

Gardening with New York City Native Plants



Smooth Rose



Bunchberry.
Cornus Canadensis.

Flowering dogwood



Solomon's seal



City of New York
Parks & Recreation

Michael R. Bloomberg, Mayor
Adrian Benepe, Commissioner
Bill Tai, Director, Natural Resources Group

www.nyc.gov/parks



Jack in the pulpit



Violet



Wild ginger



Butterfly weed



Columbine

What is a native plant?

A native plant is one that naturally occurs in a region without having been introduced from elsewhere by people. New York City natives include mosses, ferns, grasses, sedges and rushes, wildflowers, trees, shrubs, and vines.

Over thousands of years, native plants have adapted to the climate, soils, and environmental conditions of our area. They have developed the ability to thrive in our humid summers and freezing winters and to entice local insects, birds, and other animals to pollinate their flowers and disperse their fruits. Native plants are responsible for clean air, pure water, soil stability, flood abatement, and wild animal habitat. Humans depend on these ecological processes every day. Thus native plants are the building blocks of our biological diversity and essential to healthy, functioning ecosystems.

Unfortunately, many of these plants are in decline. Of 2,179 species currently found in New York City, only 1,359 are native (62%). Additionally, many of our native species are now gone from the five boroughs. Such locally extinct plants include beautiful wildflowers like white milkweed and pink lady's slipper orchid. Besides habitat protection, one of the most important ways to give nature a hand is to use native plants in the garden and landscape.

To determine whether a plant species naturally occurs in New York City, you may use a number of sources. Consult a good field guide such as Peterson or Audubon series. Visit a nearby park nature center, arboretum, or botanical garden. Or join a local native plant club; attending frequent field trips will teach you about the local flora. See the Resources section for more information.

What is an introduced plant?

Every plant species is native to somewhere. Introduced (exotic, alien, non-native) plant species hail from other states, regions, or countries. This exotic flora was moved to new areas by people for food (apples, rice) or ornamentation (lilacs, peonies, Queen Anne's lace) or by accident, as stowaways on commercial ships or packing materials. Over the past 350 years, thousands of plant species have been introduced to the New York area. Most live peacefully with the indigenous flora that was already here.

What is an invasive plant?

Unfortunately, a small but significant number of these introduced species are out of control. They travel from where they were planted (often through bird-dispersed seeds) and run rampant through our parks, damaging local forests, meadows and wetlands. These green bullies smother our native plants, shading them from the sun and effectively starving them to death. Some invasives are so closely related to our indigenous flora that their pollens mix, producing hybrids that overwhelm the local gene pool. This alters the plant's biology, affecting floral shape, color, or blooming time. Such dramatic change is potentially devastating for the wildlife that depends on native species. Thus invasive plants disrupt biological relationships and degrade natural areas.

Why go native in the garden?

Sense of place: Why do yards and window boxes across the country hold the same impatiens, begonias and mums? Most of America's favorite garden plants hail from places like Europe and Asia. The New York area has its own regional flavor and distinct assemblage of native plants. We should seek out alternatives to hardware stores, corner delis and other outlets that offer "one size fits all". The NYC Greenmarkets, with their emphasis on locally grown greenery, can help you cultivate a sense of home by sowing local seeds.

Ease of care: When installed in the appropriate habitat, native plants require less maintenance than the exotic alternatives. Once established, they usually need less water. They require no fertilizer and little pest control, having evolved with the area's insects and diseases. Native plants will save you money (on supplies) and time (on garden care) and will also curtail the amount of toxins (pesticides, fertilizers) used to maintain artificial conditions.

Wildlife bonanza:

Create habitat havens for our native birds, bees, butterflies and other critters. Native plants are critical sources of food and lodging for wildlife. For many locally rare animals, native plants are essential to their survival. For example, the Federally-endangered Karner blue butterfly feeds exclusively on wild blue lupine, both of which are native to New York State. As forests, wet meadows and grasslands are continually lost, gardeners can play an important role in creating habitat for our wild fauna and flora.

