A 5 Step Program to Planting Native:
Bring Nature Home with Native Trees and Shrubs

Preserving our natural resources starts with maintaining biodiversity. The use of non-native plants is detrimental to wildlife as they replace native food sources. However, by planting native plants, you can help increase the native range of species that are important to our local ecology, as well as help keep insects in check and provide a food source for birds and small mammals.

Besides being ecologically responsible, planting native has other benefits that will help you. First, it reduces costs – native plants are adapted to this environment, and require less water and maintenance and are more tolerant of changes in weather. Second, it reduces the risks of pests, disease, and invasives. Third, natives can help improve soil filtration and purity of water. And finally, native plants attract a much greater array of butterflies, birds and other creatures than non-natives.

Take advantage of these amazing benefits and use these 5 steps to help you get started planting native.

Step 1: Determine Your Light
Knowing what type of light you have will help you figure out where to place plants. Keep in mind that available light is affected by buildings, shade trees, fences, or other structures that can reduce the amount of light.

There are four categories of light. Knowing which direction the sun faces in relation to your property will help you determine which category applies to the various areas of your land:

- *Full sun*: direct sunlight for at least 6 hours per day; e.g. south-facing walls.
- *Partial shade/sun*: direct sunlight for part of the day (4 to 6 hours) and shade for the rest; e.g. east- or west-facing walls.
- *Light shade*: shade for most or all of the day, though some sunlight does filter through to the ground level; e.g. ground under a small-leaved tree (i.e. birch).
- *Full shade*: no direct sunlight; e.g. north side of a house.

Step 2: Determine Your Soil
There are a lot of variables with regards to soil, but the two big ones you'll want to figure out first are pH and drainage.

<u>Soil pH</u>
Soil pH determines your plant's ability to access nutrients, and is a measure of soil acidity (0.0 is most acidic) or alkalinity (14.0 is most alkaline). Acidic soils have a low pH value (less than 5.5), while alkaline soils have a high pH value (more than 8.0). Soils with a pH between these values are considered to be more or less neutral and are where the majority of plants do well. The good news is that native plants tend to do much better in a range of soils and require less adjustments than nonnatives. However, it's still a good idea to get a basic feel for what your soil pH is as there are some natives that are less tolerant of acidic or alkaline soils.

Less time, less accuracy: A 3-in-1 soil tester, which is between $10-15 on Amazon (I used the Viixm Soil pH Meter). This is an inexpensive and easy way to get a somewhat accurate pH measure of your soil. There are other inexpensive pH tests out there, but I found this one the easiest to use.

More time, more accuracy: A soil test kit, which is around $30 on Amazon (I used the MySoil Soil Test Kit). Although this is more expensive and takes a little more time, it gives you more accurate results on pH, plus additional information on various nutrients your soil may be lacking.

Soil Drainage

Well-drained soil (also called mesic) is soil that allows water to drain at a moderate rate without water pooling. When soil drains too quickly (called dry mesic to dry), the plants do not have enough time to absorb the water and can die. Likewise, when soil does not drain quickly enough (called poorly-drained or wet to wet mesic), plants are left in pooling water, their oxygen intake from the soil is reduced, and the plants can die.

There are ways to address poorly-draining soils, but for now, focusing on well-drained soil areas will make for an easy start.

Less time, less accuracy: After a heavy rainstorm, monitor which areas of your property retain water and which areas become dry relatively quickly. This isn't very accurate, but it will at least give you an idea of the areas where standing water could be an issue.

More time, more accuracy: Perform a "perc test." Although it takes more time, this will give you an accurate look at how well your soil drains. It would also make a great science project for kids.

Step 3: Determine Your Habitat

Habitats are defined by the available resources (such as soil, moisture, and light). It's important to know your habitats so that the trees and shrubs you plant have the resources they need. Below are the four most common habitats in our area. Some properties have more than one habitat, so make sure to assess all parts of your property.

- *Woodland understory*: This area consists of smaller trees and shrubs that are adapted to grow under lower light/shade conditions. Keep in mind that some trees allow more sunlight to reach the ground, such as oaks, while others provide deep shade, like maples, and require shade-tolerant plants.
- *Woodland edge*: This area is the transition zone from woodland to open spaces and offers critical wildlife food and cover. This area has a lot of diversity, including grasses, shrubs, vines, and small trees that provide food for wildlife, such as berries, seeds, and insects. It also offers cover for nesting and protection from weather and predators.
- *Floodplain forest*: These areas range from relatively well-drained to poorly-drained, and are flooded for varying periods of time each year (generally spring and early summer). It is wet for a significant portion of the year, though the surface is dry for much of the year.

