Virginia Cooperative Extension
Virginia Tech • Virginia State University

EXPERT REVIEWED

SPES-798P

Native Plants in the Landscape: Incorporating Native Plants

Authored by Sierra Seekford, Agriculture and Natural Resources Agent, Virginia Cooperative Extension Chesterfield Office; Laurie Fox, Horticulture Associate, School of Plant and Environmental Sciences, Hampton Roads Agricultural Research and Extension Center, Virginia Tech; Alex Niemiera, Professor, School of Plant and Environmental Sciences, Virginia Tech; Meredith Steele, Associate Professor, School of Plant and Environmental Sciences, Virginia Tech

A landscape is much more than a collection of pretty plants. Landscapes are valuable assets that can provide many benefits, including increasing property value, reducing high temperatures, supporting pollinators and wildlife, reducing energy costs, cleaning the air, managing stormwater, and providing a place to relax and enjoy outdoor activities. Landscapes are also essential in preserving natural ecosystems and biodiversity, especially as development continues to rapidly reduce the natural areas that are home to many native plants.

Native plants can enhance any landscape. Research shows that a landscape benefits wildlife the most if it has at least 70% native plants, but even incorporating a few native plants can make a big positive difference (Narango et al. 2017). This publication focuses on how to include more native plants in the landscape.

Taking the First Steps

Whether considering the whole landscape, a specific area of it, or an accent like a container, a good standard to follow is "Put the right plant in the right place," a popular saying in the gardening world. This means choosing plants that are well adapted to the site conditions. While native plants are adapted to a larger geographic area, they still have preferred sites and growing conditions. Matching the plant to the specific location and conditions is important to ensure it establishes quickly and grows well. Think of the landscape as a community with the plants as neighbors. Which plants like the same conditions and grow well together? Instead of planting just one plant, consider planting several of the same plant species or several different species that like the same growing conditions to create a community. Mixed plantings provide interest in multiple seasons and opportunities for cross-pollination and reproductive success. A plant community also supports a more diverse insect and wildlife community, which creates a healthy ecosystem.

Start planning early. Make a list of your goals, wants, and needs. Do a site analysis to understand the growing conditions. What time and resources do you have available? Research specific plants. Consider incorporating native plants into the landscape in stages or phases. Plan time for selecting and purchasing plants. Mark local plant sales on your calendar. How long will site preparation and planting take? Plan for the long-term maintenance of the plants. Remember that new plantings require more maintenance, but after the plants become established, the amount of maintenance should decrease.

Other strategies to keep in mind are to:

- Pick manageable-sized areas.
- Incorporate different plants for different seasons.
- Plant in late fall and early spring to reduce stress on the plants.
- When planting a large area, try dividing it and working with one section at a time, or create a multi-year implementation plan, such as focusing on trees in year one, shrubs in year two, and perennials in year three.

Observing Natural Plant Communities

One way to learn about native plants' preferred conditions is by observing them in their natural habitat. Visit local parks, nature preserves, botanical gardens, and Virginia Cooperative Extension demonstration gardens. Look at how and where the plants grow and which plants grow together in that community. For

example, when taking a walk through the James River Park System, it's not uncommon to see yellow wingstem (Fig. 1) or buttonbush (*Cephalanthus occidentalis*) because this medium-sized native shrub thrives in the wetlands, swamps, and occasionally flooded sites, which are common throughout those natural park areas. Other plants in those communities may include sweetbay magnolia (*Magnolia virginiana*), red maple trees (*Acer rubrum*), swamp azaleas (*Rhododendron viscosum*), and various ferns, rushes, and sedges.

Resources like the Digital Atlas of the Virginia Flora (https://vaplantatlas.org) and the Virginia Department of Conservation and Recreation's "Native Plants for Conservation, Restoration and Landscaping" brochures (https://www.dcr.virginia.gov/natural-heritage/factsheets) can be good references on which native plants grow in specific areas of Virginia (coastal, piedmont, or mountains) and what habitats they prefer. Most of the 10 Virginia regional native plant guides (www.plantvirginianatives.org), developed through the Plant Virginia Native campaign, include lists of places to visit to see native plants in local areas. It's easier to identify flora when visiting places that label the plants.

