
BWSR FEATURED PLANT

GLOSSY BUCKTHORN FRANGULA ALNUS



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Similar to the more widespread common buckthorn, glossy buckthorn was brought to the United States from Eurasia for use as an ornamental shrub. The species has high seed viability (lasting in the soil two or more years) and can form thickets that create significant competition for native plants through dense shade and extensive root systems that compete for moisture and nutrients. Studies have also suggested that the roots may release a chemical that give the plant a competitive advantage. Unlike common buckthorn that has separate male and female flowering plants, all plants of glossy buckthorn can produce seed. Glossy buckthorn can handle a wide variety of moisture conditions and as a result it can colonize a variety of wetland and upland communities.



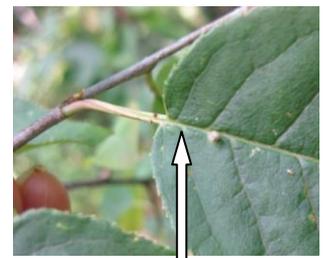
Glossy buckthorn with fruit in late summer

Identification

The leaves of glossy buckthorn are mostly alternate with wavy edges that lack distinct teeth. The leaves have a glossy sheen to both sides and come to an acute point at the tip. The plants can have single or multiple stems and can reach 20 ft or more in height. The bark is gray to light brown with light colored lenticels. Female plants produce bunches of reddish berries that turn black as they mature in late summer. Flowers are greenish-white with five petals. Buckthorn leaves and choke cherry look similar though, choke cherry trees have glands at the base of each leaf.

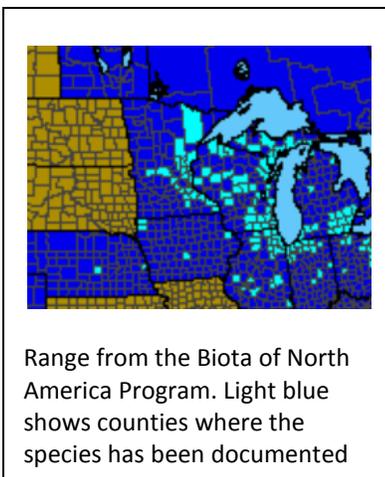


Glossy buckthorn leaf lacking serration



Chokecherry with glands at the base of the leaf and fine serration

Range



Range from the Biota of North America Program. Light blue shows counties where the species has been documented

Glossy buckthorn is an aggressive species found in wetter, disturbed or nutrient poor sites including bogs, forested and shrub swamps, wet meadows, and fens. Its ability to handle partial shade and some disturbance also make it well suited to floodplain forests. The species can also colonize upland communities such as mesic prairies, oak forests, roadways and old fields. It has been spreading quickly from eastern to western Minnesota. The plant is also common throughout the northeast United States and eastern Canada, and is found as far west as Idaho.

Glossy buckthorn has the ability to invade high quality forested wetlands.

Control Recommendations

Control methods used for glossy buckthorn typically depend on the site conditions, density of the population and available resources. There are mechanical, chemical and prescribed burning options for control. In some cases two or more methods are used in combination.

Mechanical Control –Mechanical methods often work well for small populations, smaller trees, or in combination with chemical methods. The best time for mechanical control is either before trees show fruit or late fall after most fruit has fallen. Like common buckthorn, glossy buckthorn retains leaves later into the fall, aiding control efforts. Small shrubs can be pulled by hand or with a weed wrench. It is important that fruit is not spread around the site when hauling debris. Pulling usually requires spot checks annually, since new sprouts from the existing seed bank will germinate. After pulling it is helpful to tamp the ground by foot and cover disturbed soil with leaves. Girdling is another control method that can work for larger plants.

Chemical Control – The most common method used to remove glossy buckthorn involves cutting plants at the base and applying 50 percent Roundup or Rodeo concentrations or Garlon 3A to the stem shortly after cutting. In wetland areas, Rodeo (a glyphosate formulation approved for wetland use) can be used for cut-stump treatment. Fall is a good time to cut and stump-treat buckthorn since other plants are dormant at this time and harm to non-target species can be minimized. Basal treatment is an alternative to cut stump treatment for medium sized (up to 5-inches) buckthorn. Basal treatment involves applying Garlon 4 directly to the lower 10-12 inches of bark during the dormant season. This eliminates the need for cutting, increasing efficiency, but it generally requires more herbicide and can damage non-target species.

Prescribed Fire – Burning can be effective for buckthorn control but it is not feasible in many situations such as highly urban areas, in plant communities that are not fire dependent or in areas with too little fuel to carry a fire. Hot burns are most effective for the control of buckthorn and seedlings are more susceptible than mature plants. If fuel loads are insufficient, or if the community is not fire adapted, seedlings can sometimes be spot burned with portable propane torches.



Unlike common buckthorn, glossy buckthorn has male and female flowers on the same plant, so all plants can produce seed.



Herbicide application with a backpack sprayer

Additional References

<http://www.dnr.state.mn.us/invasives/terrestrialplants/woody/buckthorn/index.html>

ftp://ftp-fc.sc.egov.usda.gov/CT/invasives/glossy_buckthorn.pdf

http://www.eminnetonka.com/public_works/natural_resources/backyard_conservation/buckthorn_threat.pdf

<http://www.fs.fed.us/database/feis/plants/shrub/fraaln/all.html>