





**Plants for a Livable Delaware** is a campaign to identify and promote superior plants that thrive without becoming invasive.

**A Livable Delaware plant must**

- Possess adaptable characteristics to landscape situations (i.e. drought resistant, tolerant of poor soils, etc.)
- Pose no potential threat as an invasive plant
- Have no serious disease or insect problems
- Be hardy to Delaware

Livable Delaware Plants are identified at some garden centers, public gardens and natural areas in Delaware. They provide safe and desirable alternatives to invasive plants.

An invasive plant can quickly overwhelm and displace existing native plants by reducing the availability of light, water, nutrients and space. They have few, if any, natural controls to keep them in check. Ecologists now rank invasions by exotic plants, animals, and pathogens second only to habitat loss as a major threat to local biodiversity.

Invasive plants may be introduced intentionally or by accident. Plants have been introduced to control erosion, provide wildlife food and habitat, or for ornamental value in gardens. A small but destructive group of ornamentals has escaped the garden and caused damage to forests, fields, wetlands, and waterways. Accidental introductions occur when people and goods travel worldwide. Packing materials can harbor seeds or plant parts. Japanese stilt grass, now a widely escaped groundcover in woodland edges, is a prime example.

Invasive plants can be divided into two categories—(1) those plants that were introduced but are no longer sold (for example, multiflora rose, autumn olive and oriental bittersweet) and (2) ornamental plants still grown and sold. The former are so aggressive that while few people (if any) are still planting them, these plants are abundant in natural or abandoned areas. The challenge with this category is to develop and implement effective controls.

This brochure focuses on invasive plants still sold and requested. The goal is to educate the gardening public about invasive plants and suggest desirable alternatives for home and commercial landscape use. The worst invasive plants produce large numbers of seed dispersed by wind, water, wildlife or people. Plants that spread aggressively by runners or underground stems can also be invasive, creating problems when planted close to natural areas.

A serious invader sold in a state or county where it seems harmless might eventually find its way—through catalog or Internet sales, informal seed swaps, or even as a cutting in Aunt Mary's purse—to regions where it will cause harm. The goal of this brochure is to promote primarily native alternatives to potentially invasive ornamental species allowing each individual gardener to choose desirable and safe plants for their gardens. Delaware natives, designated by symbol N on the accompanying lists, provide some of the best alternatives, not only because of their adaptability to the local conditions, but also because they provide opportunity to save and expand the regional beauty and refinement that is our natural heritage.

A team of scientists, naturalists and nursery industry professionals conducted assessments on many plants and developed an Official Delaware Invasive Plant List based on scientifically valid criteria. The following are descriptions of some of the worst invasive plants still sold in Delaware and the conditions under which they are most likely to cause problems. A list of suggested alternatives is included for each problem plant. The alternatives are suggested based on their ability to grow in similar environments and perform the same function in the garden, but may not possess identical ornamental characteristics. Once fully informed, each gardener can make his or her own decision about which plants to grow.

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# Solution

**Alternative shade trees include:**

Take a closer



## Problem

### Norway maple

*Acer platanoides*

**Norway maple** (*Acer platanoides*) originated in Europe and Western Asia. It is a medium- to large-sized (to 50') shade tree with a broad crown that casts a very dense shade. Norway maple can be distinguished from other similar maples by the milky white sap that oozes from leaf stalks when cut. It is one of the last trees to hold yellow leaves in the fall. Norway maples have been planted extensively because they tolerate tough landscape sites, especially in urban environments. Because they cast a dense shade, release chemicals that are toxic to other species, and have a shallow competitive root system that results in very dry soil, few plants other than Norway maple seedlings grow below them. The result is homogenous stands of Norway maple, especially in urban parks, where prolifically produced seeds are carried from street tree plantings by wind and stormwater runoff.

