



Plants That Cause Problems – “Invasive Species”



What is an Invasive Species?

Imagine spring wildflowers covered with a mat of twisted green vines. This is a sign that invasive plants have moved in and native species have moved out. **Invasive plant species originate in other parts of the world** and are introduced into to the United States through a variety of ways. Not all plants introduced from other countries become invasive. The term **invasive species** is reserved for plants that grow and reproduce rapidly, causing changes to the areas where they become established. Invasive species impact our health, our economy and the environment, and can cost the United States **\$120 billion annually!**

A Ticking Time Bomb

Growing unnoticed at first, invasive species spread and cover the landscape. They change the ecology, affecting wildlife communities and the soil. Over time, invasive plant species form a **monoculture** in which the only plant growing is the invasive plant.

Plants with Super Powers

Invasive species have super powers to alter the ecological balance of nature. They flourish because controls in their native lands do not exist here. The Nature Conservancy ranks invasive species as the second leading cause of species extinction worldwide.

Negative Effects of Invasive Species

- Changes in hydrology—wetlands dry out
- Release of chemicals into the soil that inhibit the growth of other plants. This is known as *Allelopathy*.
- Changes in the soil
- Interruption of native species' reproduction
- Native plants and animals displaced
- Can be toxic to livestock
- Can cause dermatitis
- Limits recreational use of land and water
- Stops forest regeneration
- Impacts aesthetics
- Diminishes biodiversity



Taking Control

Invasive species are controlled by several management techniques, including early detection, monitoring, mechanical removal, herbicides, **biological controls**, livestock grazing and prescribed burns. The management method used depends on the species being controlled.

Fast Fact:
Biological controls are agents that are natural enemies of the invasive species, i.e. insects, bacteria, etc., which help to control its spread.

Be Safe

Herbicides are federally regulated and can cause environmental damage if improperly used. Users should follow directions on the label and wear protective equipment. If in doubt, contact a professional applicator.

Deconstructing Natural Communities

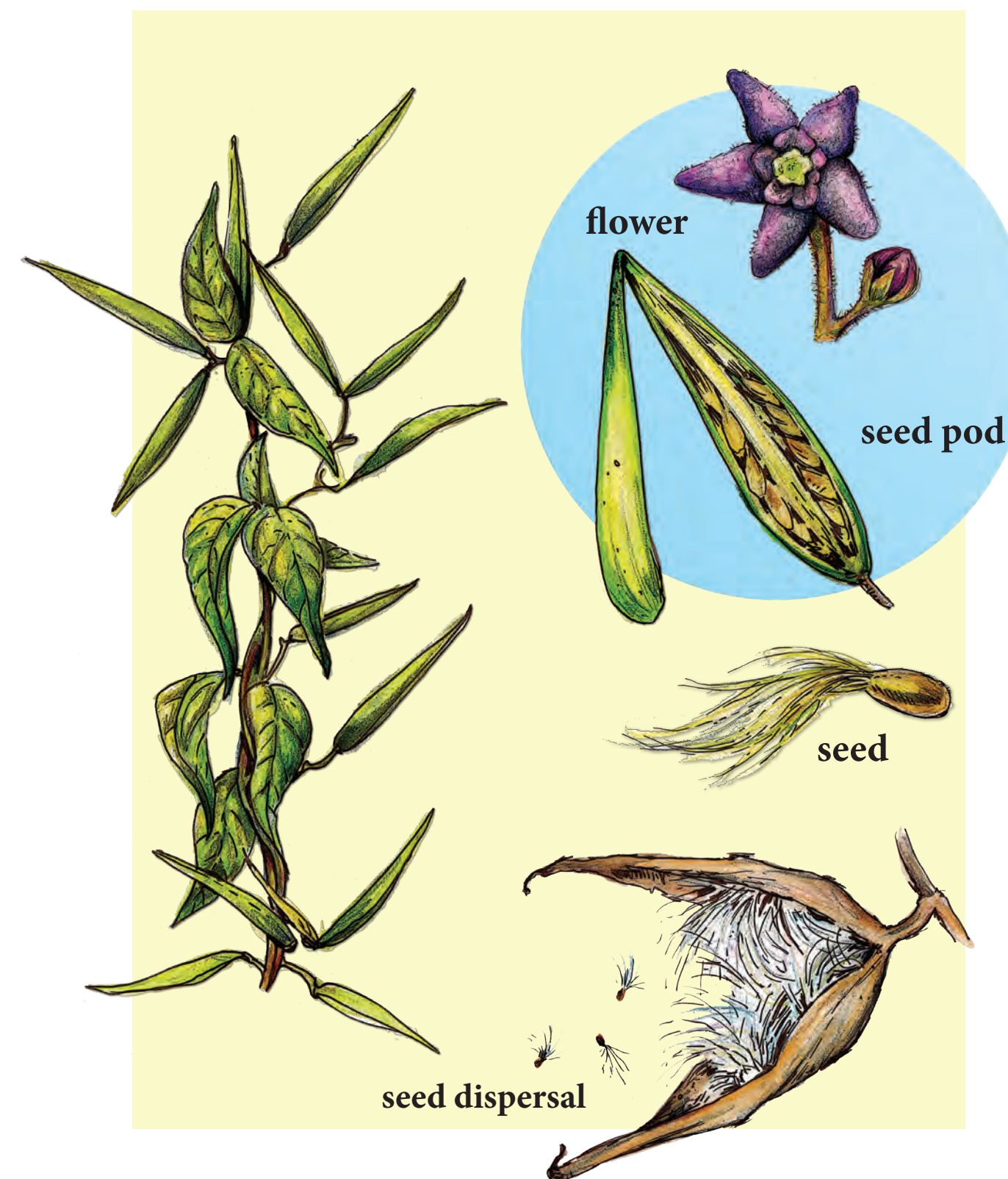
Invasive species pose a serious threat to our lands and waters. The Michigan Wildflower Association predicts that 25% of native Michigan plants will be extinct by 2050. Native wildlife depends on native plants for food and shelter, and our natural heritage is tied to intact natural communities. Thus, controlling invasive species is important not only to humans, but other wildlife as well.

