

A photograph of a yellow-green bird with dark wings perched on a pink flower stem. The background is a soft, out-of-focus green. The text 'Plant This...' is written in a yellow, cursive font on the left side. The text 'The Beauty and Benefits of Native Plants' is written in a white, cursive font on the right side.

*Plant
This...*

*The Beauty
and Benefits of
Native Plants*



Monarch butterfly enjoying
nectar of anise hyssop
(*Agastache foeniculum*).

What are “native” plants and why are they important?

In our area, native plants are the species that were here before European settlers arrived. They are critically important because they are the first link in the food chain. Insects native to our region co-evolved over millions of years with native plants. They cannot eat non-native plants. Monarch butterflies are a good example. They must lay their eggs on native milkweed plants or the larvae will die.

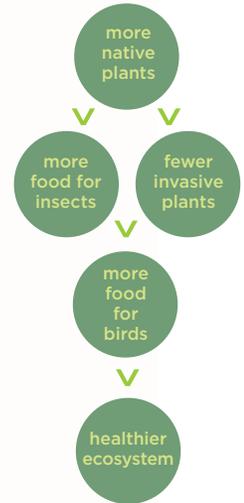
In recent generations, as gardeners have favored non-native plants, insects have struggled to find food. Our native birds depend almost entirely on insects to feed their young. Songbird populations in our area are crashing and many species are disappearing. Loss of insect populations is one of the primary reasons. Increasing the number of native plants in our gardens increases food sources for insects and enables songbirds to feed their young.

There’s another problem with non-native plants. Because our insects can’t eat them, these plants have no natural controls. As a result, they may become invasive and overwhelm native plant populations. As you drive along our highways and see trees smothered by vines, you witness the result. The same thing is happening in our woods, parks, and neighborhoods.

So, which plants are native? How do we include them in our gardens?

This booklet offers a few native alternatives to popular non-native garden plants. All the recommended species may be found in local nurseries and are easily incorporated into your garden. Substituting natives for non-natives, or just adding more native species to existing plantings, will increase food sources for the insects necessary to sustain our native bird populations. In addition, you may find yourself using less water, less fertilizer, and maybe even less labor to enjoy a beautiful garden.

Catherine Ludden



Native Plants

- 🌿 Feed the insects birds need to raise their young.
- 🌿 Are nutritious for birds, pollinators, and other animals.
- 🌿 Are host plants essential for butterfly reproduction.
- 🌿 Promote biodiversity.
- 🌿 Require less or no fertilizer, pesticides, and irrigation.
- 🌿 Tolerate local soil chemistry and climate extremes.

Non-Native Plants

- 🍀 Do not support insects essential to bird life.
- 🍀 Do not support pollinators in reproduction.
- 🍀 Often are, or may become, invasive.
- 🍀 Reduce biodiversity.
- 🍀 Attract non-native pests.
- 🍀 Are less tolerant of local soil and climate extremes.

On the following pages are pairs of native alternatives to popular non-native plants for you to consider when planting or renovating your garden.

Grasses



Plant This:

There are native ornamental grasses for every situation—sun or shade, wet or dry, tall and upright, or low and fountain-like. They all provide food and shelter for native insects and birds, and are deer-resistant. Try **Tufted hairgrass** (*Deschampsia cespitosa*), **Little Bluestem** (*Schizachyrium scoparium*), **Switch grass** (*Panicum virgatum*), or **Prairie dropseed** (*Sporobolus heterolepis*) for year-round interest in any garden.



Not That:

Many popular non-native ornamental grasses (**Miscanthus**, **Pennisetum**) are invasive. Why use them at all when native grasses are available for every ornamental style?

Flowering Vines



Plant This:

Trumpet honeysuckle (*Lonicera sempervirens*) is available with red, pink, or yellow flowers. Not only can it decorate a fence or wall, it attracts hummingbirds, and its fall berries feed migrating birds.



Not That:

Japanese honeysuckle (*Lonicera japonica*) and related non-native vines (*Lonicera morrowii*, *L.x bella*, *L.tatarica*, *L.maackii*) are so invasive they have now been prohibited for sale or distribution in New York and other states. They choke trees and kill roadside shrubs all over the United States.

Fall Color



Plant This:

For dazzling fall color, it's hard to beat **blueberries!** Both high-bush (*Vaccinium corymbosum*) and low-bush (*Vaccinium angustifolium*) blueberries offer three-season interest, not to mention delicious berries for you and the birds. With pretty white flowers, compact shrub form, gorgeous fall color, edible fruit, and great wildlife benefits, what could be better?



Not That:

Burning bush (*Euonymus alatus*) is a one-trick pony that has degraded our forests by spreading itself widely and supplanting native species. Its only virtue, fall color, is easily beaten by many native plants with multi-season interest. For most of the year, burning bush is a scraggly, undistinguished shrub of limited aesthetic value. It is now on New York's list of regulated invasive plants.



