



Today, native plants are recognized for their value not only for wildlife, but also for the beauty and hardiness that they bring to the home garden, their economic potential, and their unique spot in the ecology of our environment.

Why Choose Native Plants?

For many years, native plants in this country were considered little better than undesirable weeds.

Farmers cleared them from the land to plant crops. Gardeners pulled them up relentlessly to make room for “designer” plants which may have started as natives, but had been manipulated by breeders to reflect current standards of floral beauty.

Early European immigrants tried to reproduce the lush gardens of their homelands, regardless of the differences in climate and soil conditions in this new world.

Then, as the pendulum swung back, “native plants” became a catch phrase, a rallying cry for environmentalists concerned about the loss of habitat for wildlife.

What exactly is a native plant? The answer to this question isn't as easy as you might think. All plants (unless they are the product of human manipulation) are natives of somewhere.

What people today term “wildflowers” frequently include “exotic” species which have come from other countries and have become so well-established that we see them growing everywhere in the wild, often at the expense of the true native plants that they crowd out.

Common examples of these invasives would be Japanese honeysuckle, multiflora rose, and purple loosestrife.

The problem has become so severe that the federal government has finally written laws and established committees to help find ways to eradicate some of the most aggressive species.

In addition, federal regulations now call for the use of native plants in landscaping projects on federal and public property.

Most current definitions of native plants require that the species was present in this country before Columbus arrived in

1492. There are plants which were native to the North American continent, and others that were regional natives.

Some experts believe that it is important to only grow those plants which were originally native to your specific area of the country.

There is some validity to this viewpoint, since even native plants can become invasive when grown in a location outside their normal range. For instance, some species which are well-behaved in their typically dry southwestern locale can become aggressive when encouraged by plentiful rainfall and richer soil.

Why bother growing native plants at all, when there are so many beautiful species available from all over the world?

While it isn't necessary to turn away completely from these varieties, there are many advantages to incorporating native plants into your habitat, including value to wildlife, hardiness, and conservation.

"To these more modest ends, the number of people planting a piece of native grassland, not the size or sophistication of the individual plantings, is what will matter, for if we don't grow milkweeds in our gardens, we'll have to tell our grandchildren, "We used to see monarch butterflies long ago."

Noah's Garden
– Sara Stein

Value for wildlife

As plants and wildlife evolved together, adaptations were made by both to ensure that each was able to serve the other in the most effective way possible. As more and more natural habitat is destroyed by development, we need to help wildlife survive by replacing some of the native flora which is lost.

Butterflies are a prime example. It would be difficult not to appreciate the beauty of these insects and we tend to take their presence for granted, until we suddenly realize that there are far fewer than we remember from years ago.

A look at their requirements for survival gives us some clues to the reasons for their decreasing numbers.

We often read in the newspaper about the declining forest habitat for monarch butterflies when they reach the end of their migratory journey in Mexico. This is indeed a concern, but we need look no farther than our own local suburbs to find threats to their survival.

Monarch caterpillars eat only milkweed plants. They have not adapted to other food sources, so if there is no milkweed in an area, there are no monarchs.

Milkweed is a plant that survives in "waste places," in abandoned fields and along roadsides. If we have cleared the fields for homes and shopping centers, or even for cultivated crops, and mowed the roadsides or polluted them with salt in the winter, then there will be no milkweed.

With this awareness, we can take steps to bring the monarch



Monarch/Common Milkweed

"The arrangement of plants in the landscape and the species composition of the vegetation largely determine the abundance and variety of wildlife living in any area."

*Native Shrubs and Woody Vines of the Southeast,
– Leonard Foote & Samuel Jones, Jr.*

back. In our own yards we can plant native milkweed and once again provide a food source for the monarch caterpillars as well as nectar for a wide variety of adult butterflies.

If you have an area that can be left natural, the common milkweed can be allowed to grow. If you prefer a more cultivated appearance, butterfly weed (*Asclepias tuberosa*) with its bright orange blossoms, pink-blooming swamp milkweed



Swallowtail/Butterfly Weed



American Elderberry

(*A. incarnata*), or white milkweed (*A. variegata*) all make lovely additions to the home garden.

Using butterflies for still another example of wildlife's continued need for native plants, consider the common effort of plant breeders to create "showier" flowers. Starting with a simple, open blossom, breeders will manipulate the plant until the blooms are double or triple-petaled and ruffled and elaborate in structure.

These are lovely to behold and may certainly have a place in your garden, but they are useless to the butterfly.

