

## Overview of the Native Plant Garden

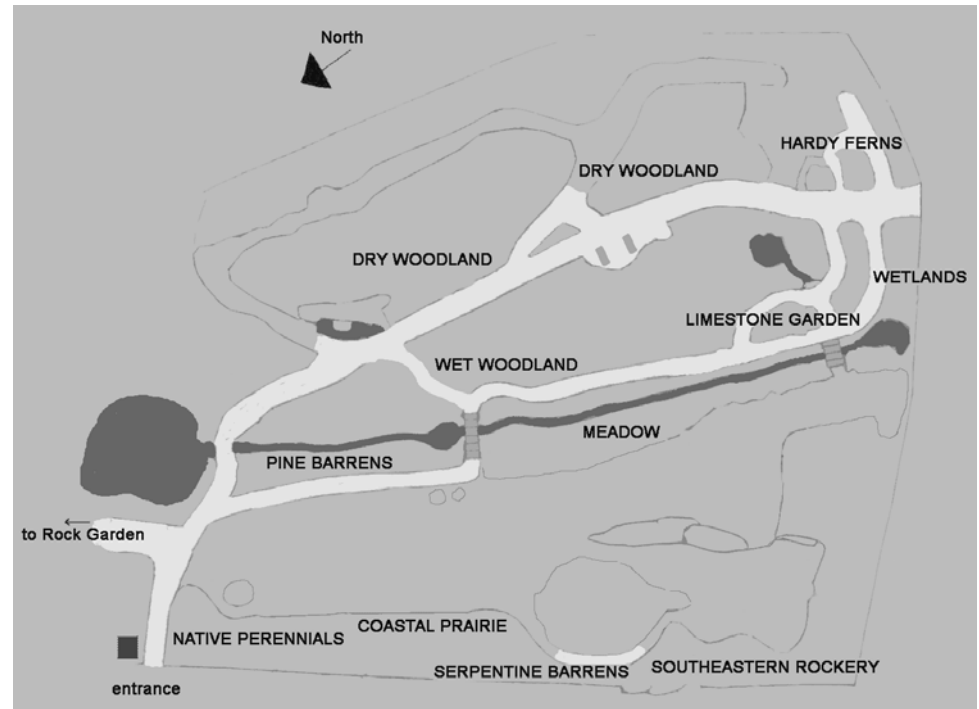
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Natives bestow certain benefits on the garden, the main point being that having adapted evolutionarily to a location or even to a microclimate, the natives are ideally suited for their environments. This means that natives survive the weather patterns well; many are quite drought tolerant. They have co-evolved with other species; many native birds and butterflies and beneficial insects are attracted to native plants. Some natives have been discovered to have medicinal properties and are commercially useful.

Once established, native plants do not generally need pesticides, fertilizers or even much watering, thus benefiting the environment and reducing maintenance costs. Most native plants thrive on neglect (after a year or two of care) and so are ideal for the haphazard or reluctant gardener. Their natural pest resistance reduces the need for toxic pesticides, and not depending on fertilizers either, there is no surplus run-off of nitrogen and phosphorus to pollute water supplies, thereby improving the ecological environment.

By contrast some non-natives have been introduced and have become aggressive in taking over and crowding out other plants. Often the invaders have no enemies to limit their spread. They become difficult to control and create a monoculture that supplants the natural bio-diversity necessary for a healthy ecosystem. Purple loosestrife (*Lythrum salicaria*) is a typical example of this—it has replaced up to half of the native flora in infested areas and seems to have contributed directly to the disappearance of birds from infested regions as they move on to find more suitable cover and food. It has been estimated that some 25% of flowering plants in North America are alien species, mostly from Eurasia.



### Habitats/Sections of the Native Plant Garden

- The **Native Perennials** section is by the entrance; April bloomers include Golden Alexanders (*Zizia aptera*), Allegheny Spurge (*Pachysandra procumbens*), Wild Geranium/Cranesbill (*Geranium maculatum*), Virginia Bluebells (*Mertensia canadensis*), and Wild Ginger (*Asarum canadense*).
- The **Coastal Prairie** is based on the historic Hempstead Plain of Long Island; these are mostly late-summer bloomers in the sunflower family, but note April blooming shrub/tree Nantucket Shadbush/Serviceberry (*Amelanchier nantucketensis*)
- The **Serpentine Barrens** is named for the mineral *serpentine*, which is green with magnesium and other toxic minerals and contributes to dry, acidic, eroding, nutrient-poor soils that few plants tolerate. Star Chickweed (*Stellaria pubera*) blooms in April.
- The **Southeastern Rockery** is a rocky area in the southern part of the garden; April bloomers include Allegheny Spurge (*Pachysandra procumbens*), Celandine Poppy (*Stylophorum diphyllum*), and Mayapple (*Podophyllum peltatum*).

