

## Landscaping with Native Plants

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If we can judge the popularity of a gardening endeavor by the number of books written on it then the decade of the 90's should be known as the decade of native plant gardening, at the very least in a relative sense. We have 15 books on native plants or wildflowers that were published in the 90's, but only 3 from the 80's, 2 from the 70's and 1 from the 60's (and with recent publication of William Cullina's great new book, The New England Wildflower Society Guide to Growing and Propagating Wildflowers of the United States and Canada, already 1 book in the 00's). Many of you may have been growing native plants in your home gardens for many years. Others might be wondering what all the fuss is about, and usually have two questions: What plants can be considered native and why should I incorporate them into my garden?

Native plants are those that grow naturally in a certain region and were not introduced to that region by humans. So many "wildflowers" are not native plants. For example, purple loosestrife (*Lythrum salicaria*) grows naturally in our region but was introduced here from overseas. It has become a problem plant in wet meadow habitats, forming virtual monocultures that crowd out indigenous species. The same could be said for many of the plants included in wildflower seed mixes although most are not quite the rogue that purple loosestrife has become.

As you can see from my definition of native plant, in order to determine whether a plant is native or not, a gardener must first circumscribe the region that he or she considers their garden to be a part of. And this is largely subjective and up to the whim of the individual gardener. You might decide that you are a Catskill Mountain gardener or an Ulster County gardener or a Hudson Valley gardener or an eastern deciduous forest gardener. Any of these choices would be fine. Gardening with native plants should not be thought of as an intrusion of political correctness into the horticultural world, but as an attempt to develop gardens that possess a regional identity. Does your shade garden consist largely of Japanese pachysandra, hostas and impatiens, struggling to grow under a Norway maple and alongside a hedge of forsythia overtopped with Japanese honeysuckle? If so, you have plenty of company around the world. Now suppose the denizens of your shade garden are wild ginger (*Asarum canadense*), wood poppy (*Stylophorum diphyllum*), Solomon's seal (*Polygonatum biflorum*), lady fern (*Athyrium filix-femina*), sweet white violet (*Viola blanda*), and Pennsylvania sedge (*Carex pensylvanica*), growing under the shade of red oak (*Quercus rubra*) and sweet birch (*Betula lenta*) with withe-rod (*Viburnum cassinoides*) and high-bush blueberry (*Vaccinium corymbosum*) in the understory. Your shade garden is a microcosm of eastern North America deciduous forest. And, with the exception of the wood poppy which has more of a midwestern and southern distribution, all the plants in your shade garden can be found growing locally.

But how about that wood poppy? Some might wonder if a native plant gardener has no qualms about putting wood poppy into a Catskill Mountain or Hudson Valley garden even though the species doesn't grow wild in these locations, what's so wrong with growing one of those wonderful Asian jack-in-the-pulpits like the Japanese cobra lily (*Arisaema sikokianum*)? The answer is nothing is wrong with growing Japanese cobra lily in your shade

garden or a few hostas. This is an example of ecological gardening in which the gardener uses species from around the world that are adapted to our environmental conditions. The garden becomes a composite of native plants and plants from similar bioregions around the world, but still retains a strong regional identity. Obviously the strength of that identity begins to wane as the proportion of non-native species in the garden increases as do the advantages that come from growing native plants. At the extreme is the hosta-Norway maple-forsythia-Japanese honeysuckle garden that has no native plants, no regional identity, and none of the advantages that come from growing native plants, but does have certain disadvantages that can arise from the use of exotic plants in the garden.

There are five reasons to incorporate native plants into your garden.

