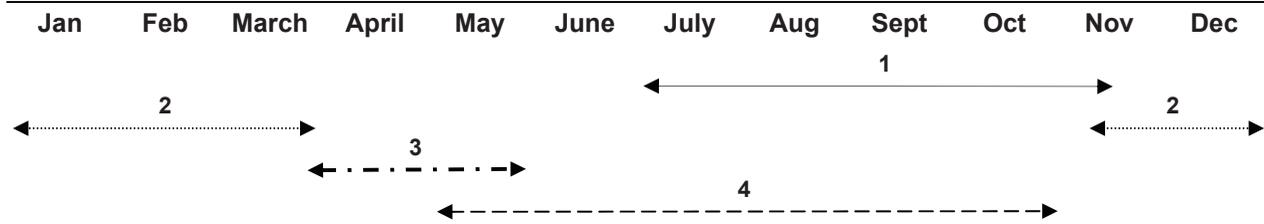




Leaves

Flower

Fruit



Management Techniques

- (July-dormancy) Stump treat. Cut the autumn olive to the ground and immediately treat the stump with the appropriate herbicide within 15 minutes. Wipe herbicide on the cut with a small sponge-tipped bottle or paintbrush. This is especially effective when done July-September. ***This is your best option.*** *This should be followed with technique 3 annually. Choose ONE of the following herbicides:*
 - 25% Aminopyralid solution
 - 12.5% Triclopyr solution formulated for use with penetrating oil
- (Dormant season) Basal bark treatments. Using a handheld sprayer, line herbicide around the base of the plant 6-12 inches from the ground. *This technique needs to be completed several years in a row and should be followed with technique 3 annually. Choose ONE of the following herbicides:*
 - 25% Aminopyralid solution
 - 12.5% Triclopyr solution formulated for use with penetrating oil
- (Spring) Pull first year seedlings out of the ground while the soil is moist. Make sure to remove all of the root system. *Technique 4 should be used on any remaining plants.*
- (May-October) Foliar spray. Apply herbicide to leaves using a sprayer. In general, this technique will have a deeper root-kill if used in the fall, but can be used to top kill the plant in the spring and summer. *This should be followed with technique 2. Choose ONE of the following herbicides:*
 - 2% Aminopyralid solution
 - 2% Triclopyr solution (selective for broadleaf plants) and a 0.5% surfactant

FIRE IS NOT RECOMMENDED AS A MANAGEMENT TECHNIQUE FOR ESTABLISHED STANDS

For More Information Visit:

<http://www.HawkeyeCWMA.org>

ALWAYS READ AND FOLLOW PESTICIDE LABELS.

Proper training for prescribed fires is highly recommended.

Basic training can be found online at

<http://training.nwcg.gov/courses/s130.html>
and

<http://training.nwcg.gov/courses/s190.html>

Related Websites:

<http://www.iowadnr.com/forestry/invasive.html>

<http://plants.usda.gov>

www.invasivespecies.gov

www.nps.gov/plants/alien

Credits:

Photographs: Mark Vitosh, IDNR; Mary Sue Bowers, USACE; US Fish and Wildlife; Courtney Janiak, Boston Globe; Joseph Austin, Austin, TX; Pennsylvania Department of Conservation and Natural Resources; Nancy Loewenstein, Auburn University; James H. Miller, USDA Forest Service; Chris Evans, River to River CWMA; www.bugwood.org

