

Marilyndica

Newsletter of the Maryland Native Plant Society

SPRING/SUMMER 2025 Vol. 16 No. 1



*Stewardship for
Vibrant Native
Landscapes*



MDFlora.org

P.O. Box 4877, Silver Spring, MD 20914

EXECUTIVE OFFICERS

President Lauren Hubbard

Vice President Judy Fulton

Treasurer Kirsten Hoffman

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BOARD OF DIRECTORS

Ashley Bowers Karyn Molines

Allen Browne Rod Simmons

Liz McDowell Bradley Simpson

GENERAL INQUIRIES

info@mdflora.org

MNPS CHAPTERS

Eastern Shore: Cristina Niciporciukas
eschapter@mdflora.org

Southern Maryland: Karyn Molines
info@mdflora.org

Western Mountains: Liz McDowell
lmcd.mnps@gmail.com

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Editor: Pru Foster

Assistant Editors: Jil Swearingen &
Bradley Simpson

Layout & Design: Liz Fisher/EC Fisher Design



Sassafra albidum. Princess Anne, Somerset
County. Photo by Cristina Niciporciukas.

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Carex buxbaumii at Huntley Meadows.

Photo by Rod Simmons.

MNPS UPCOMING EVENTS (APRIL–AUGUST)

Registration is required for all events: mdflora.org

Field trips are listed on the website.

ANNUAL CONFERENCE

**September 6-7, Washington College in Chestertown, "Extraordinary
Ecosystems of the Eastern Shore"**

MONTHLY PROGRAMS

Talks start at 7:30 pm. Programs are by Zoom and are recorded, unless
otherwise indicated. Zoom opens at 7 pm for a board update and Q&A.

**April 29, 7:30 PM, Zoom, Mark Brownlee, "Healthier Lawns for a
Healthier Environment"**

**May 27, 7:30pm, Zoom, Nancy Lawson, "A World of Discovery: Exploring
the science and heart of sensory wildscapes"**

**June 24, 7:30 PM, Zoom, Jorge Bogantes Montero, "Wild Rice
Restoration in the Anacostia"**

**July 29, 7:30 PM, Hybrid (Central MD Research & Education Center),
Katie Lauter & Sarah D'Adamo, "Baltimore Green Space"**

**August 26, 7:30 PM, Hybrid (Central MD Research & Education
Center), Lisa Kuder, "Maryland's Best Native Plants Program"**

**September 30, 7:30 PM, Hybrid (Central MD Research & Education
Center), Jim Brighton, "Maryland Biodiversity Project"**

Cover: Monarch butterfly (*Danaus plexippus*) gathering nectar on *Solidago erecta* before fall migration.
Photo by Rod Simmons.

The importance of transitions and connectivity in our managed landscapes

With the mission of the Maryland Native Plant Society to promote awareness and conservation of Maryland's native plants and their habitats, our organization focuses our efforts on preserving wild spaces. But we are also acutely aware of the impacts that landscaped lands have on our wild spaces. This issue of *Marilandica* highlights how we can better steward the land in our care to help foster biodiversity.

With over 90 percent of the land in Maryland privately owned (<https://www.nrcm.org/documents/publiclandownership.pdf>), private lands are critical for the state's biodiversity and can also impact adjacent wild spaces either positively or negatively, depending upon how that land is managed. In Maryland, private land is frequently farmed or turfed and adjacent to wild space that is forested. This transition between distinct ecological communities is an 'ecotone' which typically host a high degree of biodiversity. When the bordering habitats are in good ecological condition, this zone of varying characteristics represents a boon to biodiversity.

Fireflies are a species that thrive in an ecotone. When a forest abuts a grassland managed with wildlife in mind, i.e., one that is mown annually, you will find large populations of fireflies. Fireflies spend 95% of their lifecycle in leaf litter. But during their mating phase, they spend their days hiding in tall grasses and rise up into the tree canopy at dusk, where they can flash and attract mates. Fireflies need all these habitats to live. Heavily mown turf and/or pesticide use reduce firefly populations. I share this example because I am lucky enough to witness magical firefly light shows in my own yard, while my neighbors with standard turf have far fewer fireflies.

In addition to contributing to healthy ecotones, high-quality habitat on private land can provide connectivity between



A common eastern firefly, *Photinus pyralis*, on common milkweed, *Asclepias syriaca*, in Lauren's field. Photo by Lauren Hubbard.

otherwise isolated wild spaces. Research continues to show that providing habitat corridors, even small ones, helps fragmented habitats recover biodiversity more quickly, saves local populations, and reduces the rates of extinction. Damschen et al., *Science* 365, 1478–1480 (2019). Building and managing high-quality habitat corridors will help buffer against species losses.

