Ornamental Alternatives to Invasive Species



LHPRISM Partner and CCE Master Gardener Volunteer Training November 14, 2016

This project was contracted by the Lower Hudson Partnership for Regional Invasive Species Management using funds from the Environmental Protection Fund as administered by the New York State Department of Environmental Conservation.



Cornell University Cooperative Extension Dutchess County



Project

Address LHPRISM Strategic Plan:

Goal 4 Education and Outreach Objectives
 b. "Identify available education resources and holes",
 c. "Get more professionals trained on emerging species",

d. "Offer training to the average person on removal techniques"





Goal

- Collect, create and share information on invasive terrestrial plants and insects including their identification, management and control.
- Outcomes will include educational materials and displays which can be used by CCE volunteers and also LHPRISM partners and their volunteers.





Approach

- Team selected target terrestrial plants from "New York State Prohibited and Regulated Invasive Plants", September 10, 2014.
- Ornamental and cultural characteristics of the invasive plants were analyzed.
- Recommendations were made replace those characteristics with non-invasive alternative plants.
- Choices were not limited to native species but the bulk of the alternatives are in fact, natives.
- Display boards were created based on this and CCE Putnam's Best Management Practices project.
- This detailed presentation on each ornamental alternative was created and available for all LHPRISM partners' use.





Credits

This presentation was created by Cornell Cooperative Extension of Dutchess County Master Gardener volunteers:

Mary Gall Sue Grumet Chris Ferrero Cathy Lane Gillian Leslie Bob Keeley Michelle Keeley Linda Kinney Kathy Smith Nancy Swanson

And Joyce d. Tomaselli CCEDC Community Horticulture Resource Educator





Alternative Ornamentals

1. Vines

Tree

- 2. Trees
- 3. Shrubs
- 4. Herbaceous Perennials
- 5. Grasses
- Alternatives are presented in alphabetical order by Botanical name; natives then non-native species.
- > www.BONAP.org was used for Native status.
- Icons are used to indicate key characteristics.





Cornell University Cooperative Extension Dutchess County

Replaces: Common name, Botanical name

Icon Definitions



Full Sun: Requires a minimum of 6 hours of direct sun daily.

Part Sun/Part Shade: Can tolerate between 6 hours and 2 hours sun.



Shade: Can tolerate less than 2 hours of direct sun daily.



Drought Tolerant



Native To New York



Attracts Butterflies



Native To United States (example from Plants.USDA.gov)



Attracts Hummingbirds

Deer Resistant



Species Native to NY but Adventive in some counties (example for Echinacea purpurea from BONAP.org)



Cornell University Cooperative Extension Dutchess County



Vines

Both perennial and annual vine alternatives are included.

Some vines were considered but discarded due to aggressive growing tendencies (e.g. Fox Grape, Boston Ivy, Sweet Autumn Clematis and Virginia Creeper).







Targeted Invasive Vines

Botanical Name	Common Name	DEC Classifi- cation
Celastrus orbiculatus	Oriental Bittersweet	prohibited
Clematis terniflora	Japanese Virgin's Bower	regulated
Cynanchum Iouiseae (C. nigrum, Vincetoxicum nigrum)	Black Swallow- wort	prohibited
Cynanchum rossicum (C. medium, Vincetoxicum medium, V. rossicum)	Pale Swallow- wort	prohibited
Humulus japonicus	Japanese Hops	prohibited
Lonicera japonica	Japanese Honeysuckle	prohibited
Pueraria montana	Kudzu	prohibited

Alternatives

Botanical Name	Common Name	
Aristolochia macrophylla	Dutchman's Pipe**	
Campsis radicans	Trumpet Creeper**	
Clematis virginiana	Virgin's Bower**	
Clematis x hybrid	Clematis	
Hydrangea anomala subsp. Petiolaris	Climbing Hydrangea	
Lablab purpureus	Hyacinth Bean, annual	
Lonicera sempervirens	Trumpet Honeysuckle**	
Thunbergia alata	Black-eyed susan vine, annual	
Wisteria frutescens	American Wisteria**	
* LIC Notice	HUDSON	

9

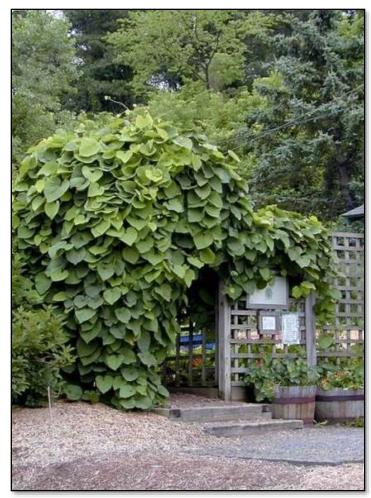
PRISM



Cornell University Cooperative Extension Dutchess County

** New York Native, * US Native

Dutchman's Pipe, Aristolochia macrophylla



HEIGHT: 20-30' SPREAD: 10-20'

SHAPE: Twining vine

FLOWER COLOR: Insignificant

- Produces large, heart-shaped, densely overlapping, green glossy leaves
- Deciduous
- Tolerates acid to alkaline soil
- Tolerates occasional periods of dry soil
- Aggressive grower
- Zones 5-8







Cornell University Cooperative Extension

Dutchess County

Replaces: Oriental Bittersweet, Celastrus orbiculatus



Trumpet Vine, Campsis radicans



HEIGHT: 30-40' **SPREAD**: 5-10'

SHAPE: Clinging vine

FLOWER COLOR: Coral

- Blooms summer to fall with a profusion of coral trumpet flowers
- Puts out many tendrils
- Deciduous
- Tolerates acid to alkaline soil
- Tolerates salt spray and salty soil
- Tolerates prolong periods of dry soil
- Aggressive grower in rich soil
- Will not grow well in shade
- Zones 4-9





Vine

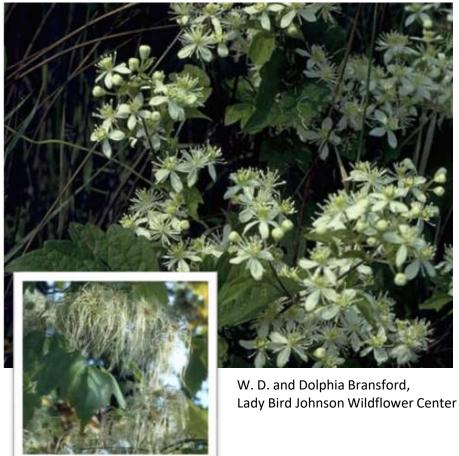
Cornell University Cooperative Extension Dutchess County

Cornell Woody Plants Database

Replaces: Japanese Honeysuckle, *Lonicera japonica* Porcelain Berry, *Ampelopsis brevipedunculata*



Virgin's Bower, Clematis virginiana



HEIGHT: 5-18' SPREAD: 3-6'

SHAPE: Twining vine

FLOWER COLOR: white

- Produces bright green foliage
- Blooms late summer, followed by feathery seedheads
- Perennial
- Prefers cool roots, so shade roots with annual plantings or mulch
- Requires average, well drained soil moisture

Bennie Bengston, Lady Bird Johnson Wildflower Center





Vine

Cornell University Cooperative Extension Dutchess County

Replaces: Japanese Virgin's Bower, Clematis terniflora

Trumpet Honeysuckle, Lonicera sempervirens



HEIGHT: 10-20' SPREAD: 3-6'

SHAPE: Twining vine

FLOWER COLOR: Orange-red

- Leafs out in early spring with bluegreen leaves
- Blooms in summer with a profusion of orange-red trumpet shaped flowers
- Deciduous
- Tolerates acid to alkaline soil
- Tolerates occasional periods of dry soil
- Zones 4-9





Cornell University Cooperative Extension Dutchess County

Replaces: Japanese Honeysuckle, *Lonicera japonica* Porcelain Berry, *Ampelopsis brevipedunculata*



Vine American Wisteria, Wisteria frutescens



plants.usda.gov

HEIGHT: 15-30' **SPREAD**: 4-8'

SHAPE: Twining vine

FLOWER COLOR: Lilac-bluish

- Produces shiny, dark green leaves
- Blooms May to June with large, fragrant lilac-bluish flowers
- Deciduous
- Tolerates acid to alkaline soil, prefers slightly acidic soil
- Prefers moist, well drained soil
- Less aggressive than the Asian species
 - Zones 5-9









