



Native Alternatives for Invasive Ornamental Plant Species

Edited by Timothy M. Abbey

The Connecticut Agricultural Experiment Station
for the Connecticut Invasive Plant Working Group

**Funding provided by U.S. Dept. of Interior, Fish and Wildlife
Service, Silvio O. Conte National Fish and Wildlife Refuge**

Introduction

The goal of this brochure is to promote commercially available, although underused, native plants as alternatives to potentially invasive ornamental plant species. An invasive plant is a species non-native to the ecosystem under consideration, and whose introduction, whether accidental or intentional, causes or is likely to cause harm to the environment, economy or human health. Invasive plants are so successful because they: 1) grow and mature rapidly; 2) spread quickly; 3) can flower and/or set seed over a long period of time; 4) have no known diseases or insects to provide control; 5) thrive in many habitats; and 6) are difficult to remove or control. The first five characteristics contributed to the development and production of some non-native plants as marketable ornamental plants because these traits are often desirable for landscape plantings.

A plant species is considered native to the United States if it was present in the country before the arrival of settlers. For our purposes, this definition is restricted to plants native to the eastern United States. Native plants grown under the correct environmental conditions generally have fewer serious problems with common disease and insect pests. However, native plants are being lost to land development, invasive plant competition, and from attack by non-native diseases and insects.

The number of woody tree, shrub, vine, and herbaceous perennial species available to the public is enormous. Most plants, whether they are native or non-native, grow and limit their development to the environment in which they are planted. In fact, many of our beautiful ornamental plants and the majority of our fruits and vegetables are not native to the United States and are not invasive. However, a small number of plant species have become invasive. They disperse to other locations and thrive there. In naturalized areas, they establish themselves at the expense of native plants. They also detract from the aesthetic appearance of managed landscapes and hamper the growth and harvest of crops in cultivated agricultural areas. In either case, this disruption has a negative impact. Typically, invasive species are extremely difficult to control once established.

Cover photo: *Eupatorium* spp. Photo by Donna Ellis

This publication focuses on five plants considered invasive (found on the state invasive plant lists of Connecticut, New York and Pennsylvania) and still commercially available. At this time, all the cultivars for a given species are considered invasive. However, future research may prove this to be incorrect.

Members of the Connecticut Nursery and Landscape Association and Connecticut Invasive Plant Working Group selected the native plants featured as alternatives to the invasive plants listed. Due to space limitations, only a few alternative plant species have been presented. If you are seeking a specific flower color, fall foliage color, wildlife benefit, etc., there are many additional native plants and cultivars that can be used for these various purposes.

On the following pages, a photograph and explanatory information are shown in a red box for each invasive species. The common name and scientific name are in red. The next line indicates the native range and the date the plant was introduced to the United States.

The common name and scientific name of alternative plants are in green. The area of the United States where each plant is native and the zones in which it will grow are also listed. Each listing of alternative plants has notes on flowering time and color, sunlight and soil requirements, plant size, attractiveness to wildlife, and suitability for various kinds of plantings.

This publication is available from:

Publications

The Connecticut Agricultural Experiment Station

P.O. Box 1106

New Haven, CT 06504-1106

or online at

www.caes.state.ct.us/SpecialFeatures/SpecialFeatures.htm

www.hort.uconn.edu/cipwg

Autumn olive *Elaeagnus umbellata**China, Korea, Japan (1830)*

Silvery-white, fragrant flowers.
 Red fruit in September-October
 eaten by birds. Excellent drought
 tolerance. Can grow under low
 fertility.

**Chokeberry (red)** *Aronia arbutifolia**Eastern United States Zones 4-9*

White flowers in May. Red-purple
 fall color. Full sun to partial shade.
 Adapts to various soil conditions.
 Size (HxW)=6-10' x 8-12'. Berries
 for winter interest. Mass plantings.

**American cranberry bush** *Viburnum trilobum**Northeastern United States Zones 2-7*

White flowers, May-early June.
 Yellow, reddish-purple fall color. Full
 sun to partial shade. Moist, well
 drained soil, but adapts to various
 conditions. Size (HxW)=8-12' x
 equal. Red fall and winter berries.

**Fothergilla (dwarf, large)** *Fothergilla gardenii*, *F. major**Southeastern United States Zones 4-8*

White flowers, April-May. Yellow,
 orange, scarlet fall color. Full sun to
 partial shade. Moist, well-drained,
 acidic soil. Size (HxW)=2-3' x equal.
 6-10' x equal. Foundation, border,
 mass plantings.



Inkberry (Compact forms) *Ilex glabra*

Eastern United States Zones 4-9

White flowers, May-June. Evergreen foliage. Full sun to shade. Moist, acidic soils, although drought tolerant. Size (HxW)=6-8' x 8-10'. Foundation, border, mass plantings. Produces suckers.



