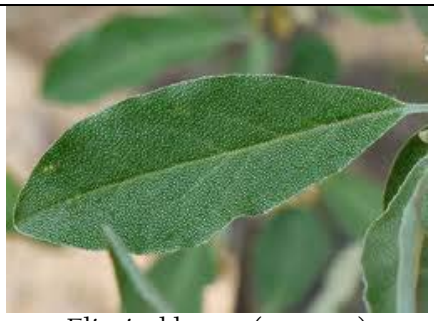
Autumn olive

Elaeagnus umbellata

Fact Sheet

NH Department of Agriculture, Markets & Food, Division of Plant Industry, 29 Hazen Dr, Concord, NH 03301
(603) 271-3488

Common Name: **Autumn olive** Latin Name: ***Elaeagnus umbellata***
New Hampshire Invasive Species Status: **Prohibited** (*Agr 3800*) Native to: **Asia**


Eliptical leaves (summer)


Autumn olive – Concord, NH

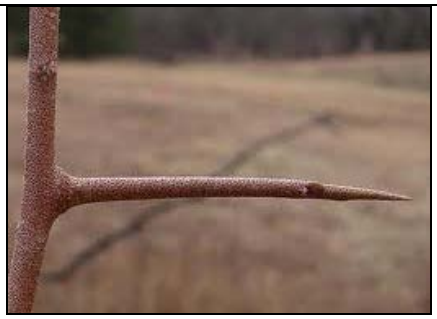

Silvery underside of leaf (summer)

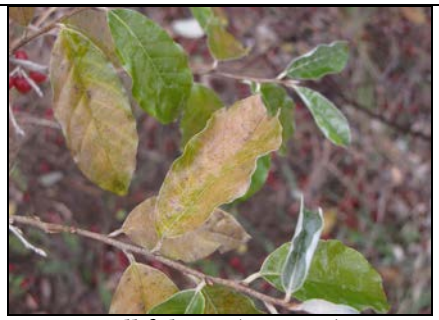

Flowers (spring)


Fleshy fruit (late summer)


Fruit clusters (fall)


Bark (summer)


Single thorn (summer)


Fall foliage (autumn)

Description: Weedy deciduous shrub measuring 20' by 20'. **Bark**: Silvery-gray and smooth with whitish lenticels. **Stems**: Cinnamon-brown. **Leaves**: Elliptical, 2-3'' long, glossy, green above and silvery below. **Flowers**: Solitary, whitish, 4-petaled, mid-June. **Fruit**: Drupe. **Zone**: 3-8. **Habitat**: Naturalizes in open spaces exposed to full sun. **Spread**: Seeds dispersed by birds and wildlife. **Comments**: Very aggressive. Outcompetes and displaces native species. **Controls**: Remove seedlings and saplings by hand. Larger shrubs can be mechanically removed, or cut and apply herbicide to stump.

General Considerations

Fruits are bourn in great numbers on ¼ inch stalks starting off as silvery with brown scales turning red as they ripen (September to November) containing a single seed. Fleshy fruits are consumed by birds and wildlife thus spreading the seeds over long distances. Cold stratification improves germination. Seeds that pass through the digestive tract of birds and wildlife scarify the hard seedcoat, which will help with germination in the spring. Persistent seed bank is possible. Fruits are also collected and cooked to turn into jelly.

Cutting plants can promote sucker sprouting and a stronger rooting system if not chemically treated thereafter.

Tolerant of a wide variety of growing conditions from wet to dry and basic to acidic soils. Persists in shade with rapid growth in full sun to produce seed as early as year 3. Wide spreading with many sprouts, leafing out early in spring and retaining foliage late in fall leading to the exclusion of other forest plants. Abundant seed spread by birds, with seedlings able to establish in shade. Invades forest edges and understories.

Autumn-olive forms root nodules induced by symbiosis with actinomycetes in the soil. This symbiosis permits the fixation and subsequent utilization of atmospheric nitrogen

Mature plants can produce about 30 pounds of fruit annually. Thirty pounds of fruit is generally equivalent to about 3 pounds of seed, or about 66,000 seeds. Under favorable conditions, autumn-olive can produce fruit by 3 to 5 years of age, usually at about 4 to 8 feet in height. Fruit production is reduced by shading.

Control Options

See the following control guides: **Integrated Pest Management (IPM) for Woody Plants**; or the **Control of Invasive Species by Numbers**

Elaeagnus umbellata Autumn olive	
Plant Type	Shrub
Habitat Type	Forests, fields, roadsides, wetlands
USDA Hardiness Zone	3-8
Rooting Structure	Fibrous
Environmental Impacts	Nitrogen fixing disrupts natural soil processes required by many native species. Displacing native plants
Wildlife Impacts	Loss of valuable habitat
Leaf arrangement	Alternate, simple
NWI Ranking	FACU
Soil Type	Sand, loam or clay-based soils
Soil pH Range	5-7
Light Requirements	Prefers full sun, but grows in light shade.
Growing Season	
Growth Rate	1-ft per year
Mature Height	20 ft. (7 m)
Life Span	
Reproductive Age	3-5 years
Flowering Period	April - May
Flower Type	Monoecious or Dioecious
Pollination	Open-pollinated - insects
Seed Set	September
Seed Per Plant	66,000 seeds
Scarification Required	Yes
Cold Stratification	3-4 °C for 90-120 days
Seed Longevity	Typically 3-years possibly 4
Seed Germination Rate	90%
Seedling Density	125,000 plants hectare
Other Propagules	Suckering
Dispersal Vectors	Bird, small mammals, fruit dropping

Sources

Mehrhoff, L., 2001. Invasive Plant Atlas of New England, Catalog of Species, *Alliaria petiolata:* http://www.eddmaps.org/ipane/ipanespecies/trees/ailanthus_altissima.htm

USDA Forest Service invasive species website: http://www.fs.fed.us/database/feis/plants/tree/ailalt/all.html

Invasives.org: http://www.invasive.org/browse/subinfo.cfm?sub=3003