### **(1) Aesthetics - Native plants are ornamental**

Some of the hottest plants in ornamental horticulture currently come to us from Asia, where plant explorers continue to find new and interesting and occasionally even spectacular plants, for example the Japanese cobra lily mentioned above. Many gardeners find these plants to be more interesting or beautiful than our native plants and certainly Asia has a much more diverse group of jack-in-the-pulpits than occurs in eastern North America, where we have only two members of the genus, jack-in-the-pulpit, *Arisaema triphyllum*, and the green dragon, *Arisaema draconitum*. Now we happen to find our own jack-in-the-pulpit to be as attractive and interesting as most of the Asian species and the green dragon as unusual, but there is a natural human tendency to value the new and exotic over the commonplace. But if it's the new and unusual you're after, how about *Baptisia*, a genus of North American plants that most of you are probably not familiar with but which contains at least a half dozen stately plants with interesting, blemish-free foliage, pea-shaped flowers that come in shades of blue, white, or yellow, and ornamental seed pods. If you're just looking for beauty and don't mind commonplace, it's hard to beat *Echinacea* or *Rudbeckia*, two uniquely North American genera whose members include some of the most popular and beautiful garden plants. Or, if diversity is your thing, North America is home to around 250 species of *Penstemon*, and virtually every member of the genus is a wonderful ornamental with tubular flowers in shades of red, pink, purple, blue, yellow and white. We could describe many more great North American plants but we think you get the point: the plants of North America are every bit as garden-worthy and ornamental as those that hail from other continents. If you don't believe me, just check with European gardeners, whose flower borders rarely go without such North American plants as joe-pye-weed (*Eupatorium* spp.), goatsbeard (*Aruncus dioicus*) or black cohosh (*Actaea racemosa*) or European plant breeders who create cultivars of many of our native plants, then send them back over the Atlantic to unsuspecting gardeners who snap them up, not realizing that the progenitor of the cultivar can be found growing wild nearby and be just as attractive in their gardens. A perfect example is *Helenium* - nursery catalogs are full of cultivars with names such as Kugelsonne (Sunball) or Dunkelpracht (Dark Beauty) that were created by European breeders. They are primarily derived and in many cases are indistinguishable, at least to my eye, from sneezeweed or Helen's flower, *Helenium autumnale*, a common wet meadow plant of eastern North America.

### **(2) Horticulture - Native plants are adapted to the conditions we garden in**

For beginning gardeners especially, who may not yet be as knowledgeable about plant needs as more experienced gardeners, native plants take the guesswork out of gardening and help ensure that one's first garden doesn't become one's first, very expensive, compost pile. If you choose plants that are native to our region they are likely to thrive in our warm, wet summers,

fluctuating spring temperatures, cold winters, and, usually, acidic, clayey, rocky, soils. After all, these are precisely the conditions in which the plant grows in the wild, and without the nurturing hand of the gardener. Of course, knowledge of plants still helps. Marsh marigold (*Caltha palustris*), not a marigold at all, but a member of the buttercup family, is a common native plant in our area, but as you can surmise from its name, inhabits wet meadows and pondsides and needs abundant moisture in spring - it will languish and die in a location that is sunny and dry throughout the year. The beginning gardener can't just assume that because marsh marigold is a native plant that it will thrive in any garden location.

Although it seems to be a common notion, it is not necessarily the case that native plants are more unpalatable to the current scourge of our gardens, the white-tailed deer, than exotic plants. For example, there is probably no plant more reliable deer-resistant than the daffodil, which hails from Europe and North Africa, while one of our most beautiful native plants, the cardinal flower (*Lobelia cardinalis*) is like candy to deer - if they find it they will eat it.

### **(3) Ecology - Native plants provide habitat and food for wildlife**

Virtually all plants, native or exotic, provide nesting areas for birds and small mammals, and food for them as well - and food for many different kinds of insects including butterflies, bees, and garden beneficials (those insects such as ladybird beetles and syrphid flies that help us out by preying on garden pests such as aphids). However, native plants are particularly good choices for those interested in wildlife gardening because our local wildlife is often adapted to our local plant species. This probably applies less to birds who seem to have no problem feasting on non-native fruits such as orchard cherries, than to insects, many of which are host-specific. The best regional example of this occurs in the Pine Bush habitat near Albany, where native plants such as wild lupine (*Lupinus perennis*) and horsemint (*Monarda punctata*) thrive in the sandy soil and hot, dry conditions. Much of the Pine Bush has disappeared under the combined pressures of housing developments, shopping malls and highway construction. Along with the habitat, of course, go the plants, and along with the plants goes a particularly beautiful small butterfly, the Karner blue - an endangered species that feeds exclusively on wild lupine. As a society we can create nature preserves where lupine and Karner blue butterflies can persist. However, the potential amount of habitat for wildlife that can be created by home gardeners is immense - imagine the cumulative effect if every home gardener devoted at least a portion of their garden or property to creating habitat for wildlife. If you live in or near the Pine Bush of Albany, you can help preserve the Karner blue butterfly. If you live somewhere else, the habitat you create will help preserve numerous species of birds, insects, amphibians, reptiles and mammals even if they are not currently in as desperate a situation as the Karner blue.