Common winterberry *Ilex verticillata*

Eastern United States Zones 3-9

White flowers, June-July. Minimal yellow fall color. Full sun to partial shade. Moist, acidic (pH 4.5-6.5) soil, tolerant of wet conditions. Size (HxW)=6-10' x equal. Border or massing, red winter berries for birds. Need female and male plants for berries.



Japanese barberry *Berberis thunbergii*

Japan (1864)

Many cultivars have dark red foliage. Red berries in October and winter for birds. Can be used as a hedge or barrier. Drought tolerant, can tolerate urban conditions.



Bayberry *Myrica pensylvanica*

Eastern United States Zones 3-6

Yellow flowers, March-April. Minimal burgundy fall color. Full sun to partial shade. Poor soils, drought and salt tolerant. Size (HxW)=5-12' x equal. Gray, winter berries. Produces suckers.



Highbush blueberry *Vaccinium corymbosum*

Eastern United States Zones 3-6

White flowers, May-early June. Yellow, bronze, orange to red fall color. Full sun to partial shade. Moist to dry acidic (pH 4.5-5.5) soil. Size (HxW)=6-12' x 8-12'. Summer berries for birds and mammals.



Chokeberry (red) *Aronia arbutifolia*

Eastern United States Zones 4-9

White flowers in May. Red-purple fall color. Full sun to partial shade. Adapts to various soil conditions. Size (HxW)=6-10' x 8-12'. Berries for winter interest. Mass plantings.



American cranberry bush *Viburnum trilobum*

Northeastern United States Zones 2-7

White flowers, May-early June. Yellow, reddish-purple fall color. Full sun to partial shade. Moist, well drained soil, but adapts to various conditions. Size (HxW)=8-12' x equal. Red fall and winter berries.



Virginia sweetspire *Itea virginica*

Southeastern United States Zones 5-9

White flowers, June-July. Reddish purple fall color. Full sun to partial shade. Moist soil, tolerant of wet conditions. Size (HxW)=3-5' x variable. Shrub border. Borderline hardiness in New England.



Common winterberry *Ilex verticillata*

Eastern United States Zones 3-9

White flowers, June-July. Minimal yellow fall color. Full sun to partial shade. Moist soil, acidic (pH 4.5-6.5), tolerant of wet conditions. Size (HxW)=6-10' x equal. Border or massing, red winter berries for birds. Need female and male plants for berries.



Winged euonymus (Burning bush) *Euonymus alatus*

Northeast Asia to Central China (1860)

Bright red fall foliage. Versatile: can be used as a border, mass planting, hedge, etc. Can tolerate a variety of soil types, pH adaptable.



Bayberry *Myrica pensylvanica*

Eastern United States Zones 3-6

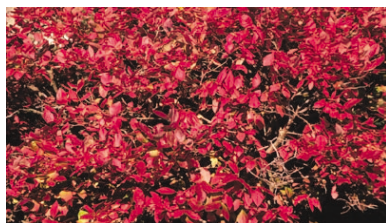
Yellow flowers, March-April. Minimal burgundy fall color. Full sun to partial shade. Poor soils. Drought and salt tolerant. Size (HxW)=5-12' x equal. Gray, winter berries. Produces suckers.



Highbush blueberry *Vaccinium corymbosum*

Eastern United States Zones 3-6

White flowers, May-early June. Yellow, bronze, orange to red fall color. Full sun to partial shade. Moist to dry acidic (pH 4.5-5.5) soil. Size (HxW)=6-12' x 8-12'. Summer berries for birds and mammals.



Chokeberry (red) *Aronia arbutifolia*

Eastern United States Zones 4-9

White flowers in May. Red-purple fall color. Full sun to partial shade. Adapts to various soil conditions. Size (HxW)=6-10' x 8-12'. Berries for winter interest. Mass plantings.



American cranberry bush *Viburnum trilobum*

Northeastern United States Zones 2-7

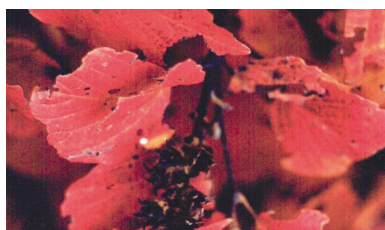
White flowers, May-early June. Yellow, reddish-purple fall color. Full sun to partial shade. Moist, well drained soil, but adapts to various conditions. Size (HxW)=8-12' x equal. Red fall and winter berries.



