



INVASIVE SPECIES OF PEI

Oriental Bittersweet *Celastrus orbiculatus*



What are invasive species?

Invasive species are species that may be invasive when introduced to an area outside of their native range. They can be introduced intentionally or unintentionally.

Why are invasive species a problem?

Once they establish, invasive plants can reproduce quickly because they have no natural predators or pathogens to keep them in check, and they often become the dominant species in an ecosystem. This can have devastating effects on the environment. Invasive species can displace native plants by monopolizing space, light, water and other resources needed for growth. They can completely alter native plant communities and drastically lower biodiversity. Invasive species can also adversely affect the economy and human health, and interfere with recreational activities.

HISTORY

Oriental bittersweet is native to China, Japan and Korea. It was first introduced to the United States in the mid-1800's as an ornamental. It was later used extensively for erosion control, in highway plantings and for wildlife food and habitat. This plant currently occurs in at least 7 provinces, including PEI, and in more than 33 states.

IDENTIFICATION

Oriental bittersweet is an invasive deciduous woody vine that can reach 20m in length with mature vines 10cm in diameter. It uses trees and shrubs as structural support, coiling its stems around the supporting trunks.

Here are some distinguishing features that may help you positively identify it:

- Leaves are alternate, glossy and finely toothed. They can be variable in shape, but are often roundish with a tapered tip. The leaves range from 4-12cm long and 3.5-5cm wide, turning yellow in the fall.
- Small greenish-yellow flowers, each having 5 petals and 5 sepals, are clustered in the leaf axils (in contrast, the flower clusters and fruit of native American bittersweet occur at the tips of the stems). Flowering occurs in May and June. Male and female flowers are found on separate plants (dioecious).
- Fruit are yellowish capsules that split open in autumn to reveal bright red arils (fruit-like structures containing the seeds).
- Bark is light brown to gray and may be covered with small light colored spots (lenticels).
- Roots are bright orange. Sprouts form from roots, root fragments and the root crown.



CONCERN

Oriental bittersweet takes advantage of multiple invasive and dispersal strategies (benefits of mutualism, efficient use of energy to enhance growth, vining growth habit, allelopathy [production of biochemicals that inhibit the growth of other organisms], hybridization, seed production, vegetative reproduction) providing it with a competitive advantage that threatens ecosystems and native plant communities.

Its vining habit covers other vegetation creating dense shade and preventing photosynthesis, hence plant growth. The vines coil around tree trunks causing girdling. This cuts off the flow of water and nutrients, killing the plant. Trees that are covered with Oriental bittersweet are susceptible to damage in ice, snow and windstorms, due to the added weight.

The brightly colored fruit is attractive to birds and other animals. Birds, in particular, can excrete seeds far from their point of origin, starting new infestations. People also spread Oriental bittersweet by using it in decorative arrangements. The seed is dispersed when arrangements are transported to new locations or when they are disposed of improperly.

Oriental bittersweet is sometimes mislabeled and sold in nurseries as our native American bittersweet.



HABITAT

Oriental bittersweet grows in a wide range of habitats from grasslands to meadows, forests and forest edges, along roads and fencelines, in old fields and on dunes and coastal beaches.

It germinates and grows readily in shady conditions. Plants prefer, and are more productive, in full sun, growing upwards to the top of the forest canopy.



How can you help?

Here are a few things you can do to help stop the introduction and spread of alien invasive species:

- Learn more about invasive species in PEI, including how to identify species of concern
- Choose native species whenever possible
- Carefully inspect and clean clothing, gear, animals, and vehicles before visiting a new natural area
- Never dump garden or pond waste in a natural area
- When disposing of invasive species, they should be placed in a clear or dark plastic bag and taken to Island Waste Management for incineration
- Report a sighting

How to report:

If you think you have seen an invasive species on PEI, please report your sighting to the PEI Invasive Species Council at:

peiinvasives.ca/report

or email:

peiinvasives@gmail.com

PREVENTION AND CONTROL

Oriental bittersweet is difficult to control once established, often requiring multiple management strategies.

Early detection is important. Manage seedlings and small populations by hand pulling or digging. Monitor sites where it has been observed and removed for possible regrowth.

Cutting back or mowing vines will stop photosynthesis and prevent the plant from storing food. If done often throughout the growing season, this strategy may eventually deplete the plants energy reserves. Note: Occasional cutting/mowing can stimulate re-sprouting which increases the infestation.

Avoid buying, growing, transplanting or trading plants. Be cautious moving soil in areas where Oriental bittersweet is found as any root fragment can sprout and become a new plant. Dispose of plant material properly to prevent further spread.

The PEIISC does not offer information on chemical control methods, however, information is available on various websites. If chemical control is used, product labels should be strictly followed and considerations for possible environmental damage should be taken into account. Herbicide is prohibited around wetland environments in PEI.

GARDEN ALTERNATIVES



Climbing hydrangea (*Hydrangea anomala*) is a vining, woody deciduous perennial that will grow in partial to full shade and gets up to 9-12m tall. They have white clusters of small flowers that are attractive to bees and butterflies.

Clematis is a popular perennial vine that comes in many different colors, sizes and shapes. The flowers may be single, double or semi-double. They prefer at least 6 hours of sunlight per day and loamy, moist soils that are well-drained.



Hardy Explorer Roses are climbing roses that were developed, by Agriculture and Agri-Food Canada, to survive our Canadian winters. They are hardy to -35°C , are disease resistant, require little pruning, come in multiple colors and flower repeatedly throughout the summer.

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