

# Jamestown's Invasive Plants: The Threat they Pose!

Enormous areas of Conanicut Island are rapidly being ravaged by invasive plant species; on private lands as well as in our parks and along our roads and shoreline. These non-native invasive plants are displacing our treasured native plants and as a result, the quality and resilience of our island's habitats are seriously threatened. As a community, we need to heighten our awareness of the invasive species of most immediate concern, learn to identify them, and take community action to remove them and to reverse this dangerous trend.

The Jamestown Invasive Plant Public Awareness Campaign (JIPPAC) is a committee operating within the Taylor Point Restoration Association (TPRA), and working in cooperation with other Jamestown organizations including Sustainable Jamestown. This committee has formed to help community organizations and residents learn about these invasive plants, to raise awareness of the abundance of invasive plant infestations consuming our Island's fields, woods, shorelines and lands, and to promote the implementation of effective control measures.

## What are we trying to protect?



Native Virginia Rose on Conanicut Island

Jamestown's native plants such as Virginia Rose, Jack-in-the-Pulpit, High Bush Blueberry, Black Cherry, Common Winterberry, Shadbush, Smooth Arrowwood, Common Evening Primrose, Bayberry, Sweet Pepperbush and so many others have established a natural ecological balance with Jamestown's native insects, birds, mammals and other native plants. This balance has been achieved through eons of parallel evolution of the plants and insects and birds and animals that have existed locally through time and in close proximity. These local species have adapted to their native environmental conditions and also have adapted to each other such that they have grown dependent on each other for survival. This interdependence helps to maintain an overall balance of nature. These are the species and environmental relationships that we seek to protect.

# Invasive Plant Species of Most Immediate Concern

This booklet introduces fourteen of Jamestown's invasive plants that are considered to be of most immediate environmental concern. These plants include:

Japanese Knotweed (*Fallopia japonica*), a herbaceous perennial;  
Black Swallowwort (*Cynanchum louiseae*), a perennial twining vine;  
Porcelain-Berry (*Ampelopsis brevipeduncula*), a woody vine;  
Garlic Mustard (*Alliaria petiolata*), a biennial herb;  
Japanese Angelica Tree (*Aralia elata*), a tree or shrub;  
Common Reed (*Phragmites australis*), a perennial grass;  
Asian Bittersweet (*Celastrus orbiculatus*), a woody vine;  
Multiflora Rose (*Rosa multiflora*), a shrub that may climb into trees like a vine;  
Common Privet (*Ligustrum vulgare*), a shrub;  
Norway Maple (*Acer platanoides*), a tree;  
Autumn Olive (*Elaeagnus umbellata*), a shrub;  
Morrow's Honeysuckle (*Lonicera morrowii*), a shrub; and  
Japanese Honeysuckle (*Lonicera japonica*), a woody vine.

Profiles of these invasive plants are presented in this booklet to help you identify them as you travel Conanicut Island. To clarify some of the plant descriptions we present the following definitions.

## Definitions

**Allelopathy** is the ability to suppress growth of a potential plant competitor by releasing toxic or inhibiting chemicals. Plants with this ability are said to be "alleopathic"

**Biennial:** Biennial plants live for two years. Perennials live three years or more.

**Perennial:** Perennial plants live three years or more.

**Bipinnate** refers to pinnate leaflets that are also divided into leaflets, typically feathery in appearance.

**Drupe** refers to a fleshy fruit with thin skin and a central stone containing the seed.

**Herbaceous** refers to a plant that does not have much wood and its stems are green and soft.

**Inflorescence** refers to a cluster of flowers arranged on a stem that has a main branch or an arrangement of branches

### Leaf Arrangement:

**Alternate** leaves are arrangements in which a single leaf is attached at a node.

**Opposite** refers to a pair of leaves attached at a node.

**Whorled** refers to arrangements in which three or more leaves are attached at a node.

**Compound:** refers to instances in which a leaf consists of several or many distinct parts (leaflets) joined to a single stem.

**Nodes** refer to those critical areas from which leaves, branches, and aerial roots grow out from the stem, while **internodes** are the intervals between the nodes.

**Panicle** refers to a loose branching cluster of flowers.

**Pinnate** describes a compound leaf with leaflets arranged on either side of the stem, typically in pairs opposite each other.

**Rhizomes** are continuously growing horizontal underground stems that put out roots and shoots.

**Rosette** refers to a circular arrangement of leaves or leaflike structures, usually sitting atop the soil.

**Samara** refers to a type of winged dry fruit consisting of one seed surrounded by papery tissue that helps carry the seed away from the tree as the wind blows.

# Japanese Knotweed (*Fallopia japonica*)

Invasive, Non-Native, Herbaceous Perennial Plant  
Grows 3 to 10 feet in height

**Introduction:** Japanese Knotweed was introduced to North America from Asia as an ornamental plant. It is one of the 100 most invasive species in the world, according to the Global Invasive Species Programme.

**Description:** The semi-woody stem is smooth, stout, and swollen at joints where the leaf meets the stem. Its stems are jointed and hollow resembling the hollow stalks of bamboo. Its leaves are alternate and broadly oval to somewhat triangular and pointed at the tip, growing up to 6 inches long and 5 inches wide. Knotweed has numerous, small, creamy white flowers arranged near the end of the plant's arching stems. They bloom in August and September and then produce very small winged fruits. Its seeds are triangular, dark and glossy. Japanese Knotweed grows best in full sun but is shade tolerant. Japanese knotweed can tolerate high temperatures, high salinity, and drought.