Habitats, connectivity, and ecotones only support biodiversity if the spaces are filled with appropriate species. Within the continental USA, Maryland has some of the highest densities of exotic species per area (bonap.org), making it especially challenging to develop and maintain high-quality habitats. I have frequently witnessed invasives creeping into wild areas, such as Rachel Carson Conservation Park, where *Miscanthus* grass from neighboring properties is making inroads along the edge of the park, and in Rock Creek Park, where Japanese Barberry is found in abundance due to spillover from adjacent residential landscapes.

It is in the wonderful wild spaces that many of us find peace amidst a chaotic world. Protecting them will require participation from both private and public land managers. There is work to be done on many fronts: controlling invasives, promoting native plants, citizen observations, research, lobbying on behalf of our leafy friends, and protecting habitat. Without significant contributions from private landowners, our chance of successfully maintaining or improving biodiversity is significantly diminished. I hope this issue of *Marilandica* will provide you with the inspiration to do this good work.

Lauren Hubbard, PhD

An ecotone bridging forest and long grass on the author's property is host to a multitude of fireflies. Photo by Lauren Hubbard

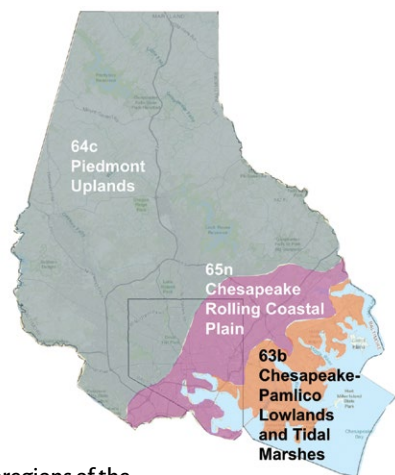
Ecoregions: A Hierarchy of Uniqueness

By ArcheWild®

The concept of the ecoregion has been around for decades but has only recently become recognized as an important tool for those engaged in restoration and rewilding efforts. This article discusses what ecoregions are, why they are important, and how we can use the concept of ecoregions at home.

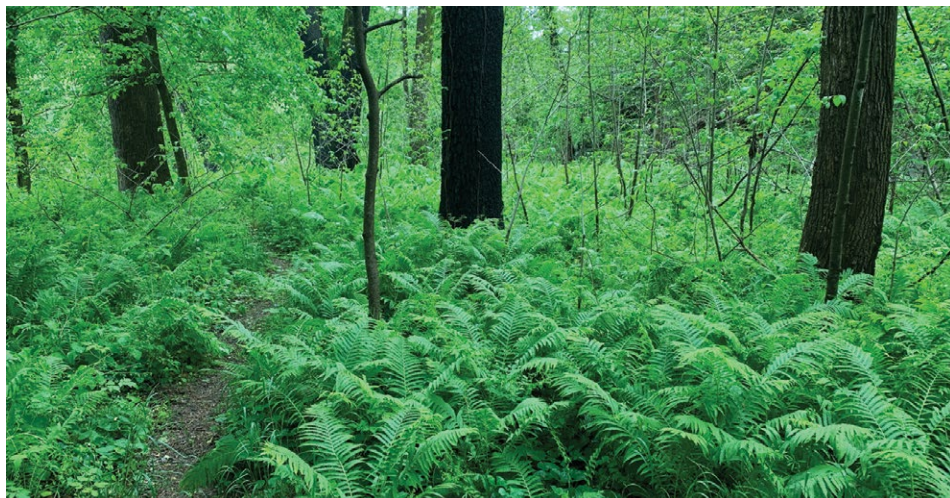
What are they?

In 1987, geographer James M. Omernik coined the term “ecoregions” and created the first maps displaying ecoregions for the US Environmental Protection Agency (EPA). These ecological regions are based on geology, landforms, soils, vegetation, climate, land use, wildlife, and hydrology. Importantly, the EPA notes, “The relative importance of each characteristic varies from one ecological region to another.” The differences between ecoregions are sometimes expressed in terms of the unique vegetation systems they support.



Ecoregions of the Eastern Shore. Map by M. Brownlee

Ecoregions are defined in levels, going from the most general (Level I) to the most specific (Level IV). Fifteen Level I ecoregions occur in North America with familiar names like North American Deserts, Great Plains, and Eastern Temperate Forests, where Maryland lies. Originally, Omernik only defined Levels I, II, and III,



Ostrich Ferns on an ancient alluvial bench at Plummers Island. Photo by Rod Simmons.

but because land managers needed more specific information relevant to planting projects, he led an effort to further subdivide the ecoregion framework. This resulted in the publication of Level IV Ecoregion maps in the early 2000s depicting 967 distinct ecoregions in the lower 48 states. This article is focused on the applicability and use of Level IV Ecoregions that were released in the early 2000s. You can read more about, and access an interactive map of Maryland's thirteen (13) Level IV Ecoregions at bplant.org/region/1364.