Added beauty:

New York City has hundreds of native species, most of which would be a gorgeous addition to any garden. These attractive plants meet every horticultural need from ground covers to lovely foliage and hardy bloomers, and all plant shapes: ferns, wildflowers, vines, shrubs, and trees. A native garden could bloom from March to November, providing year round beauty and interest.

Preserve natural heritage:

Our local biological diversity has suffered from an onslaught of exotic invasive species. Some introduced garden plants, like dame's rocket, Oriental bittersweet, privet and purple loosestrife have become noxious weeds. Adding homegrown greenery to your garden gives natives a chance to reclaim the landscape.

Cleaner waterways:

Native grasses and wildflowers provide excellent erosion control. Increased biological diversity encourages rainwater to enter the soil. Monocultures of groundcover such as lawn, periwinkle, pachysandra and English ivy create high levels of water runoff, thus encouraging local drought conditions and polluting waterways during storm events.



Virgin's bower

Native Plant Suggestions

All plants listed are native to New York and hardy to zone 5.

SUNNY WINDOW BOXES (and other dry sites)

These plants naturally thrive in low nutrient soils (like sandy sites). The container should comfortably hold at least 5" of soil, filled with a growing medium that will drain well, and placed in site with lots of sun.

Wildflowers (forbs)

- **Field pussytoes** (*Antennaria neglecta*) Aster family. Grows to 16 in. Flowers small, white, May-July.
- **Wild columbine** (*Aquilegia canadensis*) Buttercup family. Grows to 18 in. Unique red and yellow flowers attract hummingbirds in spring.
- **Butterfly weed** (*Asclepias tuberosa*) Milkweed family. Grows to 2 ft. Flowers bright orange, showy, July-August. Attracts butterflies. Foliage is a favorite food of Monarch caterpillars.
- **Smooth blue aster** (*Aster laevis*, syn. *Symphyotrichum laeve*) Aster family. Grows to 3 ft. Flowers blue, showy, Aug.-Oct. Attracts butterflies. Smooth blue-green foliage and stems.
- **Wild blue lupine** (*Lupinus perennis*) Pea family. Grows to 2 ft. A spike of showy blue flowers in May above dissected foliage. Attracts butterflies. Sole food source for Karner blue butterfly.
- **Spotted bee-balm** (*Monarda punctata*) Mint family. Grows to 3 ft. Flowers yellowish with purple spots, July-Oct. Attracts butterflies & hummingbirds.
- **Prickly pear cactus** (*Opuntia humifusa*) Cactus family. Grows to 1ft., evergreen stems "paddles", colonial, prickly. Yellow, showy flowers in June-July, red fleshy fruit, edible, Oct-Nov.
- **Seaside goldenrod** (*Solidago sempervirens*) Aster family. Grows to 5 ft. Large, showy yellow flowers in Aug-Oct. Attracts butterflies. Also try rough goldenrod (*S. rugosa*).
- **Birdfoot violet** (*Viola pedata*) Violet family. Grows to 6 in. Flowers lilac-violet with conspicuous orange centers in spring above dissected foliage. Attracts butterflies.

Shrub

- **Bearberry** (*Arctostaphylos uva-ursi*) Heath family. Grows to 6 in., evergreen leaves on a trailing woody stem. White flowers in late spring; red fleshy fruits in late summer persist into winter.

Grasses

- **Purple lovegrass** (*Eragrostis spectabilis*) Grass family. Grows to 2 ft. Flowers purple, showy, late summer.
- **Puffsh Heath dropseed** (*Sporobolus neglectus*) Grass family. Annual growing to 20 in. Blooms Aug.-Oct. Also see poverty-grass (*Sporobolus vaginiflorus*).