Cornell University Cooperative Extension Dutchess County

Replaces: Oriental Bittersweet, Celastrus orbiculatus

Clematis, Clematis Jackmanii



Cornell Woody Plants Database



Vine

Cornell University

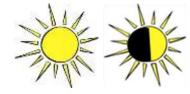
Cooperative Extension Replaces: Japanese Virgin's Bower, Clematis terniflord

HEIGHT: 5-18' SPREAD: 3-6'

SHAPE: Twining vine

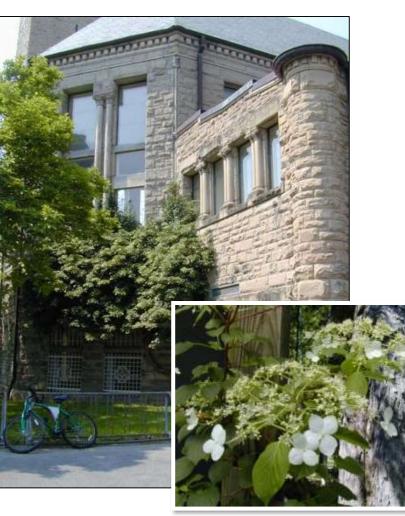
FLOWER COLOR: Violet-purple

- Produces bright green to blue-green foliage
- Blooms spring to early summer with beautiful violet-purple
- Perennial
- Prefers cool roots, so shade roots with annual plantings or mulch
- Does best in neutral or slightly alkaline soils
- Requires average, well drained soil moisture





Vine Climbing Hydrangea, Hydrangea anomala ssp. petiolaris



Cornell Woody Plants Database



Cornell University Dutchess County

Cooperative Extension Replaces: Oriental Bittersweet, Celastrus orbiculatus

HEIGHT: 60-80' **SPREAD**: 5-6'

SHAPE: Clinging vine

FLOWER COLOR: White

- Produces glossy dark green leaves
- Blooms in June/July with large, fragrant white flowers
- Winter interest with reddish-tan bark
- Deciduous
- Tolerates acid to alkaline soil
- Prefers moist, well drained soil
- Slow starter; grows quickly once established
- Needs sturdy support
- Zones 4-8



Vine

Hyacinth Bean, Lablab purpureus



HEIGHT: 10-20' SPREAD: 3-6'

SHAPE: Twining vine

FLOWER COLOR: Rose-purple

- Blooms June to frost with fragrant rosepurple flowers
- Annual
- Tolerates acid to alkaline soil
- Tolerates occasional periods of dry soil
- Needs a sturdy support structure due to the weight of the vine at maturity; collect seed in fall for planting the following year.





Cornell University Cooperative Extension Dutchess County

Replaces: Japanese Virgin's Bower, Clematis terniflo 🤍



Vine Blackeyed Susan Vine, Thunbergia alata



HEIGHT: 3-8' SPREAD: 3-6'

SHAPE: Twining vine

FLOWER COLOR: Orange-yellow

- Blooms summer to fall with orange-yellow flowers with best blooming in late summer and fall after the hot summer temperatures moderate
- Annual
- Tolerates acid to alkaline soil
- Prefers moist, well drained soil
- Prefers sun to part sun with afternoon shade





Cornell University Cooperative Extension Dutchess County

plants.usda.gov





Trees

Many native trees have exceptional ornamental qualities and are uniquely able to support wildlife. A few have been chosen to highlight.

Notes:

- Tree's root style impacts their transplant success. Cautions are noted.
- Saplings should be protected from deer until taller than browse height.
- Tree information is from Cornell's Woody Plants database at
- Woodyplants.cals.cornell.edu
- Insect information is from the National Wildlife Federation Native Plant Finder at nwf.org/nativeplantfinder based on the research of Dr. Doug Tallamy





Replaces: Common name, *Botanical name*



Targeted Invasive Trees

Al	ter	nat	ives
----	-----	-----	------

Botanical Name	Common Name	DEC Classifi- cation
Aralia elata	Japanese Angelica Tree	prohibited
Acer platanoides	Norway Maple	regulated
Frangula alnus (Rhamnus frangula)	Smooth Buckthorn	prohibited
Robinia pseudoacacia	Black Locust	regulated
Rhamnus cathartica	Common Buckthorn	prohibited

Botanical Name	Common Name
Acer pensylvanicum	Striped Maple**
Acer ruburm	Red Maple**
Acer saccharum	Sugar Maple **
Betula nigra	River Birch**
Chionanthus virginicus	Fringetree**
Fagus grandiflora	American Beech**
Junperus virginiana	Eastern Red Cedar**
Liquidambar styraciflua	Sweet Gum**
Nyssa sylvatica	Black Gum**
Plantus occidentalis	American Scyamore**
Prunus serotina	Black Cherry**
Quercus alba	White Oak**
Quercus coccinea	Scarlet Oak**
Quercus palustris	Pin Oak**
Sassafras albidum	Sassafras**
Tilia americana	Basswood**





Striped Maple, Acer pensylvanicum



Cornell Woody Plants Database



SHAPE: arching branches and flat or rounded crown

- Large shrub or small tree
- Understory plant
- Yellow flowers late spring
- Bark is quite ornamental with longitudinal stripes
- Unique large leaves are golden in fall
- Trouble free but bark is thin
- Host plant for > 200 species
- Transplants easily





Tree

Cornell University Cooperative Extension Dutchess County

Replaces: Common and Smooth Buckthorn, *Rhamnus cathartica* and *R. frangula*



Red Maple, Acer rubrum



HEIGHT: 40-60' SPREAD: variable

SHAPE: generally upright with rounded crown

- Many varieties available including columnar types
- Spectacular autumn color
- Host plant for > 200 species
- Easy to transplant
- Tolerates wet sites and salt spray



Cornell Woody Plants Database



Cornell University Cooperative Extension Dutchess County Replaces: Norway and Sycamore Maple, Acer *platanoides* and *A. pseudoplatanus*



Sugar Maple, Acer saccharum



HEIGHT: 60-75' SPREAD: variable

SHAPE: upright oval to mounded, dense foliage

- Many named varieties and shapes
- Provides dense shade
- Splendid fall color
- Trouble free but stressed by drought and urban pressures
- Host plant for > 200 species
- Transplants easily



Cornell Woody Plants Database



Tree

Cornell University Cooperative Extension Dutchess County Replaces: Norway and Sycamore Maple, Acer *platanoides* and *A. pseudoplatanus*



River Birch, Betula nigra



Cornell Woody Plants Database

HEIGHT: 40'-70' SPREAD: 40-60'

SHAPE: pyramidal-oval to rounded

- Exfoliating bark gives year-round interest
- Many varieties available
- Host plant for > 300 species
- Tolerates wet sites and salt spray
- Best growth in consistently moist acid soil
- Resistant to bronze birch borer
- Susceptible to leaf miner
- Moderately difficult to transplant



24



Cornell University Cooperative Extension Dutchess County

Replaces: Japanese Angelica, Aralia elata

Fringetree, Chionanthus virginicus



HEIGHT: 15-20' SPREAD: 15-25'

SHAPE: broad spreading habit

FLOWER COLOR: dramatic white flowers in early spring

- Beneficial showy berries
 - Yellow autumn color
- Requires acid soil (pH 5.0 70)
- Tolerates salty soil and air-borne pollutants
- Late to leaf out
- Pest free



Tree

Cornell University Cooperative Extension Dutchess County

Cornell Woody Plants Database

Replaces: Common and Smooth Buckthorn, Rhamnus cathartica and R. frangula



American Beech, Fagus grandifolia



Cornell Woody Plants Database



Cornell University Cooperative Extension Dutchess County HEIGHT: 50-70' SPREAD: 50-70'

SHAPE: widespreading crown, low branching

- Green leaves turn golden in fall
- Silver gray branches and trunk
- Edible fruit
- Prefers consistently moist, welldrained soil
- Pest free
- Host plant for > 100 species
- Difficult to transplant except as small B&B or container grown plant



Replaces: Norway and Sycamore Maple, Acer *platanoides* and *A. pseudoplatanus*



Eastern Red Cedar, Junperus virginiana



Cornell Woody Plants Database, Alan Cressler, Peggy Romfh, Lady Bird Johnson Wildflower Center



Tree

Cornell University Cooperative Extension Dutchess County

Replaces: Black Locust, Robinia pseudoacacic

HEIGHT: 40-50 ft. SPREAD: 8-20'