Ecoregions in the context of native plants

Ecoregions are key to understanding which native plants grow where and why. They help explain why many of the plant species growing in western Maryland are different from those growing on Maryland's Eastern Shore (see map). Ecoregions are geographical areas that typically support ecologically distinct and genetically unique sets of plants, often referred to as plant assemblages or plant communities (e.g., forests, meadows, swamps, or shrublands). A native plant or a set of native plants that calls one ecoregion home might be completely absent from another. In other words, not every Maryland native plant species is

native everywhere across the state.

For example, a species that is attuned to the ecological conditions present at Finzel's Swamp, north of Frostburg, will likely struggle if transplanted to a site on the leeward side of Assateague, MD, and vice versa. Likewise, if you have a beach house on Wallops Island, perusing a list of plants considered native to Maryland is of little to no use to you. Instead, you will want to see a list of species considered native to your ecoregion, which would be the Virginian Barrier Islands and Coastal Marshes.

Do ecoregions really matter that much?

Mostly. Each ecoregion is a unique amalgam of environmental factors, and crossing the boundary between two ecoregions might well transport you from one plant world to another.

But the differences between ecoregions are more foundational than the plant differences themselves. In fact, ecoregions are not necessarily defined by the species growing within them at all, but may instead be delineated by other ecological conditions such as the local rocks, water patterns, landforms, and soils, as well as the land use history. The native plants present in an ecoregion are a result of the coevolution of the physical conditions and living beings, resulting in



Accession code label on a crop of shrubs uniquely identifies the source of the seed. Photo by M. Brownlee



Monarda didyma growing at elevation often have greater mildew resistance than those growing in coves. Photo by M. Brownlee

Examples of propagation nurseries with ecoregion coding capabilities:

Greenbelt Native Plant Center (NY/NJ)

Nasami Farm (MA/VT/CT)

ArcheWild® Native Nurseries (PA/MD/WV)

Earth Sangha (VA)

the plants that are present being perfectly suited to live there and to support other life in the ecosystem. But there are even more distinctions within ecoregions, because each site has a unique history and unique physical, chemical, and hydrological traits, local plant populations may develop with unique genetic traits. The locally adapted, genetically distinct populations are called local ecotypes.

While some species show little to no such local differentiation, many, if not most plants studied in this context do. For example, scouring rush (*Equisetum hyemale*) shows no significant genetic differences anywhere in the world. On the other hand, Hart's tongue fern (*Asplenium scolopendrium*) and red spruce (*Picea rubens*) have many local ecotypes with clearly established and significantly different genetics even within one relatively small place.

Unpublished research suggests that each population of large-flowered trillium (*Trillium grandiflorum*) is genetically distinct and that butterfly milkweed (*Asclepias tuberosa* ssp. *tuberosa*) populations are genetically distinct every 50-75 miles, broadly synonymous with the ecoregions on the east coast. These findings, if confirmed, have significant ramifications for forest and meadow restoration projects, respectively. Why use seeds or plants that originated somewhere else, given that their chance of survival is less than seeds and plants from local ecotypes?

Aside from planting success, it is also considered important to use local ecotype plants in landscaping and restoration

work to preserve the genetic diversity of a species. Genetic diversity can enable a species' survival by providing options for coping with stress, such as habitat reduction and climate change. When we transplant a non-local species into a new region, not only may it fail to flourish, but if it does grow and spread, it may dominate the genetics of a locally unique population and diminish the genetic bank, an effect called outbreeding depression.

Purple coneflowers, *Echinacea purpurea*, widely available in the nursery trade, offer us an opportunity to see how this works in the real world. The species can be found naturally on thin soils in forest clearings in Wisconsin all the way down to the cedar glades of Missouri. Dry, thin, gravelly, and sandy soils in areas with low humidity, low winter rainfall, and minimal predation are its home. How would this species perform in Maryland, in our schists or the wet clays of our valleys or the humid sands of the peninsula? Probably not very well, because the plant's genetics evolved over countless generations to survive over there, and not here. Consider—we've been planting purple coneflower into our gardens and parks for so long that it should be a roadside weed by now. But it isn't. That's likely because the ecoregions of Maryland are incompatible with purple coneflower in the long term. So calling it a "native" in a Maryland context is incorrect. Purple coneflower is not native here and cannot play a significant role in healing our local ecosystems. Sure, it's possible to keep it alive at home with lots of tending, but that's gardening and cannot be scaled up across our communities and certainly

not across the state.

