



*Buckthorn retains its berries into winter.*



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## Herbicide Common Sense

NOHLC treats Buckthorn using an herbicide called glyphosate. ShoreKlear™ and some other brands contain 53.8% of glyphosate with no surfactants added. ShoreKlear™ is the only brand of glyphosate currently sold in small quantities for homeowners. ShoreKlear™ may be purchased online or at local stores such as McKays Do It Center in Holly and The Pond Place in Milford.

Manufacturers recommend adding surfactants to glyphosate if the herbicide is sprayed. Roundup™, ShoreKlear Plus™, and other products are premixed with surfactants. However, surfactants are not necessary if the herbicide is placed on a cut stump, as described in this pamphlet. Surfactants may harm amphibians, fish, and other animals. NOHLC does not recommend these mixtures to control Buckthorn. Current research suggests that glyphosate without surfactants, used as described in this pamphlet, controls Buckthorn without harming wildlife, and will kill any plants that absorb the herbicide.

Because glyphosate affects metabolism in plants but not animals, it has very low toxicity to humans. However, homeowners should take common-sense precautions; wear gloves when handling it, and mix and store the glyphosate in something that contains spills.

## Where Can I get More Information?

More information on Buckthorn and lists of native plants to replace it are available at:

- Midwest Invasive Plant Network (mipn.org)
- The Center For Invasive Species and Ecosystem Health at the Bugwood Network (bugwood.org)
- The Stewardship Network (stewardshipnetwork.org)

NOHLC offers a ***Starter Kit To Control Invasive Plants***. This starter kit contains a chemical-resistant plastic dropper bottle containing a little biodegradable purple dye. The dye (food coloring may also be used) makes the herbicide more visible and easy to use. Fill the bottle halfway with glyphosate, an herbicide which may be used in wetlands. Then fill the bottle with distilled water.



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## A Homeowner's Guide to Buckthorn



Buckthorn is an invasive shrub or small tree that turns native forests into impenetrable thorny thickets, crowding out native understory trees and wildflowers, and harming our wildlife.

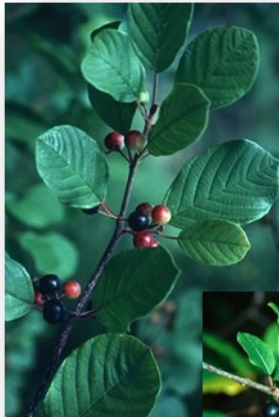


North Oakland  
Headwaters  
Land Conservancy

## What's Wrong with Buckthorn?

The Buckthorn commonly found in southeast Michigan is an invasive shrub or small scrubby tree. It was imported from Eurasia as an ornamental plant in the 1800's and 1900's. It is still sold in nurseries as Fernleaf and Columnar Buckthorn. Without the natural competitors from its native Eurasia, it is growing unchecked in Michigan, and it changes soil chemistry, killing native wildflowers and other native plants.

Buckthorn produces dense shade that turns native woodlands and wet areas into thorny thickets, crowding out native understory trees and wildflowers. It harms our wildlife by choking out the native plants and trees they depend on for food and shelter. It is best to eliminate small saplings when they first develop, before they produce berries.



*Glossy Buckthorn leaves and unripe berries (Rhamnus Frangula)*



*Common Buckthorn leaves and berries (Rhamnus Cathartica)*

## Is This Plant Buckthorn?

Buckthorn may be identified by the texture and pattern of its bark, the color of the inner bark, the berries, and its long growing season. A plant that has at least two of these characteristics is probably buckthorn.

Buckthorn is a small scrubby tree that may reach up to 20—25 feet tall, becoming a thorny nuisance. Common (or European) Buckthorn and Glossy Buckthorn, two closely related species, are both invasive in the upper Midwest. Buckthorn has a long growing season; the smooth oval leaves appear earlier than on native plants and persist later into the fall, making Buckthorn easy to spot in the early spring and late fall.

On young saplings, the bark is dark with distinctive white dashes called lenticels. Mature buckthorn trees have rough and peeling bark, similar to cherry tree bark. The inner bark (sapwood) stays bright yellow-orange. Buckthorn grows rapidly and produces many berries that are eaten by birds, who spread the seeds. However, the berries often cause diarrhea in our native birds. The pea-sized berries develop in July through September, and ripen from red to purple black.



*Young Buckthorn bark has distinctive white dashes called lenticels.*

*Characteristic orange inner bark. Outer bark on mature trees is reddish brown and flaky.*



## Non-Chemical Controls

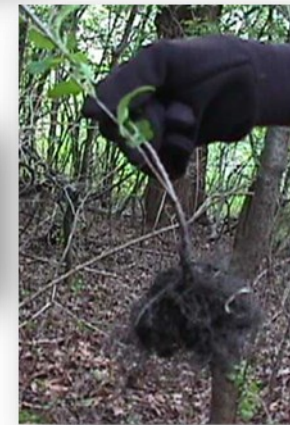
The best way to control Buckthorn is by pulling or digging out young seedlings or saplings, roots and all. Buckthorn can be pulled any time of year when the ground is not frozen. If Buckthorn is cut, or if large roots are left in the ground, the stump will resprout. If the buckthorn is too large to pull or dig out, herbicide must be applied to the cut stump as described below. Because the seeds remain viable in the soil for 2 to 3 years, Buckthorn must be removed for several years to eradicate the seeds that remain in the soil.



*Buckthorn seedlings can be pulled easily.*



*Small Buckthorn saplings can be pulled or dug up, roots and all.*



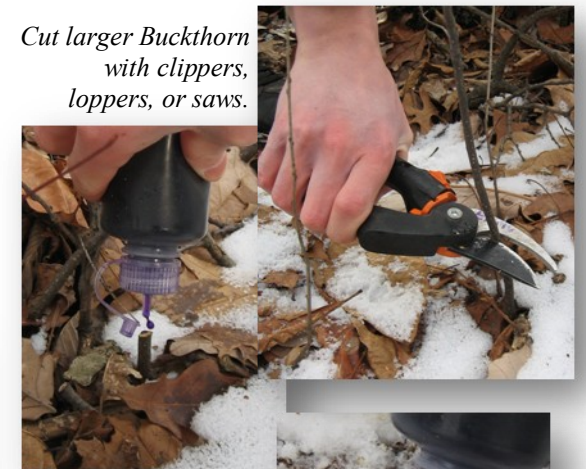
*If cut stumps are not painted with herbicide immediately after being cut, the stump resprouts, making Buckthorn more difficult to control.*

## Cut and Treat

If Buckthorn is too large to pull or dig out, it must be cut and herbicide applied to the cut stump. Cutting and treating the stump can be done in summer, fall, and winter. Because sap is rising upwards in the spring and the herbicide does not move down into the roots, cutting and treating the stump in the spring does not prevent resprouting.

On small saplings, the cut stump can be covered with a drop of herbicide. On larger cut stumps, simply apply the herbicide to the ring of darker wood just inside the bark. This part of the wood, called the cambium, will transport the herbicide into the roots.

*Cut larger Buckthorn with clippers, loppers, or saws.*



*Treat sapling stumps with herbicide to prevent resprouting. Treat larger stumps by painting a ring of herbicide just inside the bark.*