SHAPE: Columnar to broad-pyramidal

- Prefers open, sunny areas
- Wide variety of cultivars available
- Tolerates wide range of pH and salty soil
- Host plant for > 30 species
- Susceptible to mites, bagworms and phomopsis blight
- Difficult to transplant bare root
- Somewhat deer resistant



LOWER

27

Sweet Gum, Liquidambar styraciflua



HEIGHT: 70-100' SPREAD: variable

SHAPE: Pyramidal when young, round with age

- Best on moist sunny sites
- Brilliant fall color
- Unique "gum ball" seed pods
 - Interesting gray-brown bark
- May show occasional chlorosis on high pH sites
- Host plant for > 30 species
- Relatively pest free
- Transplant in spring



Cornell Woody Plants Database, Julie Makin, Lady Bird Johnson Wildflower Center



Tree

Cornell University Cooperative Extension Dutchess County Replaces: Norway and Sycamore Maple, Acer *platanoides* and *A. pseudoplatanus*



Black Gum, Nyssa sylvatica



HEIGHT: 40-70' SPREAD: 20-30'

SHAPE: pyramidal

- Many varieties available
- Glossy dark green summer foliage
- Great fall color
 - Small blue-black drupes for wildlife
 - Host plant for > 30 species
- Does not tolerate high pH but does well in salty soil
- Difficult to transplant use small sizes, B&B only in spring







Cornell University Cooperative Extension Dutchess County Replaces: Norway and Sycamore Maple, Acer *platanoides* and *A. pseudoplatanus*



Eastern Sycamore, Planatus occidentalis



HEIGHT: 75-100' SPREAD: 75-100'

SHAPE: wide-spreading open crown

- Requires abundant space
- Prefers deep, rich soil
- Dramatic bark patterns and textures
- Tolerates salty soils and urban conditions
- Host plant for > 30 species
- Susceptible to many diseases, especially anthracnose
- Easily transplanted



Cornell Woody Plants Database



Cornell University Cooperative Extension Dutchess County

Replaces: Black Locust, Robinia pseudoacacia



Black Cherry, Prunus serotina



Cornell Woody Plants Database, Paul Cox, Lady Bird Johnson Wildflower Center



Tree

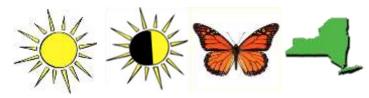
Cornell University Cooperative Extension Dutchess County

Replaces: Black Locust, Robinia pseudoacacia

HEIGHT: 50-60'. SPREAD: 20-30'

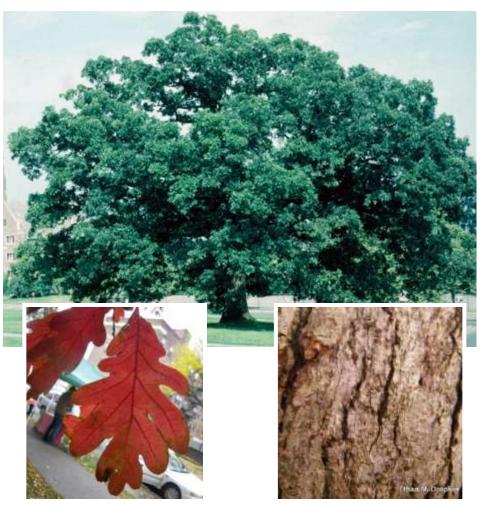
SHAPE: Pyramidal, oval

- Bright green leaves in spring, dark green in summer, yellow in autumn
- Mature bark is gray-black and scaly
- White flowers in May
- Edible berries (red black) used in wine and jelly and attract birds
- Host plant for > 350 species
- One of the most trouble-free cherries
- Wood is brittle, subject to breakage
- Prefers deep, fertile soils





White Oak, Quercus alba



Cornell Woody Plants Database

HEIGHT: 50-80' SPREAD: 50-80'

SHAPE: pyramidal to oval/rounded

- Majestic, long-lived and durable
- Dark blue-green to green leaves turn red in fall
- Bark is light ash brown
- Mature bark has small scaly plates
- Host plant for > 350 species
- Susceptible to many diseases and insects but thrives for decades
- Must be moved as a small tree B & B





Cornell University Cooperative Extension Dutchess County Replaces: Norway and Sycamore Maple, Acer *platanoides* and *A. pseudoplatanus*



Scarlet Oak, Quercus coccinea



HEIGHT: 70-75' SPREAD: 40-50'

SHAPE: Pyramidal to rounded and open

- Glossy, dark green leaves turn scarlet in fall
- Autumn color can last 3-4 weeks
- Host plant for > 350 species
- Prefers consistently moist, welldrained soil
- Tolerates occasional periods of dry soil
- Disease and pest free
- Difficult to transplant





Cornell University Cooperative Extension Dutchess County

Cornell Woody Plants Database

Replaces: Norway and Sycamore Maple, Acer *platanoides* and *A. pseudoplatanus*



Pin Oak, Quercus palustris



HEIGHT: 50-70 ft. SPREAD: variable

SHAPE: Pyramidal, oval with age

- Great fall color
- Interesting gray bark
- Relatively pest free
- Host plant for > 350 species
- Resistant to anthracnose;
- Preferred by orange-striped oakworm
- Requires acid (pH 5.0 to 7.0) soil, suffers iron chlorosis with high pH
- One of the easiest oaks to transplant, but still difficult





Cornell University Cooperative Extension Dutchess County

Cornell Woody Plants Database

Replaces: Norway and Sycamore Maple, Acer *platanoides* and *A. pseudoplatanus*



Sassafras, Sassafras albidum



Cornell Woody Plants Database

HEIGHT: 30-60' SPREAD: 25-40'

SHAPE: pyramidal; irregular

- Bright green foliage turns brilliant yellow, orange, red in fall
- Dark cinnamon furrowed bark
- Blue-black fruits and bright red stalks
- Host plant for > 20 species
- Relatively free of problems
- Very difficult to transplant; transplant as young plants from container or B&B in early spring; suckers





Tree

Cornell University Cooperative Extension Dutchess County

Replaces: Japanese Angelica, Aralia elata

Basswood, Tillia americana



Cornell Woody Plants Database

HEIGHT: 60-80' SPREAD: variable

SHAPE: pyramidal

- Fragrant flowers attract many bees
- Wide variety of cultivars
- Host plant for > 100 species
- Very susceptible to Japanese beetles, mites, aphids, borers
- Leaf miners and scale may also be problematic
- Creates dense shade
- Transplant in spring or fall
- Easy bare root transplanting





Cornell University Cooperative Extension Dutchess County Replaces: Norway and Sycamore Maple, Acer *platanoides* and *A. pseudoplatanus*





CCE Dutchess County

Ornamental Alternatives to Invasive Species October 2016



Targeted Invasive Shrubs

Botanical Name	Common Name	DEC Classifi- cation
Berberis thunbergii	Japanese Barberry	prohibited
Elaeagnus umbellata	Autumn Olive	prohibited
Euonymus alatus	Burning Bush	regulated
Euonymus fortunei	Winter Creeper	regulated
Ligustrum obtusifolium	Border Privet	prohibited
Lonicera maackii	Amur Honeysuckle	prohibited
Lonicera morrowii	Morrow's Honeysuckle	prohibited
Lonicera tatarica	Tartarian Honeysuckle	prohibited
Lonicera x bella	Fly Honeysuckle	prohibited
Reynoutria japonica	Japanese Knotweed	prohibited
Reynoutria sachalinensis	Giant Knotweed	prohibited
Reynoutria x bohemica	Bohemian Knotweed	prohibited
Rosa multiflora	Multiflora Rose	prohibited
Rubus phoenicolasius	Wineberry	prohibited
Salix atrocinerea	Gray Florist's Willow	prohibited
Cornell University Cooperative Extension Dutchess County ** New York Native, * US Native		

Alternatives

Botanical Name	Common Name
Aesculus parviflora	Bottlebrush Buckeye *
Arctostaphylos uva-ursi	Common Bearberry**
Aronia arbutifolia	Chokeberry **
Buxus sp	Boxwood
Clethra alnifolia	Summersweet**
Corylus americana	American Filbert**
Fothergilla gardenii	Dwarf fothergilla*
Gaultheria procumbens	Wintergreen**
Hydrangea quercifolia	Oakleaf Hydrangea*
llex glabra	Inkberry**
llex verticillata	Winterberry Holly**
Itea virginica	Sweetspire**
Lindera benzoin	Spicebush**
Microbiota decussata	Russian Arborvitae
Myrica pensylvanica	Bayberry**
Physocarpus opulifolius	Ninebark**
Rhus aromatica	Fragrant Sumac**
Rubus odoratus	Flowering Raspberry**
Salix discolor	Pussy willow*
Vaccinium corymbosum	Blueberry**
Weigela florida	Weigela "Wine" cultiv