The prevailing philosophy on the smart use of natives is that plants originating from within a single ecoregion, regardless of the state or county, tend to be genetically attuned to, compatible with, and suitable for use anywhere within that same ecoregion. Although this is generally accepted amongst ecologists and botanists, it doesn't always lead to successful planting because, of course, each location is unique. In the absence of detailed genetic testing for each species in every ecoregion in which it occurs, there is no way to know definitively whether or not a plant grown from a nonlocal source will thrive at your site. Instead, the current best practice amongst professionals is to: 1. Use native plants grown from seed produced in documented ecoregion-specific founder plots (cultivated plantings that host a specific, documented genetic strain of a native plant) or from seed collected from wild populations by licensed collectors; <https://on.doi.gov/41FH3ZI>; 2. Growers and nursery outlets declare the ecoregion origin of their plants; and 3. Let the purchaser decide whether the plants are appropriate for their site.

How do nurseries identify the ecoregion origin of their plants?

There are a few organizations that can accurately declare and track the ecoregion origin of the plants that they grow. Ecoregion designations (e.g., 64c) are applied by a practicing ecologist or staff botanist at the time that seeds are

Continued on page 10

On Beauty: Changing Perceptions

By PRU FOSTER

A beautiful painting can fill us with awe and peace, a haunting melody can remind us of our mortality, a poem can transport us to other spaces. The pursuit of beauty is probably one of the noblest endeavors of humanity. The frightfully strong passions that we experience in the presence of beauty might suggest that “what is beautiful” is fundamental to human nature. However, what we perceive as beautiful changes.

Many of us will know of the classic example of changing perceptions of female beauty. The earliest known representations of humanity are small statues of large-breasted, rounded pear-shaped women from some 24,000 years ago. Indeed, the “ideal” woman remained plump, except for a few exceptions, until the early parts of the 20th century, all over the globe. Until then, a heavier woman had appeal because she had long-term access to food and wealth. As humanity became more food secure and wealthier, we started to ascribe beauty to dangerously thin women. Another trait that is universally described as beautiful is average features—and this, too, changes over time. For example, we find an average-sized nose or average eye shape beautiful, probably because that is what is familiar to us. But this kind of average depends on who we see, which changes as people mix and diets change. One beauty trait that does not change over time is symmetry. Researchers believe our appreciation of symmetry derives from survival pressures: asymmetries can indicate past disease or injury.



An urban native garden in Mt. Vernon, Baltimore. Photo by Ashley Bowers.

Our perception of beauty in the landscape is driven by very similar factors: symmetry, familiarity, wealth displays, and survival cues. For instance, we used to fear the wilderness because it was unfamiliar and threatened our existence. Europeans used to think that mountains and forests were to be avoided at all costs—think of the many fairy tales that foretold doom if you stepped off the path. In the 1700s, this began to change—in part due to the spread of Natural Theology, which preached reverence for the Almighty’s work. A further shift occurred in the ensuing centuries, and

eventually, wilderness became a place to seek beauty and serenity. No doubt, part of our modern-day sentiments arose from a familiarity with wilderness and a better understanding of how to cope with its dangers.

We now stand at another inflection point in our perception of beauty. This change in perspective also involves our security and will be accelerated by familiarity. We stand at a point where more than 50% of the world’s habitable land is no longer wild, we’ve lost nearly 3/4 of wildlife populations relative to 1973, and climate change is accelerating this loss. We are on the precipice of a drastic system change that threatens our survival. And this is likely to impact what we perceive as beautiful. For instance, in the recognition that the main driver of habitat destruction is raising livestock, many of us perceive a vegetarian diet as beautiful. Similarly, as we recognize that our native landscapes support biodiversity, growing numbers of people perceive native plant gardens as more beautiful than overly managed exotic collections. And as our exposure to and familiarity with native landscapes increases, our collective appreciation of native landscapes will grow.

And what a difference this change in perspective is making. Lawns in the US cover more than twice the area of our national parks, covering more land than corn, wheat, and fruit trees combined. Many readers will know that in and of themselves, lawns have very little ecological value. They are not only very poor at supporting wildlife, but they actively spread biodiversity loss

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Acidic Oak-Hickory Forest garden, Reserve Hill. Photo by Rod Simmons,



Stewardship Calendar for Biodiversity

GENERAL PRINCIPALS

This calendar presents optimal times to carry out landscaping tasks, but many can be done at any time (or not at all).

When choosing plants, consider natives already thriving on your property and in your neighborhood.

Create centralized, open, well-defined spaces with dense plantings to define the edges and create rooms & corridors

Include "Cues to Care" like signs, edging, or mown paths.