- *Prairie*: Prairies are a mixture of grasses, herbs, wildflowers, and shrubs. Grasses are the dominant plants in a prairie, rather than trees, which means they are adapted to full sunlight.

Step 4: Pick Your Plants

There are many amazing native plants to choose from, but the list below contains great starter plants because they're easy enough to maintain. The focus is on trees and shrubs, which are broken up by habitat. Additional suggestions for groundcover and perennials are also provided.

Keep in mind that you don't have to plant natives everywhere all at once – you can start small in one area, or even just replace non-natives when they die (see *Midwestern Native Shrubs and Trees* for native plants that are similar to non-natives).

A note on deer: You'll need to put fencing around all new plants. Plants marked with "*" are those that deer seem to leave alone, but keep in mind that positioning is a factor – plants that grow along a deer run will get eaten regularly.

Woodland Understory

American hornbeam/blue beech (tree; *Carpinus caroliniana*): part to full shade, adaptable to different soils and pH; small ornamental tree for a shadier site; vibrant fall colors.

Eastern hophornbeam/ironwood (tree; *Ostrya virginiana*): full sun to part shade, needs a well-drained upland site, pH should be under 7.6 (acidic to neutral); birds love the fruit; four-season beauty; great as a privacy screen/windbreak.

Allegheny Serviceberry* (tree/shrub; *Amelanchier laevis*): full sun to part shade, pH should be under 7.5 (acidic to neutral); butterfly host, birds love the fruit; first flowering tree of spring; vibrant fall colors.

Spicebush (shrub; *Lindera benzoin*): full sun to part shade, acidic to alkaline soil; butterfly host, birds love the fruit; lemon fragrance, glossy red berries and rich fall color. For greater success, plant more than one.

Bonus plantings: Zigzag goldenrod (groundcover; *Solidago flexicaulis*)

Woodland Edge

Eastern redbud* (tree; *Cercis canadensis*): full sun to part shade; pink flowers in the spring; great planting in shrub borders or to highlight plants in large beds.

Pagoda dogwood* (tree; *Cornus alternifolia*): shade (a few hours of sun in the morning with protection from the west), moist, well-drained soil, highly acidic to neutral pH; attracts birds; white flowers in spring, blue/black fruit in summer, rich fall color.

Blackhaw* (tree/shrub; *Viburnum prunifolium*): full sun to part shade (flowers heaviest in full sun), tolerates a wide range of soils; birds love the fruit; great privacy screen/hedge.

American elderberry* (shrub; *Sambucus canadensis*): full sun to part shade, well-drained soil, acidic to alkaline pH; birds love the fruits; fruit and lacy white flowers are edible (stems and foliage highly toxic); great plant for shrub borders that have half-day sun; cut back annually.

Bonus plantings: False Solomon's seal* (perennial; *Maianthemum racemosum*); Wild geranium (perennial; *Geranium maculatum*)

Floodplain Forest

Bur oak (tree; *Quercus macrocarpa*): full sun, tolerant of a wide variety of soils so long as not continually saturated; hosts a wealth of insects including butterflies and provides acorns for other creatures; fastest growing oak and long lived; bark and massive branches are spectacular in winter.

Hackberry (tree; *Celtis occidentialis*): full sun, adaptable to any soil and extreme weather; birds love the fruit; fast growing in youth, slows as it matures.

River birch (tree; *Betula nigra*): full sun, drought sensitive (helps to plant near a downspout), cannot tolerate a high pH (around 6.5 best); butterfly host; curling, papery bark when young; fast growing.

Spicebush (shrub; *Lindera benzoin*): see Woodland Understory

Bonus plantings: Ostrich fern* (groundcover; *Matteuccia struthiopteris*); Virginia bluebells (perennial; *Mertensia virginica*)

Prairie

American hazelnut/filbert (tree/shrub; *Corylus americana*): full sun to part shade, tolerates any well-drained soil; first to bloom in spring; edible nut; vibrant fall colors; planting 3 or more increases the chance of producing seed.

New Jersey tea (shrub; *Ceanothus americanus*): full sun, well-drained soil, acidic to alkaline pH; white clusters of flowers attract pollinating insects; can be used as a fine tea.

