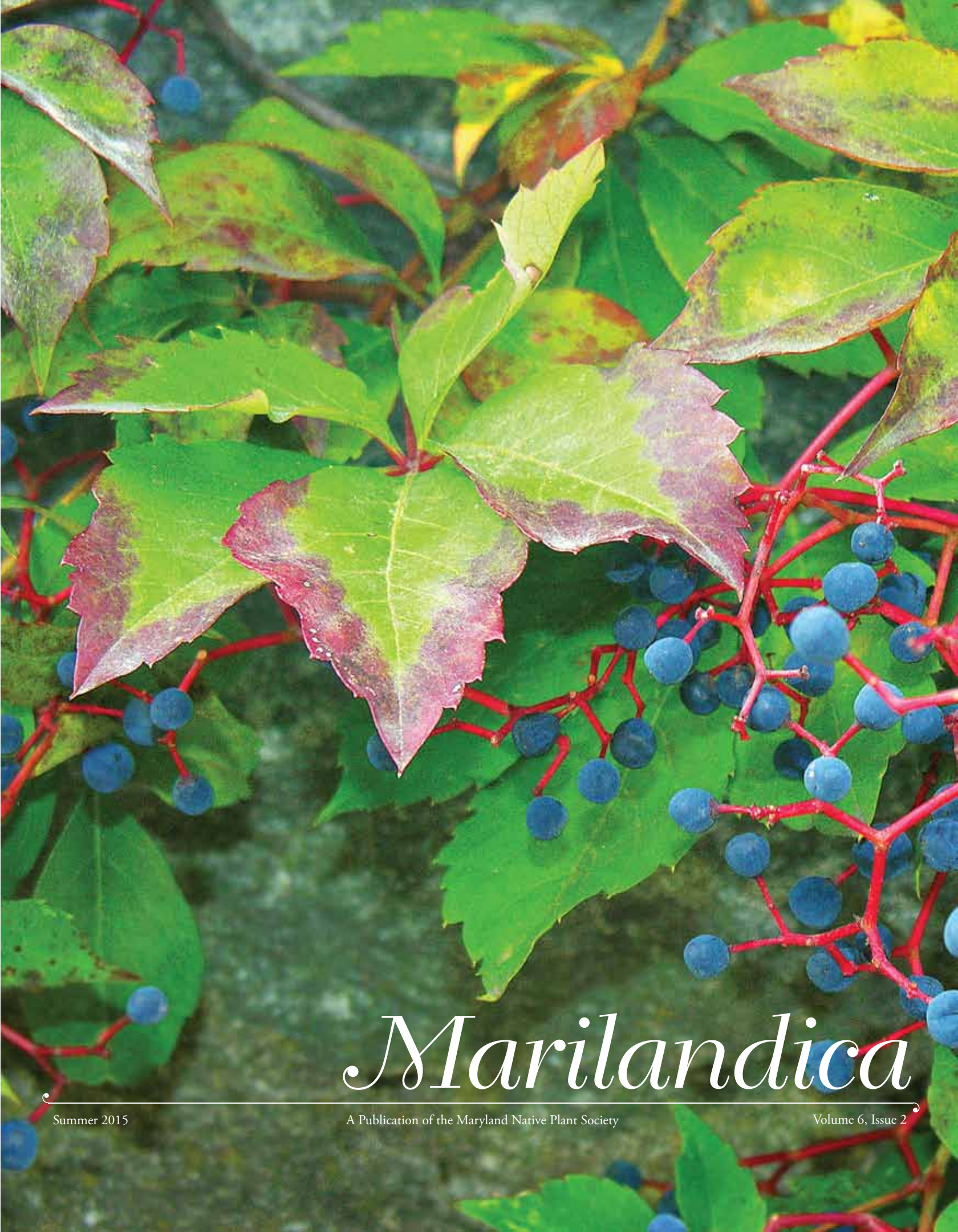

Marilandica

Summer 2015 A Publication of the Maryland Native Plant Society Volume 6, Issue 2

Marilandica
A Publication of the
Maryland Native Plant Society

www.mdflora.org
P.O. 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.

