Wild Ones
NATIVE PLANTS, NATURAL LANDSCAPES
PRAIRIE EDGE

How to Install and Maintain a Native Plant Habitat

Do this to maximize the ecosystem benefits of your yard, garden or landscape!

What are Native Plants?

A native plant is one that has naturally evolved in a region for thousands of years, or over geologic time, without human introduction or intervention.

Purchase straight native plant species that are grown locally, not cultivars of native plants. For instance, the Latin name for the straight species of Dense Blazingstar is *Liatris spicata*. An example of a cultivar is *Liatris spicata* 'Kobold'.This will ensure that your native plants have the same genetic diversity that has allowed them to adapt to local climate and soil conditions, and survive disease, droughts and floods for thousands of years.

Non-Native Plants and Invasive Plants

Non-native plants can escape gardens when seeds are carried by wind, water, birds and other animals. These plants cause harm because they replace valuable native habitat and have little or no food value for wildlife. Even though you may not witness the spread of your non-native plants into nearby natural habitat, many plants are distributed a mile or more by birds eating the seed or fruit.

Where Can I Purchase Native Plants?

Wild Ones chapters in Minnesota have developed a brochure with a comprehensive listing of native plant nurseries and landscape services throughout Minnesota and western Wisconsin. These nurseries carry local ecotype/genotype plants that have been grown without harmful herbicides or pesticides. You can find the brochure at Wild Ones meetings and events, or online at www.wildonesprairieedge.org

What are the Ecological Benefits of My Native Plant Garden or Landscape?

In addition to providing essential food for wildlife, including pollinators and birds, native plants provide essential services for a healthy ecosystem. Their vast network of roots (some of which extend 15 feet or more into the soil) eliminates the need for watering after the first year of planting, reduces storm water runoff and soil erosion, aerates the soil, filters rainwater, adds organic matter and sequesters carbon.

Site Selection

Replace a portion of your turf grass with native plants that provide the most benefit to the food web. The more you replace, the greater the benefit. If you need to start small, choose a site that is difficult to mow, enlarge an existing garden or create a rain garden. Some native plant gardeners remove all of the exotic plants in their landscapes, others keep a small number of their favorites. Determine the growing conditions of your proposed garden. These include the soil type (clay, sand or loam), moisture level (wet, moist, medium or dry) and amount of sunlight. Full sun receives six hours or more of sun after 9 am and before 6 pm. Part sun receives between four to six hours of sun. Full shade receives less than four hours of sun preferably in the morning or late afternoon with no mid-day sunlight.

For a more detailed description of growing conditions go to: www.prairienursery.com/resources-and-guides/getting-started/growing-conditions-defined.php

Site Preparation

Control weeds with as little use of herbicide as practical. Smothering with newspaper or hand pulling works well in many cases. If you are dealing with large shrubby invasive plants such as buckthorn, you may need to cut and treat the stump with a small amount of herbicide. The use of a sponge tipped applicator such as a Buckthorn Blaster will allow you to use the herbicide sparingly. See the ***Weeding*** section below for more information.

If you are putting in a native planting where you currently have turf grass you can "compost in place".

This is how: Mow the turf grass at the lowest setting. Cover the area with eight layers of overlapping newspaper or two layers of brown landscaping paper on rolls (found in the paint department at home improvement stores). Burlap or cardboard can be also be used. Do not use a fabric weed barrier as this will degrade over time and add plastic to the soil. Cover paper with 3 to 4 inches of mulch. Double shredded hardwood mulch works well. Do not use rock or dyed mulch. Wait at least two months before planting. Ideally, do this in the fall and plant in the spring or vice versa. In the fall, you can rakes leaves onto the area, then cover with paper and mulch.

Plant Selection

The staff at the native plant landscape nurseries can help you select the right plant for your site if you are able to accurately describe the growing conditions (sun, soil and moisture level). If you are not quite sure, they can help you select plants that can thrive in a variety of growing conditions.

www.PrairieNursery.com has an easy to follow description of the growing conditions for each of the plants they sell, as well as other important information such as height and bloom times. The National Wildlife Federation has a native plant finder by

zip code which identifies the most ecologically beneficial plants for your restoration:
www.nwf.org/Garden-for-Wildlife/About/Native-Plants

The goal is to achieve a landscape that provides a plentiful and varied diet of seeds, nuts, fruits and insects, as well as shelter and nesting materials. Plant a wide diversity of native trees, shrubs, perennials, sedges and grasses, each with its unique habitat value. For pollinators, you want at least three each of three species of blooming plants at all growing times: spring, summer and fall.