POTTED SHADE GARDENS

“Shade” does not mean “utter darkness.” Dappled sunlight throughout the day or attenuated light for at least 4 hours is the minimum required. Soils should have a healthy dose of organic material and be kept consistently moist. Note the many members of the Lily family, a group well-represented on our forest floors. Consider a collection of lilies. Another lovely combination is ferns mixed with spring ephemerals. The fronds begin to expand as the flowers die out.

Wildflowers (forbs)

- **Wild leek** (*Allium tricoccum*) Lily family. Grows to 1ft. Broad leaves die back before flowers (white) bloom in April-May. Spring ephemeral.
- **Jack-in-the-pulpit** (*Arisaema triphyllum*) Arum family. One of the few native species of this tropical family. Grows to 2 ft. Unique flowers in May.
- **Heart-leaved aster** (*Aster cordifolius*, syn. *Symphotrichum cordifolium*) Aster family. Grows to 4 ft. Flowers powder blue, showy, Aug.-Oct. Attracts butterflies. Also try white wood aster (*Aster divaricatus* syn. *Eurybia divaricata*). These two asters are very common in the city’s woodland understory.
- **Round-lobed hepatica** (*Hepatica americana*) Buttercup family. Grows to 6 in., semi-evergreen. Delicate blue-lavender flowers in March-April. One of our first wildflowers to bloom. Mortled leaves unfurl after petals have dropped. Spring ephemeral.
- **Smooth Solomon's seal** (*Polygonatum biflorum*) Lily family. Grows to 3 ft. Gracefully arching stems punctuated by bell-shaped greenish-white flowers in May-June. Red berries follow in late summer. Try also hairy Solomon’s seal (*P. pubescens*) and false Solomon’s seal (*Smilacina racemosa*).
- **Blue-stemmed goldenrod** (*Solidago caesia*) Aster family. Grows to 3 ft. Flowers yellow, showy, Aug.-Oct. Attracts butterflies. Try also Zig zag goldenrod (*S. flexicaulis*).
- **Wake robin** (*Trillium erectum*) Lily family. Grows to 16 in. Flowers dark red, large and showy, April-June. Spreads slowly. Our hardest trillium. NYC once had many species of this quintessential wildflower growing in our forests. Today they are all extinct in the five boroughs.
- **Perfoliate bellwort** (*Uvularia perfoliata*) Lily family. Grows to 1 ft. Bell-shaped yellow flowers, May-June.
- **Yellow forest violet** (*Viola pubescens*) Violet family. Grows to 18 in. Flowers yellow, showy, April-May. Attracts butterflies. There are many species of shade tolerant violets that are native to our area. Try also *V. blanda* (white flowers) and *V. palmata* (purple flowers).

Ferns

- **Cinnamon fern** (*Osmunda cinnamomea*) Fronds to 3 ft. Cinnamon-colored chaff mid-frond. Tolerates wet soils. Leave dead fronds over winter to protect plant. Try also *O. claytonia*.
- **Royal fern** (*Osmunda regalis*) Fronds to 4 ft. Tolerates wet soils. Very attractive and distinctive sterile fronds.
- **Maidenhair fern** (*Adiantum pedatum*) Fronds to 3 ft. A delicate spiral of airy leaflets on black, wiry stems. Spreads slowly, drought tolerant once established. One of our most beautiful native ferns.

GROUNDCOVERS TO BLANKET BARE SPOT

Wildflowers (forbs)