Wise on Weeds

Left unchecked, invasive species not only degrade natural areas but also diminish recreational opportunities. Here are ways to help control invasives:

1. Learn about invasive species in the region.
2. Volunteer to assist with stewardship in your community and support stewardship activities.
3. Follow rules and guidelines to prevent the spread of invasive species.
4. Consider alternative plantings when landscaping, **select native species**.
5. Be careful not to transport invasive seeds.
6. Properly dispose of cultivated plants when gardening.
7. Record sightings of invasive species on the Midwest Invasive Species Information Network at <http://www.misin.msu.edu>

Oakland County Offenders



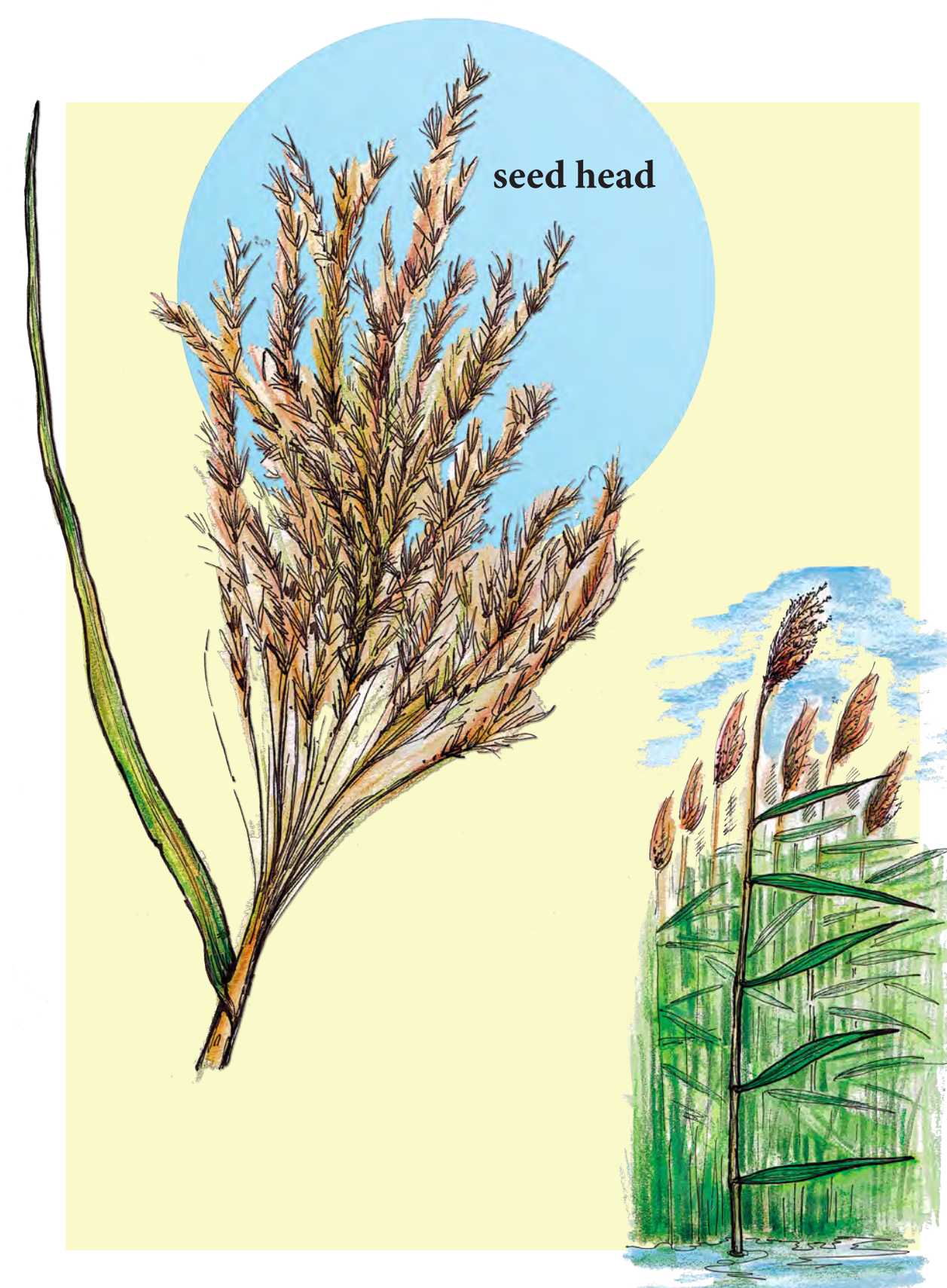
Black Swallow-wort *Cynanchum louiseae* & Pale Swallow-wort *Cynanchum rossicum*

Both plants have similar characteristics. Swallow-wort is related to milkweed.

ID: Herbaceous perennial vine, 3-6 ft. with simple lance-shaped leaves. Small five-petaled flowers with yellow centers. Flowers are pink to maroon in Pale Swallow-wort and black in Black Swallow-wort. Narrow, milkweed-like seed pods.

Country of Origin: Native to southwestern Europe, the Ukraine and part of Russia.

Ecological Threat: Forms monocultures and displaces native species. Toxic to livestock and causes high mortality to monarch butterflies when selected as a host plant.