Brochure Created By: Sarah Chmielewski, Karen Clauson

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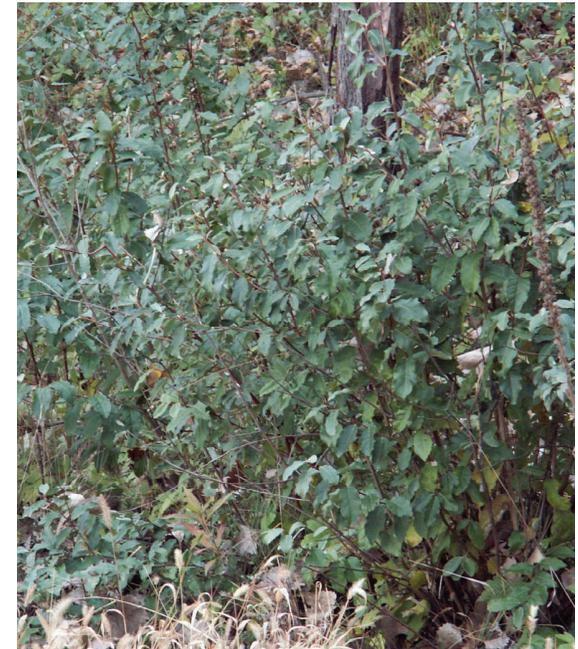
The Hawkeye Cooperative Weed Management Area (HCWMA) is a collective group of county, state, and federal agencies, nonprofit organizations and community associations who have come together to **combat the invasive species problem in Eastern Iowa**. The HCWMA serves Benton, Cedar, Iowa, Johnson, Jones, Linn, and Louisa Counties and is open to all interested parties. The Term CWMA, or Cooperative Weed Management Area, refers to a local organization that integrates invasive species management resources across jurisdictional boundaries in order to benefit entire regions.

Funding for this brochure provided by the US Forest Service through a Healthy Forest Initiative Grant.

All Hawkeye CWMA members (agencies, organizations, and individuals) are equal opportunity providers and employers.

Autumn Olive

Elaeagnus umbellata



A SERIOUS THREAT
To
Iowa's Prairies/Grasslands

What is Autumn Olive?

- Non-native woody shrub.
- Introduced from China, Korea and Japan in the 1830s as an ornamental shrub.
- Planted to reclaim mine lands and for wildlife habitat.



Line Drawing of Autumn Olive

What does Autumn Olive Look Like?

Identifying traits: Bushy plant that can grow up to 20 feet tall. Oblong leaves are silver on the bottom. Stems have a silver tint and thorns. Fruit is red at maturity. After three years of growth the plant can flower and produce fruit.



Bark:

As the shrub gets older, the bark begins to split and crack. This starts at the base and works its way up.

Leaves:

The 1 inch wide leaves are oblong, with smooth but wavy edges. Leaves are dark green to grayish green in color, with silver and white dotted undersides. They are arranged alternately on the stems. Leaves appear in early spring, before native vegetation.



Flowers:



The flowers appear in May, after the first leaves are produced. The abundant, tiny flowers can be found in the leaf axils of the plant. They are fragrant, silvery yellow, tubular, and are 1/2 inch long.

Fruits:

When the fruits first appear they are silver and then turn red upon maturity. These plants can produce up to 6 pounds of fruit a year.



What is the Threat to Iowa?

- Has no natural growth controls.
- Resprouts vigorously after fires.
- Is a threat to both open and semi open areas.
- Adaptable to a variety of soils and is drought resistant.
- Produces lots of fruits that are quickly dispersed by wildlife.
- Prevents light from getting to native plants.
- Highway plantings draw birds close to high-speed traffic.
- Interferes with the nitrogen cycle of native communities.

Native Alternatives:

Witch Hazel (*Hamamelis virginiana*)-



This shrub tolerates poor, wet, polluted, and shaded soil. It has aesthetic and fragrant leaves and flowers in the fall. The fruit attracts birds and the stems are browsed by deer and beavers. The oil from this plant has been used in medicines, eye-washes, after shave, and salves for soothing insect bites, burns, and poison ivy rashes.

Downy Arrowwood (*Viburnum rafinesquianum*)-

This 3-6 foot tall shrub produces brilliant purple berries in the summer and early fall. The shrub can grow in dry or mesic soils, transplants well, and is disease and insect tolerant. The fruit attracts birds and small mammals.



Another potential problem in Iowa: Russian Olive (*Elaeagnus angustifolia*)

History:

Russian Olive is native to Europe and Western Asia. It was introduced to North America in the late 1800's. It has been used to reclaim mine lands and as wildlife habitat.

Similar Characteristics to Autumn Olive:

The 1/2 inch leaves are alternate on both olive varieties. The stems are slightly thorny. There are small yellowish flowers on both of the plants.

Differences from Autumn Olive:

Russian Olive grows to a maximum height of 35 feet. The fruits grow singularly, while the fruit of Autumn Olive cluster together. Fruits of Russian Olive are green to yellow, compared to the silver to red fruit of Autumn Olive. Both sides of the mature leaves of Russian Olive have a silver sheen to them, not just the undersides like Autumn Olive.



Russian Olive (*Elaeagnus angustifolia*)