**Propagation:** Knotweed can propagate vegetatively. It can regrow from even a tiny fragment of a root. It has a deep taproot and an extensive network of rhizomes that may extend laterally up to 65 feet and can grow 3 inches in diameter. It grows aggressively by these rhizomes and by sprouting from root and stem fragments. It also can reproduce by seed.

**Competitive Factors:** Japanese Knotweed forms monocultures that reduce plant species diversity by shading out native vegetation. It also alters nutrient cycling and suppresses growth of other plants by releasing toxic or inhibiting chemicals enhancing its ability to dominate native species. It is extremely fast-growing and can grow 9 - 12 feet in just ten weeks.

**Management issues:** Roadside maintenance equipment appears to disperse cut fragments of knotweed along roadways, contributing to the spread of knotweed. Dumping of landscape waste also is a source of new populations. Knotweed rhizomes and shoots can penetrate asphalt and create cracks in concrete.

**Some known infestations on Conanicut Island:** Knotweed occurs opposite Head's Beach, on Narragansett Avenue near Grinnell, at East Ferry along Conanicut Avenue, Along Carr Lane, at East and West Passage Estates, along West Wind Drive and elsewhere.





# Black Swallowwort (*Cynanchum louiseae*)

Invasive, Non-Native, Perennial Twining Vine  
Can grow eight feet in length in a season

**Introduction:** In the late 1800s, Black Swallowwort, an herbaceous perennial vine native to southwestern Europe, was intentionally brought to North America as an ornamental. Also known as black dog-strangling vine, it is a member of the milkweed family. Monarch butterflies that rely on milkweed to reproduce are known to mistake Black Swallowwort for milkweed and deposit their eggs on the plant. However the Black Swallowwort is toxic to the monarch caterpillars and so the butterfly larvae that emerge on it die.

**Description:** The leaves of Black Swallowwort are oval shaped with pointed tips and occur in pairs along the stem. Its small five-petaled star-shaped flowers are dark purple to almost black with white hairs, and are borne in clusters. The fruits are slender tapered pods. The plants have rhizomes (underground stems) that sprout new plants and grow in clumps of several stems, forming extensive patches. Black Swallowwort thrives in a wide range of settings and is shade tolerant.

**Propagation:** In late spring the Black Swallowwort's small star-shaped purple flowers bloom and in the summer its long green seed pods release flat brown seeds that float on the wind by virtue of the fine white hairs that cover them. A square meter stand of Black Swallowwort can produce 1000-2000 seeds per year. This plant also propagates via rhizomes located at the base of the stem that can sprout and grow into new vines.

**Competitive Factors:** Black Swallowwort forms associations with fungi in the soil. The fungi help in the plant roots' uptake of soil nutrients. These associations are closer and more efficient than they are in native species, giving Black Swallowwort a competitive advantage. Large infestations of Black Swallowwort may have four times as many of these fungi spores, magnifying their advantage over native plants. It also twines around and strangles nearby native plants

**Management issues:** Since the vine has an extensive rhizome system, roadside maintenance activity or home landscape efforts that disturb Black Swallowwort have the potential to encourage new shoot growth if the plant is cut. Once the main stem is damaged, buds on the root crown will activate to produce new shoots. Also when the plant's seed pods are disturbed by workers or homeowners, seeds can inadvertently be spread to new areas.

**Some known infestations on Conanicut Island:** Black Swallowwort infestations occur in the gardens at the library; along lower Walcott Avenue and Racquet Road; at Taylor Point; along Rosemary Lane and among hedges, roadsides and among shrubs throughout the Island's public and private lands.



# Porcelain-Berry (*Ampelopsis glandulosa*)

Invasive, Non-Native, Woody Vine  
Can grow 20 feet high

**Introduction:** In the 1870s this perennial vine was brought to the United States from East Asia as an ornamental ground cover. A member of the grape family, its clusters of iridescent berries form in autumn, growing in a dazzling array of sparkling blues and purples. Although it is well known to be highly invasive, because of its unusual and colorful fruits, Porcelain-Berry is still widely cultivated and sold for landscaping uses.

**Description:** Porcelain-Berry grows quickly, forming dense mats that cover native vegetation. It also climbs into trees and can shade out young shrubs and seedlings. The leaves of Porcelain-Berry look very much like grape leaves. They are bright green and slightly hairy on the underside. They are often deeply lobed with three to five lobes per leaf. Young twigs are also hairy to the touch. Porcelain-Berry can be distinguished from grapes because the pith of the Porcelain-Berry vine is white, whereas that of Wild Grape is brown. Also Wild Grape bark peels or shreds, while Porcelain-Berry bark does not. Porcelain-Berry flowers in mid-summer producing inconspicuous greenish to white flowers growing in small clusters. Porcelain-Berry prefers moist, rich soils and full sunlight, although it can tolerate partial shade. It has a vigorous root system and can re-sprout.

**Propagation:** Porcelain-Berry spreads both by seed and vegetatively. Birds and other small animals eat the berries and disperse seeds in their droppings. The taproot is large and vigorous.

**Competitive Factors:** Porcelain-Berry is a highly competitive invader of open and wooded habitats. Once it gets rooted it overtakes everything around it as its long woody vines grow over the tops of native shrubs and young trees, forming a dense cover that blocks sunlight, shading and killing the plants below. It grows rapidly, and can grow as much as 15 feet in a single growing season.

