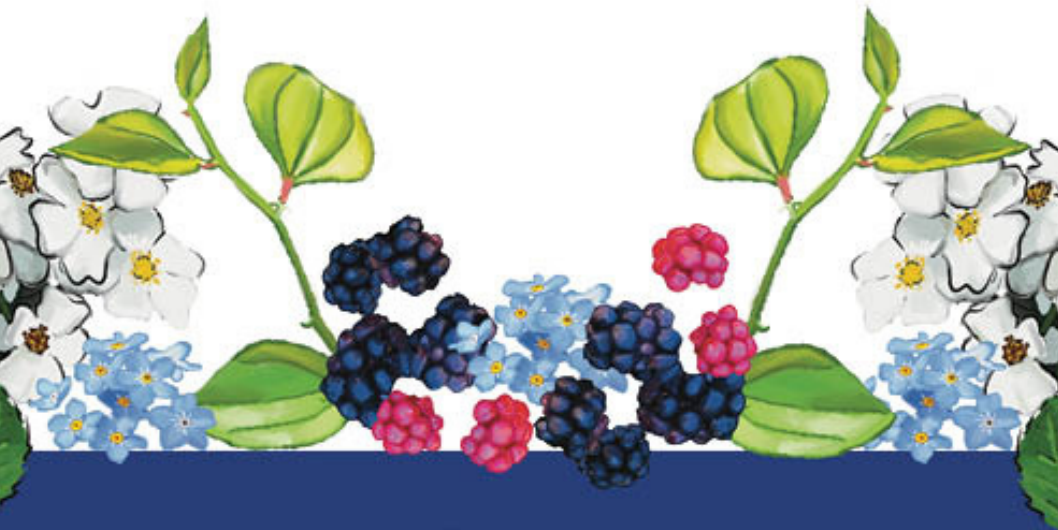


# INVASIVE SPECIES

Top Priority Plants: Norman Bird Sanctuary

Newport, RI



By Nova Maloney

Illustrated By Courtney Colibee



## **An Informational Booklet on Invasive Species at Norman Bird Sanctuary**

### **What are invasive species?**

Invasive species are non-native species that become established outside their natural range and threaten native biodiversity. This book details many invasive species that are present in Norman Bird Sanctuary, as well as the management techniques used to control these plants. The Norman Bird Sanctuary maintains a strict pesticide- and herbicide-free approach to land management. Therefore, this book contains only manual management techniques in order to protect the Sanctuary's sensitive ecology.

# Common Reed

(*Phragmites australis*)

## The Common reed...

is native to central Europe. This grass can reach 13 feet tall. It creates dense colonies in wetlands, creating ideal breeding ground for mosquitoes.

## Management techniques:

- Hand pull small seedlings.
- Uproot the base of mature plants using a shovel.
- Cut the stems and seed heads. Avoid disturbing the soil. Rake, bag, and dispose of the thatch to prevent seed spread and expose the soil to sunlight.
- Mow monotypic stands of common reed. Avoid disturbing the soil. Rake, bag, and dispose of the cut materials.



# Honeysuckle

(*Lonicera* spp.)

## Honeysuckle...

is extremely invasive. There are several species of invasive honeysuckle. These shrubs can form dense thickets, decrease light availability, deplete soil moisture and nutrients, and limit the re-growth of forests.

## Management techniques:

- Hand pull thin stands of seedlings.
- Mow large monotypic stands of honeysuckle.
- Uproot or clip twice a year in its growing period from early spring to late summer. Uproot when soil is moist. Avoid clipping in winter, as this encourages re-sprouting.



# Raspberry/blackberry

(*Rubus* spp.)

## Raspberry/blackberry...

are within multiple species of *Rubus*, both native and non-native. These woody vines prefer to grow in wet soil, along streams, ponds, and drainage ditches. The vine canes can grow to 10 feet, forming dense thickets that block access to water sources.

## Removal Methods:

- Hand pull seedlings from the ground.
- Uproot the base of the vine using a shovel.
- Cut the stem in two places; high up and low to the ground.



# Multiflora Rose

(*Rosa multiflora*)

## Multiflora Rose...

is native to Asia. This thorny shrub can grow 10 feet tall and 10 feet wide, forming dense impenetrable thickets. This shrub can act like a vine, growing 20 feet high on trees. The heavy vines can weaken trees.

## Management techniques:

- Hand-pull thin stands of seedlings.
- Mow large monotypic stands of multiflora rose three to six times a year. The strong thorns can possibly puncture rubber tires.
- Cut small patches of multiflora rose. Cut at least once per growing season as close to the ground as possible.



# Oriental Bittersweet

(*Celastrus orbiculatus*)

## Oriental Bittersweet...

is native to China. This climbing vine can grow to 60 feet. It wraps around trees, damaging them with its heavy vines.

## Management techniques:

- Hand-pull individual seedlings from the ground. Safety tip: Do not try to pull large vines down from trees. This can cause branches to break and fall, risking injury to people underneath.
- Uproot larger plants using a shovel. Bag and seal all plant parts to dispose of in a landfill.
- Cut the stem in two places: high up and low to the ground. Cut small shoots on a weekly basis. Cut large shoots down to the ground every two weeks.





