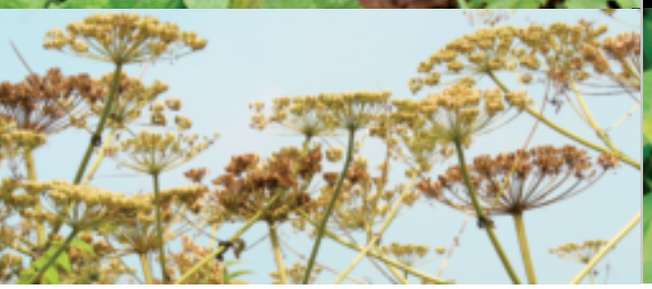

Giant hogweed: Tall (up to 15-20 feet), herbaceous biennial plant with large, hollow, purple-blotched, hairy stems and very large (up to several feet in width), deeply lobed, sharply pointed leaves. Lower stalks are ribbed. Umbrella-like white flowers in late spring may be up to 2+ feet in diameter. May grow in dense stands. **DANGEROUS.** Do not touch or attempt removal; causes skin sensitivity to UV radiation leading to severe burns and scars. (Notify Cornell Cooperative Extension at 585-473-5335.) **NATIVE ALTERNATIVES:**

Joe Pye weed	Elderberry	Pagoda Dogwood
Eupatorium dubium	*Sambucus canadensis*	Cornus alternifolia

Black swallowwort: Perennial vine, often well over 6 feet in length, twines and sprawls over other vegetation. Dies back to the ground each year. Oblong leaves are dark green, shiny with smooth edges, about 4 inches long; leaf tip is pointed and base of leaf is rounded. Spring flowers are small, purple-black. Seed pods, 3-5 inches long, appear late spring. Pods split open in fall to reveal silky-haired, windborne seeds. May reduce Monarch butterfly population as it offers no nourishment to deposited larvae. **NATIVE ALTERNATIVES:**

Butterflyweed	Pipevine	Swamp milkweed
Asclepias tuberosa	*Aristolochia macrophylla*	*Asclepias incarnata*

Tree of heaven: Rapidly growing, deciduous tree, can reach 80 feet in height. Resembles sumac. Eleven to 25 leaflets, 2 - 6 inches long each, alternate along a long stem. Flowers in late spring have an offensive odor similar to rotting nuts or popcorn. Female trees produce thousands of fruits, 1-2 inches long, each with one seed in the center, hanging in clusters. Produces chemicals that prevents growth of other plants. **WARNING**: Pollen may be an allergen and contact with the plant can cause dermatitis. **NATIVE ALTERNATIVES:**

Black walnut	Hackberry	Sycamore
Juglans nigra	*Celtis occidentalis*	*Platinus occidentalis*

Japanese barberry: Dense, deciduous woody shrub with narrow, wedge-shaped leaves 1 - 2 inches long, reddish in fall; leaves have smooth edges. May reach 9 feet in height. Differs from non-invasive barberry in that a single, sharp spine grows off the stem beneath each leaf cluster. Pale yellow flowers in spring; in mid-summer oblong red berries, 1/3 inch long, mature. Fruits persist through winter. Forms dense stands in woodlands, forests and meadows.

NATIVE ALTERNATIVES:

Winterberry	Sweet pepperbush	Spicebush
Ilex verticillata	*Clethra alnifolia*	*Lindera benzoin*

Garden Villains

Monroe County area invasive plant & tree species

Why invasive plants?

Non-native plants have been introduced everywhere for erosion control, as fences, for medicinal uses, to recreate a homeland environment, and for their exotic beauty. Many also arrived by accident. Lacking the natural controls that checked their growth in their native landscape, these non-native plants are able to grow in a variety of conditions, spread quickly, to displace native plants, and alter ecosystems. We need to take action to preserve a diverse ecosystem. We can start in our own back yards.