**Management issues:** Efforts to pull out the vines by hand should be undertaken before fruiting to prevent the production and dispersal of seeds. If the plants are pulled while in fruit, all plant material should be bagged for disposal. A large, thick mat of Porcelain-Berry can often be traced back to a single root. Killing the taproot is key to effective management efforts.

**Some known infestations on Conanicut Island:** Huge infestations of Porcelain-Berry occur at Ft. Wetherill, along Racquet Road and East Shore Road, on Beavertail, opposite the lower Taylor Point parking area and in many other areas throughout Conanicut Island.





# Garlic Mustard (*Alliaria petiolata*)

Invasive, Non-Native, Herbaceous Plant  
Can grow eight feet in length in a season

**Introduction:** In the 1860s Garlic Mustard was introduced to North America by settlers from Europe who used it as a culinary and medicinal herb. A cool season biennial herb, Garlic Mustard grows a deep, thin, white taproot that smells like horseradish. Its stalked, coarsely toothed leaves smell like garlic when they are crushed. The young leaves can be used in salads and pestos. The leaves have reportedly been used to treat bronchitis, asthma and eczema and have been applied as an antiseptic poultice. Garlic Mustard favors moist, shaded areas of forests and grows alongside woods, roads, and trails. Disturbed areas are susceptible to invasion by Garlic Mustard.

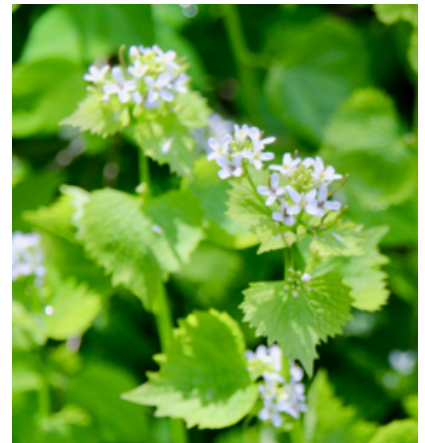
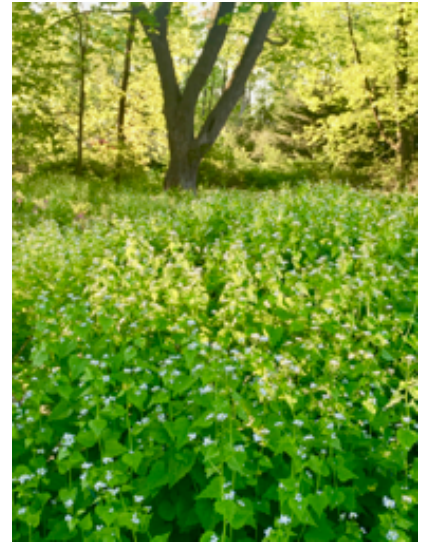
**Description:** In the first year, Garlic Mustard appears as a rosette of green leaves close to the ground. The rosettes remain green through the winter and develop into mature flowering plants the following spring. Flowering Garlic Mustard plants can grow from 2 to 3 1/2 feet high. They produce clusters of small white flowers, each with four petals. In May, Garlic Mustard produces seeds in erect slender pods. The seeds become black and shiny as they mature. By late June, when the Garlic Mustard plants have died back, they are still recognizable by the erect stalks of dry, pale brown seedpods that remain.

**Propagation:** A single Garlic Mustard plant can produce thousands of seeds, which can disperse many yards from the parent plant and which can lay dormant in the soil for years before sprouting. Its flowers may either self-fertilize or may be cross-pollinated by insects.

**Competitive Factors:** Garlic Mustard spreads rapidly and can outcompete native plants that complete their life cycles in the springtime. Garlic Mustard can dominate the understory, outcompeting native plants by monopolizing light, moisture, nutrients, soil and space. Wildlife species that depend on early native plants for their foliage, pollen, nectar, fruits, seeds and roots, are deprived of these food sources when Garlic Mustard replaces them. The caterpillars of some species of garden white butterfly feed on toothwort (*Dentaria*). The butterflies are known to mistake Garlic Mustard for toothwort and lay their eggs on it. When the larvae hatch, they cannot digest the Garlic Mustard and they die.

**Management issues:** Garlic Mustard seeds are small. They can be spread to new areas by movement of contaminated soil, by animals and by humans via equipment and clothing.

**Some known infestations on Conanicut Island:** Garlic Mustard occurs along Racquet Road, Blueberry Lane, Ledge Road, Green Lane, Walcott Avenue, at Conanicut Battery, at Taylor Point and many other places on public and private lands throughout Jamestown.



# Japanese Angelica-Tree (*Aralia elata*)

Not yet listed on Rhode Island's Invasive Plant List  
A Non-Native tree or shrub that can grow 40 feet tall

**Introduction:** Native to Japan, Korea, Manchuria and far eastern Russia, Japanese Angelica-Tree was first introduced to North America in 1830 as an ornamental species. Looking very much like its relative, the Devil's Walking Stick (*Aralia spinosa*), which is native to the Southeast and Mid-Atlantic, but not to New England, Japanese Angelica-Tree is often mistaken for it. Blooming from late summer to early fall, the plant's flowering structures are the characteristic that most distinguishes them, one from the other. Japanese Angelica Tree has a series of stems that radiate from a singular point. Devil's Walking Stick has a flower with a single central stalk, where the stems come off all the way along, up to the top. The shoots of Japanese Angelica-Tree are a popular element of Japanese and Korean cuisine.