Bottlebrush Buckeye, Aesculus parviflora



Alfred F. W. Vick, Lady Bird Johnson Wildflower Center



Cornell University Cooperative Extension Dutchess County Replaces: Honeysuckles, *Lonicera maackii, L. morrowii, L. tatarica, L. x bella*



HEIGHT: 6-8' SPREAD: variable

SHAPE: very wide spreading and suckering

- Striking coarse textured foliage
- Midsummer showy white flowers
- Yellow fall color
- Smooth nut is enclosed by a bright yellow husk
- Tolerates wide range of pH
- Prefers consistently moist, welldrained soil, tolerates occasional very wet or very dry soil
- Pest and disease resistant
- Difficult to transplant; use container or B & B



Groundcover

Common Bearberry, Arctostaphylos uva-ursi



Cornell Woody Plants Database.



SHAPE: Groundcover

- Bright green foliage turns bronze/reddish in fall
- Bright red berries appear in August and persist into winter
- Many cultivars available
- Does well in sandy, infertile soils •
- Requires acid soil pH 5.0 7.0
- Tolerates salt spray
- **Disease** free
- Transplant containerized or as large mats





Cooperative Extension Dutchess County

Replaces: Winter Creeper, Euonymus fortunei

Chokeberry, Aronia arbutifolia



Cornell Woody Plants Database.

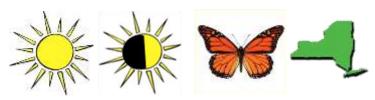
Note: Aronia melanocarpa is similar with black berries

HEIGHT: 6-12' **SPREAD:** 3-12'

SHAPE: leggy quality; best when massed

White blooms in April

- Bright red fruit clusters in fall
- Brilliant red/purple fall color
- Tolerates wide range of pH
- Good for wetland reclamation sites
- Tolerates occasional very wet or dry conditions
- Tolerates salt spray
- Transplants well
- Deer love this plant



41



Cornell University Cooperative Extension Dutchess County

Replaces: Burning Bush, Euonymus alatus

Summer sweet, Clethra alnifolia



HEIGHT: 4-8' **SPREAD:** 4-8'

SHAPE:

- Woody, evergreen groundcover
- Requires acidic soil pH 5.0-7.0
- Tolerates salt spray
- White fragrant flowers are followed by brown capsules which persist through winter
- Wide variety of cultivars available
- Pest and disease free





Cornell University Cooperative Extension Dutchess County

Replaces: Multiflora Rose, Rosa multiflora



American Filbert, Corylus americana



HEIGHT: 10-16' **SPREAD:** 8-13' **SHAPE:** rounded, multi-stemmed

- March-April bloom in catkins
- Nuts in July-August enjoyed by humans and wildlife
- Good fall color
- Large, naturalizing shrub
- Spreads by suckers
- Used for hedges, erosion control, windbreak

Image Source: Wikimedia Commons



Cornell University Cooperative Extension Dutchess County

Replaces: Autumn Olive, *Elaeagnus umbellata*



Dwarf Fothergilla, Fothergilla gardenii



Cornell Woody Plants Database.



Cornell University Cooperative Extension Dutchess County Replaces: Japanese, Giant and Bohemian Knotweed, *Reynoutria* sp.

HEIGHT: 2-3' SPREAD: 2-3'

SHAPE: variable, rounded

- Fragrant, white bottlebrush flowers in May
- Blue-green leaves turn yellow-orange-red in fall
- Slow growing
- Prefers Consistently moist, well-drained soil
- Tolerates occasional periods of dry soil
- Trouble free
- Transplant B & B or from container





Wintergreen, Gaultheria procumbens



Source of Images: Wikimedia Commons

HEIGHT: 1-2" SPREAD: 1'

SHAPE: Groundcover

- Woody, evergreen groundcover
- White flowers in June-July give way to red berries, colorful fall foliage
- Fragrant foliage
- Thrives in well-drained, moist, acidic soil in shade





Cornell University Cooperative Extension Dutchess County

Replaces: Winter creeper, Euonymus fortunei



Shrub Oakleaf Hydrangea, Hydrangea quercifolia



Cornell Woody Plants Database.



Cornell University Cooperative Extension Dutchess County

Replaces: Burning Bush, Euonymus alatus

HEIGHT: 6-8' **SPREAD:** 6-8'

SHAPE: rounded

- Elongated, conical 4"-12" clusters of creamy white flowers turn dusty rose then brown and persist into winter
- Forms colonies from a shallow root system
- Outstanding reddish purple fall color
- Older stems are exfoliating to reveal a rich, brown inner bark.
- Many cultivars available
- Pest and disease free



46

Inkberry, Ilex glabra



HEIGHT: 6-8' SPREAD: 6-10'

SHAPE: upright-mounded

- Broadleaf evergreen
- Can form colonies
- Well suited to mass planting or as a hedge, responds well to shearing
- Glossy green foliage
- Black fruit
- Requires male for pollination
- Can get leggy in shade
- Tolerates salt spray
- Trouble-free





Cornell University Cooperative Extension Dutchess County

Cornell Woody Plants Database.

Replaces: Border Privet, Ligustrum obtusifolium



Winterberry, *llex verticillata*



HEIGHT: 6-8' **SPREAD:** 6-12'

SHAPE: upright, mounded

- Inconspicuous flowers attract bees
- Bright red fruits appear while leaves are still green and persist throughout winter
- Yellow fall color: deciduous
- Requires male for pollination
- Many cultivars available
- Grows in both wet and dry sites; good naturalizer



Cornell Woody Plants Database.



Cornell University Cooperative Extension Dutchess County

Replaces: Honeysuckles, Lonicera maackii, L. morrowii, L. tatarica, L. x bella



Virginia Sweetspire, Itea virginica



HEIGHT: 3-5' SPREAD: 3-5'

SHAPE: rounded - mounded, irregular habit

- Cascading white fragrant flowers
- Stunning fall color
- Requires acidic soil pH 5.0-7.0
- Tolerates salt spray
- Natural habitat is shaded stream banks; good for rain gardens
- Colonizing and irregular shrub
- Most effective in massed plantings
- Requires little to no maintenance





Cornell University Cooperative Extension Dutchess County

Replaces: Multiflora Rose, Rose multiflora



Spicebush, Lindera benzoin



HEIGHT: 6-12' SPREAD: 6-12'

SHAPE: rounded

- Dense clusters of tiny, pale yellow flowers bloom before the leaves from buds along the stems
- Leaves and stem have identifiable spicy scent
- Bright scarlet oval drupe fruit
- Requires male for pollination
- Leaves bright green changing to golden-yellow in fall
- Difficult to transplant; slow to reestablish



Cornell Woody Plants Database.



