

## Your Opinion Counts!

1. How did you find out about the garden?  
 Website  Newsletter  Brochure  Campus Tour  
 Other \_\_\_\_\_

2. Do you currently use native plants at your home?  
 Yes  No

3. After visiting/touring the garden:  
 Have you learned about at least one new native plant?  
 Are you more aware of the benefits of using native plants?  
 Are you more likely to use native plants in your home garden?  
 Are you less likely to use non-native species in your landscape?

Comments: \_\_\_\_\_

4. Do you find the information in this brochure useful?  
 Yes  No

Please explain: \_\_\_\_\_

5. Would you like additional information?

- Coastal dunes  
 Sample native plant seed packet  
 Other brochures on native gardening

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_ Zip: \_\_\_\_\_

If you would like to subscribe to **AT SEA** (UD CMES) and/or **Estuary News** (PDE), our free quarterly e-newsletters, please include your e-mail address:

# WETLANDS

## WHAT IS A WETLAND?

There are many types of wetlands, including vegetated areas that are covered with water or have very wet soils for part of the year. Wetlands can be as small as a backyard pond or drainage swale or as large as the Everglades. The primary characteristic that makes wetlands different from other landscape features is that they are wet for at least part of the growing season — they can be wet all year or dry up seasonally.

## WHAT TYPES OF WETLANDS EXIST IN YOUR COMMUNITY?

Even if there is no open water near your home, a wet shrubby depression or grassy valley could contain wetlands that fill with water during the rainy season and are dry for the rest of the year. Freshwater wetlands receive water from one or more sources: rainwater, surface water, or ground water. Wherever you live, it is likely that there are wetlands nearby.

Wetlands serve many critical environmental functions such as providing habitat, refuge, spawning and nursery areas; producing food; cycling nutrients; absorbing flood waters; and filtering potentially harmful pollution from water.

Many beautiful plants are available to create colorful landscapes in wetland areas — a few examples are shown here:



## USEFUL RESOURCES



### Internet Resources

Adkins Arboretum  
[www.adkinsarboretum.org](http://www.adkinsarboretum.org)

American Forests  
[www.americanforests.org/resources/bigtrees/register.php](http://www.americanforests.org/resources/bigtrees/register.php)

Bowman's Hill Wildflower Preserve  
[www.bhwp.org](http://www.bhwp.org)

Delaware Native Plant Society  
[www.delawarenativeplants.org](http://www.delawarenativeplants.org)

Delaware Natural Heritage Program  
[www.dnrec.state.de.us/fw/wildrehe.htm](http://www.dnrec.state.de.us/fw/wildrehe.htm)

Delaware Sea Grant College Program  
[www.ocean.udel.edu/seagrant/](http://www.ocean.udel.edu/seagrant/)

Delaware Wildflowers  
[www.delawarewildflowers.org](http://www.delawarewildflowers.org)

Maryland Native Plant Society  
[www.mdflora.org](http://www.mdflora.org)

Native Plant Society of New Jersey  
[www.npsnj.org](http://www.npsnj.org)

Partnership for the Delaware Estuary  
[www.delawareestuary.org](http://www.delawareestuary.org)

Pennsylvania Native Plant Society  
[www.pawildflower.org](http://www.pawildflower.org)

University of Delaware Botanic Garden  
<http://ag.udel.edu/udbg>

USDA NRCS Plants Database  
<http://plants.usda.gov>

U.S. Fish and Wildlife Service  
[www.fws.gov](http://www.fws.gov)

Virginia Native Plant Society  
[www.vnps.org](http://www.vnps.org)

### Native Plant Nurseries and Suppliers

The following organizations offer native plants and seeds for sale each year:

Adkins Arboretum  
Ridgely, MD (410-634-2847)

Delaware Native Plant Society  
Dover, DE (See above website)

Delaware Nature Society  
Hockessin, DE (302-239-2334)

University of Delaware Botanic Gardens  
Newark, DE (302-831-0153)

Commercial and non-profit suppliers of native plants and seeds:

Bowman's Hill Wildflower Preserve  
New Hope, PA (215-863-2924)

Chesapeake Native Nursery  
Takoma Park, MD (301-270-4534)

Eastern Shore Nurseries, Inc.  
Easton, MD (410-832-1320)