Figure 1. Bright yellow wingstem, *Verbesina alternifolia*, growing along a local creek. (Photo by Sierra Seekford)

Site Conditions in the Landscape

Become familiar with the conditions on the property to be planted. Think about how the space will look and how it will be used. It is helpful to create a map. The plot map provided when a house is purchased can be used, or a map of the property can be made on graph paper by measuring boundary lines and the size of the house. Or make a simple map of the specific area of the landscape that will be the focus of the work. Make several copies of the map and add notes about the conditions and any other information that might influence what plants are chosen and where they are incorporated into the landscape. Identify specific locations where specific native plants could be incorporated and note them on the map. Use different resources to research and find plants that fit these locations and conditions. Make a list of plants for each location, with alternative options in case the first choice isn't available. Make a list of places to buy native plants. Include local nurseries and garden centers, and organizations like Extension Master Gardeners, Native Plant Society chapters, the Butterfly Society, and botanical gardens that host plant sales. Mark any plant sale dates on the calendar and remember to bring along the map and list when shopping.

Use the maps to keep track of these site conditions:

- **Sun and shade.** Does the area get the most light in the morning or the afternoon? For how long? The term "full sun" means an area gets light for six or more hours a day. Where are the shade lines in summer versus winter? For example, the shadow cast by a house will be longer in the winter and shorter in the summer because of the position of the sun on the horizon at different times of the year. Many videos and tools are available online to help with mapping light in the landscape.

- **Drainage.** Where is the water coming from (the neighbor's yard, the house roof, the street)? How is it moving through the landscape? How long does the water stay? If water stands for more than two days, look at ways to improve infiltration into the soil. Is the flow causing any erosion? That should be addressed quickly before property is lost. In most situations, it's easier and cheaper to accept and work with the water flow pathway than to try to change it.

- **Soil conditions.** Is the soil sandy, clayey, or a mix? Is there sufficient organic matter? How deep is the soil? Does it drain well, or is it compacted? What are the pH and nutrient levels? These factors affect how well

plants will establish and grow. The local Extension office and most libraries have Virginia Tech soil test kits to help determine these conditions.

- **Topography.** Are there slopes that need to be stabilized or rocky outcroppings to work around? What about low areas that might be a good place for native plants that tolerate moist soils?

- **Existing features.** Are there any healthy mature plants to keep, or maybe some unhealthy ones that might need to be removed? Is there a water feature, such as a pond or stream? What about structures like a shed, fence, or utility fixtures above or below ground that can influence the choice and location of plants? Also note desirable views to frame or undesirable ones that could be blocked.

- **Future features.** Think about possible future changes to the area, such as a house addition or a new shed, deck, patio, fence, or walkway. Any of these could provide new areas for plants or mean existing plants need to be moved or removed.

- **Activities.** Consider what is happening in the landscape — birdwatching, growing herbs, vegetables, or flowers for pollinators, soccer practice, a swimming pool, and room for pets to live or play. Who will be using these spaces (grown adults, elderly parents, children, pets) and where might native plants fit into the landscape?

Site Preparation and Removal of Weeds and Invasive Plants

When making notes about locations and conditions, also consider what needs to be done to prepare the site for planting. To determine the pH, nutrient, and organic matter levels of the soil, get Virginia Tech soil test forms and boxes at local Extension offices (https://ext.vt.edu/offices.html) and at most libraries. A soil test is easy to take (instructions are on the form), is generally inexpensive ($10-$20 plus shipping), and provides great information to help match the right plant to the site. Soil samples can also be sent to private labs for testing, though this may cost a little more.