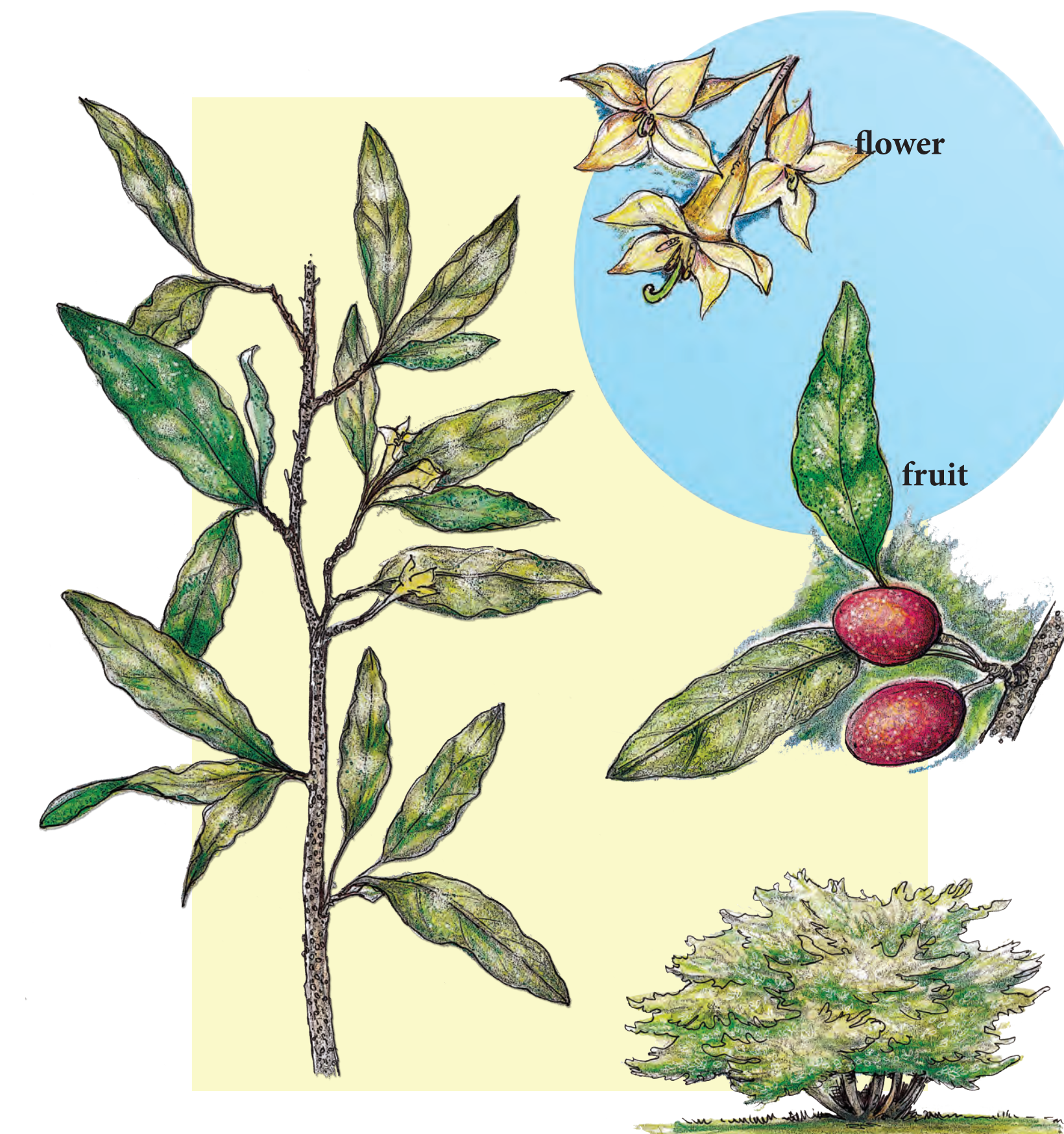


Phragmites, a.k.a. Common Reed *Phragmites australis subspecies australis*

ID: Tall perennial grass 6-15 ft. high that grows in wetlands. Plants form dense colonies with plume-like seed heads. Plants can produce as many as 2,000 seeds annually. Spreads from underground rhizomes (horizontal roots).

Country of Origin: Native to Europe and Asia, this invasive subspecies was introduced from packing material in ship ballasts and discarded in coastal marshes in the 1900s.

Ecological Threat: The invasive subspecies is widespread along coastal shoreline and wetlands. Degrading wetlands by displacing native plants and animals, this plant also reduces property value by blocking shoreline views. Permits from the Michigan Department of Environmental Quality are required for removal; visit the MDEQ's Aquatic Nuisance Control website for details.