General Management

Control of invasive plants and trees is usually a long-term effort requiring multiple measures, such as cutting, mowing, digging, pulling and treating with herbicides, over a series of growing seasons. Never attempt to use a chemical treatment without contacting your Cooperative Extension for the latest updates.

When controlling invasive plants in your yard and your community--

- Be careful to **remove only invasive** plants, not native plants.
- Young plants are easily pulled. Pull or **dig before seeds set** (seeds may remain viable for several years), removing all of roots and crown to prevent re-sprouting.
- Some plants can re-grow from any cut piece. Manual control must **eradicate all runners** and roots.
- **Use heat** in the form of hot water or propane gas on small infestations.
- Cut, mow or burn at least annually, prior to seed formation, to control small infestations, unless the area has nesting birds. **Get advice**: large scale mowing can remove native plants and create a situation in which invasive plants can move in and thrive.
- For small infestations, cover cut or mowed stems with impermeable material, such as **black plastic**, during growing season.
- Do **not cut in winter** --encourages regrowth.
- Large, established infestations require cutting as well as herbicide application. Chemical control or burning of an established infestation should be done only with **guidance of the Cooperative Extension**; special permits or regulations may apply.
- While a plant may seem to be completely removed, it may continue to appear for years depending upon the number of **viable seeds** left in the soil. Check for new growth.

Threats

Invasive plants threaten because they can...

- **Alter ecosystems**; interfere with natural plant succession, nutrient cycle.
- Modify water tables, **reduce water flow**.
- Thrive in any conditions; may **outcompete and displace** native, beneficial or rare plant species.
- **Degrade natural habitat**, possibly causing extinctions.
- Spread quickly and persist, to create a monoculture; threaten **diversity**.
- Offer **little value** in food or shelter to wildlife.
- Create **dense shade**, starving the supply of light for other plants.
- Strangle other plants, even **uproot** them.
- Damage human enterprise, inflicting enormous **economic costs**.

What you can do

- **Plant native** species. Request a list of native species from Cooperative Extension.
- **Prevention** is the most effective control. Do not plant them. Ask nurseries and seed companies not to stock them.
- Do not deposit removed invasive plants in mulch or in rubbish; bag and **send to landfill**.
- Prevent invasive plant spread; if you must clear any garden areas, cover with **mulch** or plant **groundcovers**. Know the source of mulch used to ensure that no invasive plant seeds are present.
- **Question large scale clearing** of nearby land; many invasives thrive in disturbed soil.
- Urge your planning or conservation board to **ban** planting of invasive species.
- If you see invasive plants in a natural area, **notify** those responsible.
- Before leaving a natural area, **brush off** any seeds or plant material from clothing and shoes.

Japanese barberry twig and flower

The 12 most important invasive non-native plant species currently affecting Monroe County and surrounding counties are described here. This is not a comprehensive list; new, potentially problematic species are regularly introduced. Use this quick reference for recognition, recommendations for control, and suitable alternative garden plants. For more information see *www.invasive.org*.

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Front cover: Black swallowwort at seed stage
Back cover: Black swallowwort in flower