If it is difficult to collect soil for a test or to dig a shovel into the ground, then the site has compacted soil or a lot of rocks or roots that will need to be addressed. These conditions make it hard for a new plant's roots to grow and to get enough air, water, and nutrients. Depending on how large the site is, there are several solutions to try. Rocks and roots (if from a dead shrub or tree) can be dug or raked out. If the roots belong to a live shrub or tree, the soil can be built up about 4-6 inches on top of the roots (but not directly around the stems or trunk) to create a planting bed for the new plants. Don't make it any higher or the shrub or tree roots could be smothered and kill the plant. If building up is not an option, consider mulching the area and planting farther out from the shrub or tree. If the problem is compacted soil, work on the site after a rain or an irrigation cycle, and when there is no standing water. Spread a 1-inch layer of organic matter (compost, leaf mold, or soil conditioner) over the area, then use a garden or digging fork to poke holes 4 to 6 inches deep every 8 to 12 inches in a grid pattern across the area to be planted. The organic matter will work into the holes, reducing compaction by increasing air space and water infiltration so that roots can grow more easily. Tilling or digging and turning over the soil isn't recommended. These practices can mix soil layers, bring weed seeds to the surface to germinate and compete with native plants, and possibly disturb native ground-nesting bees.

Look for weeds and invasive plants at the site and in the surrounding areas. These should be removed before planting the new native plants. Weeds are classified into three groups:

- Winter annual weeds germinate in the fall, grow through the winter, produce seeds, and die in the spring.

- Summer annual weeds germinate in the spring, grow through the summer, produce seeds, and die in the fall.

- Perennial weeds come back year after year and can spread by both seeds and vegetative plant parts.

Some weeds are extremely aggressive, spreading quickly to infest large areas and outcompete other desirable plants. These weeds are considered invasive species. The site should be clear of both weeds and turfgrass before planting. Weed removal methods include smothering them with cardboard covered with a layer of organic mulch, solarizing by laying black plastic over the planting area for two to three months before planting, or using a translocated/systemic herbicide that kills weed tops and roots. If using an herbicide, be careful not to get any on the foliage or roots of nearby desirable plants. Perennial weeds, especially invasive species, often need an integrated management plan that combines multiple methods. After planting native plants, weeds can be prevented with mulch until the plant canopies grow and fill in. Growing weeds can be pulled by hand when they are very young, burned with a weed torch (after a rain or an irrigation cycle, so the mulch doesn't catch fire), or spot-sprayed with a post-emergent herbicide. To get assistance in identifying weeds and creating a management plan, contact any local Extension office.

The book "Eight Essential Elements of Conservation Landscaping" (https://www.chesapeakelandscape.org/resources/the-eight-essential-elements/) from the Chesapeake Conservation Landscaping Council and the Blue Ridge PRISM website (https://blueridgeprism.org/) have more information on managing invasive species. In addition, the Virginia Invasive Plant Species List can be found through the Virginia Department of Conservation and Recreation's website (https://www.dcr.virginia.gov/natural-heritage/invsppdflist).

Incorporating Native Plants into the Landscape

Native plants can be incorporated into a landscape in many ways. Always design for and space plants based on their mature size to avoid crowding and reduce long-term maintenance. Create small planting areas, large planting areas, or use the whole landscape. Native plants can be tucked in between or under existing plants. They can be used in window boxes, a single container, or several containers grouped together. When planting in containers, use plants that are compatible with each other and have the same sun or shade requirements. Native plants can be used as specimens or planted in masses, in formal or naturalistic design, and everything in between. They can be layered based on height and can have different textures, bloom times, and other seasonally interesting features like bark, berries, or unique growth habits. Native plants can be used to solve landscape problems like erosion or to block undesirable views, to attract and support pollinators and wildlife, to restore degraded areas, to support cultural, spiritual, and health practices, to provide food for humans and wildlife, and just because they are fun.

Native plants often serve multiple functions at the same time in a landscape. For example, the Northern spicebush (*Lindera benzoin*) provides habitat for birds and berries for wildlife, acts as the host plant for the Eastern Tiger Swallowtail butterfly, and has a beautiful yellow fall color.