Gateway Garden Center  
Hockessin, DE (302-239-4675)

Lord's Landscaping  
Ocean View, DE (302-539-6119)

Maryland Native Nursery, Inc.  
Baltimore, MD (410-529-0552)

Ronny's Garden World  
Smyrna, DE (302-653-6288)

Wiley Farms  
Townsend, DE (302-378-8441)

Windsor's Flowers and Plants  
Rehoboth/Lewes, DE (302-227-9481)



### This garden was made possible by:

Delaware Sea Grant College Program, Partnership for the Delaware Estuary, University of Delaware, Delaware DNREC Division of Soil and Water Conservation and Division of Water Resources, J. B. Landscaping, U. S. Fish and Wildlife Service, National Fish and Wildlife Foundation, Sussex County Conservation District, and Cape Henlopen High School Agri-Science and National Honor Society programs.



# NATIVE PLANT DEMONSTRATION GARDEN



## Adding color and texture to your backyard garden is easy with native plants!

This garden has been established to encourage residents and visitors to use native plants in home garden landscapes. By using native plants, gardeners can enhance the natural beauty of an area while providing food, protective cover, and nesting sites for birds and small animals.

Native plants are species that have evolved in a particular region over thousands of years. The plants that have been selected for this garden are well adapted to life at the coast and are easy to maintain. They require less water, fertilizer, and pesticides than non-native species, which ultimately save time, money, and reduce pollution from unnecessary chemicals.



GRASSES, FERNS, & VINES					
Photo	Name (Common & Scientific)	Characteristics (Height; Flowers)	Conditions (Light; Moisture; Soil Type)	Habitat	Notes
	<b>American Beach Grass</b> <i>Ammophila breviligulata</i>	Height: 1.5-3.5' Flowers: Jul-Sep	Light: full sun Moisture: D Soil type: L S	maritime beaches, dunes, grasslands, shrublands	prefers well-drained, sandy sites; spreads rapidly by rhizomes
	<b>Cinnamon Fern</b> <i>Osmunda cinnamomea</i>	Height: 2-5' Fruit: Apr-May	Light: full/partial sun, shade Moisture: M W Soil type: C L	woods, marshes, swamps, bogs, streamsides	tolerates drought
	<b>Royal Fern</b> <i>Osmunda regalis</i>	Height: 1.5-6' Fruit: Apr-Jun	Light: full/partial sun, shade Moisture: MW Soil type: C L S	fresh tidal and nontidal marshes and swamps, woods	tolerates full sun if moist; tolerates drought
	<b>Salt Meadow Hay</b> <i>Spartina patens</i>	Height: 1-3' Flowers: Jul-Sep	Light: full sun Moisture: MW Soil type: C L S	coastal salt and brackish tidal marshes; irregularly flooded high marsh at or above mean high tide line	forms large mats; good for shore erosion control
	<b>Sensitive Fern</b> <i>Onoclea sensibilis</i>	Height: 1-3.5' Fruit: Jun-Oct	Light: full/partial sun, shade Moisture: M W Soil type: C L S	fresh tidal and nontidal marshes, meadows, swamps, woods	spreads in wet areas
	<b>Trumpet Honeysuckle</b> <i>Lonicera sempervirens</i>	Spread: 6-12' Flowers: Apr-Oct, coral to red with yellow	Light: full/partial sun Moisture: D M Soil type: C L S	thickets, fence rows, open woods, dry stony woods, forest edges	flowers intermittently until frost; transplants well; semi-evergreen