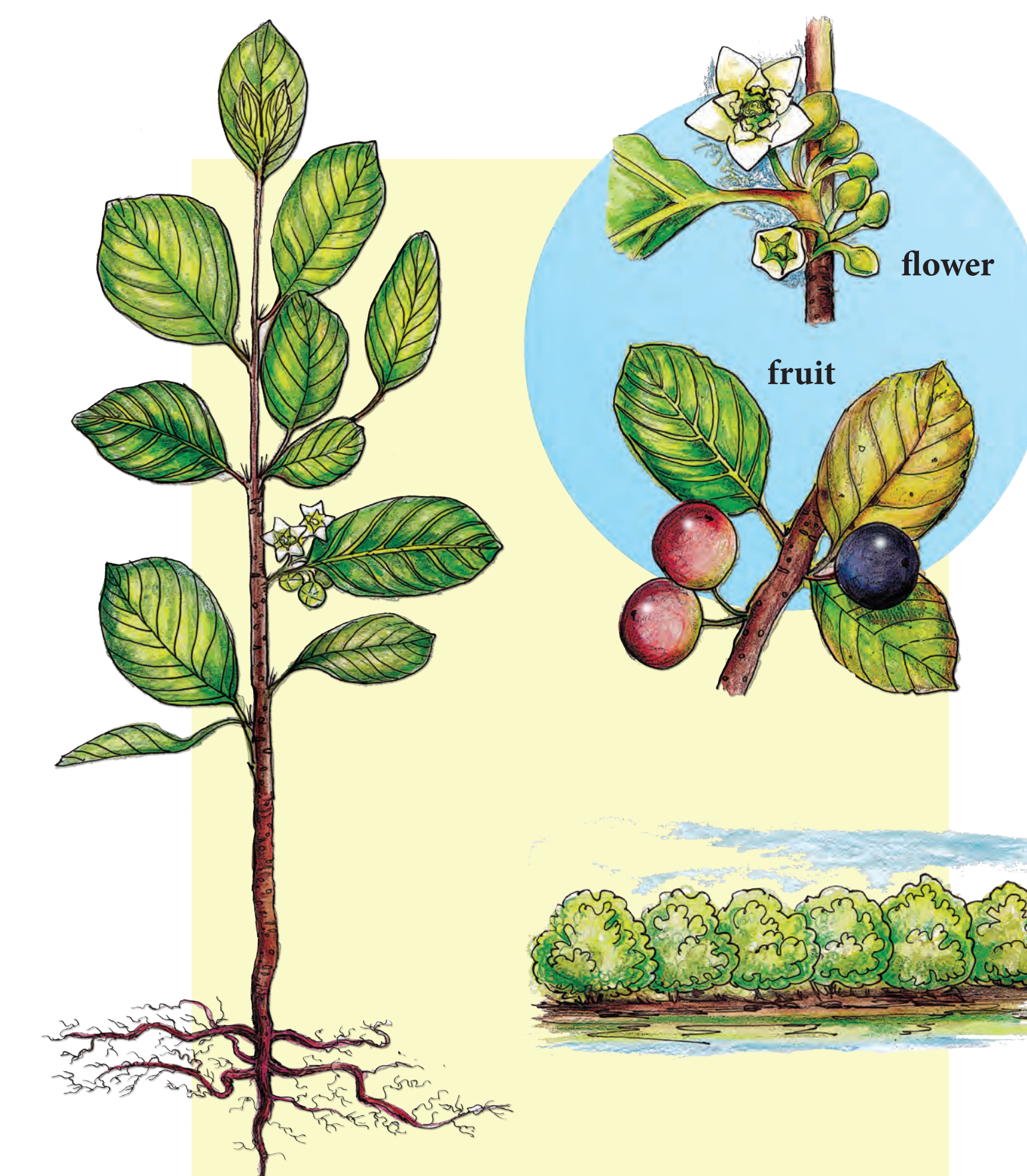


Autumn Olive *Elaeagnus umbellata*

ID: A deciduous shrub 20 ft. high and 30 ft. wide with thorny branches. Simple gray-green oblong leaves have silvery scale under each leaf. Small light yellow fragrant flowers bloom April through June.

Country of Origin: Native to China, Korea and Japan, this shrub was introduced into North America in 1830. Autumn Olive was once planted for wildlife food and cover.

Ecological Threat: This shrub grows rapidly and bears fruit in 3 to 5 years. Each shrub can produce 2-8 pounds of seed annually. Seeds are widely dispersed by birds and have a high germination rate. Autumn Olive changes the nitrogen cycle in the soil.