Colorful Leaves

Plant This:

Ninebark (*Physocarpus opulifolius*) is a native plant that is becoming more popular due to new cultivars with leaf colors ranging from deep purple through copper or bronze to lime green. All have showy white flowers in early summer and are suitable for many different garden designs.



Not That:

Japanese barberry (*Berberis thunbergii*), in all its varieties, is a dangerous invasive that has not only infested our woodlands, but has been shown to increase populations of deer ticks carrying Lyme disease. Birds carry barberry seeds to the woods where the plants revert to thorny green thickets, providing year-round shelter for mice that carry infected deer ticks. Thus, the ticks remain active year around, increasing their populations. Japanese barberry is prohibited for sale or distribution in New York.

*As You Plan New Areas,
Consider This:*

Native meadow plants support life. Whatever conditions prevail in your garden, there are meadow plants that will work and provide year-round interest. Meadow grasses and perennials are gorgeous mixed in typical flower beds, or you can devote an area to a natural meadow planting. Meadow plantings are deer-resistant and drought-tolerant, and need not look wild or weedy. Hardscape or mown paths will set them off and highlight their beauty. Anywhere lawn grows—and many places where it won't—can become a meadow planting.



Not That:

Lawn is an ecological wasteland. The roots are only a few inches deep, so lawns require constant irrigation; but they cannot absorb heavy rainfall, so they contribute to runoff. Chemical fertilizers mix with storm water runoff and pollute our waterways. Constant maintenance with mowers, edgers, and blowers contributes to noise and air pollution. Virtually the only wildlife supported by lawn are grubs, the larvae of Japanese beetles, which is why so much pesticide is applied, making most lawns toxic to beneficial insects, as well as to children and pets.

Butterfly Garden



Plant This:

Joe Pye weed (*Eupatorium maculatum*) sports showy, nectar-loaded flowers, blooms from midsummer to fall, and attracts butterflies. Like many other native flowering plants, it also hosts butterfly larvae, so your garden becomes a source of more butterflies. The bigger the variety of natives, the greater the number and variety of butterflies. Try coneflowers (*Echinacea spp.*); hyssop (*Agastache foeniculum*); milkweed (*Asclepias spp.*); beebalm (*Monarda spp.*), and goldenrod (*Solidago spp.*).



Not That:

Butterfly bush (*Buddleia davidii*) attracts butterflies, but that is not a good thing. There is not one species of butterfly in our region whose larvae can survive on butterfly bush. If a butterfly drinks nectar from the flowers and then lays her eggs on the leaves of this plant, the larvae will die. So, butterfly bush leads to fewer butterflies, not more. Originally from Asia, it has no insect or animal controls in North America. It produces billions of seeds and is wildly invasive.

Spring-Flowering Shrubs



Plant This:

Shadbush or serviceberry (*Amelanchier spp.*) is one of our most valuable native shrubs. It blooms in early spring, covering itself in profuse white flowers that provide nectar for early-season pollinators. In summer, it has an airy form allowing underplanting. It also produces delicious edible berries; but the birds, chipmunks, and squirrels will usually get to them before you can. Its last trick is fabulous fall color. Shadbush gives you three seasons of garden interest and is beneficial to humans and wildlife.

Not That:

Ah, **forsythia**. This ubiquitous Asian shrub (*Forsythia spp.*) does only one thing: it blooms early in a yellow that some find cheerful, others garish. It is invasive in several states, rooting itself wherever its branches touch the ground. It is everywhere, but it does nothing for insects, butterflies, or birds. If we replaced even a small percentage of all those forsythias with native flowering shrubs, it could make a real difference in biodiversity. Be creative! Replace that old forsythia hedge with a mixed border of native flowering shrubs.

Ornamental Trees



Plant This:

Our native **flowering dogwood** (*Cornus florida*) is a three-season beauty. Its fall berries are an important source of nutrition for migrating birds. Although its popularity has been challenged by non-native dogwoods thought to be more disease-resistant, it appears that the disease actually came into the U.S. on the non-natives. However, newer cultivars of the native dogwood are disease-resistant. Other gorgeous native ornamentals are **redbud** (*Cercis canadensis*), **shadbush or serviceberry** (*Amelanchier spp.*), and **Virginia fringetree** (*Chionanthus virginicus*).

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Not That:

Kousa or Korean dogwood (*Cornus kousa*) has become very popular in the nursery trade, and new cultivars appear every year. But planting more of these trees is problematic if, as suspected, they host the anthracnose fungus that has damaged native dogwoods. The fall berries of the Kousa are too large for most birds to swallow, and even squirrels seem to ignore them. Yet the tree has already begun to naturalize in New York, signaling a potentially invasive species



Shade Trees

Plant This:

The single most important thing you can do for biodiversity is to plant—or save—a **native oak tree**. No other plant supports more wildlife. A mature oak takes up thousands of gallons of storm water each year, reducing runoff, but needs little to no supplemental irrigation. Plant an oak! Any of these would be a great choice: **red oak** (*Quercus rubra*), **white oak** (*Q. alba*), **pin oak** (*Q. palustris*), **willow leaf oak** (*Q. phellos*), **scarlet oak** (*Q. coccinia*).