TIME OF YEAR	NURTURE BIODIVERSITY	PROPAGATION + PLANTING	INVASIVES	MAINTENANCE
All year	Severely limit the amount of pesticides and fertilizer used	Gather seeds as they ripen (mostly in the autumn)	Inventory the invasives in your area	Minimize watering to establish deeper roots and save water
	Aim for at least 80% of plant mass to be native plants	You can plant anytime the soil is not frozen or water-logged	Remove pioneer invasives. Replace with natives	Planting in autumn reduces the need for watering dramatically
First frost	Make or add to a brush pile habitat (anytime)	Mulch a section of lawn for a new bed next spring	First to last frost - dig out identifiable invasives	Prune most deciduous trees and shrubs
Deep Winter	Plan for diversity and an abundance of native plants	Winter sow seeds that need cold stratification	Cut windows on invasive vines growing into trees - easiest to do in winter	Prune native vines for shape
	Plan for habitat connectivity	Order seeds or attend a seed swap	Make an invasives removal plan	Shake snow off evergreen shrubs
Early spring	"Chop and drop" last year's perennial growth, leaving some standing for bees	Divide well-established perennials (after blooming)	Dig out lesser celandine and pull or cut garlic mustard before seeds set	Prune evergreens and spring flowering shrubs after flowering done
Late spring - early summer	Let some areas grow tall, perhaps mowing paths through them for access and appreciation	Propagate by layering	Remove invasives' seed heads and dispose of them properly before they spread	Deadhead to encourage more flowers, leave some seed heads for food, propagation, and beauty
High Summer	Provide clean water for wildlife (all year but especially in summer)	Put cuttings into pots or directly into the ground	Cut & paint invasives that are difficult to remove mechanically (Anytime between full leaf out to early winter)	Water trees and new plantings during extended periods of no or little rain
	If you require a lawn, use organic practices	Sow native seed in bare soil areas	Begin stiltgrass management	Share your native gardens with neighbors.
Autumn	"Leave the leaves" and plant stalks to provide habitat & natural fertilizer	Divide well-established perennials (after blooming)	"All flourishing is mutual." <i>— Robin Wall-Kimmerer</i>	

SPRING



SUMMER



AUTUMN



WINTER



Mertensia virginica in early spring; *Rudbeckia fulgida* and *Euphorbia corollata* in summer; autumn color along the Goldmine Trail; snow on *Pycnanthemum incanum* seed heads. Photos by Pru Foster.

The Urgent Need to Landscape with Native Plants

Photo by John Adolph, MD DNR Flickr.



By STACY SMALL-LORENZ, UMD Extension Agent for Residential Landscape Ecology

When anyone asks, “Why landscape with native plants?” I think, “There are so many reasons, where to begin?” For starters, consider the Ruby-throated Hummingbird (*Archilochus colubris*), who builds her marsh-mallow-sized nest of spider webs, plant down, and pine resin, plastered with bits of moss and lichen. Or perhaps the Baltimore Oriole (*Icterus galbula*), who weaves its sock-like nest of long slender plant fibers like grass or grapevine bark, along with horse hair and feathers. Or even our tiniest songbird, the cold-hardy Golden-crowned Kinglet (*Regulus satrapa*), who hatches her bumblebee-sized nestlings into a cradle of plant fibers, mosses, spiderweb, insect cocoons, bark strips, feathers, and deer hair built with her partner. The myriad intricate relationships among birds and native plants are truly astounding, from food and shelter to nest materials and nesting sites. These relationships have fueled my own fascination with native plants for decades.

Maybe even more remarkable in their specialization on native plants are some butterflies, moths, and bees that depend upon one particular plant species with which they co-evolved. One familiar habitat specialist is the monarch butterfly (*Danaus plexippus*). Despite the fact that most U.S. school children can now recite the dependency of monarch caterpillars on milkweeds for reproduction, we have failed to halt the decline of monarchs across the mid Atlantic. Changing spring and fall weather patterns along with expanding suburbs and alterations in agricultural landscapes and practices are all possible contributors to the monarch’s decline. Residential landscapes don’t typically feature the wide array of nectar and pollen-bearing flowers that meet a monarch’s needs for reproduction and migration on the US leg of its international migratory journey. However, we have an opportunity to change that here in the mid-Atlantic region, by improving habitat conditions across residential landscapes.

Beyond monarchs, entomologist and ecologist Doug Tallamy reports that a whopping 557 species of lepidoptera (butterflies, moths, and skippers) caterpillars rely upon North American oak tree species, and we know that caterpillars are a primary

food source for songbird nestlings. According to Sam Droege of the USGS Wild Bee Lab, the mid-Atlantic region is home to 500 species of native bees, and any given yard has an estimated 100 species of native bees in search of the right plants for nectar, pollen, and (sometimes) nest sites. Many of our native plants directly depend upon native bees for pollination to reproduce.