In order for a butterfly to land and get its curled tongue into the nectar, the flower must be fairly open and flat, or tubular without a lot of extra petals to block the entrance.

You can incorporate many different kinds of native plants in your landscape, thus attracting a wide range of wildlife.

Fruiting shrubs such as elderberry (*Sambucus canadensis*) will draw birds, as will native evergreens and vines such as Virginia creeper (*Parthenocissus quinquefolia*).

To attract mammals, you can plant nut trees like native oaks and hickories. Whatever native plants you choose, you can be sure



Purple Coneflower

that you will be benefiting some species of wildlife because they are so closely interrelated.

When allowed to flourish in the wild, native plants provide the diversity that wildlife needs. Food sources are produced at a variety of heights, and at different times of the year.

Some berries are eaten immediately, while others languish on the branch. These less-favored fruits will still be there in winter when most other food sources have disappeared, and can mean the difference between survival and starvation.

Every part of a native plant has value, whether it be the nectar of the flowers, the bark for winter consumption or for hiding insects, or the leaves for forage.

The roots loosen the soil, creating space, and sometimes food, for underground creatures.

Different growth habits create shelter to suit every species. When we clear natural areas and plant only lawn grass and a variety of exotic plants, the results may be

"Native plants are an integral part of all ecosystems. Each species belongs to a carefully balanced system that supports other species.

In a healthy ecosystem, plant and animal species interact to keep the system working properly. Birds feed on berries from shrubs; seed from the berries are deposited by the bird, thus dispersing the shrubs. Earthworms churn up the soil, aerating it and improving plant growth; the plants drop their leaves, providing the earthworms with organic matter for food.

The intricacy of ecosystems – each with thousands of species of plants, animals, insects, and bacteria – boggles the mind. There is no way to know beforehand what the loss of even one species will mean to an ecosystem and, subsequently, to species such as humans who rely on that ecosystem."

*– Lisa Fox and Peggy Olwell
Plant Conservation Alliance*



Bluebell

pleasing to human eyes which have been acclimated to current standards of horticultural beauty, but little remains of value for wildlife.

Hardiness

Despite the overly-adaptable nature of certain exotic species, many introduced plants are temperamental and require a lot of work on the part of the gardener if they are to thrive.

This may include frequent fertilizing and spraying with

pesticides, both of which are expensive and have a negative effect on the environment.

In times of drought, these plants will require additional watering to survive, thus using up large quantities of that valuable resource when we most need to conserve it. Plants native to a given area, on the other hand, have adapted strategies over many years to survive climate extremes in their natural habitat.

Those species which grow in arid regions have developed smaller leaves, or even no leaves at all, in order to lessen both the need for water and its loss through evaporation.

Prairie species “cooperate” by distributing their roots at various levels underground, rather than having them all concentrate on the nutrients and moisture at a single level.

Although periods of major drought may occur only once or twice in our own lifetimes, even species from normally wet regions will have seen many droughts during their evolution and will be somewhat adapted.

Flowers may be shorter due to lack of rain, but they will generally bloom. Trees that are severely stressed by drought will actually produce more fruit (seed) than usual, ensuring that even if the individual tree dies, the species will continue.

Native plants also frequently have a resistance to common fungal infections and insect problems. Even if they are attacked, they have developed the skills to survive. Milkweed plants are likely to be eaten by caterpillars, yet their roots persist and they return each year.

Oak trees which are attacked by insects will not only survive, but the next year will produce higher amounts of toxic tannic acid, thus “fighting back” during the new season of growth.

Some natives have other distinct advantages over their cultivated counterparts. A number of landscape trees, such as the Bradford Pear, have been bred to provide a mass of showy flowers in the spring, but that’s the end of their performance.

A native Sourwood (*Oxydendrum arboreum*), by comparison, has beautiful white blossoms in late spring, vibrant fall foliage, and fruits which persist through the winter.

The Bradford Pear is also an example of what can happen when we tamper with Mother Nature. It has been used widely for landscaping because of its uniform, vase-like shape. This is the result of breeding to get all of the major limbs to emerge from the same spot on the trunk.

“When a soil loses fertility we pour on fertilizer, or at best alter its tame flora and fauna, without considering the fact that its wild flora and fauna, which built the soil to begin with, may likewise be important to its maintenance. It was recently discovered, for example, that good tobacco crops depend, for some unknown reason, on the preconditioning of the soil by wild ragweed. It does not occur to us that such unexpected chains of dependency may have wide prevalence in nature.”