- **Wild ginger** (*Asarum canadense*) Birthwort family. To about 8 in. tall. Leaves lustrous green. Flowers hidden below leaves, deep purple-brown, April-May. Very shade tolerant.
- **Wild geranium** (*Geranium maculatum*) Geranium family. Grows to 22 in. Showy pink-purple flowers are held aloft cut foliage in April-June. Attracts butterflies. Shade tolerant. Spreads slowly.
- **Twoleaf mitrewort** (*Mitella diphylla*) Saxifrage family. Grows to 16 in. Flowers white, scattered along inflorescence, April-May. Also try foam flower (*Tiarella cordifolia*).
- **Mountain phlox** (*Phlox subulata*) Pink family. To about 8 in. tall. Showy purplish pink flowers attract butterflies in May-July. Prefers dry, non-fertilized soils. Great for rock gardens.
- **Old field cinquefoil** (*Potentilla simplex*) Rose family. Grows to 1 ft. Leaves are semi-evergreen. Flowers yellow, April-June. Try also Silverweed (*P. anserina*).
- **Common blue violet** (*Viola sororia*) Violet family. To about 6 in. tall. Flowers violet April-May. Attracts butterflies. Tolerant of partial shade. Freely self-sows, naturalizing in most areas.
- **Barren strawberry** (*Waldsteinia fragarioides*) Rose family. Grows to 6 in. Small clusters of yellow flowers in spring. Evergreen foliage turns bronze in winter.

Ferns

- **Hay-scented fern** (*Dennstaedtia punctilobula*) Fronds to 32 in. Colonial, forming a carpet over time. Light green, lacy fronds smell sweet early in the season. Extremely drought tolerant once established.
- **Sensitive fern** (*Onoclea sensibilis*) Fronds to 1 ft. Very attractive reproductive fronds, like a cluster of small black beads and does well in full sun, but keep moist, it’s sensitive to drought.
- **New York fern** (*Thelypteris noveboracensis*) Fronds to 18 in. Colonial, forming a carpet over time. Frond tapers to base.

Graminoids (grasses & sedges)

- **Pennsylvania sedge** (*Carex pensylvanica*) Sedge family. Grows to 12 in., leaves semi-evergreen, forming patchy ground cover (grows in clumps). Blooms April-July. Seeds eaten by songbirds.
- **Sideoats grama** (*Bouteloua curtipendula*) Grass family. Grows 2.5 ft., showy seedheads attract birds. Turns a burnished orange in fall.

Vines

- **Partridgeberry** (*Mitchella repens*) Madder family. Grows to 8 in. Small, oval evergreen leaves with pairs of white flowers in summer; scarlet berries all winter. Tolerates shade and dry soils.
- **Virginia creeper** (*Parthenocissus quinquefolia*) Grape family. Climbing woody vine or ground cover, quick growing. Foliage turns beautiful reds in autumn. Deep blue fruits in fall eaten by migratory birds.
- **Allegheny pachysandra** (*Pachysandra procumbens*) Boxwood family. This pachysandra is native to PA and south, whereas the one sold at most nurseries is from Japan and can be invasive. The native vine has attractive foliage, two-toned leaves.

BUTTERFLY GARDEN

The Composite family (Asteraceae) is arguable the best family for nectar plants. Examples of genera from this family include **Aster**, **Eupatorium**, **Coreopsis**, **Helianthus**, **Liatris**, **Solidago** and **Vernonia**. Other families with attractive blooms for butterflies are **Parsley family**-Apiaceae (*Heracleum*, *Osmorhiza*, *Zizia*), **Milkweed family**-Asclepidaceae (*Asclepias*), **Pea family**-Fabaceae (*Baptisia*, *Desmodium*, *Lespedeza*, *Lupinus*), **Mint family**-Lamiaceae (*Agastache*, *Monarda*), and **Violet family**-Violaceae (*Viola*). Both the plants and butterflies prefer sunny locations. **N.B. Butterfly bush** (*Buddleja* species) can be invasive. Consider instead the natives below.

Don't forget food for caterpillars. Such host plants include **sedges** (*Carex* spp.), **bulrushes** (*Scirpus* spp.), **grasses** (*Panicum* spp.), **trees** (e.g., poplars, birches, oaks, hickories); **shrubs** (e.g., dogwoods, willows, spicebush, viburnums), etc.