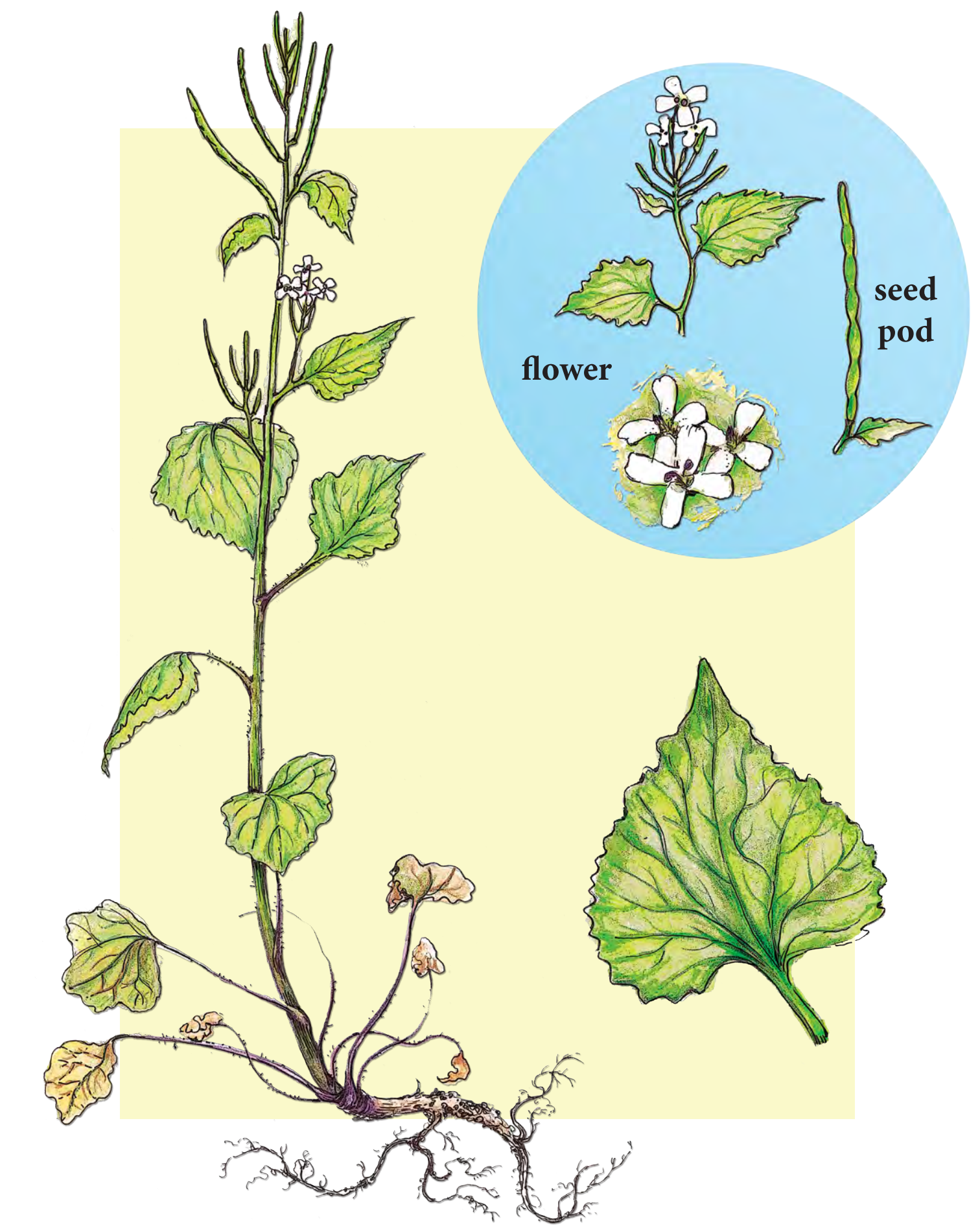
Common Buckthorn *Rhamnus cathartica* & Glossy Buckthorn *Frangula alnus*

These two invasive species belong to the same family and cause similar problems.

ID: Deciduous small trees growing 20 ft. tall with simple oval leaves. Common Buckthorn leaves have small teeth along the leaf edge; Glossy Buckthorn leaves have smooth edges. Common Buckthorn twigs have thorn tips. Barks are dotted with light colored spots called lenticels.

Country of Origin: Native to Eurasia and was introduced into North America for fencerows and wildlife habitat.

Ecological Threat: Forms dense thickets that crowd and shade out native species which impacts forest regeneration.

