

TERRY BONACE'S
DUNE PLANTS
FRIEND OR FOE?



BEVERLY SHORES

ENVIRONMENTAL RESTORATION GROUP
PROMOTING & PROTECTING ECOLOGICAL HARMONY

Autumn Olive

Terry Bonace

Autumn olive (*Eleagnus umbellata*) can be readily observed in Beverly Shores along Beverly Drive, especially in the closed section of West Beverly between Broadway and East State Park Road. In spring, its fragrant pale yellow flowers and silvery foliage are likely to attract your attention as you walk by. But despite its attractive characteristics, it is a major threat to Duneland plant diversity, an aggressive invasive that crowds out many native plants as it changes our soil in ways that prevents the natives from returning. The state of Indiana (www.in.gov/dnr/files/Autumn_Olive.pdf) recommends: "Do not buy, sell or plant autumn olive in Indiana."



Autumn Olive

Autumn olive's leaves alternate on its stems. Silvery leaf hairs occur primarily on the underside of the leaves with the upper sides appearing darker green. Growing in the form of a shrub or small tree, autumn olive develops abundant, pea-sized red fruit in the fall. It is easily identified in the spring because its leaves appear early while most native vegetation is still dormant. It grows in full sun to light shade and is drought tolerant. The berries are eagerly consumed by birds and wildlife, resulting in widely dispersed seeds.

Autumn olive is not really an olive at all. The olives we eat and press for olive oil come from a member of the ash tree family. The autumn olive we see in Beverly Shores is from the oleaster family. The oleaster family also includes Russian olive (*Eleagnus angustifolia*), a non-native ornamental, and buffaloberry.

Autumn olive was first introduced into the United States in the 1830s as an ornamental. In the early 1960s the Soil Conservation Service introduced "Cardinal," a variety of autumn olive developed for its prolific fruit yield, encouraging its use for wildlife food and cover, windbreaks, stabilization and revegetation of road banks, and reclamation of mining spoils. Autumn olive has a special property making it particularly useful for revegetating poor soils: like a legume, it can capture nitrogen with its roots, bringing fertility to the poorest soils. Autumn olive, then, has two advantages for invading natural areas: its berries are widely eaten and dispersed by wildlife and it provides its own soil fertility. Naturally occurring poor soils often host rare native plants, adapted over

thousands of years to these poor conditions. Autumn olive can readily move into these poor soils and crowd out the natives in addition to enriching the soils and making them unsuitable substrate for the natives to return. So not only is autumn olive a problem for displacing and shading out native plants but it can more selectively harm some very special plants that depend on low nutrient soils.

Despite the state of Indiana's urging not to plant autumn olive and to eradicate existing plants, autumn olive is still available commercially. It may even be touted for the healthful properties of its fruit, since the berries are edible and contain high quantities of lycopene. You may recall when lycopene was first celebrated for its high concentration in tomatoes and its potential for helping to prevent cancer and heart disease. Autumn olive fruit contains many times the concentration of lycopene than do tomatoes, fresh or canned. But as desirable as this feature may appear, autumn olive is a deadly effective rival to native plant life.

Autumn olive, like so many invasive species, is tough to control but most easily removed by hand when the plant is small. Otherwise, the most effective way to control this plant is with a combination of mechanical and chemical treatment. Cut the plant off at the main stem, and apply a glyphosate-containing herbicide ("Roundup") directly on the cut stump to kill the root system. Then spray glyphosate to re-sprouting leaves with a hand sprayer. The best time for application to the cut stems is July through September during the late growing season, although it also may be used when the plant is dormant. Cutting alone should be avoided because it can lead to a thicker, denser stand. As in the use of all herbicides and pesticides, carefully follow all label directions as required by federal and state law.