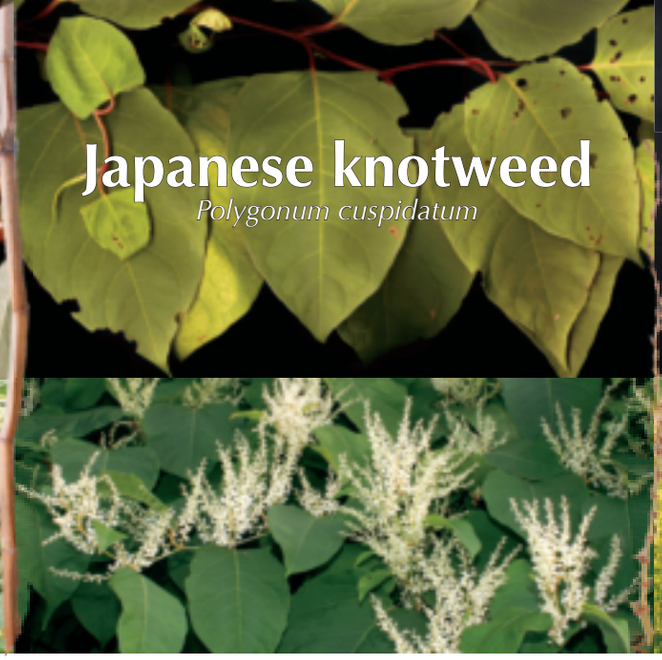
Autumn olive

Eleagnus umbellata

Autumn olive: Deciduous perennial shrub, up to 20 feet in height. Oblong, 1-3 inch long, alternately arranged leaves are gray-green on top with silvery scales on back; leaf margins are smooth and wavy. Branches are thorny, also have scales. Clusters of 5-10 bell-shaped, light yellow and fragrant flowers appear in late spring. Round, juicy, red fruit, dotted with metallic scales, appears in fall. Spreads rapidly, creating dense shade, threatening other plants.

NATIVE ALTERNATIVES:

Black haw	Gray dogwood	Northern bayberry
Viburnum prunifolium	*Cornus racemosa*	*Myrica pensylvanica*



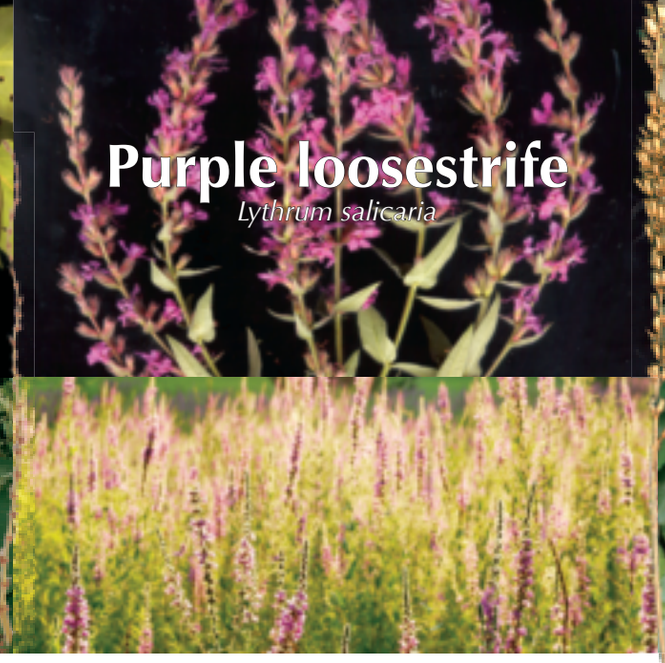
Japanese knotweed

Polygonum cuspidatum

Japanese knotweed: Upright, shrubby, herbaceous perennial, up to 15 feet high. Broad, pointed oval leaves are about 6 inches long and 3 inches wide. Green or reddish bamboo-like stem (shown, above left). Spikes of small white flowers appear in late summer. Extremely aggressive, often found near riverbanks, ditches and railroad right-of-ways. May cause flooding by decreasing water flow in streams. Very small piece of root can give rise to a plant.

NATIVE ALTERNATIVES:

Fragrant or shining sumac	Silky dogwood	Virginia sweetspire
Rhus aromatica or copallina	*Cornus amomum*	*Itea virginica*



Purple loosestrife

Lythrum salicaria

Purple loosestrife: Erect, perennial herb, up to 6 feet tall with leaves at base and long flower-tops.From late June to September tall spikes of purple-magenta flowers are present. Seeds set (shown in spike, above right) in fall and persist through winter. Seen along roadsides in ditches; abundant in wetlands, where it contributes to habitat degradation and decreasing numbers of waterfowl. Carefully managed biological controls have achieved recent successes.