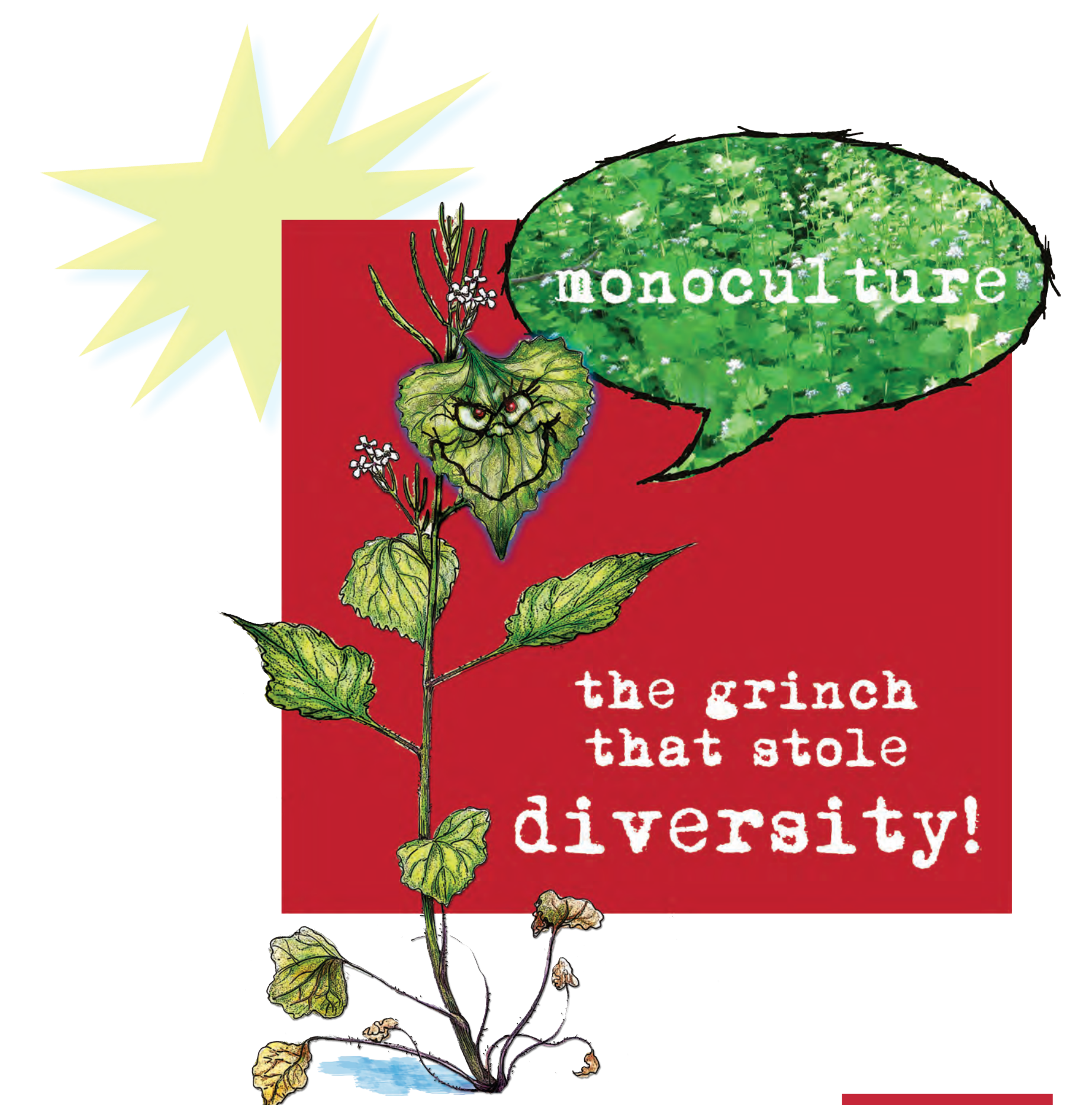


Garlic Mustard *Allaria perfoliata*

ID: Herbaceous biennial plant with simple, toothed, triangular shaped leaves. Leaves form a basal rosette in the first year. In the second year, small white flowers appear on 3 ft. stems from basal rosette. Individual plants can produce 350 – 7,900 seeds. All parts of the plant when crushed have a garlic odor.

Country of Origin: Native to Europe and Asia. It was introduced as cooking herb in the 1800s.

Ecological Threat: Alters the habitat quality and causes a cascading ecological impact on forests. It releases chemicals into the soil that inhibit soil fungi needed by trees to absorb water and nutrients. It out-competes native plants and alters forest leaf litter.



Visit DestinationOakland.com for details and to link with organizations to become wise on weeds.



Go Native

Two members of the Michigan Native Plant Producers Association are located in Oakland County. These local producers can provide additional information about the importance of using native plants.

American Roots—248.627.8525
Oakland Wildflower Farm—248.969.6904