Fothergilla (dwarf, large) *Fothergilla gardenii*, *F. major*

Southeastern United States Zones 4-8

White flowers, April-May. Yellow, orange, scarlet fall color. Full sun to partial shade. Moist, well-drained, acidic soil. Size (HxW)=2-3' x equal. 6-10' x equal. Foundation, border, mass plantings.



Summersweet (Sweet pepper bush) *Clethra alnifolia*

Eastern United States Zones 3-9

White flowers, July-August. Pale yellow to golden brown fall color. Full sun to shade. Moist to wet, acidic soils. Salt tolerant. Size (HxW)=6-8' x 8-10'. Blooms best in full sun. Fruit.



Purple loosestrife *Lythrum salicaria*

Europe (Early 1800's)

Reddish-purple flowers in July-August, which attract insects.

Grows well in moist areas.

Height 3-10'. Large plants have a woody tap root.

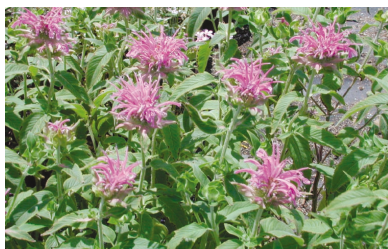


Beebalm *Monarda didyma*

Eastern North America Zones 4-9

Scarlet red, pink, lavender, white flowers, July-August. Full sun. Moist soils, not drought tolerant.

Height=2-4'. Attracts bees, butterflies and hummingbirds.



Swamp milkweed *Asclepias incarnata*

Eastern North America Zones 4-9

White, pink flowers, July-August.

Full sun to partial shade. Well-drained soils. Does well in wet areas.

Height=2-4'. Attracts butterflies.



Blue giant hyssop *Agastache foeniculum*

North America Zones 5-9

Blue flowers, August-September.

Full sun. Moist, well-drained soil.

Height=2-3'.



Joe-pye weed *Eupatorium dubium* (also *E. purpureum*)

Eastern North America Zones 4-9

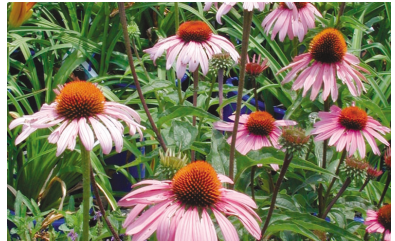
Purple flowers, August-September.
Full sun to partial shade. Moist, wet
soil. Height=5-7'. Attracts butterflies.



Purple coneflower *Echinacea purpurea*

Eastern North America Zones 3-8

Purple, white flowers, July-September. Full sun to partial shade. Well-drained soils. Drought tolerant.
Height=2-4'. Attracts butterflies.



Norway maple *Acer platanoides*

Continental Europe (1756)

Yellow fall leaf color held late into the fall. Well adapted to different soil types. Can tolerate harsh urban conditions. Used as a lawn, park and street tree.



Red maple *Acer rubrum*

Eastern United States Zones 3-9

Red flowers, March-April. Yellow, red, orange fall color. Full sun to shade. Moist, slightly acidic soil. Tolerates many conditions, including wet. Size (HxW)=40-60' x equal. Spring food for wildlife. Parks, lawns, street tree.



Sugar maple *Acer saccharum*

Eastern United States Zones 4-8

Yellow flowers, April-May. Yellow to red fall foliage. Full sun to shade. Moist, well-drained soil. Size (HxW)=60-70' x two-thirds height. Fall food for wildlife. Parks, lawns, street tree (away from salts).



Other Native Shrubs for Consideration

Arrowwood *Viburnum dentatum*

Full sun to partial shade. Moist, well-drained soil, but well adapted to various conditions. Salt tolerant. Fall berries eaten by birds.

Buttonbush *Cephalanthus occidentalis*

Full sun to partial shade. Interesting flower and fruit.

Drooping leucothoe *Leucothoe fontanesiana*

Evergreen. Partial to full shade. Acidic, moist soil.

Mountain laurel *Kalmia latifolia*

Evergreen. Full sun to shade. Well-drained acidic soil.

Connecticut and Pennsylvania state flower.

Red twig dogwood *Cornus sericea*

Full sun to shade. Moist, well-drained soil, but will adapt to various soil conditions. White fall berries eaten by birds. Bright red stems.

Rhododendron *Rhododendron carolinianum*

Rhododendron catawbiense

Evergreen. Partial to full shade. Acidic, well-drained soil.

Group plantings, foundations.

Shadbush *Amelanchier arborea*

Full sun to partial shade. Moist, well-drained, acidic soil. Good for wet areas, but not stress tolerant. Edible, purple-black summer berries.

Spicebush *Lindera benzoin*

Full sun to partial shade. Moist, well-drained soil. Very early flowers.

