early acorn production and its aesthetic appeal.

Where to Look

Q. acutissima can be found in temperate climates of the U.S. and Canada, including the US states of VA, MD, DC, DE, PA, OH, IN, IL, MO, AR, LA, MS, AL, TN, GA, and NC, though it does not grow in northern New England or the upper Midwest. It has been noted in woodland edge habitats, meadows, and open areas.

Figure 1 *Quercus acutissima* leaves. David Stephens, Bugwood.org

Identifying the Plant

Sawtooth oak is a large deciduous tree growing up to 15m (50 ft), with a trunk flaring out at the base. The bark is furrowed and grey in mature adults. Leaves are alternate, lanceolate and pointed, 4-8 in. in length, and resemble chestnut leaves but have a narrower width of 1-2.25 in. Margins are toothed with bristles on the teeth.

Inconspicuous flowers are produced in mid spring. 1 in. acorns are usually produced in the summer to fall in large crops every other year. They start green then become brown and develop a distinctive fringed cap.

How to get rid of it?

The first step to controlling *Q. acutissima* is to prevent the planting of new trees.

Once established, the main management threat posed by Sawtooth oak is its spread through an abundant production of acorns. The tree itself, however, can be removed fairly easily. Regular mowing of an area will deter new growth. Seedlings may be pulled or foliar treated with glyphosate. Large adults may be treated with glyphosate using girdling, hack and squirt, or cut-stump.

Figure 2 *Quercus acutissima*, fruit and leaves. Chuck Bargeron, University of Georgia, Bugwood.org

Resources

Plant Invaders of Mid-Atlantic Natural Areas, 4th ed. (2010). http://www.nps.gov/plants/alien/pubs/midatlantic/plants-to-watch.htm#quac

Kaufman, Sylvan Ramsey, and Kaufman, Wallace. Invasive Plants: Guide to Identification and the Impacts and Control of Common North American Species. Mechanicsburg, PA: Stackpole Books. (2007).

[1] This species has been identified as a potential or emerging threat to natural areas in the mid-Atlantic region

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