– A Sand County Almanac
Aldo Leopold (1949)



Fritillary/Butterfly Weed

While the result may be attractive, now that these trees have been around long enough to mature, many of them are beginning to split down the middle. Having the weight centered in one area makes them exceedingly vulnerable to wind and snow, unlike native varieties which have branches extending from points all along the trunk, thus evenly distributing the weight.

Conservation

The rate of extinction for plants and animals is at an all-time high. There are a number of causes, but loss of habitat is certainly a major factor. Many zoos are now expected not just to provide entertainment and education, but are entrusted with the survival of certain species through careful breeding programs, often with the hope of reintroducing animals to the wild as suitable habitat becomes available.

While we may not have the resources to help ensure the continued existence of Giant Pandas or Bengal Tigers, each of us can participate in the conservation of native plants, and thus the local wildlife that depends on them.

Genetic diversity is another concern. We have been breeding plants to favor certain characteristics for so long that the genetic makeup of many of them is nearly identical. This could be disastrous. Just one pest or disease could wipe out an entire species, perhaps permanently.

Already we have had to turn to native root stock to save specific crops such as walnuts. By planting a variety of native species, we may be ensuring the survival of genetic lines.

Most of the medicines used in this country – over 40 percent – contain chemicals based on plant derivations, yet to date only about two percent of the world's plant species have been analyzed.

Just 25 years ago, the cancer treatment taxol was discovered in the bark of the native Pacific yew tree.

These trees had no former commercial value and could just as easily have been rendered extinct, a casualty of logging operations for other species.

Clearly native plants are resources that we can't afford to lose or neglect, and yet the United States has indeed lost nearly 200 plant species since the 1800's. Five thousand are at risk, with over 600 on the endangered species list.

Individual concerned gardeners and naturalists can be a driving force in saving species and in educating others about the importance of native plants.

How do I find and use native plants?

Because of the valid concern that natural habitat is disappearing more rapidly every year, native plants should not be gathered in the wild. Most have very specific soil requirements, so they are unlikely to survive transplanting anyway.

Exceptions to this rule would be the "rescue operations" which are held when an area is scheduled to be cleared for development. In those cases, trained volunteers go in and gather wild species which are



Eared Coreopsis



Foxglove

then relocated and nurtured until they are reestablished.

Fortunately, today there are many nurseries which specialize in native plants, and even "mainstream" nurseries carry at least a basic selection.

To avoid contributing to the conservation problem, you should ask where a nursery gets its native stock, and only buy from those which propagate their own plants, not from those which gather them in the wild.

While local nurseries may be a resource for some native plants, a wider range is available through mail order sources. Many also sell seeds. Suppliers can be found in gardening magazines or through the Internet.

Native plant societies, local conservation associations, botanic gardens, and government agencies such as the County

Cooperative Extension can direct you to additional resources.

Local nature centers and garden clubs often have sales or "plant swaps" where you can get inexpensive plants and learn about what species have done well for others in your area.

Plants will have the greatest chance of survival if they have been propagated in a climate zone similar to your own.

If you have the space, one of the easiest ways to add native plants to your landscape is to simply leave a portion of your yard unmowed. You might be amazed at the wildflowers which appear when given the chance to flourish.

Even if the showier plants don't grow right away, remember that many butterfly host plants are "weeds" such as plantain, clover, and vetch.

Allowing an area to "go wild" will benefit wildlife and ensure more butterflies and bees for pollination in your garden.

In already existing planting areas you can tuck native flowers among your other perennials, plant

hedgerows or evergreen windbreaks along your property line, or create islands of native shrubs and trees in an open area of lawn.

Traditional lawns are of very little value to wildlife and require a large investment of time, energy, and resources to maintain, so it's beneficial to reduce the amount of cut grass and replace it with more valuable plantings.

Does using natives in your flowerbeds mean that you have to settle for scraggly, nondescript plants? Not at all!

Many natives are showy performers in their own right, while others become much more attractive when they are removed from natural competition and given additional sunlight and water.

Gardeners in England treasure the goldenrod which is only native to America, yet here we often consider it an annoying weed.

As previously mentioned, follow the lead of nature and strive for diversity in your plantings. This means that you should have a variety of species and types of plants (herbaceous perennials,

"By observing native plants, the gardener gains a more profound insight into seasonal rhythms and life cycles. This, in turn, assists in developing a sense of identity with nature and the natural environment. There is that marvelous sense of satisfaction resulting from encouraging rare species of plants, or perhaps reestablishing species which might once have been abundant in the wild and may have previously grown in nearby areas."