Wildflowers (forbs)

Clasping milkweed (*Asclepias amplexicaulis*) Grows to 32 in. Flowers pink-purple, June-July. Other native milkweed species: **common milkweed** (*A. syriaca*) to 6 ft., flowers lavender, fragrant, **swamp milkweed** (*A. incarnata*) to 4 ft., magenta flowers, tolerant of wet soils.

Cow parsnip (*Heracleum lanatum*) Grows to 10 ft., flowers white, June-July. Also in the Parsley Family (with that Queen Anne's lace looking floral cluster): **hairy sweet cicely** (*Osmorhiza claytonii*) Grows to 2 ft., flowers white, May-June. Try also *O. longistylis*; **golden alexanders** (*Zizia aurea*) to 32 in., flowers yellow, showy, April-June.

Wild bergamot (*Monarda fistulosa*) Grows to 4 ft. Flowers lilac or pink, July-Sept. Other native Monarda species, (all 3 species also attract hummingbirds): **horse mint** (*M. punctata*) to 3 ft, yellow flowers with purple spots and **bee balm** (*M. didyma*) to 4 ft., red flowers.

Seaside goldenrod (*Solidago sempervirens*) Grows to 6 ft, flowers yellow, showy, Aug-Oct. Large, fleshy green leaves and beautiful red stems in fall. Other native goldenrod species: *S. juncea*, *S. nemoralis*, *S. odora*, *S. rugosa*.

Also consider -

- **Dutchman's pipe** (*Aristolochia macrophylla*) Birthwort family. Grows to 30 ft. Well-behaved twining woody vine grown for large, shady foliage. Critical food source for larvae of the pipevine swallowtail butterfly.
- **Rose mallow** (*Hibiscus moscheutos*) Mallow family. Tropical looking, showy white or pink flowers in summer. Intolerant of drought.
- **Blue flag iris** (*Iris versicolor*) Iris family. Grows to 3 ft. Sword-shaped, blue-green leaves with showy violet-blue flowers in early summer. Also try *I. prismatica*.
- **Cardinal flower** (*Lobelia cardinalis*) Bellflower family. Grows to 4 ft. Striking scarlet flowers in late summer. Also try *L. siphilitica*.
- **Blue vervain** (*Verbena hastata*) Vervain family. Elongated leaves; small blue flowers in terminal spikes in summer. Also try *V. stricta*.

SHOWY TREES & SHRUBS

Native Small Trees, Tall Shrubs

- **Shadbush** (*Amelanchier canadensis*) Rose family. Grows to 25 ft. Multi-stemmed shrub with showy white flowers in April-May; edible purple fruits June-July. Fall foliage. Attractive bark.
- **Gray birch** (*Betula populifolia*) Birch family. Grows to 30 ft., often multi-stemmed. Striking bark - white with black markings. Nice fall color. Adds winter interest to the garden or yard.
- **Common hackberry** (*Celtis occidentalis*) Elm family. Grows to 70 ft. (usually much smaller), flowers April-May; black fruits Sept.-Oct. Beautiful silvery bark, corky and textured with age. Host to larvae of some butterflies.
- **Flowering dogwood** (*Cornus florida*) Dogwood family. Grows to 40 ft., fall color, showy white (sometimes pink) flowers in April-June; red fleshy fruit in Oct.-Nov. Valuable to fall migrating birds. Bark ages to an attractive patchwork of squares.
- **Witch hazel** (*Hamamelis virginiana*) Witch hazel family. Grows to 25 ft. Multi-stemmed shrub with unusual yellow flowers that bloom late, Oct.-Nov. Smooth gray bark. Small brown nuts in late fall provide food for wildlife. Shade tolerant.