# Common Greenbrier

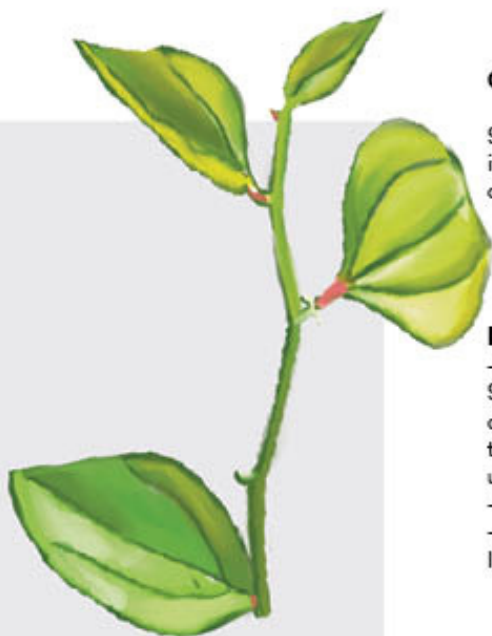
(*Smilax rotundifolia*)

## Common Greenbrier...

is native to the Eastern United States. Although this thorny vine is native, it can threaten local biodiversity. It forms dense thickets and smothers other plants.

## Management techniques:

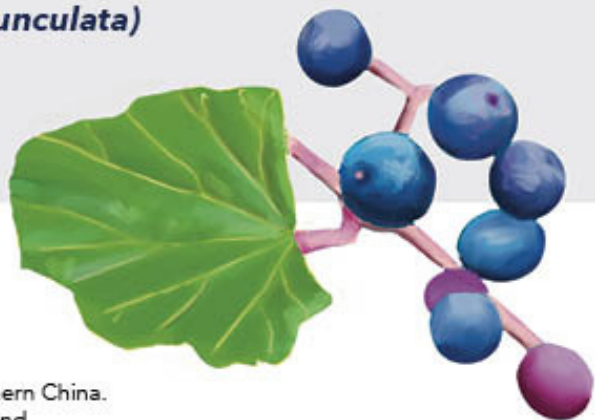
- Hand-pull seedlings from the ground.
- Safety tip: Do not try to pull large vines down from trees. This can cause branches to break and fall, risking injury to people underneath.
- Uproot larger plants using a shovel.
- Cut the stem in two places; high up and low to the ground.





# Porcelain-berry

(*Ampelopsis brevipedunculata*)



## Porcelain-berry...

is native to Japan and Northern China.

This woody vine prefers moist soil and invades the edges of streams, ponds and thickets. It can climb up to 20 feet up trees, increasing the top weight and making the tree vulnerable to wind damage.

## Management techniques:

- Hand pull individual seedlings from the ground. Safety tip: Do not try to pull large vines down from trees. This can cause branches to break and fall, risking injury to people underneath.
- Prune the vines in autumn or spring to prevent seed production.
- Cut the stem in two places; high up and low to the ground.

# Japanese Knotweed

(*Fallopia japonica*)



## Japanese Knotweed...

is an herbaceous plant native to eastern Asia. Young shoots can grow 3 to 4 inches each day. It forms dense stands, with wide leaves that shade out other plants. This plant is highly difficult to eradicate once established.

## Management techniques:

- Hand pull juvenile knotweed.
- Uproot small stands of young knotweed using a shovel. Remove the entire root and runners.
- Cut the shoots close to the ground, prior to the flowering period in August and September. Cut regularly (three or more times) during the growing period. Bag and seal any plant parts to dispose of in a landfill.
- Mow large monotypic stands of knotweed.
- Never compost Japanese knotweed, as they can survive composting.

# Wineberry

(*Rubus phoenicolasius*)

## Wineberry...

is native to Japan, Korea, and China. The canes of this shrub can grow to 10 feet long. When the canes touch the soil, they take root and sprout a new plant. This forms dense thickets, out-competing native plants.

## Management techniques:

- Hand pull thin stands of seedlings.
- Mow large monotypic stands of wineberry.
- Uproot by hand or spade when the soil is moist. Take the canes and berries off-site.
- Cut down to the base of the shrub. Remove all plant parts from the site.



# Privet Privet

(*Ligustrum vulgare*)

## Privet...

is native to Europe and Asia. This shrub can grow 12 to 15 feet, forming dense thickets that out-compete native plants for space, light, and water.

## Management techniques:

- Hand pull small seedlings.
- Cut young or mature privet close to the ground. Cut prior to the seed production period in early summer. Monitor the site for re-growth and repeat cutting as needed.



# Garlic Mustard

(*Alliaria petiolata*)



## Garlic Mustard...

is native to Europe. The crushed leaves of this plant smell like garlic, giving it its name. Garlic mustard produces allelopathic chemicals that inhibit seed germination of nearby plants. This plant also threatens native butterflies who lay eggs on mustard plants. The larvae cannot survive on this plant due to its leaf chemistry.

## Management techniques:

- Hand pull young or mature plants when soil is moist. Once plants begin to flower, bag the plant and dispose of it.
- Cut large stands at ground level in the spring. Once plants begin to flower, bag the plant and dispose of it.
- Mow large monotypic stands of garlic mustard.

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# Invasive Species

## Norman Bird Sanctuary

Partnered With Salve Regina- Conservation Biology Lead by Dr. Jameson Chase

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