A garden can become a great way to educate neighbors about the importance and utilization of native plants. Consider adding a sign that explains the landscape or identifies the pollinator garden, monarch way station, wildlife habitat, or bird sanctuary created. Also, think about labeling the plants so visitors know what they are looking at.

Examples of how to incorporate native plants into the landscape

Pollinator gardens and monarch waystations

Pollinator gardens attract and support a wide variety of bees, beneficial insects, and hummingbirds. These gardens need full sun and plants that provide pollen, nectar, and food throughout the growing season (spring through fall). Choose plants with a variety of heights, colors, and bloom times. Plant lists and garden design templates are available from sources including the Virginia Native Plant Society, the Butterfly Society of Virginia, and the Xerces Society (see Resources, below). Monarch waystations are very specific for supporting monarch butterflies and provide the necessary resources to support successive generations of butterflies (fig. 2). These gardens also need full sun, and 75-100% of the plants in them must be milkweeds (at least 10 plants), which are essential for monarchs to complete their life cycle. Adult monarch butterflies lay eggs on the leaves. The eggs hatch into caterpillars (larvae) that only eat milkweed leaves before making a chrysalis (cocoon) to become an adult butterfly. The tallest milkweeds, such as common milkweed (*Asclepias syrica*) and swamp milkweed (*Asclepias incarnata*) (fig. 2), attract the most egg-laying monarchs (Baker and Potter 2018). The shorter butterfly milkweed (*Asclepias tuberosa*) should be used around the outer edges of the way station. To be most effective, a way station should be at least 100 square feet in area (Monarch Watch, n.d.). Including other plants at the waystation can support adult butterflies, but it's not necessary if there are other flowers that can provide pollen and nectar in nearby areas.

Figure 2. Monarch butterfly and caterpillar on swamp milkweed, Asclepias incarnata. (Photo courtesy of Rob Routledge, Sault College, Bugwood.org.)

Wildlife habitat

Wildlife habitat is a critical service that native plants provide. The best way to provide habitat for a range of wildlife is to create diverse canopy layers in the landscape. Groundcovers, like partridgeberry (*Mitchella repens*) and common wild ginger (*Asarum canadense*), and short plants like golden ragwort (*Packera aurea*) and Solomon's seal (*Polygonatum biflorum*), provide cover from predators and places for toads, skinks, salamanders, and other small wildlife to make homes. Shrubs like wax myrtle (*Morella cerifera*) and viburnums (*Viburnum* spp.) and smaller understory trees like American hornbeam (*Carpinus caroliniana*) and Eastern redbud (*Cercis canadensis*) provide the middle layers; while larger trees like tuliptree (*Liriodendron tulipifera*) and black gum (*Nyssa sylatica*) make up the higher canopy layers that provide shelter, nesting sites, and travel routes for many birds and wildlife like squirrels, raccoons, and opossums. If possible, leave the dead hollow stalks of native perennials to provide overwintering habitat for beneficial insects, especially native bees. If that's not possible or preferable, try to leave 18-24 inches of the stalks standing, or alternatively, cut them down to the ground, gather the stalks into a bundle, tie with a ribbon or string, or put them in a colorful tomato cage, and stand them in the garden for the insects to use.

Food for humans and wildlife

People can eat blueberries (*Vaccinium* spp.) and use them as a hedge. Serviceberries (*Amelanchier* spp.) and pawpaws (*Asimina triloba*) have edible fruit and also provide understory tree canopy layers. The common persimmon (*Diospyros virginiana*) has edible fruit and makes a great medium-sized tree in the landscape. Always be sure to positively identify a plant and confirm that the berries, fruits, or nuts are safe for humans to eat. Birds and other wildlife will eat berries from the red chokeberry (*Aronia arbutifolia*) and the American beautyberry (*Callicarpa americana*) and nuts from hickory (*Carya* spp.) and oak (*Quercus* spp.) trees (Narango et al. 2017). In fact, according to research conducted by Douglas Tallamy of the University of Delaware, oaks are one of the most important native keystone plants because they are host plants for more than 500 different caterpillar species, which are an important food source for young birds. Leave the dead flower stalks and seed heads of herbaceous plants in the fall, as many of them provide seeds that adult birds and small wildlife eat over the winter.