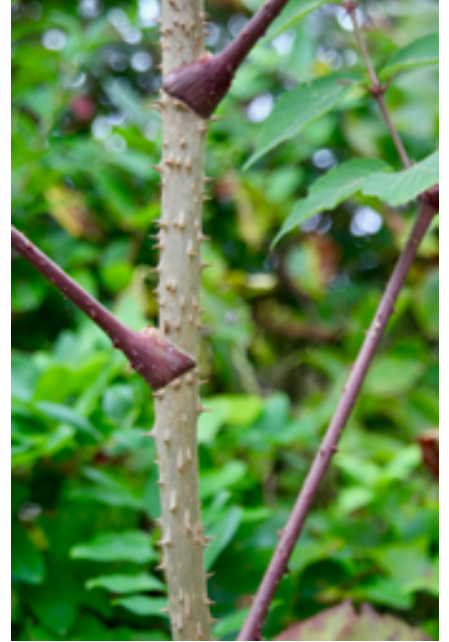
**Description:** This deciduous thicket-forming tree has a silvery trunk covered in sharp thorns. Its dark green compound bipinnate leaves look featherlike and grow two to four feet long. The tree produces a striking crown of white to pinkish flowers growing on a large multi-stem inflorescence. The inflorescence can be one to two feet long and may be wider than it is long. The fruits are small purple to black berries that ripen from September to October. The Japanese Angelica-Tree favors loamy soils and partial shade, but will also grow in poorer soils and in full sun. It often grows alongside disturbed grounds, edge habitats, along roadsides as well as in open areas, and urban landscapes.

**Propagation:** Japanese Angelica-Tree propagates aggressively from root sprouts, forming expansive and dense thickets. It also reseeds itself readily, spreading into new areas as birds disperse its berries.

**Competitive Factors:** Because Japanese Angelica-Tree grows rapidly as a dense, matted thicket over the top of slower-growing native plants, it creates a canopy of shade so dense that it quickly deprives the other plants of sunlight. It also puts out a fast-growing network of roots throughout the soil. The roots aggressively absorb available moisture and nutrients, making them unavailable to the original community of native plants. The result is enormous monoculture of impenetrable thickets. A single plant can add up to two feet of growth per year.

**Management issues:** Because of this plant's aggressive root sprouting and seed production, road crew or property management activities that leave root cuttings or seeds behind, or carry them to new areas, have the potential to extend existing infestations and introduce new ones.

**Some known infestations on Conanicut Island:** This invasive occurs along the Helm Street exit, at Watson Farm, along East Shore Road, along North Road across from the reservoir, along West Wind Drive, at Conanicut Battery, along Ft. Wetherill Road, and elsewhere on the Island.





# Common Reed (*Phragmites australis*)

Invasive, Non-Native, Grass  
Can grow as high as 12 – 15 feet

**Introduction:** The Common Reed, *Phragmites australis*, was introduced to the United States in the late 19th century when ships from Eurasia unintentionally carried its seeds in their ballast.

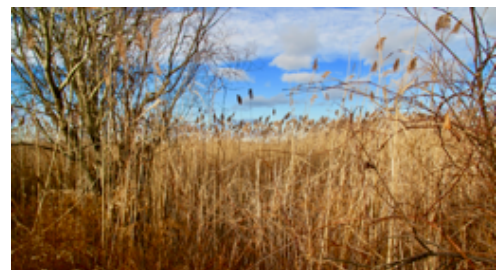
**Description:** *Phragmites australis* is a stout, warm-season, perennial grass that can grow as high as 15 feet, often extending in vast, dense, expansive "reed beds". The stems of *Phragmites* are smooth, upright, rigid, and hollow. Its leaves are gray-green, contrasting with long white hairs that grow from the leaf-sheath junction. The inflorescence is light brown to purple and can reach from 7 inches to 15 inches long. The seeds of the Common Reed are brown, lightweight, and about a third of an inch long. In the fall the plant turns brown. The inflorescence persists throughout the winter. *Phragmites australis* can grow in a wide variety of habitats but is most often found in wet and in marshy areas. It grows in vast colonies along coastal beaches or dunes, along the banks and shores of lakes, streams, rivers and ponds, in ditches, in open disturbed areas, in salt marshes and wet meadows. This plant grows best in fresh water, but can be found in brackish, acid or alkaline wetlands. It also forms dense, thick walls of vegetation at the interface of upland and wetland habitats.

**Propagation:** Common Reed spreads easily and extensively by seed. Mature plants can produce as many as 2,000 seeds a year. It spreads most effectively by means of its extensive and aggressive system of horizontal and vertical rhizomes. Its rhizomes may exceed 60 feet in length and they can grow ten or more feet per year.

**Competitive Factors:** *Phragmites australis* is tolerant of many common urban pollutants, giving it an advantage over native species that are less tolerant of polluting substances and conditions. The tall thick expansive monocultures Common Reed forms prevent light from reaching other plants, killing them off, thus lowering species diversity and degrading fish and wildlife habitat. The reed beds can spread at 16 feet or more per year by horizontal runners.

**Management issues:** Small or broken portions of rhizomes left in the soil can lead to the establishment of new plants.

**Some known infestations on Conanicut Island:** Many areas of Jamestown have enormous infestations of *Phragmites australis* including Fort Getty and Fox Hill Marsh, along Sheffield Cove, at Head's Beach, at Potter Cove Beach and many other areas throughout the Island.





