

Invasive Plants in Pennsylvania

Common Buckthorn

Rhamnus cathartica



John M. Randall, The Nature Conservancy
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Background:

Common buckthorn was introduced into North America as an ornamental shrub in the mid 1800s. Prized for its hardiness and ability to thrive in a variety of soil and light conditions, common buckthorn was planted extensively for use in hedges, farm shelter belts and wildlife habitat. It is no longer available for purchase.

Range:

Native to Eurasia, common buckthorn can now be found throughout the Northeast and North-central regions of the United States.

Description:

Common buckthorn is a dioecious shrub or small tree growing up to 22 feet high. Twigs are often tipped with a spine. Cutting the stems reveals distinctive yellow sapwood and pink to orange heartwood. The glossy, dark green leaves remain late into fall, and are broadly oval with up-curved veins and toothed margins. In spring, dense clusters of yellow-green flowers emerge from stems near the bases of leaf stalks. Small black fruits appear in fall.



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Habitat:

Common buckthorn prefers light shade, but is tolerant of many conditions, including full shade. It often invades upland sites, such as open oak woodlands, tree fall gaps and woods edges. It may also be found in prairies and open fields.

Biology and Spread:

The plentiful fruit, which produce a laxative effect, are eaten by birds and small mammals, allowing for long-range dispersal. Most of the fruit falls directly beneath the parent, creating a dense understory of seedlings characteristic of buckthorn stands.

Ecological Threat:

Common buckthorn forms dense, even-aged thickets, which crowd out native shrubs and herbs and prevent woody plant regeneration. When open woodlands, savannas and prairies are invaded, fire is suppressed, changing the disturbance regimes of these ecosystems. Invasive shrubs like common buckthorn are population sinks for nesting songbirds due to higher predation rates. Common buckthorn is also an alternate host of oat crown rust, which lowers oat yield and quality.



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How to Control this Species:

Physical

Seedlings less than three feet tall can usually be pulled by hand. Saplings can be removed with a weed wrench, but individuals with a large base diameter are best dealt with by cutting. The resulting stump should be dug out or treated with herbicide. Girdling is also effective.

If enough fuel is present, prescribed burns have a large impact on seedlings and the current year's seeds.

Be sure to remove and dispose of any ripened fruit from the restoration site.

Look-A-Likes:

Common buckthorn may be confused with native buckthorns (*Rhamnus* spp.) and cherries (*Prunus* spp.).



Common Chokecherry

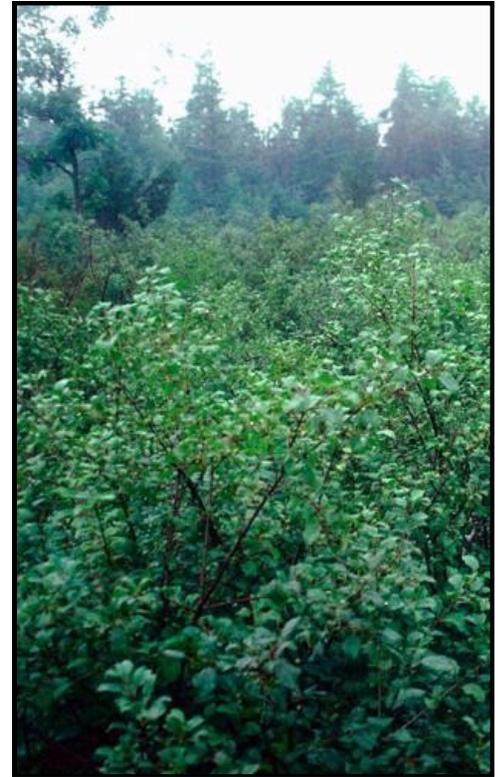
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Chemical

Herbicide applications may be done early in the season just after the trees have leafed out, but those conducted in the fall or early winter appear to be most effective.

Use a systemic herbicide, such as glyphosate, in order to destroy the root system.

Brush applications on recently cut stumps, in addition to the basal bark method, often achieve good results.



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References:

Plant Conservation Alliance's Alien Plant Working Group:
<http://www.nps.gov/plants/alien/fact/rhca1.htm>

University of Minnesota:
<http://conservancy.umn.edu/bitstream/60097/1/6.5.Gale.pdf>

For More Information:

DCNR Invasive Species Site: <http://www.dcnr.state.pa.us/conservation/science/invasivespecies/index.htm>

DCNR Invasive Exotic Plant Tutorial for Natural Lands Managers:
http://www.dcnr.state.pa.us/forestry/invasivetutorial/common_glossy_buckthorn.htm