Another reason that native plants are a better choice for wildlife gardening than exotic species is that most have not been overly bred for characteristics that humans find desirable. When plants are bred for overall size, or for flower color, size or form, they often lose other features that make them useful for wildlife. They may lose the fragrance that insects use to locate the plants - think of many of our modern rose cultivars. Production of nectar or pollen may be considerably diminished in cultivars and this makes the plants less useful for butterflies, bees and many other insects. Many cultivars are hybrids and so are often sterile and do not produce viable seeds. Shrunken, inviable seeds are of little food value to birds and many insects that are seed eaters. As natives become more popular garden subjects, breeders are beginning to create "improved" cultivars and these may suffer from the same problems as cultivars of exotic plants. Generally speaking, the best choices for wildlife gardening are native

plants that have not been "improved" according to human standards.

#### **(4) Conservation - Native plants populations are in decline**

Many native plants are becoming rarer as we turn increasing amounts of wild land into workplaces, housing developments and shopping malls. Overbrowsing brought about by out-of-control deer populations is also responsible for reducing the sizes of native plant populations. Home gardeners can help reverse this trend by growing native plants. But to ensure that you are helping to conserve declining native plant populations you have to be careful about how you obtain your plants. Many native plant gardeners may be doing more harm than good if they obtain plants by digging them from the wild or buying them from nurseries that dig plants from the wild. If you dig plants from the wild you aren't increasing plant numbers, but simply moving plants around in space. Moreover, many plants that are dug from the wild do not survive for long in our gardens. They suffer from transplant shock or from being put into the wrong spot. Large, mature specimens are often the plants that people spot on a stroll through the woods. They are so impressive that people decide to move them to their garden - but large, mature specimens don't transplant well and are unlikely to survive. If a nursery doesn't state that their plants are nursery propagated assume that they are not and beware of statements such as "Our plants are nursery grown". Plants can be dug, held in pots for any length of time and be considered nursery grown. Look for a statement that the plants are nursery propagated. Some nurseries claim to be selling plants that are rescued from housing or other developments where they clearly face imminent demise. Be wary of these nurseries as well, because there is no law that prevents such a claim from being made even if it isn't true. Become more familiar with the plants you are growing or wish to grow - their life cycles and the means by which they can be propagated. Then rather than digging plants from the wild or obtaining them from nurseries that dig plants, propagate your own. We think you'll find that this will take your gardening to a new level of satisfaction. And if you don't have the time or resources to propagate all the plants you would like for your garden, obtain plants from nurseries that sell only propagated plants.

The best opportunity for local gardeners to help conserve a federally-listed endangered species involves the wild monkshood (*Aconitum noveboracense*). This plant has a disjunct North American distribution, being found in a few localities in the midwest and in New York State. In New York it is found at only a few sites in the Catskill Mountains. In conjunction with the Olive Natural Heritage Society, Catskill Native Nursery is involved with an effort to conserve the species. We are propagating monkshood by seed and hope to eventually establish new populations at sites in the Catskills. Eventually, wild monkshood plants will also be available for sale at the nursery. But don't get the idea that only officially "listed" plants are worthy of attention. By growing any of our local native plants in your garden you will be helping to conserve them.

#### **(5) Conservation - Exotic plants can be invasive**

Many popular exotic garden plants can escape our gardens, invade wild lands and reduce populations of native plants. This could be a topic for an entire article, but here I'd like to briefly address the issue by providing a couple of examples. At the beginning of this article we described a hypothetical shade garden. Two of the plants in that garden have the potential to be invasive and probably should be avoided in any new plantings and perhaps eliminated from existing gardens. Japanese honeysuckle (*Lonicera japonica*), along with a number of Asian bush honeysuckles, has fragrant flowers and colorful red berries that provide food for birds. Birds, of course, are indiscriminate in where they deposit the seeds contained in those

berries after they have passed through their digestive system. By this mechanism, Japanese honeysuckle moves out of our gardens and into surrounding lands. Being adaptable to a wide range of soil types, moisture regimes, and light densities, it has no trouble establishing itself in just about any habitat. It covers the ground in a dense thicket that smothers other plants and can overclimb shrubs, eventually smothering them. The Norway maple (*Acer platanoides*) is a popular ornamental tree that is fast-growing in a variety of soil, moisture and light conditions, and has few pests or diseases. It is similar in size, shape, flower and fruit to our native sugar maple (*Acer saccharum*), but generally outcompetes it when the two grow in the same area. Mature trees produce numerous seedlings surrounding the parent tree, and in combination these cast a dense shade under which virtually no other herbaceous plants or tree seedlings survive. Clearly, gardeners will be doing native plants a favor if they avoid growing these plants in their gardens. Instead of Norway maple plant sugar maple and instead of Japanese honeysuckle, plant our native trumpet honeysuckle (*Lonicera sempervirens*).