(N) = native to Delaware

**Red maple** (*Acer rubrum*) – 60', dense rounded shade tree with excellent red fall color and tolerance to both wet and dry conditions (N)

**European hornbeam** (*Carpinus betulus* 'Fastigiata') – pyramidal to oval; 40-60' tree with late, yellow fall color and tolerance of wet and dry conditions

**Katsuratree** (*Cercidiphyllum japonicum*) – 40-60' with pyramidal to wide-spreading habit; leaves emerge reddish purple, change to bluish green in summer, and yellow in fall; may require water during drought periods

**Kentucky coffee tree** (*Gymnocladus dioica*) – 60-75' with a narrow oval crown that tolerates dry soil and urban conditions, short-lived fall color but great bold winter structure

**Sweet gum** (*Liquidambar styraciflua*) – 60' pyramidal tree; purple, orange and yellow fall color on the same tree and tolerance of urban conditions (gumballs can be messy) (N)

**Black gum** (*Nyssa sylvatica*) – 30-50' irregularly rounded tree with green glossy summer foliage and brilliant red foliage in fall; tolerates wet, dry and urban conditions (N)

**Swamp white oak** (*Quercus bicolor*) – 50-60' rounded tree with yellow-bronze fall color and excellent drought tolerance as well as tolerance to wet and urban conditions (N)

**Shingle oak** (*Quercus imbricaria*) – 30-45' conical tree; leaves unfold red in spring with lustrous dark green summer color and yellow-brown fall color; tolerates wet, dry and urban conditions (N)





Kentucky coffee tree



Black gum



Red maple



Black gum leaves

Take a closer



# Problem

## Bradford pear

*Pyrus calleryana* 'Bradford'

### Bradford pear or Callery pear

(*Pyrus calleryana* 'Bradford' and other cultivars) – is a small- to medium-sized (30-50') flowering tree that originated in China. It has a rapid growth rate and short life span with branches that split under wind and snow. Newer cultivars developed to correct the splitting problem produce seed prolifically through cross-pollination with 'Bradford.' Because Bradford pear was planted so extensively and the seed is spread by birds, it threatens many open and natural areas. The tree has a lollipop habit, is covered with white flowers in early spring and has good burgundy fall color.

# Solution

## Alternative small to medium spring flowering trees:

**Serviceberry** (*Amelanchier x grandiflora*) – 15-25' tall with very early white flowers covering the tree, attractive fruit and orange fall color; single stemmed cultivars are available (N)

**Fringetree** (*Chionanthus virginicus*) – 25' tall tree with spreading habit; white,

fleecy flowers later in spring; tolerant of urban conditions, sun, and shade (N)

**Flowering dogwood** (*Cornus florida*) – 20-35' tall, horizontally branched tree; white bracts covering tree in early spring; not tolerant of urban conditions (N)

**Hawthorn** (*Crataegus viridis* 'Winter King') – 20-35' tall pyramidal tree with white flowers in spring and red fruit persisting throughout winter (N)

**Carolina silverbell** (*Halesia tetraptera*) – 30-40' tall tree with white, bell-shaped flowers in early spring; tolerates dry soil (N)

**Crabapple** (*Malus* 'Donald Wyman') – 20' tall spreading tree with early spring flowers that start white and fade to pink; red fall fruit, effective into the winter; tolerant of urban conditions and this cultivar is resistant to typical crabapple diseases

**Sourwood** (*Oxydendrum arboreum*) – 25-30' tall pyramidal tree; summer flowers, brilliant red fall color; fruit capsules and interesting winter structure; requires well-drained, acid soil (N)

**Okame cherry** (*Prunus x incamp* 'Okame') – 20-30' tall, broadly columnar when young and spreading to a rounded outline with age; carmine-pink flowers in March-April

**Japanese Stewartia** (*Stewartia pseudocamellia*) – 20-40' tall pyramidal tree; large white flowers in July; sinuous exfoliating bark; basically problem free but requires good moist soil conditions





Serviceberry



Fringetree



Sourwood



Crabapple

Take a closer



# Problem

## Japanese barberry *Berberis thunbergii*

**Japanese barberry** (*Berberis thunbergii*) was introduced as an ornamental in the late 1800s. It forms dense stands in a variety of habitats including closed canopy forests, open woodlands, wetlands and open fields. Barberry spreads vegetatively and by seed. This highly shade-tolerant shrub displaces natives wherever it becomes established. Barberry cultivars are grown for their red leaf color and/or compact habit.