Bonus plantings: Black-eyed Susan (perennial; *Rudbeckia subtomentosa*); Blue wild indigo/false indigo (perennial; *Baptisia australis*); Common milkweed (perennial; attracts monarch butterflies; *Asclepias syriac*); Golden alexanders (perennial; *Zizia aurea*); Little bluestem (perennial; *Schizachyrium scoparium*); Meadow blazingstar (perennial; *Liatris ligulistylis*); Prairie dropseed (perennial; *Sporobolus heterolepis*); Prairie smoke (perennial; *Geum triflorum*)

Wet tolerant

Nannyberry (tree/shrub; *Viburnum lentago*): full sun to part shade, tolerates a wide range of soils; birds love the fruit; four-season beauty.

Red-osier dogwood (shrub; *Cornus sericea*): full sun, needs wet soils, acidic to alkaline pH; large shrub; red stems stand out in winter (remove older stems to maintain the best red stems).

Gray dogwood (shrub; *Cornus racemosa*): full sun to part shade, thrives on compacted soil, acidic to alkaline pH; birds love the fruit; thicket-forming shrub makes a great screen; rich fall colors.

Bonus plantings: Swamp milkweed (perennial; attracts monarch butterflies; *Asclepias incarnata*)

Shade tolerant

Pagoda dogwood* (tree; *Cornus alternifolia*): see Woodland Edge.

White oak (tree; *Quercus alba*): full sun to part shade, well-drained soils with no compaction, slightly acidic to neutral/highly alkaline pH; attracts butterflies, high wildlife value thanks to acorns; stunning fall red color; IL state tree.

Bonus plantings: Pennsylvania sedge/common oak sedge (groundcover; *Carex pensylvanica*); Wild ginger (groundcover; *Asarum canadense*); Jack-in-the-pulpit (perennial; *Arisaema triphyllum*); Lady fern* (perennial; *Athyrium filix-femina*); Maidenhair fern (perennial; *Adiantum pedatum*)*

Roadsides

American elderberry* (shrub; *Sambucus canadensis*): see Woodland Edge.

Bonus plantings: Black-eyed Susan (perennial; *Rudbeckia subtomentosa*); Little bluestem (perennial; *Schizachyrium scoparium*); Meadow blazingstar (perennial; *Liatris ligulistylis*); False Solomon's seal* (perennial; *Maianthemum racemosum*)

Step 5: Get Your Plants

Here is a list of nurseries with native plants not collected from the wild (collecting plants from the wild disrupts the fragile balance of plant relationships within that entire community and also depletes the supply of native plants):

Native Plant Growers

- Country Road Greenhouses – Rochelle, Illinois
- Genesis Nursery – Tampico, Illinois
- Ion Exchange – Iowa
- Natives Haven Nursery – Harvard, IL
- Ohana Farms – Marengo, IL
- Natural Garden Natives – Various Locations
- Pizzo Nursery – Leland, IL
- Prairie Moon Nursery – Minnesota
- Prairie Nursery – Wisconsin
- Prairie Restorations – Minnesota

- Prairie Seed Source – Wisconsin
- Possibility Place – Monee, IL
- Red Buffalo – Richmond, IL
- Taylor Creek Restoration Nurseries – Wisconsin

Mail Order Nurseries

- Ion Exchange
- Prairie Moon Nursery
- Prairie Nursery
- Taylor Creek Restoration Nurseries

Keep these tips in mind as you plant native: the less you do to change or disturb the existing soil, the better; water only to get plants established; and plant a variety of species at the same time.

References

- *Bringing Nature Home: How You Can Sustain Wildlife with Native Plants* (Douglas W. Tallamy)
- *Midwestern Native Shrubs and Trees* (Charlotte Adelman and Bernard L. Schwartz)
- *Perennials for Illinois* (William Aldrich and Don Williamson)
- *The Midwest Native Plant Primer* (Alan Branhagen)
- https://bplant.org/region/747
- https://www.plantmaps.com/interactive-illinois-ecoregions-l4-map.php
- https://www.openlands.org/wp-content/uploads/2019/06/Oak-Ecosystem-Recovery-TreeKeepers.pdf
- https://www.chicagobotanic.org/plantinfo/woodland_gardening
- http://www.museum.state.il.us/muslink/forest/htmls/pr.html
- https://www2.illinois.gov/dnr/education/Pages/ILPrairies.aspx
- http://chicagorti.org/healthy-hedges
- https://www.mortonarb.org/trees-plants/tree-and-plant-advice/tree-species-list/filters