

INVASIVE SPECIES OF CONCERN ON CLIFF ISLAND

Several species of non-native plants have been identified as invasive on Cliff Island. Without continued management, these plants threaten the health of the island's native ecosystems:

ASIATIC BITTERSWEET
SHRUB HONEYSUCKLE
JAPANESE KNOTWEED
NORWAY MAPLE
COMMON REED (PHRAGMITES)
JAPANESE BARBERRY
PURPLE LOOSESTRIFE
MULTIFLORA ROSE
JIMSONWEED (DATURA)
GARLIC MUSTARD
BLACK SWALLOWWORT
BISHOPS WEED

Management of all of these species is an ongoing process, requiring persistence, careful observation, and broad community participation. If you find any of these plants in locations where they have not previously been observed, please remove them using the methods described in this guide or report them to the ACE invasive species management team. Monitoring sites of known invasive species is recommended for several years after the plants have been removed to check for regrowth.

ASIATIC BITTERSWEET

Celastrus orbiculatus

Asiatic bittersweet is a widespread and tenacious invasive vine. It grows in patches on the ground as well as up, over, and around other plants with its characteristic curling green vines. Bittersweet kills native trees and shrubs by growing over and smothering host plant foliage.



Origin: eastern Asia

Habitat: various, favors forest edges and roadsides

Removal: small vines can be pulled out by hand, removing all roots to prevent re-sprouting; larger vines may need to be dug or cut.



Status: spreading rapidly, requires extensive management

Known locations: island-wide

A native tree sapling scarred by a strangling bittersweet vine

IDENTIFICATION

Leaves: alternating, hairless, round to oval with finely serrated edges; sometimes have tapered, pointed tips; color varies from light to dark green; turn yellow in the fall



Stems: characteristic surface bumps called lenticels; new stems are green and flexible, often with curling ends; older stems are brown and woody with small thorns at the base of leafy stems



Flowers: small, greenish-yellow, grow from the base of leaf stalks

Fruit: pea-sized, red-orange berry in a yellow capsule (green when immature) that opens when ripe; often growing in clumps



Roots: often connected to multiple vines, bright orange when exposed

SHRUB HONEYSUCKLE

Lonicera spp.

Shrub (or bush) honeysuckle is a large, adaptable bush that can grow up to 15 feet high. Invasive honeysuckle's dense growth shades out



native plants and destroys the low understories that are normally home to rare plants. Because its berries are attractive to birds, honeysuckle can spread quickly over significant distances.

Shrub honeysuckle harbors much higher concentrations of **disease-carrying ticks** than native shrubs! See pages 7-9 for more information.

Origin: northern Asia

Habitat: various habitats, thrives in alkaline and disturbed soils especially at edges

Removal: smaller plants can be pulled or dug, removing roots to prevent regrowth; larger bushes may need to be cut or removed with machinery

Status: spreading rapidly, requires extensive management

Known locations: island-wide

IDENTIFICATION

Leaves: opposite, oval with smooth edges, growing on stems in pairs, typically 1-2 inches long, can be lightly fuzzy

Stems: woody with grayish-brown, ridged bark

Flowers: white to pale yellow, growing in pairs; flowers in early summer (typically June)

Fruit: glossy red berries, growing in fused pairs

Threat to native

birds: While shrub honeysuckle berries may be attractive to native birds, they offer no nutritional value and replace vital, protein-rich

native berries. Studies have shown that, because honeysuckle leaves appear earlier in the season than other shrubs, birds nest in them and are then left exposed to predators in open habitat.



JAPANESE KNOTWEED

Fallopia japonica

Japanese knotweed is a hardy and persistent invader. It grows rapidly (up to 9 feet tall) and forms dense thickets that crowd out native plants. Knotweed patches alter wetlands and other wildlife habitats. It re-grows from small root fragments, allowing it to grow or spread rapidly after soil is imported or disturbed.



Other Names: bamboo, Mexican bamboo

Origin: eastern Asia

Habitat: various, but prefers moist, open areas such as river banks, wetland edges, and roadsides

Removal: digging, being very careful to remove all roots to prevent re-growth. If possible, remove before root systems have time to become extensive.

Status: requires extensive management

Known locations: the water district, Ed's Hill, wharf area

IDENTIFICATION

Leaves: broad with pointed tips, bright to dark green, may have red veins or edges

Stems: green to reddish with a zig-zag-like shape, hollow; larger stems are bamboo-like in appearance

Flowers: greenish-white, in long clusters along stem; blooms in late summer

Fruit: shiny, dark, three-sided seeds

Roots: sturdy, extensive rhizomes, connected to multiple above-ground plants



NORWAY MAPLE

Acer platanoides

Norway maples are sturdy and resilient deciduous trees known for the broad, rounded canopy shape that made them popular as ornamentals. They displace native trees and shrubs by forming a dense canopy that blocks light from native seedlings and understory plants, and by producing more and faster-growing seedlings than native trees. Norway maple's root system is impenetrable to other plants, eliminating native wildflowers and ferns that normally grow under trees.