Cornell University Cooperative Extension Dutchess County

Replaces: Honeysuckles, *Lonicera maackii*, *L. morrowii*, *L. tatarica*, *L. x bella*



Bayberry, Myrica pensylvanica



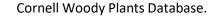
HEIGHT: 6-8' **SPREAD:** 6-8'

SHAPE: rounded

Aromatic, semi-evergreen leaves

- Waxy gray/blue persist through winter
- Fruits and leaves are eaten by many winter birds
- Requires male for pollination
- Grows in wide range of soil moisture
- Tolerates salt spray
- Disease free
- Slow growing, spreads by suckers







Cornell University Cooperative Extension Dutchess County

Replaces: Autumn Olive, Elaeagnus umbellata



Ninebark, Physocarpus opulifolius



HEIGHT: 5-10' SPREAD: 6-10'

SHAPE: upright, spreading

FLOWER COLOR: yellow

- Small pink or white spirea-like flowers attract many pollinators
- Clusters of reddish fruit
- Exfoliating bark reveals layers of reddish to light brown inner bark
- Fast-growing
- Insect and disease resistant
- Tolerates a wide range of soil conditions including drought

Cornell Woody Plants Database, W.D. and Donphia Bransford, Lady Bird Johnson Wildflower Center



Cornell University Cooperative Extension Dutchess County

Replaces: Japanese Barberry, Berberis thunbergii

Fragrant Sumac, Rhus aromatica



HEIGHT: 2-6' **SPREAD:** 6-10'

SHAPE: groundcover; irregular spreading shrub

- Yellow catkins in late winter
- Small clusters of red berries in spring may persist into winter
- Dense shrub spreads by suckering
- Leaves and twigs are aromatic
- Leaves resemble poison ivy but do not cause irritation
- Tolerates a wide range of soil conditions including drought
- Moderately difficult to plant bare root
- No serious pests or diseases







Cornell University Cooperative Extension Dutchess County

Replaces: Japanese Barberry, Berberis thunbergii



LOWER

Flowering Raspberry, Rubus odoratus



Source of Images: Wikimedia Commons

HEIGHT: 3-6' SPREAD: 6-12'

SHAPE: multi-stemmed canes

- 2" rose-like, fragrant flowers bloom from June thru August
- Hairy stems, not thorny
- Fruit attractive but not tasty
- Shade tolerant
- Spreads by suckers





Cornell University Cooperative Extension Dutchess County

Replaces: Japanese Wineberry, Rubus phoenicolas 🥰

OW

Pussy Willow, Salix discolor

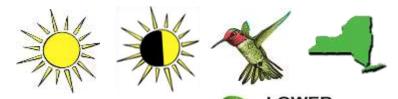


Note: Images from Cornell Woody Database are of closely related European species Salix caprea

HEIGHT: 15-25' SPREAD: 12-15'

SHAPE: multi-stemmed canes

- Large, fast-growing
 6-15' x 4-12'
- Catkins are buds, bloom March-April
- Thrives in moist to wet soil
- Dioecious males have showiest catkins
- Hummingbirds seek catkins for nesting materials
- Great for rain gardens



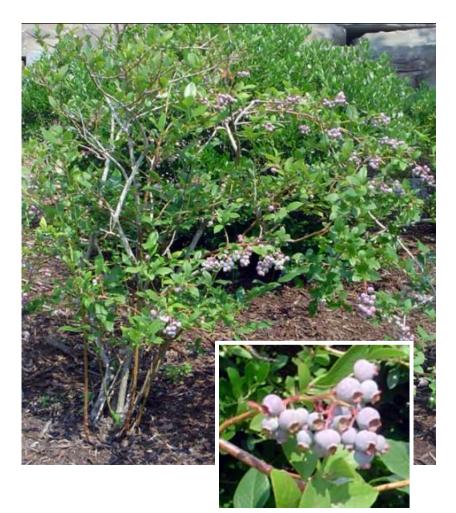


Cornell University Cooperative Extension Dutchess County

Replaces: Gray's Florist Willow, Salix atrocinerea



Blueberry, Vaccinium corymbosum



Cornell Woody Plants Database.

HEIGHT: 6-12' **SPREAD:** 8-12'

SHAPE: spreading

- Delicate white or pink-tinged flowers in May
- Sweet, edible blue berries
- Blue-green leaves turn
 yellow/bronze/orange/red in fall
- Twigs turn red in winter
- Requires acid soil pH 4.5 5.0
- Requires consistently moist, welldrained soil







Cornell University Cooperative Extension Dutchess County

Replaces: Burning Bush, Euonymus alatus

Boxwood, Buxus sempervirens

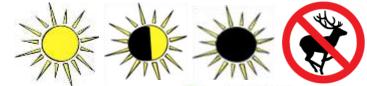


Cornell Woody Plants Database.

HEIGHT: 3-4' SPREAD: 3-4'

SHAPE: compact; mounded shrub

- Evergreen light blue to blue-gray foliage; foliage will turn yellow or bronze in winter depending on cultivar.
- Salt spray in winter makes foliage discoloration worse
- Slow growth rate
- Tolerates wide range of pH
- Needs consistently moist, welldrained soil
- Sensitive to mites and leaf miners
- Leaves are toxic to livestock
- Transplant B&B or from container





Cornell University Cooperative Extension Dutchess County Replaces: Border Privet, Ligustrum obtusifolium 🚮

57

Russian Arborvitae, Microbiota decussata



Source of Images: Cornell Woody Plants Database

HEIGHT: 6-18" SPREAD: 3-12'

SHAPE: groundcover

- Woody, evergreen groundcover
- Bright green foliage turns bronzepurple in fall and winter
- Insignificant flowers and fruit
- Provides beautiful form and texture to shady areas
- Intolerant of poor drainage
- Can be hard to establish
- No serious pests or diseases







Cornell University Cooperative Extension Dutchess County

Replaces: Euonymus fortunei

Weigela, Weigela florida "Wine" varieties



Source of Images: Proven Winners

HEIGHT & SPREAD: varies by cultivar

SHAPE: rounded

- Small to midsize, e.g.
 "Wine & Roses" 4x5'
 "Spilled Wine" 2x3'
- Blooms profusely May-June, scattered re-bloom can occur
- Burgundy foliage, pink flowers
- Branches on mature shrubs tend to arch toward the ground
- Pest and disease free





Cornell University Cooperative Extension Dutchess County

Replaces: Japanese Barberry, Berberis thunbergii



Herbaceous Perennials

CCE Dutchess County

Ornamental Alternatives to Invasive Species October 2016





Targeted Invasive Perennials

Alternatives (page 1 of 2)

Botanical Name	Common Name	DEC	Botanical Name	Common Name
		Classifi- cation	Achillea milliflorum**	Yarrow**
Anthricanon and an other			Alchemilla mollis	
Anthriscus sylvestris	Wild Chervil	prohibited	Asclepias incarnata	Swamp Milkweed**
<i>Cirsium arvense (C. setosum, C. incanum, Serratula</i> Canada Thistle			Asclepias tuberosa	Butterfly Weed**
	prohibited	Baptisia australis	Blue False Indigo**	
arvensis)			Baptisia tinctoria	Yellow Wild Indigo**
Dipsacus laciniatus	Cut-leaf Teasel	prohibited	Chelone glabra	White Turtlehead**
Euphorbia cyparissias	Cypress Spurge	prohibited	Chrysogonum virginianum	Golden Star**
cypansias		Echinacea purpurea	Purple coneflower**	
Euphorbia esula	bia esula Leafy Spurge	prohibited	Echinops bannaticus	
Ficaria verna	Lesser Celandine	prohibited	Eryngium amethystinum	Sea Holly
(Ranunculus ficaria)		•	Eutrochium maculatum	Joe Pye Weed**
Iris pseudacorus	Yellow Iris	prohibited	Euphorbia polychroma	
Lespedeza cuneata	Chinese Lespedeza	prohibited	Helenium autumnale	Sneezeweed**
Lysimachia vulgaris	Garden Loosestrife	prohibited	Helianthus maximiliani	Maximilian Sunflower**
Lythrum salicaria	Purple Loosestrife	prohibited	Helianthus salicifolius	Willow-Leaved sunflower**
Silphium perfoliatum	Cup-plant	prohibited	Heliopsis helianthoides	False Sunflower or Oxeye Sunflower**



** New York Native, * US Native



Targeted Invasive Perennials

Botanical Name	Common Name	DEC Classifi- cation
Anthriscus sylvestris	Wild Chervil	prohibited
Cirsium arvense (C. setosum, C. incanum, Serratula arvensis)	Canada Thistle	prohibited
Dipsacus laciniatus	Cut-leaf Teasel	prohibited
Euphorbia cyparissias	Cypress Spurge	prohibited
Euphorbia esula	Leafy Spurge	prohibited
Ficaria verna (Ranunculus ficaria)	Lesser Celandine	prohibited
Iris pseudacorus	Yellow Iris	prohibited
Lespedeza cuneata	Chinese Lespedeza	prohibited
Lysimachia vulgaris	Garden Loosestrife	prohibited
Lythrum salicaria	Purple Loosestrife	prohibited
Silphium perfoliatum	Cup-plant	prohibited

Alternatives (page 2 of 2)