Letter from the President

Dear Members,

My first six months as your president have been quite full. As I mentioned in January, one of my goals is to reinvigorate chapters throughout Maryland, and that has already begun. Last fall we held our annual conference in Cecil County and were treated to wonderful presentations and field trips that increased our knowledge of this diverse area. Our Northeast chapter, which includes Cecil County, has recently been revived by Tracy Ripani. She has been putting together programs and field trips with the help and advice of other native plant enthusiasts in the area, and displaying at local events with an MNPS table. She is planning a canoe trip at Anita C. Light Estuary in August and a trip to serpentine barrens in early October. Many of her contacts have been people who are new to the Society, but MNPS members from other areas have been taking advantage of these programs too.

The new chair of our Eastern Shore chapter, Lyle Edward Almond, has plans to host more programs and field trips. Lyle, who works for the University of Maryland Extension in the area of woodland stewardship, has helped plan our upcoming annual conference in Salisbury. For many of us, the conference in Salisbury will be our introduction to a special corner of Maryland—in the heart of the Delmarva Peninsula, just a half hour west of Ocean City and two hours south of Baltimore. We have lined up dynamic and informative speakers, and offer some terrific field trips with knowledgeable leaders. Please register for the conference if you haven't done so already. See details in this issue.

Our field trips are one of our core offerings, and I am delighted that we now have a coordinator, Liz Jones, who is doing a great job increasing the number and variety of field trips, adding more field trip leaders, and thinking of creative ways to better serve our members. Just recently we held a weekday field trip to the Smithsonian Environmental Research Center in Edgewater Maryland, as a follow-up to our April program by Katalin Szlavecz on invasive earthworms. If you have a suggestion concerning our field trips please email fieldtrips@mdflora.org. We are always looking for new, interesting places to visit.

I hope to see you in the field, at one of our programs, or at the conference!

~ Marney

MNPS Research Grants - Deadline August 17

MNPS offers small grants for research on Maryland native plants and their habitats. The maximum amount to be awarded this year is $2500, which may be split among two or more applicants, or awarded to one applicant.

Any project that meets the application requirements will be considered, whether the applicant is a student, a teacher, an academic, or an independent researcher. Please keep in mind that the research grants are for empirical, hypothesis-driven research. Projects that only involve native planting or educational outreach, while worthy, are not within the scope of these grants. We understand that proposals from primary or secondary school teachers may not be for grand-scale research, but we do want evidence of a concrete experimental design. There is also an expectation that the results of the work will be published and/or presented in a suitable forum.

See www.mdflora.org/grants.html for details, an application form and a list of previous grant recipients.

~ Brett McMillan, Chair, Research Grants Committee

Your membership dues and donations help support projects like these. Contributions from members and friends make a real difference to botanical and ecological research and to all of the Society's activities.

On the cover: Virginia Creeper in Autumn
Courtesy of photographer and MNPS member Janice Browne. For more of her work, see www.janicebrowne.com.

Graphic design of *Marilandica* is by Marjie Paul, PaulDesignWorks@me.com.

Wildflower in Focus: Virginia Creeper

Parthenocissus quinquefolia (Linnaeus) Planchon
Family Vitaceae

> *"Ubiquitous in an **extraordinary range** of wet to very dry, forested to open habitats; tolerant of a range of soil types, tolerant of deep flooding, capable of rooting in deep outcrop crevices and boulder-filed interstices that exclude other plants; scarce at the highest elevations."* Flora of Virgina, p 977. (emphasis added)

What a wonderful plant! So common that it's often neglected on our field trip plant lists. In fact, of the 46 Maryland locations for which the MNPS website has plant lists, only 16 include Virginia creeper. But I'll eat my garden gloves if it's not present at every one of the other 30.

Virginia creeper sphinx moth, Darapsa myron

Climbing Mechanism. Like other members of the Grape Family, Virginia creeper is a "liana" – meaning that it's a woody vine. It climbs when it encounters a structure and can also grow a considerable distance along the ground. Some lianas, such as poison ivy (*Toxicodendron radicans*) and English ivy (*Hedera helix*), climb and attach using adhesive adventitious roots. Virginia creeper employs different strategies, having branched tendrils that coil around twigs and that have small adhesive pads at their tips. Charles Darwin was fascinated by adhesive mechanisms in climbing plants, but strangely, Virginia creeper is one of the few species whose adhesive properties have been studied since his time. Upon touch stimulus, the tendril tips swell and flatten against the substrate. Epidermal cells in the tips become papillate, that is, they develop tiny projections, which are believed to produce a polysaccharide adhesive that may become woody and weather resistant as the tendril ages.