Riparian buffers

Riparian buffers are planted areas along shorelines that slow and filter stormwater before it enters a pond, stream, or other body of water, stabilize banks from eroding, and provide green corridors that connect larger green spaces in a community so wildlife can move safely and have a larger habitat area. Buffers should be planted in layers, as described in the habitat and food sections above. Additional plants to include are ones that like to grow right at the water's edge, like high-tide bush (*Baccharis halimifolia*), swamp azalea (*Rhododendron viscosum*), swamp rose (*Rosa palustris*), pickerelweed (*Pontederia cordata*), lizard's tail (*Saururus cernuus),* and soft rush (*Juncus effusus*). If the shoreline is adjacent to brackish (salt) water, that is a whole different set of conditions and a very different group of plants. See the section below for more information.

Living shorelines and wetlands

Living shorelines and wetlands are critical pollution filters and shoreline protection (against property loss from erosion) areas in landscapes. There are both freshwater and brackish water types, and the plants are specific because of fluctuating water levels and salt concentration (most plants are not salt-tolerant). To restore or create these areas, be sure to use native plants that are adapted to the specific site conditions. An excellent source of information for these types of landscape sites is the Virginia Institute of Marine Science, part of the College of William and Mary. There are also environmental organizations like the Chesapeake Bay Foundation and local groups like the James River Association, Elizabeth River Project, and Lynnhaven River NOW that can help with identifying, designing, cost-sharing, and finding plants for these unique landscape sites.

Stormwater management

Stormwater management in the landscape is one of the most frequently requested topics. Rain gardens, swales, buffers, and conservation landscaping are vegetated stormwater management practices that can be used individually or connected in a water treatment train (like boxcars on a train). More specific information on these practices is available in the Stormwater Management for Homeowners Fact Sheet series of publications from Virginia Cooperative Extension (ext.vt.edu). The goal of these practices is to slow down runoff, filter out pollutants, and reduce the overall volume of water running off into storm drains and nearby waterways. Native plants make these practices function more efficiently.

A rain garden is like a puddle with plants where runoff is held for a short time while the plants, soil, and soil microorganisms filter it before it soaks into the soil. Plant roots absorb water and also create channels in the soil for water to soak in and recharge groundwater supplies. A wide variety of native plants can be used in rain gardens, like flag iris (*Iris versicolor* or *Iris virginica*),

joe pye weed (*Eutrochium* spp.), yellow wild indigo (*Baptisia tinctoria*), garden phlox (*Phlox paniculata*), swamp rosemallow (*Hibiscus moscheutos*), buttonbush (*Cephalanthus occidentalis*), pepperbush (*Clethra alnifolia*), and even small trees (if the rain garden is large enough).

Swales are shallow and wide, conveying runoff from one point to another. They are usually located along property edges bordering roads when there is no curb, or around houses on a downslope. Depending on where the swales are located, shorter plants like common yarrow (*Achillea millefolium*), mistflower (C*onoclinium coelestinum*), and green and gold (*Chrysogonum virginianum*) might be more appropriate.

Conservation landscaping refers to areas in the landscape designed to intercept, slow down, and soak in stormwater. These areas can be anywhere in the landscape, but are commonly found at the base of a slope, at the end of a swale, or at the end of a downspout or drainage pipe. Use a combination of plants in any style or design in these areas. Make sure the runoff can flow freely into them. Plants in stormwater management areas also provide habitat, food, pollinator support, and seasonal interest. Reach out to the local Soil and Water Conservation District to find out whether it participates in the Virginia Conservation Assistance Program (VCAP), which provides cost sharing and educational assistance to homeowners installing stormwater management practices.