# Asian Bittersweet (*Celastrus orbiculatus*)

Invasive, Non-Native, Woody Vine  
Can grow to 100 feet

**Introduction:** Native to China, Japan and Korea, Asian Bittersweet was brought to the United States around 1860 as an ornamental plant. The colorful fruiting stems of this vine are often cut in the autumn and used for decoration, which unfortunately facilitates the establishment of new infestations.

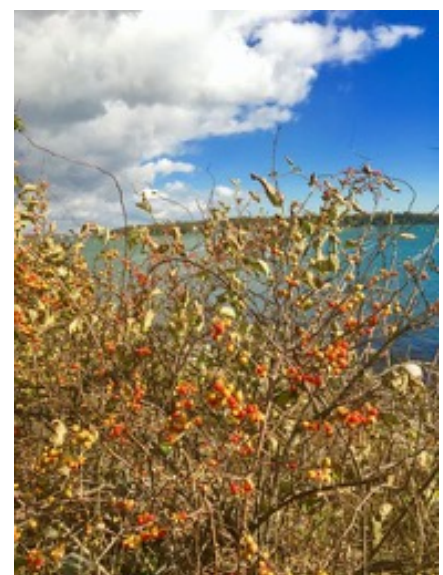
**Description:** Asian Bittersweet is a woody, perennial, twining vine with thin, spindly, silver to reddish brown bark. It twines around and climbs trunks of trees or shrubs and can grow to 100 feet. The leaves are alternate, toothed, and teardrop-shaped to round with a pointed tip. The flowers are small and greenish yellow, with male and female flowers on separate plants. Asian Bittersweet blooms in early summer and bears fruit in the fall. The fruit is greenish to yellow and grows in clusters of 3-7 along the stem. In fall the fruit splits open to reveal a bright red inner fruit. Asian Bittersweet has distinctive bright orange roots.

**Propagation:** Asian Bittersweet reproduces by its seeds being dispersed by birds. Additionally stems can form off of the extensive root structure and small root fragments can regenerate.

**Competitive Factors:** Asian Bittersweet has high seed production, good seed viability, long range seed dispersal, and a rapid growth rate. It climbs up trees, shrubs, or any other above ground structure to grow upward into sunny exposures. The vine wraps around tree trunks as it grows and can eventually constrict the host plant's vascular system, inhibiting carbohydrate flow from the leaves to the roots and water and nutrient flow from the roots to the leaves. Thus the vines simply strangle the host tree to death or weigh it down so much from the excess weight that the host tree's branches break. Asian Bittersweet will over-top native plants and can even shade and wipe out entire plant communities. In the absence of a host tree or other structure to climb upon, it can use its own twining stems to grow toward the light, creating impenetrable thickets in open fields.

**Management issues:** Asian Bittersweet produces new stems from root sprouts and root fragments. Disturbing it when it is fruiting can spread its seeds, promoting the development of new infestations.

**Some known infestations on Conanicut Island:** Asian Bittersweet occurs at Taylor Point, at Fort Getty, at Beavertail, at Fort Wetherill and in many other areas throughout the Island.



# Multiflora Rose (*Rosa multiflora*)

Invasive, Non-Native, Shrub

Multiflora Rose can grow 10-15 feet high and 9-13 feet wide.

**Introduction:** Multiflora Rose, native to eastern China, Japan, and Korea, was introduced to North America from Japan in 1866 for use as rootstock for ornamental roses. In the 1930s, the U. S. Soil Conservation Service used it extensively for erosion control and to create natural hedge barriers to confine livestock. Once it was recognized as effective habitat and cover protection for pheasant, northern bobwhite, and cottontail rabbit and food for songbirds and deer, its spread was promoted further. More recently Multiflora Rose has been planted in highway median strips to provide crash barriers and reduce headlight glare from oncoming traffic. The impenetrable thickets it forms crowd out native species.

**Description:** Multiflora Rose is a vigorous perennial shrub. Its canes (stems) are reddish to green and often have curved thorns. Its compound leaves have oval, saw-tooth smooth leaflets. In early summer, clusters of showy, fragrant, white to pink flowers that are 1/2 inch to one inch in diameter, give way, as the summer progresses, to small bright red fruits, or rose hips. The rose hips remain on the plant through the winter. Multiflora Rose can be mistaken for the native species, Virginia Rose, Pasture Rose and Swamp Rose, all of which grow on Conanicut Island.

**Propagation:** Multiflora Rose has both male and female reproductive parts on the same flower on the same plant. As a result a single plant can produce a colony of reproducing plants. One plant may produce as many as a million seeds per year and these seeds may stay viable in the soil bank for 10 to 20 years. The seeds are dispersed by birds and animals. Multiflora Rose also reproduces vegetatively, sprouting when stems are cut or broken, thus yielding more reproductive stems giving way to more flowers, fruit, and seed than the original uncut or unbroken stems. Canes held to the ground for a long time also can sprout roots and form a new plant; a process known as "layering".

**Competitive Factors:** Multiflora Rose is aggressive and will colonize roadsides, open fields, open woodlands, and the edges of forests. Its heavy seed production, strong seed viability and abundance of seed vectors, coupled with the fact that it also can reproduce vegetatively, all work to give it competitive advantages over native plant species.

**Management issues:** Cutting canes and leaving fragments on the ground has the potential to introduce new plants vegetatively. Disturbing fruiting plants can also spread seeds that may grow.

**Some known infestations on Conanicut Island:** Multiflora Rose occurs in Conanicut Battery, at Beavertail, in Shoreby Hill Green and many other areas throughout the Island.





