



NYC Parks

Species Least Preferred by Deer

Native Species Planting Guide for New York City

Species Least Preferred by Deer

Native ecosystems and horticultural plantings in the Bronx and Staten Island are experiencing extreme pressure by white-tailed deer (*Odocoileus virginianus*). White-tailed deer have no natural predators in New York City, and hunting is prohibited. **There are no plant species that are truly deer resistant; white-tailed deer are generalist herbivores, and if they are hungry, they will eat any plant material -- even the bark off of trees.** Although this reality seems grim, they do develop preferences and will ignore many plant species in their grazing patterns. Deer have co-evolved with New York City's native plant species, but many species are considered less desirable. Plant species least preferred by deer may still experience seldom or occasion damage. Browsing by deer may only occur as fresh new growth appears on plants and will then be ignored for the rest of the season. Planting a high diversity of species will minimize the impact that any deer browse will have in your overall planting design. Planting aesthetically-pleasing native species will minimize inputs and maximize benefits to pollinators and the greater ecosystem; they can be used in highly-designed landscapes or to offer a more natural look to a landscape. Many ferns and grasses are rarely damaged by deer, and strong scented perennials are often a deterrent. Additional measures, such as well-maintained deer fencing, can help to protect plantings.

As a part of [New York City's Deer Impact Management Plan](#), the New York City Department of Parks & Recreation (NYC Parks) is conducting a Deer Impact Vegetation Assessment to assess whether the Plan is meeting its goal of protecting native forests. This three-year assessment started in 2016 and examines how deer browse varies across different forest types (upland forest, maritime forest, and forested wetland), vegetation types (trees, shrubs/vines, herbaceous vegetation), deer protection methods, and time. The monitoring of rare and sensitive species during the growing season include plots within and outside of deer exclosures to better understand variations in browse and the effectiveness of deer exclosures. Preliminary findings from Project Year one and two show that there is deer browse across almost all parks in Staten Island and the Bronx.

Note: This document should be used in conjunction with the [Native Species Planting Guide for New York City – 2nd Edition](#)

Ferns

Ferns are a group of plants that are generally not preferred by deer. Fiddleheads in early spring may experience some browse. The most likely plant specimens to be affected are those along high traffic deer paths. This unfortunate collateral damage can be mitigated by planting strategically if traffic patterns are observed.

SCIENTIFIC NAME	COMMON NAME
<i>Adiantum pedatum</i>	Northern maidenhair fern
<i>Athyrium filix-femina</i>	Lady fern
<i>Dennstaedtia punctilobula</i>	Hayscented fern
<i>Dryopteris marginalis</i>	Marginal woodfern
<i>Onoclea sensibilis</i>	Sensitive fern
<i>Osmunda cinnamomea</i>	Cinnamon fern
<i>Osmunda claytoniana</i>	Interrupted fern
<i>Osmunda regalis</i>	Royal fern
<i>Polystichum acrostichoides</i>	Christmas fern
<i>Thelypteris noveboracensis</i>	New York fern
<i>Thelypteris palustris</i>	Marsh fern

Graminoids

Graminoids make up less than 10% of a deer's annual diet. Mature graminoids specimens are less palatable to deer because of their high cellulose content, which is harder to digest. Graminoids are also lower in nutrients when compared to forbs or woody plants. Fresh new growth on clumping graminoids may experience some browse, and cool season species like wild rye (*Elymus* spp.) will be foraged. Many species within the sedge family (*Cyperaceae*) will be ignored by deer; listed below are a few choices.

SCIENTIFIC NAME	COMMON NAME
<i>Agrostis perennans</i>	Autumn bentgrass
<i>Andropogon gerardii</i>	Big bluestem
<i>Andropogon virginicus</i>	Broomsedge bluestem
<i>Calamagrostis canadensis</i>	Bluejoint
<i>Carex crinita</i>	Fringed sedge
<i>Carex pensylvanica</i>	Pennsylvania sedge
<i>Carex stricta</i>	Tussock sedge
<i>Carex vulpinoidea</i>	Fox sedge
<i>Chasmanthium laxum</i>	Slender woodoats
<i>Elymus canadensis</i>	Canada wildrye
<i>Elymus virginicus</i>	Virginia wildrye
<i>Eragrostis spectabilis</i>	Purple lovegrass
<i>Juncus effusus</i>	Common rush
<i>Panicum virgatum</i>	Switchgrass

Schizachyrium scoparium
Scirpus cyperinus
Sorghastrum nutans
Tridens flavus

Little bluestem
Woolgrass
Indiangrass
Purpletop

Forbs

Forbs are among the most highly desired group of plants for deer. Forbs are highly nutritious, easily digestible, and available throughout each growing season. Forb species most likely to be avoided are those that are strongly scented, like a species from the mint family (*Lamiaceae*), or those with a coarse texture.