# Solution

## Alternatives to barberry include:

**Slender deutzia** (*Deutzia gracilis* 'Nikko') – 2-4' tall by 3-4' wide, low mounded shrub with bright green summer leaf color and pure white flowers that cover the plant for 2 weeks in spring

**Helleri holly** (*Ilex crenata* 'Helleri') – 1 1/2' by 2' mounded shrub with small evergreen leaves

**Virginia sweetspire** (*Itea virginica*) – 3-5' shrub with arching branches forming colonies; white fragrant flowers in June-July and lasting garnet red fall color; prefers full sun to part shade; tolerates wet and dry conditions once established (N)

**Bayberry** (*Myrica pensylvanica*) – 5-12' tall upright rounded shrub, can sucker and form colonies; leathery leaves are semi-evergreen and aromatic; great for massing or borders; tolerates sun to partial shade, dry to wet soil and salt (N)

**Eastern ninebark** (*Physocarpus opulifolius* 'Diablo') – 5-9' tall spreading, upright shrub, interesting exfoliating bark; white flat-topped flower clusters in late spring; highly adaptable to urban conditions; Diablo cultivar has attractive deep burgundy colored leaves (N)

**Fragrant sumac** (*Rhus aromatica* 'Gro-low') – 2' high, wide-spreading shrub with yellow flowers in very early spring and orangish red fall color; tolerates shade or sun and dry conditions; can be rejuvenated by mowing to ground

**Spirea** (*Spiraea japonica* 'Atrosanguinea') – 3-4' high spreading shrub; deep rose, red leaves and flowers; tough, adaptable to urban conditions, prefers full sun

**Spirea** (*Spiraea* 'Flaming Mound') 2' by 2' mounded shrub with flaming red foliage, red flower buds turning yellow, dark pink flowers; tough, adaptable to urban conditions, prefers full sun

**American Cranberrybush Viburnum** (*Viburnum trilobum*) – 8-12' rounded shrub, showy white flowers in May to early June, producing red berries; yellow to reddish-purple fall color; prefers full sun to part shade; adaptable

**Highbush blueberry** (*Vaccinium corymbosum*) – 6-12' upright shrub; white urn-shaped flowers, blue fruit and brilliant red fall color; tolerates wet soil conditions (N)





Eastern ninebark



Fragrant sumac



Spirea



Virginia sweetspire

Take a closer



# Problem

## Butterfly bush

*Buddleia davidii*

**Butterfly bush** (*Buddleia davidii*), originally from China, has been grown as an ornamental since 1900 and has escaped from gardens into disturbed areas such as roadsides, open fields and waterways. The shrub is often rangy and unkempt. In the garden, many seedlings can be found at the base of an existing butterfly bush. Flowers are a nectar source for butterflies, but the plant does not provide food for butterfly larvae.

# Solution

**Alternatives for butterfly bush include:**

### Perennials:

**Blue giant hyssop** (*Agastache foeniculum*) - 2-3' tall with blue flowers in July through September; prefers full sun and dry conditions; many cultivars are available in a wide array of flower colors; all are butterfly magnets

**Butterfly milkweed** (*Asclepias tuberosa*) - 1-3' tall with tight clusters of showy, waxy, yellow to deep orange flowers borne on downy stems through the summer; particularly attractive to butter-

flies, especially monarchs; prefers dry sandy soils (N)

**Joe pye weed** (*Eupatorium fistulosum*) - 5'-7' tall with huge rounded purple flowers in August-September; prefers full sun to partial shade, moist, wet soil; attracts butterflies (N)

### Woody plants:

**Sweetshrub** (*Calycanthus floridus*) - 6-9' broadly rounded shrub; burgundy flowers with fruity fragrance in May (cultivar 'Athens' has yellow flowers) and lingering into July; yellow fall color is variable with cultivars; trouble-free, adaptable shrub

**Sweet pepperbush** (*Clethra alnifolia*) - 4-8' tall with smaller cultivars; white delightfully fragrant flowers in July-August borne in upright spikes (pink cultivars are available); fall color is pale yellow to rich golden as the season progresses; tolerates wet, shade, sun and salt (N)

**Bottlebrush buckeye** (*Aesculus parviflora*) - 8-12' in height; wide-spreading, suckering shrub with ascending picturesque candelabra branching; tall, grandiose white flowers borne above the foliage in June-July; excellent massed or as a specimen; tolerates both sun and partial shade