Native Smaller Stature Shrubs

- **New Jersey tea** (*Ceanothus americanus*) Buckthorn family. Grows to 4 ft.; creamy white flowers June-July, when flowers are few. Attracts butterflies.
- **Inkberry** (*Ilex glabra*) Holly family. Grows to 6 ft., evergreen; small white flowers June-July; black fleshy fruits in Sept.-Nov., eaten by birds. (N.B. male and female flowers are on separate plants, both sexes must be present for fruit production).
- **Winterberry** (*Ilex verticillata*) Holly family. Grows to 15 ft., small white flowers June-July, red fleshy fruits in Sept.-Oct, eaten by birds. (N.B. male and female flowers are on separate plants, both sexes must be present for fruit production).
- **Northern bayberry** (*Myrica pensylvanica*) Bayberry family. To 10ft., tends to sucker into large colonies. Silvery bark. Holds leaves all winter. Both male and female plants are necessary to insure fruit production. Waxy berries provide food for winter resident and spring migratory birds.
- **Beach Plum** (*Prunus maritima*) Rose family. To 6 ft., attractive bark. Beautiful sculpted branching patterns. Showy white flowers early summer before leaves, edible fruits mid-summer.
- **Pinkster azalea** (*Rhododendron periclymenoides*) Heath family. Grows to 6 ft.; gorgeous tubular pink flowers, lightly fragrant, attracts humming birds in April-May. Will spread through stolons if conditions are right.
- **Highbush blueberry** (*Vaccinium corymbosum*) Heath family. Grows to 9 ft., fall foliage; small, bell-shaped white flowers May-June, blue edible fruits July-Aug., eaten by wildlife. Host to larvae of some butterflies.

Resources



Wood lily

Books

- Cullina, William. 2000. *The New England Wild Flower Society Guide to Growing and Propagating Wildflowers of the United States and Canada*. Boston, MA: Houghton Mifflin Company. 384 pp.
- Cullina, William. 2002. *Native Trees, Shrubs & Vines: A Guide to Using, Growing, and Propagating North American Woody Plants*. Boston, MA: Houghton Mifflin Company. 376 pp.
- Darke, Rick. 2002. *The American Woodland Garden: Capturing the Spirit of the Deciduous Forest*. OR: Timber Press. 376 pp.
- Stein, Sara. 1993. *Noah's Garden: Restoring the Ecology of Our Own Back Yards*. Boston: Houghton Mifflin. 304 pp.
- Stein, Sara. 1997. *Planting Noah's Garden*. Boston: Houghton Mifflin. 464 pp.

Inspiration for the Garden - Nature in New York City

- New York City Department of Parks & Recreation, Natural Resources Group - "Forever Wild" program
www.nyc.gov/foreverwild
- BBG Native Plant Garden
www.bbg.org/exp/stroll/nativeflora.html

Gardening with Native Plants

- Bowman's Hill Wildflower Preserve www.bhwp.org
- Green Landscaping with Native Plants
www.epa.gov/reg3esd1/garden/index.htm
- Landscaping for a Healthy Planet
www.envirolandscaping.org/
- Local Ecotype Guidelines
www.for-wild.org/land/ecotype.html
- Native Gardening and Invasive Plants Guide
enature.com/native_invasive/natives.asp
- Smaller American Lawns Today
arboretum.conncoll.edu/salt/salt.html

Creating Habitat for Native Wild Animals

- Backyard Wildlife Habitat
www.nwf.org/backyardwildlifehabitat/
- MonarchWatch Butterfly Gardening
www.monarchwatch.org/garden/creating.htm
- Wild Acres of Maryland www.dnr.state.md.us/wildlife/wildacres.asp

Native Plant Organizations

- Lady Bird Johnson Wildflower Center www.wildflower.org
Also has a satellite office in Westchester County
- Connecticut Botanical Society www.ct-botanical-society.org
- Long Island Botanical Society libotanical.org (no www)
- The New England Wild Flower Society www.newfs.org
- The Native Plant Society of New Jersey www.npsnj.org
- New York Flora Association www.nyflora.org
- Torrey Botanical Society www.torreybotanical.org