SCIENTIFIC NAME

COMMON NAME

Actaea racemosa
Actaea pachypoda
Ageratina altissima
Allium tricoccum
Aquilegia canadensis
Arisaema triphyllum
Asarum canadense
Asclepias incarnata
Asclepias syriaca
Asclepias tuberosa
Baptisia tinctoria
Caltha palustris
Caulophyllum thalictroides
Chelone glabra
Cirsium discolor
Dicentra cucullaria
Eutrochium dubium
Eutrochium fistulosum
Eutrochium maculatum
Eupatorium perfoliatum
Eutrochium purpureum
Eurybia divaricata
Geranium maculatum
Geum canadense
Helenium autumnale
Helianthus decapetalus
Helianthus divaricatus
Heuchera americana
Hibiscus moscheutos
Iris versicolor

Black cohosh
Doll's eyes
White snakeroot
Wild leek
Wild columbine
Jack-in-the-Pulpit
Wild ginger
Swamp milkweed
Common milkweed
Butterflyweed
Yellow wild indigo
Marsh marigold
Blue cohosh
White turtlehead
Field thistle
Dutchman's breeches
Coastal plain joe pye weed
Trumpetweed
Spotted joe pye weed
Common boneset
Sweetscented joe pye weed
White wood aster
Wild geranium
White avens
Common sneezeweed
Thin-leaved sunflower
Woodland sunflower
American alumroot
Crimson-eyed rosemallow
Harlequin blueflag

<i>Lobelia cardinalis</i>	Cardinalflower
<i>Lobelia siphilitica</i>	Great blue lobelia
<i>Mimulus ringens</i>	Allegheny monkeyflower
<i>Monarda fistulosa</i>	Wild bergamot
<i>Monarda punctata</i>	Spotted beebalm
<i>Oenothera biennis</i>	Common evening primrose
<i>Oenothera fruticosa</i>	Narrowleaf evening primrose
<i>Opuntia humifusa</i>	Eastern prickly pear
<i>Packera aurea</i>	Golden ragwort
<i>Penstemon digitalis</i>	Foxglove beardtongue
<i>Podophyllum peltatum</i>	Mayapple
<i>Potentilla canadensis</i>	Dwarf cinquefoil
<i>Potentilla fruticosa</i>	Shrubby cinquefoil
<i>Potentilla simplex</i>	Common cinquefoil
<i>Pycnanthemum incanum</i>	Hoary mountainmint
<i>Pycnanthemum tenuifolium</i>	Narrowleaf mountainmint
<i>Pycnanthemum virginianum</i>	Virginina mountainmint
<i>Rudbeckia hirta</i>	Black-eyed Susan
<i>Sanguinaria canadensis</i>	Bloodroot
<i>Sisyrinchium angustifolium</i>	Narrowleaf blue-eyed grass
<i>Solidago caesia</i>	Wreath goldenrod
<i>Solidago canadensis</i>	Canada goldenrod
<i>Solidago rugosa</i>	Wrinkleleaf goldenrod
<i>Solidago sempervirens</i>	Seaside goldenrod
<i>Symphyotrichum ericoides</i>	White heath aster
<i>Symphyotrichum laeve</i>	Smooth blue aster
<i>Symphyotrichum novae-angliae</i>	New England aster
<i>Symphyotrichum novi-belgii</i>	New York aster
<i>Symplocarpus foetidus</i>	Skunk cabbage
<i>Teucrium canadense</i>	Canada germander
<i>Thalictrum dioicum</i>	Early meadow-rue
<i>Thalictrum pubescens</i>	Tall meadow-rue
<i>Tradescantia virginiana</i>	Spiderwort
<i>Verbena hastata</i>	Swamp verbena
<i>Verbena urticifolia</i>	White vervain
<i>Vernonia noveboracensis</i>	New York ironweed

Woody Species

Woody species are a favorite among deer for their fruits and seeds as well as the tender leaves and twigs of new growth. Shrubs and trees will be targeted every season as a potential food source although species with high toxicity levels or coarse texture will most likely be avoided. Forest regeneration is increasingly threatened by the presence of deer and their preference for tree nuts, fruits, and tender saplings.