**Bush-honeysuckle** (*Diervilla sessilifolia*) - 3-5' high suckering shrub; sulfur yellow flowers are borne from June through August; flowers on new wood so it should be pruned back in spring just like butterfly bush; extremely tough plant (N)

**Wild hydrangea** (*Hydrangea arborescens*) - 3-5' tall rounded shrub; flowers are white and borne in 4-6" flat clusters in June; 'Anabelle' has extremely large flowers; cut to ground in late fall or early spring for best flowering; will get multiple reblooms if pruned after flowering; prefers partial shade but does well in full sun with sufficient moisture (N)

**Crape myrtle** (*Lagerstroemia indica*) – 15' tall in southern Delaware and can be treated as yearly cutback in northern Delaware; flower colors from white to pink, purple and deep red; blooming throughout summer; thrives in hot, sunny climates

**Elderberry** (*Sambucus canadensis*) - 5-12' tall multi-stemmed, suckering shrub, 6-10" wide cream to white flowers that cover plant in June-July, large drooping clusters of deep purple berries relished by 48 species of birds; tolerates a wide range of conditions; good for naturalizing (N)



**Sweet pepperbush**



**Bush-honeysuckle**



**Joe pye weed**



**Butterfly milkweed**



Take a closer



# Problem

## Winged burning bush *Euonymus alatus*

**Winged burning bush** (*Euonymus alatus*) originated in Asia and Japan and is planted for its brilliant red fall color, dark green summer leaves and winged stems. It has been used as a medium-sized (5-10') shrub in the landscape. It spreads primarily by bird dispersal of seeds so its impact can be far-reaching. There are portions of woodlands in Delaware with an entirely red autumn understory due to the dominance of burning bush.

# Solution

## Alternative moderate sized shrubs include:

**Red and black chokeberry** (*Aronia arbutifolia* 'Brilliantissima' and *Aronia melanocarpa*) – 6-10' upright shrub with white flowers and red or black berries; naturalizing habit; brilliant red fall color; tolerates wet, dry and urban conditions (N)

**Red twig dogwood** (*Cornus sericea*) – 7 to 9 foot multi-stemmed shrub with red stems in winter; tolerates wet conditions (N)

**Dwarf fothergilla** (*Fothergilla gardenii*) – 3-6' rounded shrub with white fragrant flowers and great yellow, orange and scarlet fall color

**Winterberry holly** (*Ilex verticillata* 'Winter Red') – 6-10' in height, similar spread; prefers moist, acid soil; sun to part shade; attractive yellow to red fall color; excellent winter berry appeal (N)

**Virginia sweetspire** (*Itea virginica*) – 3-5' shrub with arching branches forming colonies; white fragrant flowers and lasting garnet red fall color; tolerates wet and dry conditions (N)

**Smooth sumac** (*Rhus glabra*) – 9-15' suckering shrub; great for large areas but too aggressive for a small garden; orange-red-purple fall color with persistent scarlet fruit; tolerates dry conditions (N)

**Highbush blueberry** (*Vaccinium corymbosum*) – 6-12' upright shrub; white urn-shaped flowers, blue fruit and brilliant red fall color; tolerates wet soil conditions; has all the attributes of burning bush plus white flowers and edible fruit! (N)

**Maple leaf viburnum** (*Viburnum acerifolium*) – 4-6' low branching shrub that forms thickets; pink, rose to purple fall color; tolerates dry soil and shade (N)

**Arrowwood viburnum** (*Viburnum dentatum*) – 6-8' dense, multi-stemmed shrub; good rosy pink to red fall color (N)

**Winterthur viburnum** (*Viburnum nudum* 'Winterthur') – 6' shrub with a suckering rounded habit; white flowers and excellent purple fall color that persists throughout the fall; tolerates wet soil (N)



Winterberry holly



Dwarf fothergilla leaves



Red twig dogwood



Dwarf fothergilla flower



Smooth Sumac



Take a closer



# Problem

## Privet

*Ligustrum* species

**Privet**, including border, European, Chinese, and Japanese (*Ligustrum obtusifolium*, *L. vulgare*, *L. sinense*, *L. japonicum*) were introduced to the United States as garden plants through the 18th, 19th and 20th centuries and are widely used as hedges. White flowers and black berries are debatably ornamental. Berries are dispersed by birds and other wildlife. Chemicals in the leaves protect the plant from insects. Border privet is the most commonly documented escapee in Delaware, but all four species have invasive potential and have spread into floodplains, forests, wetlands and fields throughout the eastern U. S. It forms dense thickets and out-competes native vegetation.