Attracts butterflies. Scarlet, fall berries for birds and mammals.

All parts of plant are aromatic if crushed.

Witch hazel *Hamamelis vernalis*

Full sun to partial shade. Moist soil, pH adaptable. Screen or unpruned hedge. Very early flowers.

Printed Information Sources

- Armitage, A.M. 1997. *Herbaceous Perennial Plants*, 2nd ed. Varsity Press, Inc. Athens, GA.
- Clark, R.A. and D.C. Swanson. 2001. Trees, shrubs and vines for low maintenance landscapes. *In: Strategies for Plant Health Management of Woody Ornamentals*. University of Massachusetts Extension. (413) 545-2717.
- Dirr, M.A. 1998. *Manual of Woody Landscape Plants*, 5th ed. Stipes Publishing. Champaign, IL.
- Hightshoe, G.L. 1988. *Native Trees, Shrubs and Vines for Urban and Rural America*. John Wiley & Sons, Inc. NY, NY.
- Kress, S.W. 1985. *Audubon Society Guide to Attracting Birds*. Charles Scribner's Sons. NY, NY.
- Martin, A.C., H. Zim and A.L. Nelson. 1951. *American Wildlife and Plants: A guide to wildlife food habits*. Dover Publications, Inc. NY, NY.
- Maynard, B., R. Casagrande, M. Gold, S. Livingston and S. Gordon. 1999. *Sustainable Trees and Shrubs*, 3rd Edition. University of Rhode Island Cooperative Extension. (401) 874-2900.
- Picone, P.M. 2000. *Connecticut Native Tree and Shrub Availability List*. Connecticut Department of Environmental Protection. Bureau of Natural Resources, Wildlife Division. 10pp. (860) 675-8130 or peter.picone@po.state.ct.us.
- Picone, P.M. 1995. *Enhancing Your Backyard Habitat for Wildlife*. Connecticut Department of Environmental Protection. Bureau of Natural Resources, Wildlife Division. 28pp. (860) 675-8130 or peter.picone@po.state.ct.us.
- Still, S.M. 1994. *Manual of Herbaceous Ornamental Plants*, 4th ed. Stipes Publishing. Champaign, IL.
- Taylor, S.L., G.D. Dreyer and W.A. Niering. 1987. *Native shrubs for landscaping*. The Connecticut College Arboretum. New London, CT. Bulletin No. 30. (860) 439-5020.

Internet Information Sources

Brooklyn Botanic Garden: www.bbg.org/gar2/pestaalerts/index.html#invasive

Connecticut Botanical Society: www.ct-botanical-society.org

Connecticut Invasive Plant Working Group: www.hort.uconn.edu/cipwg

Invasive Plant Atlas of New England (IPANE):
<http://invasives.eeb.uconn.edu/ipane>

Invasive Plant Council of New York: www.ipcnys.org

New England Wildflower Society: www.newfs.org

Nursery Survey on Invasive Plants: www.brown.edu/Research/EnvStudies_Theses/full9900/mhall/IPplants/Controversy.html

Pennsylvania Dept. of Conservation & Natural Resources:
www.dcnr.state.pa.us/pubsforestry.htm

USDA National Agricultural Library: www.invasivespecies.gov

USDA Natural Resources Conservation Service: www.ct.nrcs.usda.gov/landscp/invasive/websites.htm

USDA Natural Resources Conservation Service: <http://plants.USDA.gov>.

University of Connecticut Plant Database: www.hort.uconn.edu/plants/

Photo Credits: Timothy Abbey, Mark Brand, Glenn D. Dreyer, Donna R. Ellis

Designed by Paul Gough, The Connecticut Agricultural Experiment Station



U.S. Fish and Wildlife Service
Silvio O. Conte National Fish
and Wildlife Refuge
52 Avenue A
Turners Falls, MA 01376

www.fws.gov/r5Soc



The Connecticut Agricultural
Experiment Station
123 Huntington St.
P.O. Box 1106
New Haven, CT 06504-1106

www.caes.state.ct.us

The Connecticut Agricultural Experiment Station (CAES) prohibits discrimination on the basis of race, color, ancestry, national origin, sex, religious creed, age, political beliefs, sexual orientation, criminal conviction record, genetic information, learning disability, present or past history of mental disability, mental retardation or physical disability including but not limited to blindness, or marital or family status. To file a complaint of discrimination, write Director, The Connecticut Agricultural Experiment Station, P.O. Box 1106, New Haven, CT 06504, or call (203) 974-8440. CAES is an equal opportunity provider and employer. Persons with disabilities who require alternate means of communication of program information should contact the Station Editor at (203) 974-8446 (voice); (203) 974-8502 (FAX); or paul.gough@po.state.ct.us.