Unfortunately, landscapes dominated by invasive plant species, single-aged tree stands, or monoculture turfgrass crops dotted with ornamentals don’t offer the variety of nest sites, nest material, or insect food necessary for rearing young songbirds or much else in North America’s web of life. Furthermore, an estimated 80% of all flowering plants worldwide are pollinated by native bees not well supported by our typical residential landscape.

In *The Serviceberry*, Robin Wall Kimmerer writes about reciprocity of relationships as a central organizing theme in nature. She describes a seemingly utopian “gift economy” of sorts, one that is also entirely grounded in a web of mutually beneficial relationships among plants and animals, including humans, that prioritizes the relational over the transactional. She writes, “Climate catastrophe and biodiversity loss are the consequences of unrestrained taking by humans. Might cultivation of gratitude be part of the solution?”

In this vein, we must rethink traditional lawns and isolated ornamental plants to make space for the web of life to flourish. But this is not just for the birds, as native plants support most of humanity’s most basic survival needs – clean water to drink, oxygen to breathe, healthy soils, temperature regulation, and pollination for our crops. Society may be able to get by for a while longer living in such deep denial about our interdependence with the plant kingdom, but not much longer.

Maryland climate extremes add further urgency as conditions fluctuate between prolonged drought and heavy downpours that bring floods and erosion, coinciding with rising sea levels and saltwater intrusion. It’s time to look closely at the missed

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- Dr. Stacy Small-Lorenz is the University of Maryland Extension Agent for Residential Landscape Ecology and Bay-Wise 2.0 Program Lead.

Landscaping Plants in Different Ecoregions

By LISA KUDER, UMD Native Plants & Landscapes Extension Specialist

Maryland is affectionately referred to as a ‘Little America’ because it has multiple, distinct ecosystems, ranging from low mountains and ridges in the Appalachians to tidal marshes and estuarine ecosystems in the Chesapeake Bay to the coastal plains along the Atlantic Ocean. These three main ecosystem types are delineated as “mountain”, “Piedmont” and “coastal plains” ecoregions. (Although, technically, these designations are “EPA Level II Ecoregions”, we refer to them as simply ecoregions in this article. See ArcheWild®, pages 4 and 5 of this issue, for details). These three ecoregions have unique growing conditions, as well as unique plant and animal assemblages. While some plant species naturally span all three ecoregions, others grow in only one, and many are even more geographically restricted within a given ecoregion due to climatic, soil, and historical conditions. So when it comes to landscaping, choosing plants for the appropriate ecoregion and specific site conditions increases the likelihood of successful plant establishment and support of local wildlife.

There are multiple tools available to help home gardeners and landscape

professionals select the right plant for the right place. The US Fish & Wildlife Service’s *Native Plants for Wildlife Habitat and Conservation Landscaping* has long been the go-to reference and includes growing conditions and wildlife support information. There’s also the new Commercial Maryland Native Plant List (scan QR code below) with similar and additional data. This comprehensive list has ~600 species that are commercially available and well-suited for residential and commercial landscapes. Research in the Mid-Atlantic region shows that yards with at least 70% native vegetation can maintain healthy food webs, with biodiversity support increasing with higher percentages of natives. Keystone species such as *Quercus*, *Acer*, and *Vaccinium* support vast numbers of Lepidoptera (butterflies, moths, and skippers) species, which 96% of terrestrial birds rely on to feed their young. Below are examples of conservation landscaping options for each ecoregion. Some of the



Scan with your cell phone or visit extension.umd.edu/resource/commercial-maryland-native-plant-list/

species span more than one ecoregion.

Luckily, purchasing native plants is about to become much easier! The state of Maryland recently funded the Maryland Native Plants Program (MNPP) to increase the use and sale of native plants and to raise awareness about their critical ecological roles in supporting wildlife and providing environmental services.

As part of the MNPP, the Maryland Department of Agriculture just launched the Maryland’s Best Native Plants Certification to help customers identify retail locations that are dedicated to offering plants native to Maryland. There are three tiers of certification—bronze, silver, and gold which reflect the percentage of native plant species in the retailer’s inventory. Retailers can register at marylandsbest.maryland.gov/marylands-best-native-plant-program/ and plant seekers can look for the logo shown above. The Maryland Native Plant Society also maintains a list and map of retailers that sell native plants at www.mdflora.org/nurseries.html.



Look for this Maryland’s Best logo when shopping for native plants

Text Box 1 - Caption ecoregion coding.