# Solution

## Alternatives for privet include:

**Glossy abelia** (*Abelia x grandifolia*) - 3-6' rounded, dense spreading multi-stemmed shrub with arching branches; fine textured, lustrous dark green to purple-bronze, semi-evergreen foliage; white-pink persistent flowers late spring until frost

**Red or black chokeberry** (*Aronia arbutifolia* 'Brilliantissima' and *Aronia melanocarpa*) - 6-10' upright shrub with white flowers and red or black berries; upright, naturalizing habit; brilliant red fall color; tolerates wet, dry and urban conditions (N)

**Forsythia** (*Forsythia x intermedia*) - 8-10' arching shrub; more attractive with naturalistic habit but can be pruned into a hedge; grown for yellow flowers in early spring; tolerates tough conditions

**Inkberry** (*Ilex glabra*) - upright evergreen shrub growing 6-8' tall; good clean dark green leaf; makes a good foundation, hedge or mass; quite shade tolerant and grows in sun with ample moisture (N)

**Bayberry** (*Myrica pensylvanica*) - 5-12' tall upright rounded shrub, can sucker and form colonies; leathery leaves are semi-evergreen and aromatic; great for massing or borders; tolerates sun to partial shade, dry to wet soil and salt (N)

**Blackhaw viburnum** (*Viburnum prunifolium*) - 12-18' tall, considered a multi-stemmed shrub to small tree; handsome clean foliage in summer with pinkish red to bronze fall color; useful for massing and shrub border as well as specimen planting; sun or shade and tolerates dry soil (N)

**Eastern ninebark** (*Physocarpus opulifolius* 'Diablo') - 5-9' tall spreading, upright shrub, interesting exfoliating bark; white flat-topped flower clusters in late spring; highly adaptable to difficult urban conditions; Diablo cultivar has attractive deep burgundy colored leaves (N)



**Spirea** (*Spiraea nipponica*  
‘Snowmound’) - 3-5’ high spreading shrub;  
dark blue-green leaves; erect multiple stems  
with arching branches result in round  
topped fountain-like form; profuse white  
spring flowers; tough, adaptable to urban  
conditions, prefers full sun



Bayberry



Inkberry



Blackhaw viburnum



Red chokeberry

Take a closer



# Problem

## Purple loosestrife

*Lythrum salicaria*

**Purple loosestrife** (*Lythrum salicaria*) was introduced in the 1800's for ornamental and medicinal uses and is now widely distributed in marshes and wet ditches in every state in the continental U.S. except Florida. Purple loosestrife, a 3'-8' tall herbaceous perennial, adapts well to most sunny garden conditions but will invade and displace native plants in nearly any wet habitat. Wetland ecosystems are already significantly diminished and threatened by other land use pressures. The magenta-colored flower spikes occur throughout much of the summer, provide nectar for insects, and can produce an incredible two to three million seeds per plant per year that are readily dispersed by wind and water.

# Solution

## Alternatives to purple loosestrife include:

**Swamp milkweed** (*Asclepias incarnata*) 2-4' tall with pink flowers in July through August; prefers full sun to partial shade, tolerates wet soils; attracts butterflies (N)

**Joe pye weed** (*Eupatorium fistulosum*) 5'-7' tall with huge rounded purple flowers in August-September; prefers full sun to partial shade, moist, wet soil; attracts butterflies (N)

**Blazing star, spike gayfeather** (*Liatris spicata*) 3' tall, upright, linear form; tall mauve-purple flower spikes summer-early autumn; requires sun; similar flower color and habit to purple loosestrife but won't take wet soils; important nectar source for many insects and butterflies; cultivars available with white-lavender flowers (N)

**Beebalm** (*Monarda didyma*) 2'-4' tall with red, pink, or white flowers in July through August; requires full sun and moist soils with no drought tolerance; attracts butterflies and hummingbirds

**Garden Phlox** (*Phlox paniculata* 'Robert Poore' or 'David') - 2-3' tall perennial, lavender or white flowers blooming throughout the summer; thrives in full sun with good ventilation; resistant to powdery mildew that affects other cultivars (N)

**Obedient plant** (*Physostegia virginiana*) 1 1/2 - 2' tall with white or pink snapdragon-like flowers from June to September over glossy foliage; prefers full sun and acid soil, but not fussy, in fact, a rampant grower in rich soil.