**FLOWERING HERBACEOUS & EMERGENT PLANTS**

Photo	Name (Common & Scientific)	Characteristics (Height; Flowers)	Conditions (Light; Moisture; Soil Type)	Habitat	Notes
	<b>Black-Eyed Susan</b> <i>Rudbeckia hirta</i>	Height: 1-3.5' Flowers: Jun-Oct, yellow, black eye	Light: full to partial sun Moisture: D M Soil type: C L	fields, meadows, roadsides	meadows; attracts butterflies, bees and other beneficial insects
	<b>Blazing Star</b> <i>Liatris spicata</i>	Height: 1-6.5' Flowers: Jul-Aug, rose-purple or white	Light: full to partial sun Moisture: D M Soil type: C L S	moist meadows, open areas	drought tolerant; attractive to butterflies
	<b>Blue Flag Iris</b> <i>Iris versicolor</i>	Height: 3' Flowers: May-Jun, blue	Light: full to partial sun Moisture: M W Soil type: L S	fresh to moderately brackish tidal marshes, meadows, shores, swamps, forested wetlands	nectar attracts butterflies and other insects
	<b>Blue Vervain</b> <i>Verbena hastata</i>	Height: 1.5-5' Flowers: Jun-Oct, blue to purple	Light: full to partial sun Moisture: M W Soil type: C L S	meadows, swamps, floodplains, ditches	bright flowers; herbal uses; attracts butterflies and other nectar feeding insects
	<b>Butterfly Milkweed</b> <i>Asclepias tuberosa</i>	Height: 1-3' Flowers: May-Jul, orange	Light: full to partial sun Moisture: D M Soil type: L S	dry fields, roadsides, shale barrens	attractive seed pod; important nectar source for Monarchs and other butterflies
	<b>Cardinal Flower</b> <i>Lobelia cardinalis</i>	Height: 2-4' Flowers: Jul-Oct, red	Light: full to partial sun Moisture: MW Soil type: C L	fresh tidal and nontidal marshes, wood swamps, seeps, banks of ponds, rivers, streams	long bloom time; biennial, must reseed; attractive to hummingbirds
	<b>Common Boneset</b> <i>Eupatorium perfoliatum</i>	Height: 1-5' Flowers: Jul-Oct, white	Light: full/partial sun, shade Moisture: M W Soil type: C L S	floodplains, swamps, bogs, streambanks, meadows	attractive to butterflies and other nectar feeding insects

**KEY**  
Moisture: D=Dry M=Moist W=Wet  
Soil type: C=Clay/fine-textured L=Loamy/medium-textured S=Sandy/coarse-textured O=Organic

Photos courtesy of Delaware Sea Grant.