Not That:

Norway maples (*Acer platanoides*) are an invasive disaster in our forests. They seed themselves prolifically, shade out native perennials, native understory shrubs, and seedlings of native trees. They are worthless as a food source to wildlife. The fall color of the Norway maple is a dull yellow, and pales in comparison to that of our native red or sugar maples. Sale of Norway maples, both the green and purple-leafed form, is now regulated under New York's invasive species law.

Groundcovers... for Sun



Plant This:

Barren strawberry (*Waldsteinia fragarioides* or *Geum fragarioides*) is a low-growing, semi-evergreen groundcover that blooms in early spring with bright yellow flowers. It is drought-tolerant and can hold a bank to prevent erosion, but won't climb your trees or invade the woods. It is easily controlled and absolutely beautiful. Other groundcovers that benefit wildlife and are beautiful options to replace invasive plants include **golden groundsel** (*Packera aurea*); **mountain mint** (*Pycnanthemum muticum*); and **bearberry** (*Arctostaphylos uva-ursi*).



Not That:

A depressing amount of real estate is dedicated to non-native **pachysandra** (*Pachysandra terminalis*). Homeowners seem to plant it under trees, along driveways, and anywhere they don't know what else to do. While it doesn't do much harm if it is surrounded by pavement or regularly mown lawn, it doesn't do much good either. When it's planted near wooded areas, it's a disaster. Because nothing eats it and it can grow in sun or shade, it spreads aggressively, quickly overpowering everything on the woodland floor.

...and for Shade



Plant This:

Dwarf crested iris (*Iris cristata*), available with purple or white flowers, is a low, fast-growing native groundcover. It dies back over the winter, but comes up and blooms early. It's easily controlled and easily divided. Often we think of shady areas as problems to be solved by non-native groundcovers. But since most of our region was once forest, there are hundreds of native plants perfect for shade. Try these deer-resistant groundcovers: **Bunny Blue sedge** (*Carex laxiculmus*); **Pennsylvania sedge** (*Carex pennsylvanica*); **Canadian wild ginger** (*Asarum canadensis*); or **New York fern** (*Thelypteris noveboracensis*).



Not That:

English ivy (*Hedera helix*), all ivy, is non-native and invasive. The destructive power of ivy is frightening. As it climbs trees, it steals light and breaks branches, choking trees from the bottom up. On the ground, it smothers everything on its way to the next tree. It has no controls or competition. **Periwinkle** (*Vinca minor*) is also an invasive non-native plant infesting woodlands throughout our region. **Wintercreeper or climbing euonymous** (*Euonymous fortunei*) is another. These plants should be avoided.

Flower Power



Plant This:

Native perennials are always a better choice for the environment than annuals. Sun-loving perennials such as coneflowers (*Echinacea spp.*), tickseed (*Coreopsis spp.*), sneezeweed (*Helenium autumnale*) and butterfly weed (*Asclepias tuberosa*) provide long-lasting color. In shade, count on foamflower (*Tiarella spp.*); coralbells (*Heuchera spp.*), and Indian pinks (*Spigelia marilandica*) for color where you need it most.



Not That:

Production of **annuals** by the nursery trade requires huge amounts of chemical fertilizer, pesticide, and water. Interstate distribution of massive numbers of plants every year has resulted in accidental spread of pests and disease. Replanting annuals every year is more work for you, and using the too-common plants sold by garden centers and big-box stores makes your garden look like everybody else's. It's ok to fill your containers with annuals, where you can use plenty of fertilizer without overloading your soil, but use the valuable space in your garden for native plants. 🌱



Bee visiting sneezeweed
(*Helenium autumnale*).

Resources

Leopold, Donald J.

Native Plants of the Northeast:

A Guide for Gardening & Conservation

Portland, Ore., Timber Press, 2005

Summers, Carolyn

Designing Gardens with Flora of the American East

New Brunswick, NJ, Rutgers University Press, 2010

Tallamy, Douglas W.

Bringing Nature Home:

How Native Plants Sustain Wildlife in Our Gardens

Portland, Ore., Timber Press, 2007

Zimmerman, Catherine

Urban and Suburban Meadows:

Bringing Meadowscaping to Big and Small Spaces

Silver Spring, MD, Matrix Media Press, 2010

The Author



CATHERINE LUDDEN is a former Wall Street lawyer who is currently devoting herself to environmental interests, particularly the importance of native plants. The meadow garden pictured on the center spread is part of her former front lawn. A member of the steering committee of the Native Plant Center at Westchester Community College and member of the board of directors of Greenburgh Nature Center, she is Conservation Chair of the Garden Club of Irvington.