**Blue vervain** (*Verbena hastata*) 4-6' tall spikes of violet blue flowers in July and August; requires full sun and moist soils (N)

**New York ironweed** (*Vernonia noveboracensis*) 4 -7' tall perennial whose flowers form a purple haze; grows well in full sun, moist locations, cut back after one month if shorter plants are desired (N)





Garden phlox



Joe pye weed



Blue vervain



New York ironweed



Blazing star



Take a closer



# Problem

## Japanese silver grass

*Miscanthus sinensis*

**Japanese silver grass** (*Miscanthus sinensis*) is a graceful ornamental grass, introduced from China, with many cultivars ranging in heights from 3' to 9'. Flower heads are white to purple and flowering can occur from late summer to late fall. Cultivars that flower early have time to set seed and can self-sow into disturbed areas with open soil. *Miscanthus* 'Purpurascens' and *Miscanthus sinensis* var. *condensatus* 'Cabaret' are two cultivars that are not known to set seed.

# Solution

## Alternative ornamental grasses include:

**Silver bluestem** (*Andropogon ternarius*) – 2' tall with silvery inflorescences on slender stalks; purple bronze to copper red fall color; tolerates dry conditions (N)

**Feather reed grass** (*Calamagrostis x acutiflora* 'Karl Foerster' – 6' tall with vertical inflorescences that are loosely feathered in early summer and constrict to narrow plumes by midsummer

**Korean feather reed grass** (*Calamagrostis brachytricha*) – 3-4' tall; clump-forming, upright-arching form; wide range of soils, part shade or full sun

**Pink muhly grass** (*Muhlenbergia capillaris*) – 3' tall with masses of delicate pink flowers in late fall; marginally hardy in Northern DE

**Lindheimer's muhly** (*Muhlenbergia lindheimeri*) – 3-4' tall with 5' flower stalks; drought and heat tolerant; September blooms last through the winter; prefers full sun

**Switchgrass** (*Panicum virgatum* 'Dallas Blues', *P. virgatum* 'Cloud Nine', *P. virgatum* 'Northwind') – 5 to 7' tall; Dallas Blues has large purple panicles in fall and wide blue foliage; Cloud Nine has airy panicles that catch dew and frost; and Northwind has a very sturdy vertical habit; other cultivars available. (N)

**Indiangrass** (*Sorghastrum nutans* 'Sioux Blue') – 5-6' tall with arching habit and blue leaves; tan flowers with yellow pollen sacs are quite showy (N)

**Frost grass** (*Spodiopogon sibiricus*) – 4' tall with a neatly rounded form, panicles produced in midsummer have small hairs that catch the light; will grow in shade or full sun with adequate moisture



Dallas blues switchgrass



Cloud nine switchgrass



Feather reed grass



Silver bluestem flower



Silver bluestem



Take a closer



# Problem

## Periwinkle

*Vinca minor*

**Periwinkle** (*Vinca minor*) – is a vine or groundcover. A native of Europe, it grows vigorously and forms a dense cover that excludes most other plants, including woodland wildflowers. It only spreads vegetatively so it poses the greatest threat when planted adjacent to a natural area. Its evergreen nature and vigorous growth are hard to replace in the garden.

# Solution

## Alternative groundcovers include:

**Bearberry** (*Arctostaphylos uva-ursi*) 6-12" tall glossy, evergreen groundcover forming broad, thick mats; dainty flowers in May; does best in poor, sandy, infertile, acid soils; tolerates salt, prefers full sun, grows slowly (N)

**White heath aster** (*Aster ericoides*) – 1' tall small-leaved aster with small white flowers in late summer to fall; prefers full sun and average to dry soil (N)

**Allegheny pachysandra** (*Pachysandra procumbens*) – 6-12" semi-evergreen groundcover with green to blue-green mottled foliage; white-pink flower spikes in spring; tolerates partial to full shade but grows slowly (N)

