

Common buckthorn

Rhamnus cathartica

Fact Sheet

NH Department of Agriculture, Markets & Food, Division of Plant Industry, 29 Hazen Dr, Concord, NH 03301
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Common Name: **Common buckthorn**

New Hampshire Invasive Species Status: **Prohibited (Agr 3800)**

Latin Name: *Rhamnus cathartica*

Native to: **Eurasia**



leaves (spring)



Common buckthorn invasion



Sapling (summer)



Flowers (spring)



Roadside invasion of saplings



Fleshy fruits (fall)



Tannish-gray bark w/ lenticels



Emodin in berries - effects to birds



Fall foliage (Autumn)

Description: Deciduous shrub or small tree measuring 20' by 15'. **Bark:** Grayish to brown with raised lenticels. **Stems:** Cinnamon colored with terminal spine. **Leaves:** Alternate, simple and broadly ovate with toothed margins. **Flowers:** Inconspicuous, 4-petaled, greenish-yellow, mid-June. **Fruit:** Fleshy, 1/4" diameter turning black in the fall. **Zone:** 3-7. **Habitat:** Adapts to most conditions including pH, heavy shade to full sun. **Spread:** Seeds are bird dispersed. **Comments:** Highly aggressive, fast growing, outcompetes native species. **Controls:** Remove seedlings and saplings by hand. Larger trees can be cut [REDACTED]

General Considerations

Common buckthorn is a multi-stemmed shrub or occasionally a single-stemmed tree up to 25' (7.6 m) tall. Twigs are armed with terminal spines that can be a safety hazard. Leaves are deciduous, simple, and usually arranged sub-opposite, but examples of opposite and/or alternate arrangements do exist. Leaves are medium to dark green above and a lighter green below, oval, slightly serrate with 3 to 4 pairs of curving veins and a slightly curved tip. In the fall the foliage turns a pale yellow and persists long after most native plants have dropped their foliage.

Small umbels of small ¼” greenish yellow flowers develop from the axils of the leaves. Usually, the flowers are dioecious and less often perfect. Flowers occur from late spring to early summer and lasts about 2 weeks. Fertile female flowers are replaced by small drupes that ripen in August through September turning dark purple to black and each containing 3-4 seeds. The seeds are narrowly grooved. Seed dispersal is usually by birds. Small mammals are also a vector. Common buckthorn contains anthroquinone in all plant parts, including its fruits, which is metabolized into emodin when ingested by wildlife. Emodin can have paradoxical effects: in high doses it acts as a cathartic (resulting in moderate to severe diarrhea, see photon previous page); at low concentrations/doses it causes retention of stomach/gut contents. Common buckthorn is considered a poisonous plant in the United States and Canada. Common buckthorn is also an alternative host to alfalfa mosaic virus; and crown rust (*Puccinia coronata*) fungi that causes oat rust disease. It has also been linked as a host for the soybean aphid.

Control Options modified by the Pepperell Invasive Plant Advisory Committee

Control options include mechanical and cultural. In Massachusetts, chemical control (herbicides) options are regulated by the Department of Agricultural Resources (MDAR) Pesticide Program. <https://www.mass.gov/orgs/pesticide-program>

<i>Common buckthorn</i> Rhamnus cathartica	
Plant Type	Shrub
Habitat Type	Forests, fields, roadsides, wetlands
USDA Hardiness Zone	3-7
Rooting Structure	Fibrous, shallow and extensive
Environmental Impacts	Contains levels of anthroquinone, which when ingested is metabolized into emodin, a laxative. Common buckthorn is considered a poisonous plant in the United States and Canada
Wildlife Impacts	Ingestion of plant parts can be toxic to wildlife
Leaf arrangement	Alternate
NWI Ranking	FAC
Soil Type	
Soil pH Range	6.5 to 8.5
Light Requirements	Prefers partial to full sun, shade
Growing Season	
Growth Rate	Medium to fast
Mature Height	25 ft. (7.6m)
Life Span	50-75 years
Reproductive Age	2 years
Flowering Period	May-June
Flower Type	Dioecious
Pollination	Insects
Seed Set	August through September
Seed Per Plant	15,000 -54,000
Scarification Required	No
Cold Stratification	Yes
Seed Longevity	-2-6 years
Seed Germination Rate	88%
Seedling Density	?

Sources

Mehrhoff, L., 2001. Invasive Plant Atlas of New England, Catalog of Species, http://www.eddmaps.org/ipane/ipanespecies/shrubs/Rhamnus_cathartica.htm

USDA Forest Service invasive species website: <http://www.fs.fed.us/database/feis/plants/shrub/rhasp/all.html>

Invasives.org: <http://www.invasive.org/search/action.cfm?q=common%20buckthorn>

Bugwood: http://wiki.bugwood.org/Rhamnus_cathartica

USDA Plants Database: <http://plants.usda.gov/core/profile?symbol=rhca3>