Virginia creeper's twining and branching tendrils

Similar Species. Virginia creeper is often confused with poison ivy but they're easy to distinguish. Poison ivy has three leaflets and Virginia creeper has five. They are often seen growing on the same tree, as in the photo on page 9. So-called Boston ivy (*Parthenocissus tricuspidata*) is actually an Asian species, often used as decorative climber. As the name implies, it has three leaflets.

Wildlife Value. The fruit of Virginia creeper is a true berry, meaning a fleshy fruit produced from a single pistil. The deep blue berries are eaten by many animals, especially birds, but they are toxic to humans. Virginia creeper's thick foliage provides excellent cover for small animals, and provides birds with perches, nesting places and leaf surfaces to find insects to eat.

The larvae of the Virginia creeper sphinx moth (*Darapsa myron*, also called hog sphinx) feed on Virginia creeper and other members of the Grape Family. The females lay translucent yellow-green eggs in twos or threes on the underside of host leaves. The larvae are "hornworms," so called because of the pointed tail-like "horn" at their end. Sphinx moths are named for the caterpillars' habit of resting motionless in a reared-back, head-up position reminiscent of the sphinxes of Egyptian mythology.

Landscape Value. Michael Dirr, the guru of woody landscape plants, describes Virginia creeper as "excellent for tough low-maintenance cover," noting that many apparently ivy-covered walls are in reality covered with creeper. Although creeper may leave an adhesive residue on walls, it does not damage buildings the way English ivy does, by inserting adventitious roots into cracks.

(continued on page 9)

The wildly diverse ecosystems of Maryland's lower eastern shore beckon us to explore and learn.

Maryland Native Plant Society Annual Conference 2015

Co-sponsored by Salisbury University, Salisbury, MD

shifting sands

COASTAL PLAIN FLORA from WETLANDS to UPLANDS

MNPS MEMBERS ~ WIN a FREE TRIP to the 2015 CONFERENCE ~ See page 6 for details.

SATURDAY September 19

8:30 AM – Registration
9:15 AM – Welcome
The Silent Auction will be open during breaks, lunch, & dinner

MORNING

Land-use Legacies and Beyond:
The Shifting Sands and Flora of the Eastern Shore
Christopher Frye, *Maryland State Botanist*

Native Lichens of Delmarva and the Mid-Atlantic Coast:
Stunning Diversity With an Uncertain Future
Dr. James Lendemer, *New York Botanical Garden*

Update on the Old Growth Forest Network
Dr. Joan Maloof, *Author and Professor Emeritus, Salisbury University*

Deer, Invasive Plants and Spider Ecology
Andrew Landsman, *MNPS Grant Recipient, U. Delaware*

AFTERNOON

12:10 PM – Lunch Buffet
1:00 PM to 5:00 PM – Field Trips

EVENING

5:00 PM – Beer and Wine with Appetizers
6:00 PM – Dinner Buffet
Enlightening Experiences with Exotic & Invasive Species
in Grassland Restoration on the Eastern Shore
Dr. Douglas E. Gill, *Professor Emeritus, University of Maryland*

SUNDAY September 20

Field Trips
Meet at the site in the morning. Times and directions will be provided.
Hiking boots, sunscreen, hat, and bug repellent are highly recommended for all trips.

FIELD TRIPS: Saturday, September 19

Dorchester Pond
Leaders: Bill McAvoy and Wayne Longbottom
Dorchester Pond is one of the unique freshwater seasonal depression wetlands called "Delmarva Bays." Knee-high rubber boots recommended.

Furnace Town & Nassawango Preserve
Leaders: Wes Knapp and Cris Fleming
The Furnace Town area of Pocomoke Forest is in a deposit of late Pleistocene aged sands with a forest community found only in Delmarva. Other highlights include a bald cypress swamp, a botanically diverse right-of-way and a shortleaf pine forest. These properties are managed by Pocomoke State Forest and The Nature Conservancy. Sturdy hiking boots a must.