Origin: Europe and western Asia

Habitat: forest re-growth areas, open areas

Removal: seedlings can be hand-pulled; mature trees can be cut to the ground and stumps removed to prevent re-sprouting

Status: spreading, requires extensive management

Known locations: around Jim's Hill, near cemetery, cultivated in various yards and gardens

IDENTIFICATION

Leaves: broad, dark green, opposite, classic maple shape with distinct veins and finely pointed tips; leaf stem bleeds milky sap if removed; turns yellow in the fall (the only maple on Cliff with yellow fall foliage – native maples turn orange or red)

Stems: bark is smooth on young trees and becomes furrowed with age

Flowers: yellow-green, in clusters, bloom in spring

Seeds: paired ‘samaras,’ sometimes known as helicopter seeds, with leaf-like wings

Native Alternatives:

Red maple (*Acer rubrum*), sugar maple (*Acer saccharum*)

Note: Norway maples can look quite similar to native sugar maples and red maples. Identify carefully before removing!



COMMON REED

Phragmites australis

The common reed (*Phragmites*) is a large, adaptable, very aggressive grass. It grows up to 13



feet high and is especially problematic in wetlands and marshes. It crowds out native wetland grasses and can change soil water content and tidal

conditions in marshes. The habitats threatened by *Phragmites* are extremely important for coastal wildlife, especially migratory birds.

Origin: Europe

Habitat: thrives in wetlands and marsh edges (fresh and brackish), but can also be found along roadsides

Removal: Removal of the entire root system is essential for preventing regrowth. When this isn't possible, cutting the stems is most effective in late summer (cutting in early summer actually helps them to grow more densely).

Status: requires extensive management

Known locations: large patch in and around the man-made pond behind Benny's boathouse and nearby beach, small patches along the fire road

IDENTIFICATION

Leaves: long and narrow blades, alternating on stems, up to two inches wide

Stems: thick, green to tan, fleshy

Flowers: long, purplish-brown feather or brush-shaped flowering head on a thin stalk

Fruit: seeds forming on flowering head

Roots: hollow, fleshy; forms a dense network of rhizomes connected to many above-ground plants



JAPANESE BARBERRY

Berberis thunbergii

Japanese barberry is a woody, thorny shrub popular as a garden ornamental. However, it invades open forests and crowds out native understory plants,



eventually forming dense thickets. This has already happened on Jewell Island, where most of the forest understory is now barberry.

Unfortunately, even the most diligent gardener cannot control Japanese barberry because its seeds are spread by birds, often quite far from the original planting.

Origin: Asia

Habitat: forest understories and edges, gardens

Removal: digging, being careful to remove all roots to prevent re-growth; smaller plants can be pulled by hand

Status: under control but requires continued management as long as it remains in island gardens

Known locations: cultivated in various gardens around the island and at the cemetery

IDENTIFICATION

Leaves: small, rounded ovals growing in clumps; green, can turn orange or red seasonally; ornamental varieties have red or gold leaves year-round

Stems: long, arching branches; smooth, brown with slender thorns at base of leaf clusters; woody stems and roots are bright yellow inside when cut

Flowers: small, non-ornamental, yellow, with four petals, blooms in May

Fruit: small, red, oblong nonornamental berries on short, slender stalks; “hidden” under stems



Japanese barberry harbors much higher densities of **deer ticks** than native plants. Deer ticks carry the bacterium *Borrelia burgdorferi*, which causes Lyme disease.



See pages 7-9 for more information.

Native Alternative: ninebark, red or gold variety

PURPLE LOOSESTRIFE

Lythrum salicaria

Purple loosestrife is a colorful perennial flowering plant that invades and disrupts vital wetland ecosystems. It crowds out native wetland plants and alters open water areas. While it may spread slowly, populations can explode under favorable conditions due to its production of large numbers of seeds.



Origin: Europe and Asia

Habitat: wetlands and along streams, drainage, beaches, and roadsides

Removal: digging, being careful to remove all roots to prevent re-growth

Status: under control with constant monitoring and continued management

Known locations: Coyle's beachhead, Benny's pond, Roger's barn, Lux's marsh, Crowley's ditch, Carter's ditch, across from Ferer's ditch

IDENTIFICATION

Leaves: opposite, long and thin with smooth edges, attached directly to the stem

Stems: four-sided, sturdy, 2 to 6 feet high

Flowers: bright pinkish-purple with 5 to 7 petals, growing in tall, spike-shaped clusters; flowers July to September

Fruit: dry capsules with up to 100 or more tiny, dark seeds

Roots: large, well-developed taproot

Note: There are species of native flowers that also have tall, purple flowers in spike-shaped clusters. Make sure your target plant has four-sided stems and smooth-edged, opposite leaves before removing it!



MULTIFLORA ROSE

Rosa multiflora

Multiflora rose is a sturdy and thorny shrub that forms dense thickets and grows over trees, buildings, and other plants like a vine. It crowds out native species in open and edge habitats, overtaking forest understories and inhibiting forest regeneration.



Origin: eastern Asia

Habitat: open areas and forest edges

Removal: digging to remove all roots. Larger plants may need to be cut or removed with machinery.

Status: almost under control, requires continued management as long as it remains in island gardens

Known locations: Griffin's Cove, along the side of Church Road, cultivated in various gardens