Botanical Name	Common Name
Iris versicolor**	Blue Flag Iris**
Liatris spicata**	Gayflower or Blazing Star**
Ligularia dentata	Leopard Plant
Lobelia cardinalis	Cardinal Flower**
Lobelia siphilitica	Great Blue Lobelia or Blue Cardinal Flower**
Monarda fistulosa	Wild Bee Balm
Packera aurea	Golden Groundsel or Golden Groundwort
Rudbeckia laciniata	Green-headed Coneflower**
Rudbeckia hirta	Black-eyed Susan**
Sedum ternatum	Sedum or Stonecrop*
Senna hebecarpa	Wild Senna**
Solidago sp.	Goldenrod**
Symphyotrichum novae- angliae	New England Aster**
Verbena hastata	Swamp Verbena or Blue Vervain**
Vernonia noveboracensis	New York Ironweed**
Zizia aptera	Heart Leaved Meadow Parsnip**
Zizia aurea**	Golden Alexanders**



** New York Native, * US Native



YARROW, Achillea millefolium



Jon Hixson, Lady Bird Johnson Wildflower Center

HEIGHT: 18" – 24" **BLOOM TIME:** June - September FLOWER COLOR: White

- Flat heads are perfect landing pads for butterflies
- Can spread aggressively by rhizomes and self-seeding
- Ideal for cutting, dries well, pleasing fragrance
- Prefers lean, dry to medium, well-drained sandy loams





Cooperative Extension Dutchess County

Replaces: Wild Chervil, Anthriscus sylvestris



Herbaceous Perennial



SWAMP MILKWEED, Asclepias incarnata

Albert F.W. Vick, Lady Bird Johnson Wildflower Center



HEIGHT: 2 – 4 feet

BLOOM TIME: June-October

FLOWER COLOR: Pink

- Can withstand flooding even during growing season
- Important food for Monarch and Queen butterfly and other insects
- Deep pink flowers clustered at the top of a tall, branching stem
- Will tolerate heavy clay

R. W. Smith, Lady Bird Johnson Wildflower Center





Cornell University Cooperative Extension Dutchess County

Replaces: Purple Loosestrife, Lythrum salicaria and Yellow Flag Iris, Iris pseudacorus



Herbaceous Perennial

BUTTERFLY WEED, Asclepias tuberosa



HEIGHT: 12 – 30"

BLOOM TIME: June - August

FLOWER COLOR: Orange

- Large clusters of bright orange flowers
- Average well-drained soil
- Self-seeds
- Important plant for monarch larvae







Cornell University Cooperative Extension Dutchess County

Replaces: Garden Loosestrife, Lysimachia vulgaris



BLUE FALSE INDIGO, Baptisia australis



Joyce Tomaselli CCEDC

HEIGHT: 36" - 48"

BLOOM TIME: May - June

FLOWER COLOR: Indigo blue

- Showy plant when in bloom and has attractive seed pods
- Drought resistant and will grow in poor soil
- Will naturalize, leave in place once established
- Toxic to animals
- Deer and rabbit resistant



Cornell University Cooperative Extension Dutchess County

Replaces: Chinese Lespedeza, Lespedeza cuneata

OWER

Herbaceous Perennial Yellow Wild Indigo, Baptisia tinctoria



Alan Cressler, Lady Bird Johnson Wildflower Center

HEIGHT: 2-4 ft.

BLOOM TIME: May to September

FLOWER COLOR: yellow

- Busy perennial, black seed pods in fall
- Develops deep extensive root system that tolerates erosion.
- High CaCO3 tolerance
- Tolerates rabbits, dry clay or shallow rocky soil





Cornell University Cooperative Extension Dutchess County

Replaces: Chinese Lespedeza, *Lespedeza cuneata*



WHITE TURTLEHEAD, Chelone glabra



R.W. Smith, Lady Bird Johnson Wildflower Center

HEIGHT: 2 feet – 4 feet

BLOOM TIME: August - October

FLOWER COLOR: White/Lavender

- White (often lavender-tinged) tubular, flowers resemble turtle heads
- Best grown in moist to wet, rich, humusy soils in part shade
- Use in bog gardens and alongside streams
- May spread by rhizomes





Cornell University Cooperative Extension Dutchess County

Replaces: Yellow Flag Iris, Iris pseudacorus



GOLDEN STAR, Chrysogonum virginianum



Alan Cressler, Lady Bird Johnson Wildflower Center

HEIGHT: 6" - 8"

BLOOM TIME: Spring – Early Summer

FLOWER COLOR: Golden Yellow

- A long blooming, native groundcover
- Perfect for woodland garden
- Prefers moist, well-drained soil, tolerates full sun only if moist
- Brightens a shady spot
- Easy to grow, but can be aggressive, spreads by stolons or rhizomes but can be easily controlled







Cornell University Cooperative Extension Dutchess County

Replaces: Lesser Celandine, *Ficaria verna*

PURPLE CONEFLOWER, Echinacea purpurea



Alan Cressler, Lady Bird Johnson Wildflower Center

HEIGHT: 2 feet - 5 feet

BLOOM TIME: June - August

FLOWER COLOR: Dark Pink

- Excellent, long-blooming flower
- Dried flower heads attract birds, esp. goldfinches
- Great for cutting
- A must for the perennial garden





Cornell University Cooperative Extension Dutchess County

Replaces: Cut-leaf Teasel, Dipsacus laciniatus



JOE PYE WEED, Eutrochium maculatum



Alan Cressler, Lady Bird Johnson Wildflower Center

HEIGHT: 4 feet – 6 feet

BLOOM TIME: Late summer

FLOWER COLOR: Pink

- Tiny flowers form 12"-18" pink domes
- Prefers moist soils. Good for borders, cottage gardens, meadows, native plant gardens, wild/naturalized areas or water margins
- Tolerates clay soil
- Butterflies love this flower





Cornell University Cooperative Extension Dutchess County Replaces: Yellow Flag Iris, *Iris pseudacorus* and Purple Loosestrife, *Lythrum salicaria*



SNEEZEWEED, Helenium autumnale



R. W. Smith, Lady Bird Johnson Wildflower Center

HEIGHT: 3 feet - 5 feet

BLOOM TIME: August - September

FLOWER COLOR: Yellow

- Bright cheerful daisy-like flowers
- Prefers moist clay soil
- A great plant for the late summer garden
- Despite its name, it presents no problems for most allergy sufferers
- Easy to grow, requires a damp site
- High salt tolerance





Cornell University Cooperative Extension Dutchess County

Replaces: Wild Chervil, Anthriscus sylvestris

MAXIMILIAN SUNFLOWER, Helianthus maximiliani



HEIGHT: 3 feet - 10 feet **BLOOM TIME:** August - September FLOWER COLOR: Yellow

- 3" blooms of eye-popping color
- Many flowers on own stalks
- Adds dramatic height to the back of borders
- Thrives in a wide range of soils
- Can form large colonies
- Produces many seeds, valuable plant for wildlife

73

R. W. Smith, Lady Bird Johnson Wildflower Center

W. D. and Dolphia Bransford, Lady Bird Johnson Wildflower Center



Cornell University Cooperative Extension Dutchess County

Replaces: Cup-Plant, Silphium perfoliatum

Willow-Leaved Sunflower, Helianthus salicifolius



Julie Makin, Lady Bird Johnson Wildflower Center

HEIGHT: 8'-10' SPREAD: 1' - 3' BLOOM TIME: Sept – Oct

- Blooms August to Frost
- Long, narrow, drooping leaves
- Tolerates Clay Soil
- Good for Cut Flowers



74



Cornell University Cooperative Extension Dutchess County

Replaces: Cup-Plant, Silphium perfoliatum

Herbaceous Perennial **FALSE SUNFLOWER or OXEYE SUNFLOWER**, Heliopsis helianthoides



HEIGHT: 36"

BLOOM TIME: June to August

FLOWER COLOR: Yellow

- Yellow daisy-like flowers all summer
- Clump forming, but fans to about 3'
- Great cut flower for arrangements
- Deadhead to prevent reseeding
- Hardy, easy to grow; excellent beginner plant
- Good choice for clay soil and dry spots





Cornell University Cooperative Extension Dutchess County

R. W. Smith, Lady Bird Johnson Wildflower Center

Replaces: Wild Chervil, Anthriscus sylvestris



Blue Flag Iris, Iris versicolor



John Hixson, Lady Bird Johnson Wildflower Center



Bennie Bengston, Lady Bird Johnson Wildflower Center

HEIGHT: 2-3 ft.