**Virginia creeper** (*Parthenocissus quinquefolia*) – deciduous vine that will also crawl across the ground; brilliant red fall color; tolerates just about any kind of soil and tough conditions, full sun to full shade; fast growing (N)

**Christmas fern** (*Polystichum acrostichoides*) – 1' tall evergreen fern, tough and undemanding, grows in partial to full shade (N)

**Sweetbox** (*Sarcococca hookeriana* var. *humilis*) – 1-2' tall dense evergreen shrub that spreads by stolons and develops into a colony; black berries and lustrous green foliage; grows in partial to full shade

**Lowbush blueberry** (*Vaccinium angustifolium*) – 6" to 2' tall spreading deciduous shrub; white flowers, blue fruit and crimson fall color; tolerates sandy, rocky, poor soils (N)

**Barren-strawberry** (*Waldsteinia fragarioides*) – 6" with trifoliate, glossy, evergreen leaves; yellow flowers in spring; tolerates partial shade but full sun is preferred (N)

**Yellowroot** (*Xanthorhiza simplicissima*) – 2' tall spreading (stolons) groundcover grows vigorously in wet soils and slower in dry soils; tolerates full sun to shade, somewhat inconspicuous clusters of purple spring flowers (N)





Sweet box



Christmas fern



Allegheny pachysandra



Blueberry

Take a closer

Look

# Problem

## English Ivy

*Hedera helix*

**English Ivy** (*Hedera helix*), introduced by early European immigrants, is extremely popular and widely planted as a durable and dense, weed-excluding groundcover with evergreen foliage. It is challenging to match its dependability as a year-round ground cover. But, it is a serious threat to all vegetation levels of forested and open areas. It grows along the ground as well as into the tree canopy. Ivy spreads to neighboring properties by vegetative means and further a-field by spring-maturing seed dispersed by birds when other food sources are scarce.

# Solution

**Alternatives for English ivy include those suggested for periwinkle (*Vinca minor*) plus:**

**Wood aster** (*Aster divaricatus*) 3' tall by 2' wide spreading, flowering perennial; white daisy-like flowers; prefers shade to partial shade and dry soil; good naturalizer under trees or as a filler with other perennials (N)

**Variegated sedge** (*Carex morrowii* 'Silk Tassel', or 'Ice Dance') - mounding to 1' in height, green and cream variegated

grass-like leaves; tolerates shade or sun and wide range of soils

**Plumbago, leadwort** (*Ceratostigma plumbaginoides*) 12" tall spreading ground cover; intense, dark-blue flowers in summer to late autumn; fall color is wonderful bronze-red; prefers sun to partial shade; works well with spring bulbs as late developing foliage covers leaves of fading bulbs

**Goldenstar** (*Chrysogonum virginianum*) dense ground cover to 10"; deciduous dark green foliage; long lasting golden yellow flowers in mid to late spring; grows in partial shade to full sun

**Lily-of-the-valley** (*Convallaria majalis*) vigorous, dense deciduous ground cover to 8" tall, spreads by underground stems or rhizomes, arching stems produce scented, waxy, bell-shaped white flowers in spring; prefers partial shade or full sun

**Hay-scented fern** (*Dennstaedtia punctilobula*) 2-3' tall clump-forming deciduous fern, dense, vigorous colonizer, tolerates poor soil and both shade and sun (N)

**Geranium** (*Geranium x cantabrigiense* 'Biokovo') 8" tall, semi-evergreen groundcover, gently running and self-repairing, forming a neat green carpet overtopped by pink-tinged white flowers in May and June; thrives in full sun to light shade and average to moist soils, but also quite drought tolerant

**Lilyturf, liriop** (*Liriope spicata*, *L. muscari*) 18" tall, rhizomatous (*L. spicata*) or clump-forming (*L. muscari*) spreading, dark-green grass-like plant; spikes of lavender to white flowers in late



summer; full sun to shade; tolerant of extreme heat and urban conditions

**Variegated Solomon's seal**

(*Polygonatum odoratum* 'Variegatum') 2' tall upright spreading deciduous plant with arching stems and green and cream variegated leaves; bell shaped flowers hanging from leaf axils in spring; prefers shade to partial shade, tolerates wet to dry soils

(N) = native to Delaware



Hay scented fern



Plumbago



Wood aster



Wood aster



Geranium

## Acknowledgements

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