# European privet (*Ligustrum vulgare*)

Invasive, Non-Native, Shrub

Typically grows about 9 feet tall but can grow to 20 feet.

**Introduction:** A fast-growing, semi-evergreen or deciduous perennial shrub, European Privet was brought to North America as an ornamental in the 1700s for use as a hedge plant or for foliage in gardens. A member of the olive family, it is native to Europe, northern Africa and southwestern Asia. It grows in bottomlands, forests, old fields, closed canopy forests, along roadsides, fence rows, and areas with disturbed soil.

**Description:** The European Privet is a large irregularly shaped multi-stemmed shrub or tree. Its trunks are smooth and gray-brown generally occurring with many long, leafy branches. Its dark green leaves grow in an opposite leaf arrangement and have smooth leaf margins. They are oval to lanceolate and grow to about 2.5 inches long. Clusters of fragrant white flowers bloom at the stem tips in summer attracting butterflies. Many people find the fragrance of these flowers to be distinctly unpleasant. The flowers give way to small globe-shaped glossy blue/black berries that grow in drooping clusters and persist through winter. Each berry contains one to four seeds. The berries are poisonous to humans.

**Propagation:** European Privet propagates by seeds dispersed by birds and wildlife. It produces large numbers of viable seeds that germinate at high rates in a broad range of environmental conditions. Plants can produce hundreds of fruits per plant per year. European Privet also can grow from root and stump sprouts.

**Competitive Factors:** While European Privet favors full sun, it is readily adaptive to a wide range of light and soil conditions. It grows rapidly, and quickly forms dense thickets that shade out and displace other plants.

**Management issues:** Disturbing or cutting European Privet when it is fruiting has the potential to spread its seed. Because it also propagates vegetatively, roots, stumps and cuttings left behind have the potential to grow into new plants.

**Some known infestations on Conanicut Island:**

Groves of Privet can be found in woodlands on private and public lands throughout Jamestown, where in many areas it dominates the understory.



# Norway Maple (*Acer platanoides*)

Invasive, Non-Native, Tree

Norway Maples commonly grow 40-60 feet high, and can reach heights of 100 feet.

**Introduction:** A large deciduous tree, Norway Maple is native to eastern and central Europe, southern Scandinavia, and western Asia. Brought over as an ornamental shade tree, the Norway Maple was introduced to northeastern North America between 1750 and 1760. It is known to be tolerant of compacted soils, many air and water pollutants and to urban conditions in general. During the mid-twentieth century Norway Maple became popular as a street tree to replace American Elms which were in rapid decline owing to Dutch elm disease.

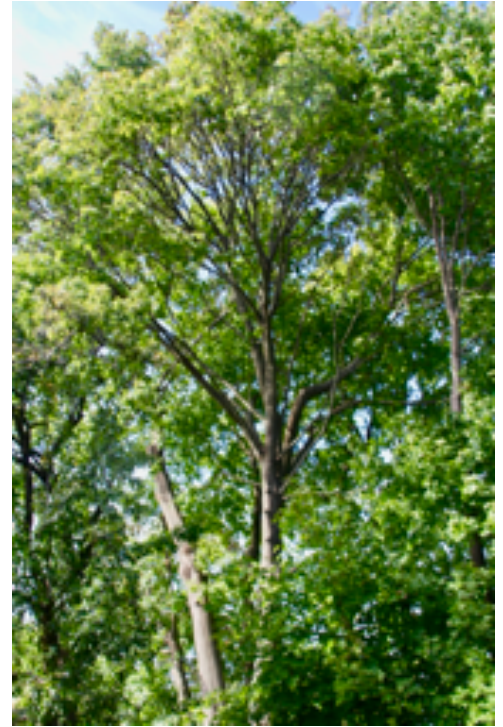
**Description:** The Norway Maple has gray bark that is regularly and shallowly grooved. Its leaves are usually green in summer and yellow in the fall. The flowers appear in April and May and are yellow-green. The fruits are samaras and are green when young and turn yellow, then brown as they age. Norway Maples are often found in forests, wetlands, open disturbed areas, along roadsides and in vacant lots. The leaf stalks of the Norway Maple exude milky white sap, as opposed to the clear sap of the native Sugar and Red Maples. Norway Maples are shade tolerant and occur in a variety of soil and moisture conditions but they prefer fertile, moist, well-drained soils.

**Propagation:** The Norway Maple reproduces by the wind-dispersal of seeds that are contained in its winged samaras. It produces heavy seed crops every 1-3 years.

**Competitive Factors:** The roots of Norway maples grow very close to the ground surface, depriving other plants of moisture. It also shades out native understory vegetation such as spring ephemerals, as well as native tree species. It can regenerate prolifically under its own canopy, shading and crowding out other plant species, thus reducing overall plant diversity. Norway Maples spread rapidly due to their heavy seed production and their high germination rate. The Norway Maples are thought to release allelopathic chemicals from their shallow root system, further creating unfavorable conditions for other more desirable species.

**Management issues:** New growth will develop from cut stumps.

**Some known infestations on Conanicut Island:** Norway Maples can be found at Conanicut Battery and in public and residential areas throughout Jamestown, growing in yards, empty lots, along borders and within hedges; growing right up through them.





# Autumn Olive (*Elaeagnus umbellata*)

Invasive, Non-Native, Shrub  
Can grow as tall as 25 feet

**Introduction:** Native to China, Japan and Korea Autumn Olive was first brought to North America in 1830 as an ornamental. It was later used to provide vegetative windbreaks and to restore deforested lands. In the mid-twentieth century it was widely used in efforts to enhance wildlife habitat and to control erosion.