BLOOM TIME: May - August

FLOWER COLOR: Blue-purple with yellow sepals

- Several flowers on 2-3 ft. scapes in late spring, early summer, attractive strap like foliage overtops scapes all summer
- Good for freshwater wetlands and pond margins
- Spreads steadily by rhizomes which can be submerged up to 6"
- Cut dead foliage to avoid pest and disease problems
- Wear gloves when handling the poisonous rhizomes



Cornell University Cooperative Extension Dutchess County

Replaces: Yellow Flag Iris, Iris pseudacorus

Herbaceous Perennial GAYFEATHER or BLAZING STAR,

Liatris spicata



Julie Makin, Lady Bird Johnson Wildflower Center

HEIGHT: 18" - 30" BLOOM TIME: July - August FLOWER COLOR: Purple

- Bright purple spikes shoot out of grassy leaves blooms from top down
- Easily grown in many soil types
- Stunning as cut flowers
- Corms multiply close to original, forming dense group
- Good for rain gardens, tolerates drought, clay soil



Cornell University Cooperative Extension Dutchess County Replaces: Cut-leaf Teasel, *Dipsacus laciniatus* and Purple Loosestrife, *Lythrum salicaria*



CARDINAL FLOWER, Lobelia cardinalis



Steven Faucette, Lady Bird Johnson Wildflower Center

Lady Bird Johnson Wildflower Center

HEIGHT: 24" - 48"

BLOOM TIME: July - September

FLOWER COLOR: Scarlet Red

- Intense scarlet red flowers
- Needs moisture, great rain garden plant
- Will naturalize





Cornell University Cooperative Extension Dutchess County

Replaces: Yellow Flag Iris, Iris pseudacorus and Garden and Purple Loosestrife, Lysimachia vulgaris, Lythrum salicaria



Herbaceous Perennial GREAT BLUE LOBELIA or BLUE CARDINAL FLOWER. Lobelia siphilitica



Bransford, W.D. and Dolphia , Lady Bird Johnson Wildflower Center



Faucette, Steven, Lady Bird Johnson Wildflower Center

HEIGHT: 18" - 24"

BLOOM TIME: August - September

FLOWER COLOR: Blue-Violet

- Pretty blue spires give a strong vertical line to gardens
- May self-sow profusely
- Carefree plant for moist to wet areas
- All parts of plant are poisonous if ingested
- Tolerates dense shade, great for woodland gardens, wet woods, stream banks, marshes, and meadows





Cornell University Cooperative Extension Dutchess County Replaces: Purple Loosestrife, Lythrum salicaria and Yellow Flag Iris, Iris pseudacorus



WILD BEE BALM, Monarda fistulosa





Thomas L. Muller, Lady Bird Johnson Wildflower Center HEIGHT: 2-4 feet

BLOOM TIME: July - September

FLOWER COLOR: Lavender

- Great naturalizing wildflower
- Easy to grow
- Needs good air circulation
- Has mildew resistance
- Tolerates poor soil and Black Walnut



Cornell University Cooperative Extension Dutchess County

Replaces: Purple Loosestrife, Lythrum salicaria



GOLDEN GROUNDSEL, GOLDEN GORUNDWORT, *Packera aurea*



W. D. and Dolphia Bransford, Lady Bird Johnson Wildflower Center



Replaces: Garden Loosestrife, Lysimachia vulgaris

HEIGHT: 6-30" BLOOM TIME: April FLOWER COLOR: Yellow

- Yellow daisy-like flowers on 12-24" stems
- Thrives in moist shady locations
- Mulch and keep soil moist
- Good for rain gardens, sides of streams or ponds, or bog gardens
- Also sold as Senecio aureus



BLACK-EYED SUSAN, Rudbeckia hirta

Sally and Andy Wasowski, Lady Bird Johnson Wildflower Center



R. W. Smith, Lady Bird Johnson Wildflower Center

HEIGHT: 36"

BLOOM TIME: July - September

FLOWER COLOR: Yellow w/Dark Eyes

- Long blooming cheerful rays of yellow to bring back childhood memories
- Deadhead to keep from reseeding and encourage repeat blooms
- An easy care plant for the sunny garden, appreciates good air circulations and well-drained soil
- Tolerates deer, clay soil and air polluti



Cornell University Cooperative Extension Dutchess County

Replaces: Garden Loosestrife, Lysimachia vulgaris



GREEN-HEADED CONEFLOWER, Rudbeckia laciniata



W. D. and Dolphia Bransford, Lady Bird Johnson Wildflower Center



R.W. Smith, Lady Bird Johnson Wildflower Center

HEIGHT: 3 – 7 feet

BLOOM TIME: Summer

FLOWER COLOR: Yellow with green cone

- •Tall, stately native wildflower
- •Makes great cut flowers
- •Attracts bees, butterflies, and birds
- •Perfect for soggy soils along stream banks and pond edges
- •Deer sometimes nibble on it
- •Spreads easily by underground stems, appropriate for large areas





Cornell University R Cooperative Extension Dutchess County G

Replaces: Cup-Plant, *Silphium perfoliatum* and Garden Loosestrife, *Lysimachia vulgaris*



SEDUM or STONECROP, Sedum ternatum





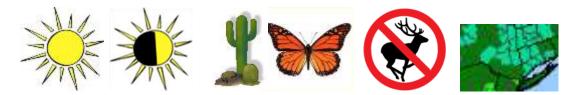
R. W. Smith, Lady Bird Johnson Wildflower Center Alan Cressler, Lady Bird Johnson Wildflower Center **HEIGHT:** 2" - 6"

BLOOM TIME: Late Spring to Summer

FLOWER COLOR: Varied

Great ground cover - easy to grow
Succulent perennial with fleshy, flat or rounded leaves
Average to dry soil

•Color and form vary





Cornell University Cooperative Extension Dutchess County Replaces: Cyprus Spurge and Leafy Spurge, Euphorbia cyparissias and E. esula



Herbaceous Perennial Wild Senna, Senna hebecarpa



George H. Bruso, Lady Bird Johnson Wildflower Center

HEIGHT: 2-5 ft.

BLOOM TIME: July, August

FLOWER COLOR: yellow

- Interesting accent in rear borders, cottage, wildflower or native gardens
- Horizontal root system allows plant to withstand wind and storms
- Black seed pods in fall attract large birds
- Good for restoration projects





Cornell University Cooperative Extension Dutchess County Replaces: Chinese Lespedeza, Lespedeza cuneata and Knotweed, Reynoutria sp.



GOLDENROD, Solidago sp.



W.D. and Dolphia Bransford, Lady Bird Johnson Wildflower Center

HEIGHT: 30" - 36"

BLOOM TIME: September - October

FLOWER COLOR: Yellow

- Many showy species
- Exceptional for areas with clay or wet soil
- Perfect for rain gardens
- Nice for cut arrangements
- Spreads by rhizomes





Cornell University Cooperative Extension Dutchess County

Replaces: Garden Loosestrife, Lysimachia vulgaris

86

NEW ENGLAND ASTER, Symphyotrichum novae-angliae



Stefan Bloodworth, Lady Bird Johnson Wildflower Center

HEIGHT: 36" - 72"

BLOOM TIME: August to October

FLOWER COLOR: Blue to Purple

- Purple petals w/yellow eyes brighten the fall garden
- Attractive in borders, cottage, butterfly, and rain gardens
- A native flower that will naturalize
- Pinch back before mid-July to encourage bushiness and control height



Cornell University Cooperative Extension Dutchess County

Replaces: Purple Loosestrife, Lythrum salicaria



Herbaceous Perennial SWAMP VERBENA, BLUE VERVAIN,

Verbena hastata

R. W. Smith, Lady Bird Johnson Wildflower Center



Mariann Watkins, Lady Bird Johnson Wildflower Center



Cornell University Cooperative Extension Dutchess County

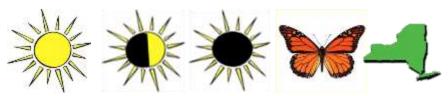
Replaces: Purple Loosestrife, Lythrum salicaria

HEIGHT: 2-5 ft.

BLOOM TIME: July - September

FLOWER COLOR: Purplish blue

- Stout-stemmed with numerous, showy pencil-like flower spikes branched like a candelabra
- Moist soil
- Attracts birds
- Special value to native bees, Common Buckeye butterfly





NEW YORK IRONWEED, Vernonia noveboracensis

HEIGHT: 4 feet - 6 feet

BLOOM TIME: August – September

FLOWER COLOR: Purple

- Deep purple 1" heads on 3"-4" clusters
- Ideal rain garden plant
- Excellent background plant
- Likes moist to wet soils, but tolerates wide range
- Tolerates clay soil







W. D. and Dolphia Bransford, Lady Bird Johnson Wildflower Center



Cornell University Cooperative Extension Dutchess County

Replaces: Purple Loosestrife, Lythrum salicaria

Herbaceous Perennial HEART LEAVED MEADOW PARSNIP, Zizia aptera



Sally and Andy Wasowski, Lady Bird Johnson Wildflower Center

HEIGHT: 1-3 ft. .