	Light	Mountain	Piedmont	Coastal Plains
Wildflower	sun - partial	<i>Monarda didyma</i>	<i>Oenothera fruticosa</i>	<i>Limonium carolinianum</i>
	partial - shade	<i>Anemone acutiloba</i>	<i>Tiarella cordifolia</i>	<i>Uvularia perfoliata</i>
Graminoid	sun - partial	<i>Bouteloua curtipendula</i>	<i>Sporobolus heterolepis</i>	<i>Spartina alterniflora</i>
	partial - shade	<i>Carex laxiculmis</i>	<i>Carex willdenowii</i>	<i>Luzula echinata</i>
Shrub	sun - partial	<i>Ilex montana</i>	<i>Amorpha fruticosa</i>	<i>Itea virginica</i>
	partial - shade	<i>Viburnum lantanoides</i>	<i>Vaccinium angustifolium</i>	<i>Viburnum acerifolium</i>
Tree	sun - partial	<i>Acer spicatum</i>	<i>Quercus phellos</i>	<i>Carya pallida</i>
	partial - shade	<i>Cornus alternifolia</i>	<i>Magnolia tripetala</i>	<i>Quercus bicolor</i>

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Hierarchy of Locality

<i>Andropogon gerardii</i>	Undeclared origin means the seed could have originated from any state in the US and could be a blend of genetics from across the continent.
<i>Andropogon gerardii</i> , MD ecotype.	State origins provide some assurances that the seed is not from Kansas or North Dakota.
<i>Andropogon gerardii</i> , MD Coastal Plain ecotype	An ecosystem origin is preferred even if an ecoregion is not specified. In this case, the description allows the purchaser to infer the seed originated in ecoregion 63f Delmarva Uplands. Ecoregion coding would be preferred, however.

collected. An ecologist or botanist can usually determine the origin of plants based on ecological conditions, the morphology of the plants themselves, and the level of disturbance that a site has experienced in the last 30 years, which is about the time horizon over which people have been using native plants at scale. They also use specialized software (such as SeedSource™) for automatic ecoregion encoding and accession code creation (see image on page 5) for tracking plants’ origins once they’ve been categorized.

While local ecotypes are the gold standard in supporting wildlife and planting success, it can be difficult for the home gardener to navigate—which is where nurseries with ecoregion coding can be a big help [see the list of nurseries on Page 5]. The next best thing to ecoregion coding is using native “straight species” plants from a nearby area. [see the “Hierarchy of Locality” table above] Cultivars of native plants are to be used with caution and should not be used in locations where wild plants of the same species might be nearby. It is a journey to learn about local ecotype plants, but the rewards are many. We encourage you to continue learning which species are native to your ecoregion and how to use them appropriately. The benefits of choosing plants and seeds from a nursery that declares the ecoregion source are significant—to your planting success and to wildlife.

potential of residential landscapes to store more carbon, absorb more stormwater and pack in far more native plants, beneficial insects and wildlife that provide essential life support systems and enrich our daily lives.

University of Maryland Extension programs like Bay-Wise 2.0 Master Gardeners and Watershed Stewards Academy seek to improve stormwater management using a number of practices that incorporate native plants into residential landscapes. We are currently revising our Bay-Wise checklist of practices to dramatically increase its focus on best practices that incorporate native plants in ways that support water quality, soil health, human well-being, and flourishing biodiversity.

The Bay-Wise certification process supports Marylanders in growing into our responsibilities as land and water stewards, in order to attain healthy, resilient Maryland watersheds and a brighter future for the Chesapeake Bay, our nation’s largest estuary. We are excited to work in cooperation with the new Maryland Native Plants Program to advance this vision.

On Beauty, continued from page 6

in the form of carbon emissions from lawnmowers, fertilizer and herbicide-rich runoff which devastates our waterways, and by acting as barriers for native animals and plants. If our lawns, or even half of our lawns, were converted to native landscapes, it would make a massive difference to biodiversity loss on land and in the water.

Why this love affair with our lawns? Can we break up with them? Lawns first appeared in medieval times around castles so the inhabitants could see approaching enemies. A closely-trimmed expanse of grass became a cultural ideal in the 16th and 17th centuries when these extensive lawns came to symbolize wealth—only very wealthy landowners could afford to employ people to cut their lawns with scythes. The invention of the lawnmower opened up lawn trimming to the lower classes. Today, our obsession with lawns is less a symbol of wealth and more a result of decades of familiarity and habit. Most homeowners have lawns, we know how to care for them, and we continue to maintain them despite the cost, labor, and environmental negatives.

Here, there is hope. More and more of us are landscaping with natives, leaving the leaves, and providing wildlife

corridors. As we do so, we notice that our wild and wondrous native gardens host far more birds, butterflies, lizards, and frogs than the close-mown and less interesting grassy expanses of our neighbors. We are rewarded with overflowing sensations of beauty and awe at life’s complexity. Although many native gardens begin as a love affair with plants and their critters, these tiny slices of Eden are shifting our perceptions of what is beautiful and reminding us all to protect life, near and far.

Blessing on the blossom.