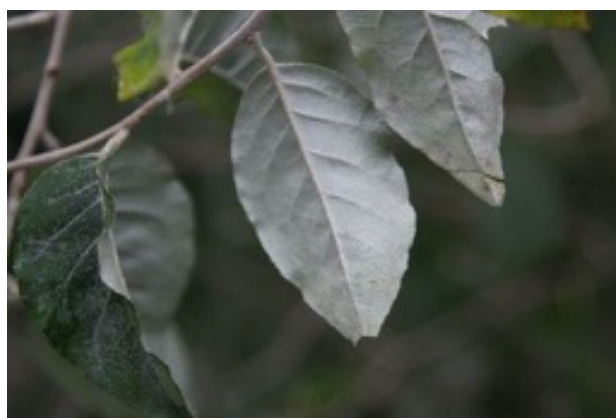
**Description:** Autumn Olive is a hardy, rapidly growing deciduous shrub or tree with a dense crown. Its simple leaves are alternate, silvery green on the undersides, and oval with a finely pointed tip. They grow 1-3 inches long and have a dark-green upper surface. Its bark is brown or gray-brown, with sharp thorns that can grow several inches long. Its fragrant pale yellowish white flowers have 4 petals and stamens. They grow in the leaf axils in clusters. In the fall Autumn Olive produces pulpy, juicy, sweet red fruits about 1/3 inch in diameter. The berries can be eaten raw or cooked and can be made into jams. An individual plant can produce as many as 10,000 berries in a season and the fruits can weigh branches to the ground. It grows in open to semi-shaded habitats including fields, woodlands, along roadsides, and in open disturbed sites. It does not favor wet soils or shade but it moderately shade tolerant.

**Propagation:** Autumn Olive produces an abundance of fruits that are dispersed by birds and mammals. It can re-sprout from a stump or root fragment.

**Competitive Factors:** Autumn Olive leafs out early and retains its leaves late in fall. It grows rapidly and will grow in dense stands that shade out and crowd out native species. It produces an abundance of seeds that are widely dispersed. It can fix nitrogen in the soil owing to a symbiotic relationship between the autumn olive roots and fungi, thus changing the soil chemistry, making site conditions unfavorable for many native plants. It is also drought resistant and does well in a wide range of soil types.

**Management issues:** Autumn Olive can re-sprout readily after being burned or cut.

**Some known infestations on Conanicut Island:** Autumn Olive can be found at Beavertail and at Fort Getty, and in private and public lands throughout Jamestown.



# Morrow's Honeysuckle (*Lonicera morrowii*)

Invasive, Non-Native, Shrub  
Can grow 8 to 10 feet high

**Introduction:** Native to eastern Asia, Morrow's Honeysuckle was brought to North America in the late 1800s as an ornamental. It has been planted widely for wildlife food and cover and for erosion control. The berries, a food source for birds, are poisonous to humans. The fruits, though abundant and carbohydrate-rich do not offer the same high-fat, nutrient-rich sustenance to migrating birds that native plant species provide.



**Description:** Morrow's Honeysuckle is a woody, perennial shrub, with hollow stems. Its flowers, which bloom in early spring, are paired and usually white, fading to yellow through the season. Its fruits are red berries; also borne in pairs. The berries appear in mid-summer and are usually gone in the fall. Its gray-green leaves are simple, opposite, and oblong. It leafs out early and has a long growing season. Morrow's Honeysuckle is commonly found in a variety of habitats, including abandoned fields, open disturbed areas, pasturelands, along roadsides and utility rights-of-way, and vacant lots. It thrives in mesic soils, but also grows well in dry, sandy soils in calcareous areas. Morrow's Honeysuckle is only moderately shade tolerant.



**Propagation:** Reproduction is primarily by seed. The seeds of Morrow's Honeysuckle are mainly dispersed by the birds and mammals that eat the fruits.

**Competitive Factors:** Due to the fact that it leafs out early, Morrow's Honeysuckle is particularly harmful to spring ephemerals, flowers that evolved to bloom briefly in the spring before other plants leaf out. It can form dense impenetrable thickets that prevent other native plants from growing. It crowds and shades out native plant species, alters habitats by decreasing light availability, and depletes soil moisture and nutrients.

**Management issues:** If mature plants are cut, they will likely re-sprout. Its root system is shallow and woody. Any portions of the root system not completely removed will potentially re-sprout.

**Some known infestations on Conanicut Island:** Morrow's honeysuckle occurs at Taylor Point, especially in the area just west of the treatment plant. It grows throughout Conanicut Island.





# Japanese Honeysuckle (*Lonicera japonica*)

Invasive, Non-Native, Woody Vine

Can climb or grow along the ground to lengths of 80 feet or more

**Introduction:** Native to Japan and eastern Asia, Japanese Honeysuckle was introduced to North America in the 1800s as an ornamental and for erosion control. It has also been planted in efforts to enhance wildlife habitat. The leaves of Japanese Honeysuckle are a source of winter forage for white-tailed deer.