NATIVE ALTERNATIVES:

Blue vervain	Joe Pye weed	Blazing star
Verbena hastata	*Eupatorium dubium*	*Liatris spicata*

Oriental bittersweet

Celastrus orbiculata

Oriental Bittersweet: Deciduous, woody climbing/spiraling vine can attain a length of 60 feet; may appear as a shrub. Toothed leaves, 2-4 inches long, exhibit a variety of appearances, but are generally rounded in the form of a teardrop. Small greenish flowers in spring; round green fruits appear in summer all along stems. Green capsule yellows in fall and opens to reveal round, red seeds (1/3 inch across), which persist through winter. Vine can uproot trees.

NATIVE ALTERNATIVES:

Passionflower	Trumpet creeper	Trumpet honeysuckle
Passiflora incarnata	*Campsis radicans*	*Lonicera sempervirens*

Multiflora rose

Rosa multiflora

Multiflora rose: Thorny, dense perennial shrub with arching stems may grow up to 15 feet tall. Oblong leaves of about 1-2 inches in length, divided in 5-11 sharply toothed leaflets, with a feathery, comb-like area at the leaf base. In May, one-inch wide, fragrant white flowers appear in clusters, eventually producing small, dark red fruits (rose hips) in summer. Fruits, containing seeds, persist through the winter, becoming dry and leathery. Plants can form a dense thicket.

NATIVE ALTERNATIVES:

Flowering raspberry	Pasture rose	Swamp rose
Rubus odoratus	*Rosa carolina*	*Rosa palustris*

Common reed

Phragmites australis

Common Reed: Large perennial, hollow-stem grass can reach 14 feet in height. Large, gray-brown flower plume up to one foot in length. Spreads by seed and by roots, forming colonies quickly; dense stands can block waterways. Seen in roadside ditches, disturbed areas, wetlands. Thrives in alkaline environments. Decreases biodiversity, degrades habitat quality and is associated with decreasing populations of marsh birds.

NATIVE ALTERNATIVES:

Indian grass	Prairie cord grass	Big bluestem
Sorghastrum nutans	*Spartina pectinata*	*Andropogon gerardii*

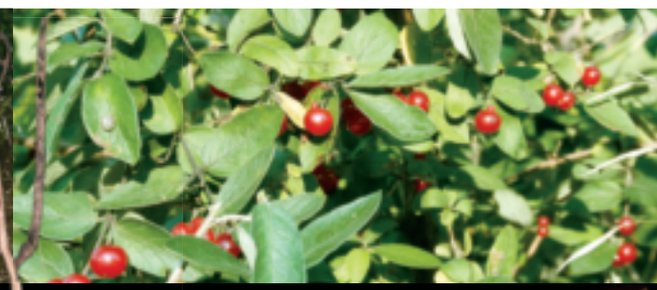
Garlic mustard

Alliaria petiolata

Garlic mustard: Biennial herb grows from 1-4 feet in height. Scalloped basal leaves form a rosette in its first year. Later, triangular leaves with toothed edges grow up the stem; leaves smell of garlic when crushed (some culinary uses). Small flowers with four white petals appear early summer. Long, narrow seed pods appear in fall (shown below and right). Easily pulled, and best removed prior to seeds setting. Toxic to the West Virginia white butterfly caterpillar.

NATIVE ALTERNATIVES:

Creeping phlox	Foam flower	Wild ginger
Phlox stolonifera	*Tiarella cordifolia*	*Asarum canadense*



Tatarian honeysuckle

Lonicera tatarica

Tatarian honeysuckle: Deciduous shrub, may attain height of 6 to 15 feet. Oval, blue-green leaves are 1-2 inches long and .5 inch wide (upon close inspection the lighter green backs of leaves look wrinkled). Fragrant flowers are tubular, with thin petals, appearing in May; small, juicy, red or orange berries appear by mid to late summer. Fruits are carbohydrate-rich and do not provide migrating birds with the high-fat content needed for long flights.

NATIVE ALTERNATIVES:

Arrowwood	Red or black chokeberry	Spicebush
Viburnum dentatum	*Aronia arbutifolia or melanocarpa*	*Lindera benzoin*