

Why Are Native Plants Important?

A summary from Dr. Douglas Tallamy's important book, Bringing Nature Home.
All quotes below are from his book.

When gardeners use native plants, they can have beautiful landscapes --- and play a vital role in protecting biodiversity.

Most of our local land is divided into our property parcels. This means that cumulatively, the plants we host on our properties have an enormous impact on the survival of the surrounding web of life of our local ecosystems. (In fact, when migratory birds and butterflies can't survive the loss of habitat in our area, we have affected the ecosystems of places far from New England.)

"Because life is fueled by the energy captured from the sun by plants, it will be the plants that we use in our gardens that determine what nature will be like 10, 20, and 50 years from now."

The Balance of Life:

Native insects need native plants to survive.

Native birds and mammals need native insects (as well as native plants) to survive.

No native insects, no higher forms of life.

"Worldwide, 37% of animal species are herbivorous insects. These species are collectively very good at converting plant tissue of all types to insect tissue, and as a consequence they also excel at providing food – in the form of themselves – for other species. In fact, a large percentage of the world's fauna depends entirely on insects to access the energy stored in plants....[for example,] if you count all of the terrestrial bird species in North America that rely on insects ... to feed their young, you would find that figure to be about 96%."

Biodiversity, Evolution, Location:

Native plants evolved with native wildlife, so everything from the shape and structure of the flowers to the chemical content of the leaves is tailored to the feeding habits of native insects, birds, and animals. If plants insects evolved with disappear, so does the wildlife that depends on them.

Bloom time of plants correlates with the pollinator cycles in your area. Native Honeysuckle nourishes Hummingbirds as they migrate north; wild Asters attract Monarch Butterflies on their autumn journey south.

Native insects attract birds, especially during nesting season. The insect population is at its peak, just in time to feed hungry nestlings. Without those insects, the baby birds *do not survive*.

Leaf growth of native plants matches the feeding habits and reproductive cycles of native leaf eaters, for example, caterpillars that turn into our native butterflies and moths. (Butterflies and moths, the Lepidoptera, are about 50% of herbivorous insects in our area.)

Birds are accustomed to using the fibers, twigs, and tendrils of native plants for building their nests.

Fruit, berries and nut maturity are timed to bird and animal life cycles. Animals depend on specific plants to provide vital food for fall migration. Mammals rely on them to fatten up for hibernation.

Disease and pest problems are usually minimal in native plants, because native plants have evolved natural defenses against the diseases endemic to their area. Leaves will be nibbled on by native insects, but not to a degree that is very noticeable by the home gardener. (The exception: imported pests or diseases, such as the dreaded Japanese Beetles and Dutch Elm Disease, that mostly arrived with imported plants, can have a much more dramatic effect on native plants.)

Plants from Abroad, Native Fauna

Ornamental plants from China and Europe do not supply food for our native insects. The insects have not evolved to be able to eat them. The anatomy and chemistry of each type of insect generally means that just a few types of co-evolved native plants meet its needs.

In fact, most native fauna stay away from imported plants. For example, native Blueberry has been observed hosting about 285 native species of butterflies and moths, native Elderberry about 40 species, while exotic Flowering Quince was observed hosting 6. Our native Oaks support over 500 native species of Lepidoptera. On the other hand, Phragmites australis, an imported plant and invasive menace in North America, supports 170 species of Lepidoptera in its homeland, while supporting only 5 species here.

“Unfortunately we have loaded our suburban landscapes with nonnative ornamentals at the expense of the native plants that once supported our local ecosystems.”

So Why Should We Care about Biodiversity?

There are many reasons. But, in short, sustaining human life requires “great quantities of ecological resources that are generated in healthy ecosystems.” Water resources, clean air, energy, and biodiversity.

Native plants are in integral part of the natural lives of everything from bacteria to birds to people.

A few rules of thumb for the home gardener, trying to introduce more biodiversity into their property:

Bit by bit:

Gardeners don't have to do a big conversion to a native landscape. Every native plant helps. It's a matter of awareness for the future.

You might want to start at borders of properties, and backs of yards, where you can put in shrub groups or strips of meadow plants. And, of course, there are beautiful perennials to incorporate into flower beds, and lovely shrubs to add to foundations.

Lawn reduction:

Most people need some lawn for family activities. Remember, though, that lawns are essentially sterile as far as wildlife support goes, and they provide lots of terrain for grubs of Japanese Beetles.

Consider reducing the size of your lawn – again, bit by bit – and filling it instead with mixtures of native trees, shrubs, wildflowers.

Lots of species:

The more types of native species of plants you include, the more types of insects, birds, etc.

The fewer number of plant species, the fewer types of associated wildlife. And “monocultures”, that is, environments consisting of one or a few species of plants, are more vulnerable to disease – and that tempts homeowners into using more pesticides.

Mowing:

Consider letting your strips of meadow remain unmowed until new growth is about to start in spring. Many native insects overwinter on spent plant stalks, many birds take cover in taller grasses over winter.

Evaluating Plants for Wildlife Support:

Here are some links to Douglas Tallamy's research work on numbers of native species of butterflies and moths associated with various plants.

Favorite Trees/Shrubs of native butterflies/moths.

<http://bringingnaturehome.net/native-gardening/woody-plants>

Favorite Perennials/Wildflowers of native butterflies/moths.

<http://bringingnaturehome.net/native-gardening/herbaceous-plants>

A spreadsheet of all the results of research to date. Click on Download, then on Host Plants.

<http://copland.udel.edu/~dtallamy/host/index.html>

Enjoy watching for wildlife!