A bigger pot does not mean a better value or that the plant will be more successful. Smaller plants such as plugs (4-packs, 6-packs) or 4 inch pots will quickly catch up, or even exceed, the larger one gallon pots. Trees and shrubs are best purchased bare root (versus in a pot) if you get them in the ground immediately upon purchase.

Planting Instructions

Remove plants from the container. If the roots are growing in a circle, cut them apart so they can grow outward. Place the plant in a hole so that it is level with the surrounding soil surface. Fill the hole around the plant, firming down the soil to remove air pockets. On slopes, build a small berm on the downhill side of the plant to hold water in place. Native plants don't require soil amendments and some plants thrive in the poorest of soils. For example, butterfly weed (*Asclepias tuberosa*) grows best in sandy or gravelly soil with low nutrient levels. Over time, native plants help build soil organic matter and restore the microbial community.

Watering

Regular watering is most critical during the first few weeks after planting and very important during hot, dry spells in the first two years. This is especially true for the bottom of a rain garden that will have plants that like moist soil. Water whenever the top four inches of soil is dry. Supplemental watering after plants are established is not needed.

Protect Plants from Large Herbivores

Some species of plants are attractive to rabbits or deer, and may need to be protected from them until plants are established. Shrubs are especially vulnerable in winter when food is scarce; taller cages are needed to compensate for rabbits and deer browsing above the snow line. Once established native plants should tolerate browsing unless browsing is exceptionally heavy and frequent.

Protect Native Insect Herbivores

Most herbivore insects, for example butterfly caterpillars, are native and an important part of the ecosystem. Without caterpillars eating the leaves of native plants, we would not have the adult butterflies. These insects also provide essential food for birds and other wildlife.

Identify and Control Non-Native Insects

Some exceptions would be non-native invasive insects such as Japanese Beetles. This website has information to identify and control non-native and invasive insects:
www.extension.umn.edu/invasive-species/identify-invasive-species Avoid the use of insecticides as there may be collateral damage. The family of insecticides known as neonicotinoids (neonics) are systemic and will persist in plants for years, harming the insect herbivores, pollinators and other wildlife in the food web.

Fall Maintenance

It's best to leave plants standing through the fall and winter as the stems and seed heads provide wildlife cover and bird food. Leave the leaves indefinitely in garden beds. This is where many beneficial insects overwinter. If you need to remove a dead branch or tree, leave the trunks or branches for insect habitat. If you walk in the woods, you might notice that the fallen trees are wonderful nurse trees for all sorts of new life.

Spring Maintenance

Cut back plants once the ground has warmed up enough for insects to emerge from their overwintering sites. A good tip is to wait until the dandelions bloom. Cut perennial flower stems back to 15 inches. The extra plant material can be chopped up and left on the plant bed.

Weeding

Weed in late May after cool season weeds emerge, and in early July before warm season weeds go to seed. Hand pull or smother weeds. Avoid chemical herbicides. As your garden matures, weeds will be crowded out as your native plants fill the empty voids.

Use these resources to identify and control common lawn weeds in Minnesota:
https://apps.extension.umn.edu/garden/diagnose/weed/idlist.html
www.minnesotawildflowers.info
www.iNaturalist.org

If You Have Bare Spots, Don't Buy More Mulch, Buy More Native Plants!

More plants equal more ecosystem services. As the mulch that you initially applied breaks down, it provides a good seed bed that will allow plants to propagate. Excess wood chips or bark provides an unnatural barrier for seeds. Leaf litter and plant debris is a more natural mulch that provides insect habitat and food for ground foraging birds.

Continue to add native plants to your landscape by observing which ones thrive in your garden and have lots of bee, butterfly or bird visitors. Never dig plants from natural areas unless you have permission from the land owner to rescue plants from an area being destroyed by construction or other land use alteration.