Design situations

Specific styles

Native plants can fit into almost any design style. Use compact, smaller-leaved plants that don't reseed much, like wild pink (*Silene caroliniana*) or inkberry (*Ilex glabra*), for a more formal design. For informal and naturalistic designs, use grasses, vines, and less compact plants like little bluestem (*Schizachyrium scoparium*), switchgrass (*Panicum virgatum*), coral honeysuckle (*Lonicera sempervirens*), New York ironweed (*Vernonia noveboracensis*), goldenrod (*Solidago* spp.), and brown- or black-eyed Susans (*Rudbeckia* spp.).

A naturalistic landscape style is meant to replicate how native plants look in the wild, while still being purposeful and planned. Plants should be layered based on height and have different textures and bloom times for interest throughout all seasons. They should be allowed to fill in and grow closely as they would naturally (Brzuszek, n.d.).

Native plants can also be used to represent a specific historical time period, like the gardens in historic Williamsburg, Virginia, or to complement a specific style of home, like Mediterranean or modern.

Specific functions

As noted above, native plants can serve many functions. Here are a few more examples:

- Fringe tree (*Chionanthus virginicus*), with its fringe-like flowers, can serve as an accent or focal plant in early spring.
- Inkberry (*Ilex glabra*) is suitable for foundation plantings or sheared hedges.
- Pickerelweed (*Pontederia cordata*) and turtlehead (*Chelone glabra*) are ideal in a water garden.
- For winter interest after other plants have gone dormant, plants like witch hazel (*Hamamelis virginiana*) provide fragrant blooms, winterberry (*Ilex verticillata*) offers red berries that can be used for holiday decorating and as bird food, and pink muhly grass (*Muhlenbergia capillaris*) offers color and texture (fig. 3).

Figure 3. Pink muhly grass (*Muhlenbergia capillaris*) plumes add color and texture to a native plant bed after the first frost. (Photo by Sierra Seekford.)

Space definition

Native plants can be used to define borders of landscape spaces (fig. 5), create "rooms," and provide transitions between different areas in the landscape. A line of mixed shrubs and trees can define property lines and create a visual barrier. Shrubs or tall perennials can be used to define the back edge of a bed or garden, while short perennials can define the front or side edges. Shrubs and vines on trellises can provide "walls" and trees the "ceiling" of outdoor rooms, and vines on arbors can provide "doorways" to transition between areas. Short perennials can border walkways (fig. 4), and low groundcovers can grow between stepping stones of pathways connecting different landscape areas.

Figure 4. Native plants bordering a pathway. (Photo by Sierra Seekford.)

Problem solving

Native plants can be ideal for addressing issues in the landscape. Some examples:

- For a groundcover to prevent erosion in dry shade like under a tree, use white-tinged sedge (*Carex albicans*), Robin's plantain (*Erigeron pulchellus*), or Christmas fern (*Polystichum acrostichoides*).
- For privacy screening to block an undesirable view or street or car lights, use wax myrtle (*Morella cerifera*) or Eastern redcedar (*Juniperus virginiana*).
- For noise reduction, use a layered planting incorporating as many evergreen plants as possible, including wax myrtle, Eastern redcedar, Mountain Laurel (*Kalmia latifolia*), great rhododendron (*Rhododendron maximum*), sweetbay magnolia (*Magnolia virginiana*) (semi-evergreen), American holly (*Ilex opaca*), loblolly pine (*Pinus taeda*), and Virginia pine (*Pinus virginiana*).

Figure 5. In the foreground, a new native plant bed has painted outlines and yellow flags to mark where to plant and how far apart to space the plants based on their size at maturity. (Photo by Laurie Fox.)

In summary, native plants can be incorporated into a landscape in many ways, and they provide countless benefits. The steps to successfully incorporating native plants into a landscape are taking the time to identify goals, assessing and preparing the site, researching and selecting the right plants, and maintaining the plants long term.

The next publication in this three-part series is "Native Plants in the Landscape: Maintaining Native Plants" (SPES-799P). The resources listed below can help Virginians incorporate these amazing plants successfully into the landscape.