FLOWERING HERBACEOUS & EMERGENT PLANTS, continued					
Photo	Name (Common & Scientific)	Characteristics (Height; Flowers)	Conditions (Light; Moisture; Soil Type)	Habitat	Notes
	<b>Dogtooth Daisy</b> <i>Helenium autumnale</i>	Height: 1.5-6' Flowers: Jul-Nov, yellow	Light: full to partial sun or shade Moisture: M Soil type: C L S	woods, swamps, riverbanks, alluvial thickets, meadows, marshes, ditches	tolerates wet areas; showy flowers, herbal uses
	<b>Eastern Prickly Pear Cactus</b> <i>Opuntia humifusa</i>	Height: 0.5-1' Flowers: Jun-Jul, yellow	Light: full sun Moisture: D Soil type: L S	sandy coastal dunes, shaly soils	fruit edible, used for jelly; Delaware's only native cactus
	<b>Great Blue Lobelia</b> <i>Lobelia siphilitica</i>	Height: 1-5' Flowers: Aug-Oct, blue, violet	Light: full to partial sun, shade Moisture: M W Soil type: C L S	woodlands, meadows, swamps	long bloom time; white cultivars available
	<b>Joe-Pye Weed</b> <i>Eupatorium fistulosum</i>	Height: 1.5-10' Flowers: Jul-Oct, pink-purple	Light: full to partial sun Moisture: D MW Soil type: C L	floodplains, meadows, thickets, roadsides	herbal uses; attractive to butterflies and other nectar feeding insects
	<b>Mistflower</b> <i>Conoclinium coelestinum</i>	Height: 1-3.5' Flowers: Jul-Oct, blue, violet or purple	Light: partial sun to full shade Moisture: D MW Soil type: C L	old fields, meadows; dry sandy woods and clearings, damp thickets, streambanks	produces attractive violet-blue florets arranged in dense heads
	<b>Monkey Flower</b> <i>Mimulus ringens</i>	Height: 1-3' Flowers: Jun-Oct, blue	Light: full to partial sun Moisture: V Soil type: L	open swamps, meadows, shores	interesting flowers; attracts butterflies and other insects
	<b>New England Aster</b> <i>Aster novae-angliae</i>	Height: 1-6' Flowers: Aug-Oct, violet	Light: full to partial sun Moisture: M Soil type: L	open woods, seasonal wetlands, shores, meadows	showy, frequently cultivated; tolerates drier soils and seasonal flooding
	<b>New York Ironweed</b> <i>Veronia noveboracensis</i>	Height: 3.5-8' Flowers: Aug-Oct, purple	Light: full to partial sun Moisture: M W Soil type: L	streambanks, fields, freshwater marshes	brilliant flowers; tall upright form adds structure to garden; spreads
	<b>Orange Coneflower</b> <i>Rudbeckia fulgida</i>	Height: 1.5-3.5' Flowers: Jul-Oct, yellow-orange, black eye	Light: full to partial sun Moisture: D M Soil type: L	moist fields, meadows	cultivars have nice foliage
	<b>Oxeye Sunflower</b> <i>Heliopsis helianthoides</i>	Height: 1-5' Flowers: Jun-Sep, pale yellow	Light: full to partial sun Moisture: D M Soil type: L S	fields, open woods, floodplains, thickets, streambanks	long bloom time
	<b>Rose Mallow</b> <i>Hibiscus moscheutos</i>	Height: 3-6' Flowers: Jul-Sep, cream, pink	Light: full to partial sun Moisture: M W Soil type: C L	fresh to brackish tidal marshes, occasionally nontidal marshes	common along coast; persists in winter; split seed capsules
	<b>Seaside Goldenrod</b> <i>Solidago sempervirens</i>	Height: 1-6.5' Flowers: Jul-Nov, yellow	Light: full to partial sun Moisture: D M Soil type: L S	coastal areas, dunes	coastal plant, may occur where road salts are used
	<b>Swamp Milkweed</b> <i>Asclepias incarnata</i>	Height: 4-6' Flowers: May-Jun, pink to reddish	Light: full to partial sun Moisture: MW Soil type: C L	fresh tidal and nontidal marshes, meadows, shrub swamps, woods, shores, ditches	can tolerate drought; interesting seed pod; important nectar source for Monarchs and other butterflies
	<b>Tall White Beard-Tongue</b> <i>Penstemon digitalis</i>	Height: 2-5' Flowers: Jun-Aug, white or faintly purple	Light: full to partial sun Moisture: D M Soil type: C L S	open woods, meadows	tolerates poor drainage; attracts butterflies and other insects
	<b>White Turtlehead</b> <i>Chelone glabra</i>	Height: 1.5-6.5' Flowers: Jul-Oct, white	Light: full to partial sun Moisture: MW Soil type: C L S	woods, streambanks, swamps, thickets	strong grower; herbal uses
	<b>Wild Bergamot</b> <i>Monarda fistulosa</i>	Height: 1.5-5' Flowers: Jun-Sep, pink to purple	Light: full to partial sun Moisture: D M Soil type: C L	fields, thickets, roadsides, forest edges	aromatic, herbal uses