BLOOM TIME: May, June

FLOWER COLOR: bright yellow

- Tolerates most light conditions
- Prefers moist soil
- Plants occur singly or in clumps
- Good cut flower
- Food source for Black Swallowtail butterfly larva



90



Cornell University Cooperative Extension Dutchess County

Replaces: Lesser Celandine, Ficaria verna

GOLDEN ALEXANDERS, Zizia aurea



Norman G. Flaigg, Lady Bird Johnson Wildflower Center

HEIGHT: 1-3 ft.

BLOOM TIME: April - August

FLOWER COLOR: Yellow

- Conspicuous blooms have fruity fragrance
- Erect branching reddish stems
- Good cut flower
- Dry seed heads add summer interest







Cornell University Cooperative Extension Dutchess County

Replaces: Wild Chervil, Anthriscus sylvestris

LADY'S MANTLE, Alchemilla mollis



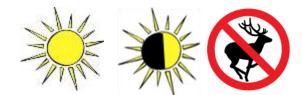
Unknown author, Cornell Plantations

HEIGHT: 16" -18"

BLOOM TIME: June - August

FLOWER COLOR: Yellow

- Clouds of chartreuse flowers float above the foliage
- Ruffled leaves catch water droplets that glisten in the sun
- Great cut flower, and dried flower
- Tolerates frost
- Prefers alkaline soil, requires welldrained soil





Cornell University Cooperative Extension Dutchess County Replaces: Cyprus Spurge and Leafy Spurge, Euphorbia cyparissias and E. esula



GLOBE THISTLE, Echinops ritro



GardenIng.Cornell.edu

HEIGHT: 3 feet - 4 feet

BLOOM TIME: July - early August

FLOWER COLOR: Blue

- •Unusual spiny globes on erect stems
- •A flower Dr. Seuss could have made
- •Prickly leaves may require hand protection
- •Great for mid to back border
- •Tolerates poor soil, avoid rich soil
- •Tap root difficult to divide, transplant
- Tolerates rabbits





Cornell University Cooperative Extension Dutchess County Replaces: Cut-leaf Teasel, *Dipsacus laciniatus,* and Canada Thistle, *Cirsium arvense*



Sea Holly, Eryngium amethystinum



Image Source: Wikimedia Commons

HEIGHT: 24-30"

BLOOM TIME: July-August

FLOWER COLOR: Deep Blue

- Blue globes combined with unusual spiky, silvery green bracts and leaves will dress up any rock garden
- Tolerant of salt
- Makes fresh and dried arrangements special
- A real conversation piece for the perennial garden





Cornell University Cooperative Extension Dutchess County

Replaces: Canada Thistle, *Cirsium arvense* and Cut-leaf teasel, *Dipsacus laciniatus*

CUSHION SPURGE, Euphorbia polychroma



HEIGHT: 12" – 15"

BLOOM TIME: Spring

FLOWER COLOR: Chartreuse

- A vibrant cushion of flowers
- Cut back after flowering to keep compact
- Sap is a skin irritant



95



Cornell University Cooperative Extension Dutchess County

Replaces: Cyprus Spurge and Leafy Spurge, Euphorbia y cyparissias and E. esula

LEOPARD PLANT, BIG LEAF LIGULARIA *Ligularia dentata*



HEIGHT: 3' - 4' BLOOM TIME: July - September FLOWER COLOR: Yellow-Orange

- Wand-like yellow-orange daisylike flowers rise 3 to 4 feet above huge, leathery foliage
- Mounding habit.
- Mulch and keep soil moist. Will wilt if not kept moist
- Protect from strong winds
- Good for rain gardens, sides of streams or ponds, or bog

gardens





Cornell University Cooperative Extension Dutchess County

Replaces: Garden Loosestrife, Lysimachia vulgaris





CCE Dutchess County

Ornamental Alternatives to Invasive Species October 2016





Targeted Invasive Grasses

Alternatives

Botanical Name	Common Name	DEC Classifi- cation
Glyceria maxima	Reed Manna Grass	prohibited
Imperata cylindrica (I. arundinacea, Lagurus cylindricus)	Cogon Grass	prohibited
Miscanthus sinensis	Chinese Silver Grass	regulated
Oplismenus hirtellus	Wavyleaf Basketgrass	prohibited
Phragmites australis	Common Reed Grass	prohibited
Phyllostachys aurea	Golden Bamboo	prohibited
Phyllostachys aureosulcata	Yellow Groove Bamboo	prohibited

Botanical Name	Common Name	
Bouteloua gracilis	Mosquito Grass or Blue Grama**	
Calamagrostis brachytricha	Feather Reed Grass	
Muhlenbergia capillaris	Pink Muhlygrass**	
Panicum virgatum	Switchgrass**	
Schizachyrium scoparium	Little Bluestem**	
Sporobolus heterolepis	Prairie Dropseed**	
Tridens flavus	Purpletop Tridens**	



MOSQUITO GRASS or BLUE GRAMA, *Bouteloua gracilis*



Sally and Andy Wasowski, Lady Bird Johnson Wildflower Center

HEIGHT: 18"

BLOOM TIME: June - August

FLOWER COLOR: Brownish purple

- A low growing native grass that resembles a mass of mosquito larvae
- Changes color to provide year-round interest
- Ideal for rock gardens
- Very easy care





Grass

Grass

PINK MUHLYGRASS, Muhlenbergia capillaris



Sally and Andy Wasowski, Lady Bird Johnson Wildflower Center



Cornell University Cooperative Extension Dutchess County HEIGHT: 2-3 feet

BLOOM TIME: September - November

FLOWER COLOR: Pink tinged

- Clump-forming, warm season, perennial grass
- Noted for its attractive summer foliage and spectacular clouds of fall flowers
- Does not spread by rhizomes
- Zone 5-9



SWITCHGRASS, Panicum virgatum



Sally and Andy Wasowski, Lady Bird Johnson Wildflower Center



Cornell University Cooperative Extension Dutchess County HEIGHT: 3-6 feet

BLOOM TIME: July

FLOWER COLOR: Pink tinged

- Tall leafy grass
- Large open clusters on wiry stalks
- Flower panicles hover over the foliage like an airy cloud.
- Changes color to provide year-round interest
- Zone 5-9



Grass Little Bluestem, Schizachyrium scoparium



Sam C. Strickland, Lady Bird Johnson Wildflower Center

HEIGHT: 3 feet BLOOM TIME: fall FLOWER COLOR: white

- Very ornamental bunchgrass with fine-textured foliage, forms very dense mounds
- Blue-green stems in August become radiant mahoganyred with white, shining seed tufts in the fall
- readily reseeds, not for small gardens





Cornell University Cooperative Extension Dutchess County Grass

PRAIRIE DROPSEED, Sporobolus heterolepis



Kathryn E. Bolin, Lady Bird Johnson Wildflower Center



Cornell University Cooperative Extension Dutchess County HEIGHT: 2-3 feet

BLOOM TIME: August - October

FLOWER COLOR: Pink and brown tinted

- Clump forming
- Fine textured medium-green leaves turn golden to light bronze in winter
- Open, branching flower panicles
- Slow growing and slow to establish
- Zone 3-9



Grass

PURPLETOP TRIDENS, Tridens flavus



R. W. Smith, Lady Bird Johnson Wildflower Center



Cornell University Cooperative Extension Dutchess County **HEIGHT:** 2-4"

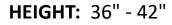
BLOOM TIME: July - October

FLOWER COLOR: Brown to rose-purple

- Densely tufted grass with thin blades
- Slender, dense, spike-like inflorescences
- May self-seed
- Zone 5-9



FEATHER REED GRASS, Calamagrostis brachytricha



BLOOM TIME: September - November

FLOWER COLOR: Pink-tinged

Forms clumps of stiff upright leaves and pinkish plumes

Use as an accent or in groups

This one's tough! Tolerates clay soil, black walnut trees, and pollution but likes moist soil

Perennial





Grass