Resources

Audubon Society. Find the closest Virginia chapter by typing in the local ZIP code, then search for native plants. https://www.audubon.org.

Blue Ridge Partnership for Regional Invasive Species Management (PRISM). This website offers invasive plant fact sheets, ideas for management strategies, and other resources, events, and programs. https://blueridgeprism.org.

Bringing Nature Home: How You Can Sustain Wildlife with Native Plants by Douglas Tallamy was published in 2007 and offers recommendations for planting natives, emphasizing how doing so benefits native wildlife.

Butterfly Society of Virginia educates Virginians about butterflies and moths and promotes conservation efforts. https://www.butterflysocietyofva.org.

Chesapeake Bay Foundation**.** With offices in Richmond and Hampton Roads, the foundation provides events, educational resources, and programs for residents throughout Virginia. Search for "native plants." https://www.cbf.org/virginia.

Chesapeake Conservation Landscaping Council. Anyone can download *The Eight Essential Elements of Conservation Landscaping*, a 59-page booklet that includes numerous references to incorporating native plants in the landscape. The site also provides information on the Chesapeake Bay Landscape Professional certification program and other resources. https://www.chesapeakelandscape.org.

Digital Atlas of the Flora of Virginia**.** This site shows which plants grow in specific geographic areas. https://vaplantatlas.org.

Elizabeth River Project**.** With a focus on the Hampton Roads area of Virginia, the organization sponsors events, educational resources, programs, and cost-share opportunities. https://elizabethriver.org.

The Garden Revolution, by Larry Weaner and Thomas Christopher, was published in 2016 by Timber Press and focuses on an ecological approach to planting.

Homegrown National Park calls for urgent action to add native plants and remove invasive ones from the landscape. It provides information on plants and insects and supports activities for kids. https://homegrownnationalpark.org.

How Can I Help? Saving Nature with Your Yard by Douglas Tallamy was published in 2025 and tackles questions commonly asked at the author's popular lectures. The book offers actionable guidance to help homeowners take the next step in their conservation efforts.

James River Association. With a focus on the James River watershed area of Virginia, the association provides events, educational resources, programs, and cost-share opportunities. https://thejamesriver.org.

The Ladybird Johnson Wildflower Center provides cultural information on native plants, as well as pictures. https://www.wildflower.org/learn/container-gardening-native-plants.

Landscape Designs with Native Plants from the University of Maryland provides design templates and other information for townhomes and single-family homes. https://extension.umd.edu/resource/landscape-designs-native-plants.

Landscaping with Native Plants in the Middle-Atlantic Region, 2nd edition, by Elizabeth N. duPont. Published in 2004 by the Brandywine Conservancy.

The Living Landscape: Designing for Beauty and Biodiversity in the Home Garden, by Rick Dark and Doug Tallamy, was published in 2014 and shows how to incorporate areas for children and pets into a native garden that provides fragrant, edible plants, shelter, and sustenance for wildlife.

Lynnhaven River NOW covers the Hampton Roads area of Virginia with events, educational resources, programs, and cost-share opportunities. https://www.lynnhavenrivernow.org.

Monarch Watch provides information about the Monarch Waystation program and how people can get involved. https://www.monarchwatch.org/waystations/.

Mt. Cuba Center near Wilmington, Delaware, publishes reports on native plants, especially in the Mid-Atlantic region, on its website. https://mtcubacenter.org.

Natural Landscaping: Designing with Native Plant Communities by John Diekelmann and Robert Schuster. Published by the University of Wisconsin Press in 2002, it approaches landscape design as the establishment of natural ecosystems, rather than the mere planting of specimens.

The Nature of Oaks: The Rich Ecology of Our Most Essential Native Trees by Douglas Tallamy was published in 2021. It reveals what is going on in oak trees month by month and shares practical advice about how to plant and care for an oak, along with information about the best oak species for specific areas.