- The **Pine Barrens** offers sandy, acidic, nutrient-poor soil featuring dwarf species. In April you may find Pyxie/Flowering Moss (*Pyxidantha barbulata*) in bloom as well as some Equisetum/Scouring Rush/Horsetail coming up (*Equisetum arvense*).
- The **Meadow** lies along a small stream leading from the pond; it is similar to the prairie—minus the grasses.
- The **Limestone Garden** offers plants that thrive in calcite-rich soils associated with sedimentary rocks and clay. One April bloomer here is Goldenseal (*Hydrastis canadensis*).
- The **Wetlands** feature plants that can tolerate the oxygen-poor soils saturated each spring with water.
- The **Hardy Ferns** section contains both native and non-native ferns identified by sign color: natives have brown signs and exotics have green signs. Growing among the ferns are April ephemerals Trout Lily/Dogtooth Violets (*Erythronium americanum*), Mayapple (*Podophyllum peltatum*), and Spring Beauty (*Claytonia virginica*)
- The **Woodland** offers a loose tree canopy admitting sunlight in early spring before trees leaf out to shade the shrubs and wildflowers below. The low-lying **Wet Woodlands** offer April flowers from Skunk Cabbage (*Symplocarpus foetidus*) and Golden Club (*Orontium aquaticum*) along with vibrant red berries from Winterberry (*Ilex verticillata*). The high-ground **Dry Woodlands** wildflowers include the following: False Rue Anemone (*Isopyrum biternatum*), Bloodroot (*Sanguinaria canadensis*), Blue Cohosh (*Caulophyllum thalictroides*), Celandine Poppy (*Stylophorum diphyllum*), Columbine (*Aquilegia canadensis*), Cuckooflower/Lady's Smock (*Cardamine pratensis*), Crested Dwarf Iris (*Iris cristata*), Dutchman's Breeches (*Dicentra cucullaria*), False Hellebore (*Veratrum viride*), Foamflower (*Tiarella cordifolia*), Jack-in-the-Pulpit (*Arisaema triphyllum*), Jacob's Ladder (*Polemonium vanbruntiae*), Marsh Marigold (*Caltha palustris*), and Mayapple (*Podophyllum peltatum*)

### Three of the Native Plant Garden signs:

#### **Coastal Prairie**

"This small piece of prairie features grasses and other herbs native to the east coast. Prairie—dry land densely populated by grasses whose matted roots form a thick layer of sod—once covered a large section of Long Island, the historic Hempstead Plain. Only a tiny fragment of this coastal prairie remains today."

"Lightning causes fires in dry grassland. The roots of prairie plants survive fire, but trees and shrubs do not. This insures that only prairie plants grow back and the habitat persists. Native Americans used to set fires to maintain grasslands for hunting. The New York Botanical Garden staff burns this prairie in spring to reduce undesired species and enrich the soil with ash."

#### **Hardy Fern Collection**

"Surrounding you is the F. Gordon Foster Hardy Fern Collection, which contains over 150 types of ferns from temperate regions of the world. Ferns native to northeastern North America are identified with brown labels, those from other regions with green labels. Notice the range of forms, textures, and colors—especially the diversely curled, ruffled, and scalloped leaves."

"Ferns were among the first land plants to occupy the earth. Today, they flourish in a wide range of habitats, from tropical rain forests, to deserts, to arctic tundra. Ferns reproduce by means of microscopic spores that grow in visible clusters on various parts of the plants. Young fern leaves or fronds, before they unfurl, form a fiddlehead or bishop's crosier that is sometimes eaten as a delicacy."

#### **Meadow**

"This meadow, extending to your left and right, comes into peak bloom from August through September, when plants reach 4 to 8 feet in height. This meadow contains a wide variety of plants, as opposed to the prairie, which is grass dominated. The meadow is burned in the early spring and comes to life again from seeds and roots left in the ground or seeds carried by wind and wildlife."

"A meadow is usually temporary. When land is disturbed—by fire, flood, or human activity; pioneer species, usually sun-tolerant with wind-borne seed, are the first to colonize the newly disturbed soil. When grasses and other non-woody flowering plants dominate the area, it is called a meadow. After ten or more years woody shrubs and trees usually begin to invade, gradually changing the meadow into a forest. This process is called plant succession."