SHRUBS & TREES					
Photo	Name (Common & Scientific)	Characteristics (Height; Flowers)	Conditions (Light; Moisture; Soil Type)	Habitat	Notes
	<b>Arrow-wood</b> <i>Viburnum dentatum</i>	Height: 10-15' Flowers: May-Jun, white	Light: full to partial sun, shade Moisture: D MW Soil type: L S O	swamps, wet woods, bogs, floodplain forests, streambanks, low, wet acid-sand habitats	stems very straight, nice structure in winter
	<b>Beach Plum</b> <i>Prunus maritima</i>	Height: 1-8' Flowers: Apr-May, white	Light: full to partial sun Moisture: D M Soil type: L S	ocean dunes, roadsides, hedgerows	edible fruit, prized for jams and jellies; salt tolerant
	<b>Buttonbush</b> <i>Cephalanthus occidentalis</i>	Height: 6-12" Flowers: Jul-Aug, creamy white	Light: full to partial sun, shade Moisture: MW Soil type: C L S O	fresh tidal and nontidal marshes, shrub swamps, forested wetlands; stream, lake and pond edge	needs sun to flower; flowers fragrant; interesting fruit; tolerates drought; leaves may persist into winter
	<b>Eastern Red Cedar</b> <i>Juniperus virginiana</i>	Height: 50-75' Spread: 35-50' Flowers: Mar-Apr, red purple	Light: full sun Moisture: D M Soil type: C L S	broad range of habitats	berries consumed by over 50 species of birds; berries have culinary use
	<b>Eastern Redbud</b> <i>Cercis canadensis</i>	Height: 20-35' Spread: 20-35' Flowers: Apr-May, pink to lavender	Light: partial sun to shade Moisture: D M Soil type: L S	river bottoms and streambanks	early bloomer — one of the earliest harbingers of spring; fixes nitrogen
	<b>Groundsel Bush</b> <i>Baccharis halimifolia</i>	Height: 6-12' Flowers: Aug-Sep, white	Light: full sun Moisture: D MW Soil type: C L S O	fresh to salt marshes, ditches, shores, dunes	volunteers in disturbed places; shallow, lateral roots; tolerates flooding to 6 inches
	<b>Highbush Blueberry</b> <i>Vaccinium corymbosum</i>	Height: 6-12' Flowers: Apr-Jun, white or pink-tinged	Light: full to partial sun, shade Moisture: D MW Soil type: L S O	forested wetlands, shrub swamps, bogs, dry to wet woods, thickets, stream- banks, rock outcroppings	edible berries commonly cultivated
	<b>Inkberry</b> <i>Ilex glabra</i>	Height: 6-10' Flowers: May-Jun, greenish white	Light: full to partial sun, shade Moisture, D M Soil type: C L S O	forested wetlands, shrub swamps, sandy woods	berries persist through winter; male and female flowers on separate plants; tolerates some salt flooding
	<b>Loblolly Pine</b> <i>Pinus taeda</i>	Height: 70-90'	Light: full sun Moisture: D MW Soil type: C L S	floodplains, fields, slopes	many birds feed on the seeds; provides winter cover
	<b>Northern Bayberry</b> <i>Myrica pensylvanica</i>	Height: 5-10' Flowers: Jul-Aug, yellowish-green	Light: full to partial sun Moisture: D MW Soil type: C L S	tidal and nontidal fresh and brackish marshes, swamps, sand flats, dunes	fragrant leaves; tends to sucker and form large colonies; waxy berries persist through winter
	<b>Red Chokeberry</b> <i>Aronia arbutifolia</i>	Height: 1.5-13' Flowers: Mar-May, white, purple-tinged	Light: full to partial sun Moisture: D MW Soil type: C L S	forested wetlands, shrub bogs, upland forests, fields, dunes	tolerates infrequent flooding by water with some salt; can be pruned as hedge
	<b>Swamp Rose</b> <i>Rosa palustris</i>	Height: 8' Flowers: Jun-Aug, pink	Light: full to partial sun, shade Moisture: MW Soil type: C L	fresh tidal and nontidal marshes, forested wetlands, shrub swamps, streambanks	edible fruit is a berry-like hip; thorns; tolerates flooding to 3 inches
	<b>Sweet Pepperbush</b> <i>Clethra alnifolia</i>	Height: 6-12' Flowers: Jul-Aug, white/pink	Light: partial sun to shade Moisture: MW Soil type: C L S	tidal and nontidal forested wetlands, shrub swamps, bogs, woods, coastal river floodplains, lakeshores	very fragrant; nectar used by hummingbirds, butterflies and other insects
	<b>Sweetbay Magnolia</b> <i>Magnolia virginiana</i>	Height: 12-30' Spread: 12-30' Flowers: May-Jul, white to cream	Light: full to partial sun, shade Moisture: MW Soil type: C L S	forested wetlands, seeps, stream and pond edges, sandy woods	semi-evergreen; fragrant flowers; tolerates occasional flooding, some salt
	<b>Winterberry Holly</b> <i>Ilex verticillata</i>	Height: 6-12' Flowers: Jun-Jul, greenish white	Light: full to partial sun, shade Moisture: MW Soil type: C L S O	fresh tidal swamps, shrub swamps, forested wetlands	berries provide winter bird food, poisonous to humans; berries on female plants, need male plant to pollinate

For a more comprehensive list of plants and information on this native garden, please visit [www.DelawareEstuary.org](http://www.DelawareEstuary.org) and/or [www.ocean.udel.edu/nativeplantgarden](http://www.ocean.udel.edu/nativeplantgarden) or call 1800-445-4935 ext. 100.

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Please be sure to include your mailing address in order to receive your free seed packet!

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