Nature's Best Hope: A New Approach to Conservation That Starts in Your Yard, by Douglas Tallamy, was published in 2020 and outlines the author's vision for a grassroots approach to conservation, showing how homeowners can turn their yards into conservation corridors that provide habitat for wildlife.

Noah's Garden: Restoring the Ecology of Our Own Back Yards by Sara Stein. Published in 1993 by Houghton Mifflin Co., the book tells the author's story of transitioning from traditional gardening to restore native habitats.

Plant Virginia Natives encourages the use of native plants and conservation landscaping practices with 10 regional Virginia guides, links to regional native plant campaigns, and many other resources. https://www.plantvirginianatives.org.

Planting in a Post-Wild World by Thomas Rainer and Claudia West. Published by Timber Press in 2015, the book focuses on how plants fit together in nature and how to mimic those features to create robust native landscapes.

The University of Minnesota Bee Lab lists plants and habitats that support native bees. https://beelab.umn.edu.

The Virginia Conservation Assistance Program (VCAP), offered through Virginia Soil and Water Conservation Districts, can help with cost sharing for the installation of stormwater management practices. https://vaswcd.org.

Virginia Cooperative Extension's website offers searchable publications like "Stormwater Management for Homeowners" and "Native Plants in the Landscape – Understanding, Incorporating and Maintaining," as well as local office locations and contact information. https://ext.vt.edu.

Virginia Department of Conservation and Recreation's Natural Heritage Program maintains the Virginia Invasive Plant Species List and offers general information about native plants for the coastal, Piedmont, and mountain areas of Virginia. https://www.dcr.virginia.gov/natural-heritage/nativeplants.

Virginia Institute of Marine Science offers the Field Guide to Virginia Salt and Brackish Marsh Plants and information on living shorelines. https://www.vims.edu.

Virginia Master Naturalists offers information on training and events. http://www.virginiamasternaturalist.org.

Virginia Native Plant Society has local chapters and native plant sales. https://vnps.org.

Xerces Society offers resources to protect bees and other pollinators. https://xerces.org.

Acknowledgements

The authors would like to express appreciation for the reviews and comments provided by the following individuals:

Kristopher Criscione, Assistant Professor and Nursery Production Specialist, School of Plant and Environmental Sciences, Hampton Roads AREC, Virginia Tech; Quinn Bracken, Extension Agent in Henrico County, Virginia Cooperative Extension; Michael Andruczyk, Senior Extension Agent, City of Chesapeake, Virginia Cooperative Extension; Barbara Fair, Extension Horticulture Specialist and Associate Professor, North Carolina State University; and Lisa Kuder, Native Plants and Landscapes Specialist, Clarksville Facility, University of Maryland Extension.

References

Baker, M. and D. A. Potter. 2018. "Colonization and Usage of Eight Milkweed (*Asclepias*) Species by Monarch Butterflies and Bees in Urban Garden Settings." *Journal of Insect Conservation*. https://doi.org/10.1007/s10841-018-0069-5.

Brzuszek, R. F. n.d. "Designing with Native Plants and Naturalistic Landscapes." Mississippi State University Extension. Accessed February 26, 2026. http://bit.ly/4tNmdTq.

Monarch Watch**,** n.d. "Monarch Waystation Program." Accessed March 2, 2026. https://www.monarchwatch.org/waystations.

Narango, D. L., D. W. Tallamy, and P. P. Marra. 2017. "Native Plants Improve Breeding and Foraging Habitat for an Insectivorous Bird." Biological Conservation Vol. 213, Part A, September 2017, Pages 42-50. https://doi.org/10.1016/j.biocon.2017.06.029

Virginia Cooperative Extension is a partnership of Virginia Tech, Virginia State University, the U.S. Department of Agriculture, and local governments. Its programs and employment are open to all, regardless of age, color, disability, sex (including pregnancy), gender, gender identity, gender expression, genetic information, ethnicity or national origin, political affiliation, race, religion, sexual orientation, or military status, or any other basis protected by law.

VT/0626/SPES-798P