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Native vs. Non-native Garden Trees and Shrubs



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1. American strawberry bush (*Euonymus americanus*)

Leaves opposite, lanceolate, with finely serrate margins. Stems green. Buds ½ inch long with green to red scales. Flowers 5-petaled, green, and very small. **Native** to the southeastern United States.

2. Winged burning bush (*Euonymus alatus*)

Leaves opposite, lanceolate-elliptic, with finely serrate margins. Stems green to gray, bearing wings. Buds ¼ inch long with gray to red scales. Flowers 5-petaled, green, and very small. **Non-native** and invasive (native to eastern Asia and Japan).

3. Red chokeberry (*Aronia arbutifolia*)

Leaves alternate, serrate, elliptic to obovate. Purple hairs present along mid-vein on upper leaf surface. Buds up to ½ inches long, red. Bark gray. Flowers white, 5-petaled. Stamens with pink anthers. Fruit a red pome. **Native** to the eastern United States.

4. Christmasberry

(*Pourthiaea villosa*, formerly *Photinia villosa*)

Leaves alternate, serrate, obovate. Buds small, brown. Bark light gray with orange lenticels. Flowers white, 5-petaled. Stamens with green anthers. Fruit an orange-red pome. **Non-native** and invasive (native to Japan, Korea, and China).

5. Japanese maple

(*Acer palmatum*)

Leaves opposite, with 7-11 serrated lobes. Stems green to red or purple. Bark tan with vertical, scratch-like fissures. Flowers inconspicuous. Fruit a small samara. **Non-native** and invasive (native to Japan and Korea).

6. Alternate-leaf dogwood (*Cornus alternifolia*)

Leaves alternate, entire, with arcuate venation. Stems greenish. Flowers white, 4-petaled, and borne in cymes. Fruit a blue to black drupe. **Native** to the northeast and midwestern United States.

7. Japanese barberry (*Berberis thunbergii*)

Leaves alternate, spatulate. Stems bearing thorns and with a yellow inner bark. Small yellow flowers with 6 petals. Red, ovate berries persist through winter and droop from stems. **Non-native** and invasive (native to Japan).

8. Winterberry (*Ilex verticillata*)

Leaves alternate, serrated. Stems and bark gray. Flowers 6, sometimes 7, white petals. Fruit a red drupe attached directly to stems. Plants dioecious. **Native** to the eastern United States.

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Maryland Native Plant Society
PO Box 4877
Silver Spring, MD 20914

OUR MISSION

Promote awareness, appreciation and conservation of Maryland's native plants and their habitats. We pursue our mission through education, research, advocacy, and service activities.

Become a member.

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ANNOUNCING THE REVIVAL OF THE EASTERN SHORE CHAPTER OF MNPS!

The newly revived Eastern Shore (ES) Chapter serves members of Maryland's nine easternmost counties by promoting awareness, appreciation, and conservation of its unique flora and natural habitats. In particular, we aim to improve documentation of ES ecoregions and reporting of native plant species through field trips and the use of iNaturalist. Success will rely on building a community of passionate and dedicated partners invested in achieving these goals, so do get in touch if you would like to learn more. To kickstart the chapter's revival, the 2025 MNPS annual conference is focused on the ecosystems of the Eastern Shore and will be held in Kent County, Maryland. The ES chapter has been instrumental in organizing this event and the many associated field trips.

The ES includes Caroline, Cecil, Dorchester, Kent, Queen Anne's, Somerset, Talbot, Wicomico, and Worcester counties. It comprises 40% of Maryland's land area and supports 8% of the state's human



Forested tidal wetlands provide habitats for a diverse range of wildlife. Princess Anne, Somerset county. Photo by Cristina Niciporciukas.

population. Maryland's ES is rich in natural habitats, including salt marshes, nontidal wetlands, Delmarva bays, swamps, pine and hardwood forests, serpentine barrens, and dune communities.

Cecil County's northern half lies in the Piedmont Physiographic Province, within the Environmental Protection Agency's Level III Northern Piedmont and Southeastern Plains Ecoregions, and contains one Level IV Ecoregion (Piedmont Uplands). The southern half of Cecil County and the remaining eight ES counties lie in the Coastal Plain Physiographic Province, within the Level III Middle Atlantic Coastal Plain Ecoregion. Within this region, there are four EPA Level IV Ecoregions (Chesapeake Rolling Coastal Plains, Chesapeake-Pamlico Lowlands and Tidal Marshes, Virginian Barrier Islands and Coastal Marshes, and Delmarva Uplands). The occurrence of multiple ecological types helps to explain the high plant diversity found in this region.

ES Chapter Webpage: mdflora.org/chapters/easternshore

Contacts: Cristina Niciporciukas (Chair) and Jil Swearingen (Co-Chair), Email: eschapter@mdflora.org