* Species with an asterisk are woody species that are the least browsed by deer, based on the first year of data from the Deer Impact Vegetation Assessment.

SCIENTIFIC NAME

COMMON NAME

TREES

<i>Acer negundo</i>	Boxelder
<i>Acer rubrum</i>	Red maple
<i>Acer saccharinum</i>	Silver maple
<i>Acer saccharum</i>	Sugar maple
<i>Amelanchier arborea</i> *	Common serviceberry
<i>Amelanchier canadensis</i> *	Canadian serviceberry
<i>Betula alleghaniensis</i>	Yellow birch
<i>Betula lenta</i>	Black birch
<i>Betula populifolia</i>	Gray birch
<i>Celtis occidentalis</i> *	Common hackberry
<i>Cornus florida</i>	Flowering dogwood
<i>Fagus grandifolia</i>	American beech
<i>Ilex opaca</i>	American holly
<i>Liquidambar styraciflua</i>	Sweetgum
<i>Nyssa sylvatica</i>	Black tupelo
<i>Pinus rigida</i>	Pitch pine
<i>Pinus strobus</i>	White pine
<i>Platanus occidentalis</i>	American sycamore
<i>Populus tremuloides</i> *	Quaking aspen
<i>Prunus serotina</i>	Black cherry
<i>Quercus bicolor</i> *	Swamp white oak
<i>Sassafras albidum</i>	Sassafras
<i>Ulmus americana</i>	Marsh fern

SHRUBS

<i>Amelanchier canadensis</i> *	Canadian serviceberry
<i>Aronia arbutifolia</i>	Red chokeberry
<i>Aronia melanocarpa</i>	Black chokeberry
<i>Cephalanthus occidentalis</i>	Buttonbush
<i>Clethra alnifolia</i> *	Sweet pepperbush
<i>Cornus amomum</i>	Silky dogwood

Cornus racemosa
Cornus sericea
Corylus americana
Crataegus crus-galli
Eubotrys racemosa
Hamamelis virginiana
Ilex glabra
Ilex verticillata
Juniperus virginiana
Kalmia angustifolia
Kalmia latifolia
Lindera benzoin
Morella pensylvanica
Oenothera fruticosa
Prunus maritima
Rhododendron periclymenoides
Rhododendron viscosum
Rhus aromatica
Rubus allegheniensis
Rubus occidentalis
Rubus odoratus
Rubus pensilvanicus
Sambucus nigra ssp. canadensis
Spiraea alba var. latifolia
Spiraea tomentosa
Vaccinium corymbosum
Vaccinium pallidum
Viburnum acerifolium
Viburnum dentatum
Viburnum prunifolium

VINES

Clematis virginiana
Lonicera sempervirens
*Parthenocissus quinquefolia**

Gray dogwood
 Redosier dogwood
 American hazelnut
 Cockspur hawthorn
 Swamp doghobble
 Witchhazel
 Inkberry
 Winterberry
 Eastern red cedar
 Sheep laurel
 Mountain laurel
 Spicebush
 Northern bayberry
 Narrowleaf evening primrose
 Beach plum
 Pinxterbloom azalea
 Swamp azalea
 Fragrant sumac
 Common blackberry
 Black raspberry
 Purpleflowering raspberry
 Pennsylvania blackberry
 American black elderberry
 Meadowsweet
 Steeplebush
 Highbush blueberry
 Blue Ridge blueberry
 Mapleleaf viburnum
 Arrowwood
 Blackhaw

Virginia virgin's bower
 Trumpet honeysuckle
 Virginia creeper

Groundcovers

Bare soil will be colonized by plant species. Planting native groundcovers can help discourage invasive species from taking hold in the landscape. Leaf texture and prickles on stems can deter deer from gaining a preference for your groundcover.

SCIENTIFIC NAME

COMMON NAME

SHRUBS

Arctostaphylos uva-ursi
Mitchella repens
Vaccinium angustifolium

Bearberry
Partridgeberry
Lowbush blueberry

VINES

Rubus flagellaris
Rubus hispidus

Northern dewberry
Bristly dewberry

FORBS

Anemone quinquefolia
Asarum canadense
Fragaria virginiana
Potentilla canadensis
Potentilla simplex

Wood anemone
Wild ginger
Wild strawberry
Dwarf cinquefoil
Common cinquefoil

GRAMINOIDS

Carex pensylvanica

Pennsylvania sedge