– Gardening with Native Wild Flowers
Samuel Jones, Jr. and Leonard Foote



White Cardinal Flower

trees, shrubs, native grasses), a range of blooming and fruiting times, and an assortment of plant heights.

With the exception of large specimen trees, colonies of plants are more desirable than single specimens when you are trying to benefit wildlife.

As with any plants, be cautious of those which spread via underground runners. Bee Balm (*Monarda didyma*) is lovely and very popular with bees and hummingbirds, but it can take over an entire garden, so be sure that it, and similar species, are planted where they have room to roam.

Those species which spread by seed may also become a bit too prolific, but they are relatively easy to control and will provide seedlings to share with other gardeners.

Despite their hardiness, it is still important to consider the basic requirements of native plants before adding them to your

*“When we walk through our late summer forests and see the profuse blooms of the white wood aster (*A. divaricatus*), we look at a mangy weed. Gertrude Jekyll saw it as a perfect late season plant and routinely incorporated it into her borders. Similarly, may apple (*Podophyllum peltatum*) is only a common woodland wildflower here but is a carefully chosen spring groundcover situated under rhododendrons on the grounds of Windsor Castle.”*

– Easy Care Native Plants
Patricia Taylor

landscape. These would include the amount of light, soil conditions, temperature range, and amount of moisture.

While the species may be native to your geographic region, your own yard will have its own specific microclimate which needs to be taken into consideration.

Even if it's native, a shrub which naturally grows along the forest edge, where it has the benefits of adequate sun and rich forest soil, is less likely to thrive if you plant it under shade trees or in rocky soil.

When you are starting out, it's a good idea to take the time to look

at natural areas around your home or neighborhood and see what kinds of plants are already growing there, do some research to find out what growing conditions those plants prefer, and then choose for yourself some native plants which have similar requirements.

Think about your own interests when choosing plants for your yard. Do you want to attract wildlife, have a wealth of flowers for cutting, create a colorful autumn display?

Once you have a goal, then you can seek out plants which have the characteristics that you want.



White Trillium

REFERENCES

Books

A wealth of books are available which provide extensive information on native plants, their importance, and how to landscape using them. Some that WindStar's naturalists have recommended include:

- *Easy Care Native Plants*, Patricia Taylor
- *Native Shrubs and Woody Vines of the Southeast* and *Gardening with Native Wild Flowers*, Leonard Foote & Samuel Jones, Jr.
- *Taylor's Guide to Natural Gardening*
- *A Sand County Almanac*, Aldo Leopold
- *Noah's Garden* and *Planting Noah's Garden*, Sara Stein

Internet Sites

If you use a search engine and plug in "native plants," you will be directed to many nurseries which carry native plants, either exclusively or in addition to exotic species.

Often there are nice descriptions of the plants and tips on what growing conditions they prefer. You will also find a number of state or regional sites which discuss the flora in that locality.

For more general information on native plants, you might want to try the following web sites, many of which will also give you additional links:

- <http://www.epa.gov/glnpo/greenacres> (landscaping with native plants and weed laws)
- <http://www.nps.gov/plants> (Plant Conservation Alliance)
- <http://www.wild-flowers.com> (GardenWeb – various links)
- <http://www.wildflowers.org> (Lady Bird Johnson Wildflower Research Center)
- <http://www.inpaws.org/links.html> (more links)
- <http://www.nps.gov/plants/alien/factmain.htm> (fact sheets on invasive plants)
- <http://www.nhq.nrcs.usda.gov/ccs/backyard.html> (backyard conservation)
- <http://www.mobat.org/cpc> (Center for Plant Conservation)
- <http://www.for-wild.org> (Wild Ones)
- <http://plants.usda.gov> (USDA plants database)

Other Resources

National Garden Bureau
Suite 310, 1311 Butterfield Road
Downers Grove, IL 60515

The Plant Conservation Alliance is a collaboration between Bureau of Land Management, Department of Defense, U.S. Geological Survey (Biological Resources Division), Federal Highway Administration, National Park Service, Natural Resources Conservation Service, Office of Surface Mining Reclamation and Enforcement, U.S. Fish and Wildlife Service, USDA Agriculture Research Service, USDA Forest Service, and more than 150 non-federal cooperators (including WindStar Wildlife Institute).

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