

## **AUTUMN OLIVE** (*Elaeagnus umbellata* Thunb.)

**Autumn Olive** forms a deciduous shrub to small tree. It was introduced into USA from Asia in 1830s as a landscape plant, but once established it become highly invasive and difficult to control. Its ability to put nitrogen into the soil is disruptive for native plants that require infertile soil. Because it grows rapidly--several feet each year--it outgrows native plants and can eliminate almost all other plants from an area that it infests. It grows along roadsides, fencerows, open pastures; forest edges and subsequently penetrates into hardwood forests directly.



Figure 1. Autumn Olive showing the arrangement as well as shape and smooth edge of the leaves. Note the abundant pea-sized fruits among the leaves along the stem.

Leaves are elliptical shape 1 1/2 to 2 inches long, with a smooth margin, but somewhat wavy in appearance (Figure 1). Leaves have a distinctive color. The upper leaf surface is grayish green and the underside is somewhat silvery in appearance. A conspicuous feature of this plant is that it leafs out before native plants and remains green late into the fall after native plants have dropped their leaves.

Flowers are small, tubular and light yellow in color, and are produced in abundance in the axils of the leaves. Fruits are about 1/4-inch in diameter, pink to red in color with silvery spots. The plant produces abundant fruits that are eaten by birds and animals, and the seeds subsequently spread widely.

Stems have coppery dots on their surfaces. The plant produces numerous yellowish short spine-like shoots (not sharp) along the stem. These short shoots are very distinctive and make it possible to recognize this plant during its dormant state.

**Control:** You want to remove or kill the root. Any root portions remaining in the ground can renew growth of the plant.

Wearing apparel: Wear goggles for eye protection from herbicide sprays; leather gloves; plastic gloves when applying herbicides; sturdy footwear; long-sleeved garments; long pants.

Tools and supplies: Long-handled pointed shovel or spade; lopper; root-puller; brush-killer concentration of Round-Up (or similar herbicide); a typical 3-inch paintbrush and convenient can to hold herbicide; hand branch-clipper; a handy carrying container for small work items. A root-puller is available for loan.

Herbicide: A recommended herbicide containing both glyphosate (1%) and triclopyr (0.1%), typically called a poison ivy and tough brush killer spray, already prepared in the manufacturer's pump sprayer model (1 gallon+ size). It is locally available in Sturgeon Bay. Check several suppliers including Walmart.

Also consider purchasing a container of Round-Up (Poison Ivy) Concentrate at the same store. It contains glyphosate 18% and triclopyr 2%. It can be used as a paint on a cut stem surface of a plant.

Procedures: For small plants 1 to 2 feet tall, you can hand-pull them from the soil when the soil is moist. Be certain to remove the entire root. If the root is 'tight', dig out with a shovel. Alternatively, for smaller plants, spray plant with herbicide indicated below in (2). Use an herbicide containing glyphosate and triclopyr for brush and poison ivy. Use the cardboard shield as described to prevent spraying native plants.

For larger plants, use one or more of these procedures:

(1) If you have a root-puller available attach the root-puller to the stem and root area. Then pull (leverage) out the entire root. It works best when the soil is moist so that the entire root is pulled out. A root-puller is available for loan.

(2) Lop off the plant stem horizontally just above ground level of the root. Then spray the cut surface with the manufacturer's sprayer containing glyphosate and triclopyr herbicide. To prevent the herbicide from drifting when you spray, use a piece of

cardboard about 24 x 24 inches square to make a spray shield. Cut a hole in the cardboard near the top (middle area) of one side to make a handgrip. Then hold this shield behind the plant root area to be sprayed so as to avoid spraying adjacent native plants. You want native plants to grow and expand into the areas where you have killed the invasive plants.

(3) Instead of spraying the cut surfaces, you can paint the freshly cut surfaces with the concentrated herbicide. Use the paintbrush with some herbicide in a convenient can. Avoid getting herbicide on adjacent native plants because you want them to grow and replace the killed invasive plants.

Disposal: You must decide how to dispose of the removed invasive plant material. Avoid allowing roots of removed plants to touch the ground because they can re-root and grow. You can let them remain in the woods (turn exposed roots upward), but it will take several years for them to decay. If you have a large quantity, you may wish to remove and dispose of them by shredding, burning or other means. If you do this work at a time when fruits and seeds are on the plant, then remove the fruit-seed branches from the woods. If the fruits with seeds drop onto the ground the seeds will develop into new plants in subsequent years.

The next years: Fruits and seeds are spread widely by birds and animals. Check the areas where you eradicated this plant for the next several years. New, young plants are easily removed by pulling them out. If larger plants are found, you can remove them as you did previously.