

## Native Plant Garden · February 13, 2005

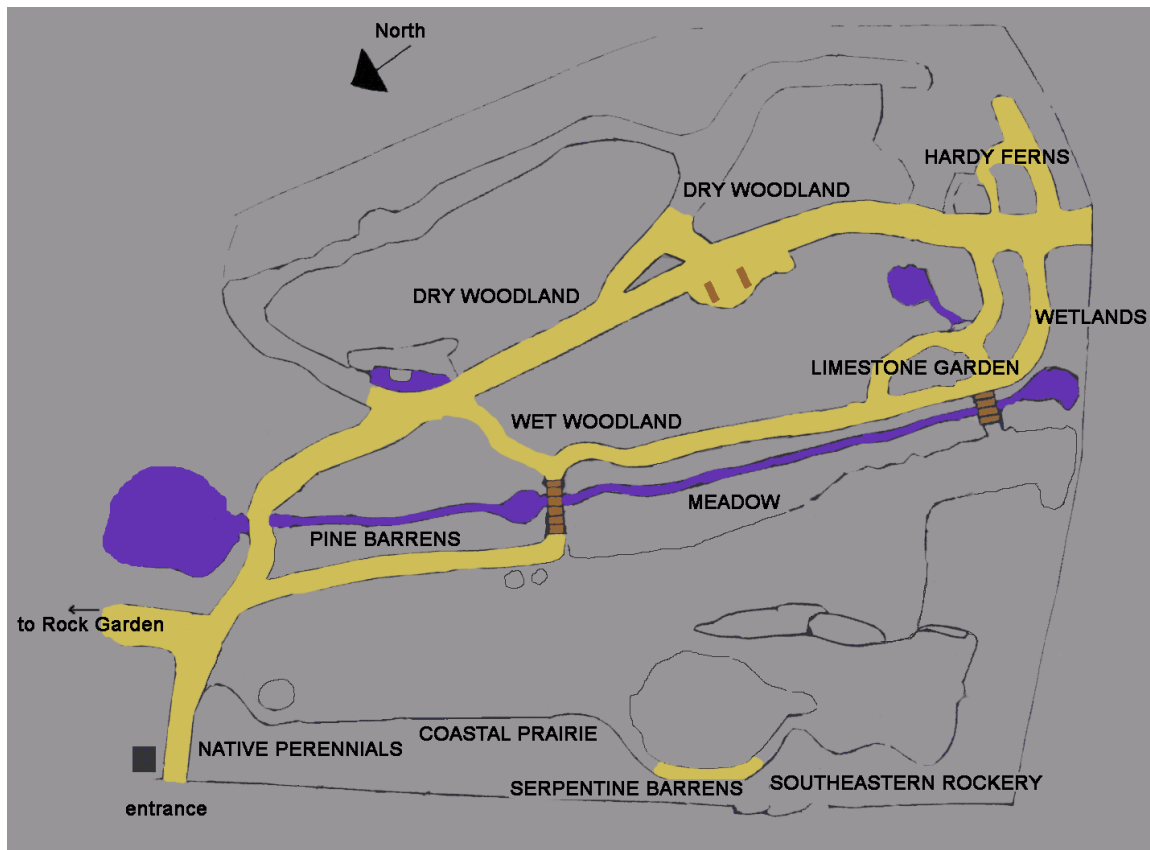
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- Evolution: natives are adapted to their environments. They survive the local weather and climate patterns (they can be drought tolerant), and some thrive on neglect.
- Co-evolution: Native plants have co-evolved with other species (native birds, insects and animals). Due to their development of chemical self-defense, natives have been discovered to have medicinal properties and can be commercially useful; some natives may also be distasteful to overpopulating herbivores such as rabbits and deer, whereas others attract pollinators and therefore enhance a butterfly or songbird garden.
- Native plants do not generally need fertilizers, herbicides, pesticides or much watering once established, thus benefiting the environment and reducing maintenance costs (most thrive on neglect). Natural pest resistance reduces the need for toxic pesticides; not depending on fertilizers, there is no surplus run-off of nitrogen and phosphorus to pollute ground water, thereby improving the ecological environment.
- Some non-natives have become aggressive in 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 bio-diversity necessary for a healthy ecosystem. Purple loosestrife is a typical example of this — it has replaced up to 50% 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, chiefly from Eurasia.

Botanical “Latinized” name vs. common names: For instance, the houseplant geranium is in fact not a *geranium* but a *pelargonium*. The true geranium is a garden flower native to North America and Eurasia. Another example is the Bluebell, which is either *Mertensia virginica*, a native of this area and a member of the Borage family, or *Endymion non-scripta*, a native of England and member of the Lily family.

The curator for the Native Plant Garden is Sarah Carter.



### Coastal Plain

"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."

### 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."

## Hardy Ferns

"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."

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