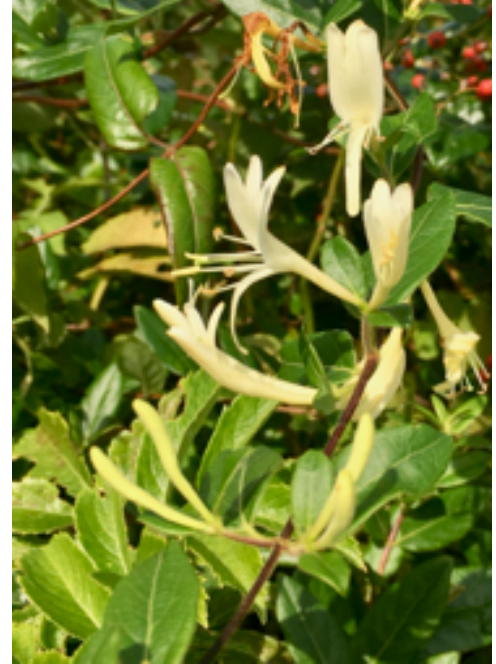
**Description:** Japanese Honeysuckle is a twining woody perennial vine that climbs by twisting its stems around vertical structures, including limbs and trunks of shrubs and trees. The vines can climb 80 feet high or more and will form a thick covering over trees, shrubs and ground cover species. The leaves are simple, opposite, and oval. Leaves are semi-evergreen to evergreen. The plant's stems are hairy, reddish/light brown, woody, and hollow. It's fragrant flowers bloom all summer long and into the fall. The tubular flowers are white-cream-pink and fade to yellow. They are paired and grow along the stem. The flowers produce glossy black to purple fruits, also paired, which produce brown-black seeds. Its extensive root system may be as deep as three feet and may extend more than 10 feet across. Japanese Honeysuckle can be found growing along roadsides, fences, fields, and woods. It tolerates a broad range of soil and light conditions.

**Propagation:** Birds and other wildlife that consume its fruits disperse the Japanese Honeysuckle seeds. The plant's long vegetative stems that grow above-ground can root at the nodes and develop into new plants helping to spread the plant locally. The plant also propagates underground by rhizomes.

**Competitive Factors:** Japanese Honeysuckle grows very rapidly and will grow on and over top of small trees and shrubs, causing them to collapse. It can grow so densely that it will shade out plants in the understory and will twine around and choke others. Japanese Honeysuckle also can develop a large seed bank. Its habitat adaptability, wide seed dispersal, rapid growth rate, and extended growing season, confer on it a strong competitive advantage over many native species.

**Management issues:** Since Japanese Honeysuckle grows easily from the seeds in its berries, human activities that cause the seed to fall are likely to spread an infestation. Because it also propagates easily from its rhizomes, activities that leave root or rhizome fragments behind are also likely to spread an infestation.

**Some known infestations on Conanicut Island:** Japanese Honeysuckle occurs at Taylor Point, Beavertail and throughout the Island.



**Non-native invasive plants** are not held in check by the natural local ecological relationships that afford balance and resilience to our Island ecosystem.

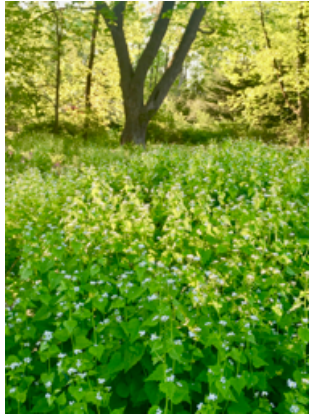
Therefore they out-compete our native plants, throwing the overall system out of balance.

They propagate aggressively and are often very fast-growing.

They establish areas as expansive monocultures; infestations that are very difficult to eradicate.



Bittersweet ravaging  
Ft. Wetherill trees



Green Lane Garlic  
Mustard infestation



Ft. Wetherill Porcelain-Berry infestation

This booklet, published by the Taylor Point Restoration Association, is intended to promote community-wide awareness of the problems posed by invasive plants and to help residents identify the specific invasive plant species that pose the greatest threat to the Island's ecology. The Jamestown Invasive Plant Public Awareness Campaign further hopes to help local residents and business owners learn about and implement effective management strategies, and work to reduce and potentially eradicate menacing invasive plants Island-wide. For background information concerning management strategies and their potential application to various circumstances, visit <http://taylorpoint.org/management/>.

As more and more members of our community learn to recognize Jamestown's invasive plants and note how non-native trees, vines, and shrubs grow in dense thickets or carpet huge expanses of land, we will gain a better collective understanding of the manner in which they dominate huge areas of our island and strangle and outcompete native plant species. These infestations threaten the potential long-term (and in some cases short-term) viability of our native birds, butterflies, other pollinators, and wildlife. These infestations reduce biodiversity and further undermine the survivability of desirable native plant, animal, bird and insect species, and hinder soil and land conservation.

**Resources:** A list of useful resources with an abundance of related information can be found on the TPRA website at <http://taylorpoint.org/web-resources/>. For information on JIPPAC go to <http://taylorpoint.org/invasive-awareness-campaign/>. Other useful resources include:

[www.sustainablejamestown.com](http://www.sustainablejamestown.com),

<https://web.uri.edu/mastergardener/>,

<https://gobotany.nativeplanttrust.org>,

<https://web.uri.edu/coopext/ipmcp/>,

Invasive Plant Atlas of New England, at <https://www.eddmaps.org/ipane/ma%20page/MA.html>.

For the full list of RI Invasive Plant Species, go to:

[http://rinhs.org/wp-content/uploads/2011/10/Rhode-Island-Invasive-Species\\_2013\\_b.pdf](http://rinhs.org/wp-content/uploads/2011/10/Rhode-Island-Invasive-Species_2013_b.pdf)