Glen Heights Forest & Bear Swamp
Leader: Joan Maloof
This small gem of a forest is owned by a developer who plans to destroy it for housing units. The forest retains the tree species diversity and structure exhibited by our original native forests. Easy terrain, but no developed trails.

Nassawango Creek
Leaders: James Lendemer and Dave Ray
This Nature Conservancy Preserve is a remnant Atlantic white-cedar area, with some open habitat. We will see a bald cypress/black gum forest, a restored pitcher plant bog, an inland dune, and a raised rim basin mature swamp forest.

Pemberton Park
Leader: Carole Bergmann
We will explore numerous Eastern Shore ecosystems including fresh water tidal marsh, Wicomoco river wetlands, pine forests, upland deciduous forests, wildflower meadows.

Plum Creek Nature Conservancy Preserve
Leader: Deborah Landau
This preserve is on a nontidal Atlantic white cedar swamp and includes a mosaic of wetland and upland habitats. Downstream, a section of the creek is tidal, with freshwater marsh and intertidal swamp communities. The creek meanders through a broad forested floodplain-wetland. To the north, there is a large restored xeric dune.

Pocomoke River Kayak Trip
Leaders: Karyn Molines and Lisa Bierer Garrett
We'll explore freshwater wetland, swamp and upland habitats in a park known for its loblolly pines and bald cypress swamp. No kayak experience required. Kayaks, paddles and life vests provided. Participants must be able to sit in the kayak and paddle for the entire 2-hour trip.

Ward Museum & Marsh Walk
Leader: Marney Bruce
The Ward Museum of Wildfowl Art in Salisbury has the world's most comprehensive collection of wildfowl carvings. The short Marsh Walk off the museum parking lot provides views of a freshwater lake with wetland plants.

Wicomico State Forest
Leaders: Rod Simmons and Alonso Abugattas
We'll make our way north to explore along sandy side roads off Sixty Foot Rd. We'll see many plants of outer coastal plain sandhill communities, swamps and hummocks, including Common Sweet-leaf, Sweetbay Magnolia, Bayberry and an abundance of graminoids and wildflowers.

FIELD TRIPS: Sunday, September 20

Adkins Arboretum
Leader: Joe Metzger
This native plant preserve and educational center in Caroline Co includes diverse plant communities, including the woodland in early fall colors. See how the Arboretum is "Greening" their grounds, parking areas and buildings. Easy walk.

Assateague Island
Leaders: Jane Hill and Kirsten Johnson
We will try to visit all of this barrier island's major habitats: salt marsh, forest, and dune. In the marsh we'll note grasses growing at different tidal levels. Flowering dune plants may include seaside goldenrod, seabeach evening primrose, and purple gerardia. Assateague has been stable long enough that forest is established on old, open duneland with a variety of woodies.

Blackwater National Wildlife Refuge
Leader TBA
Blackwater's three major habitats—forest, marsh and shallow water—are home to great plant and animal diversity. The refuge contains one-third of Maryland's tidal wetlands. We'll walk on a road from the Visitor's Center, connect to a trail into the forest and back the same route.

Fishing Bay, the "Everglades of Maryland"
Leader: Wayne Longbottom
Fishing Bay is an extensive salt marsh covering much of southern Dorchester Co. Special adaptations allow the plants in this harsh environment to thrive. We will see five of the most common plants in the salt marsh: Spartina (3 species), Black Needle Rush and Salt Grass, plus salt marsh asters and other salt marsh specialists.

Hickory Point Cypress Swamp Natural Area
Leaders: Rod Simmons and Beth Johnson
This is the largest southern swamp system in MD, supporting at least 14 RTE species. The site is an exceptionally diverse ecosystem, from bald cypress trees to Atlantic white cedar swamps to upland forests. We should see the state endangered Red Bay, the larval host plant for the Palamedes Swallowtail, also state endangered.

Wye Island
Leader: Karyn Molines
The island is home to one of the largest existing old growth forest remnants on the Eastern Shore. Other habitats to explore include swamps and warm season grass meadow.

shifting sands
COASTAL PLAIN FLORA from WETLANDS to UPLANDS

Register by mail or on-line at www.mdflora.org

- ☐ Members: $65 before 8/1
- ☐ Non-members: $75 before 8/1
- ☐ Members: $75 after 8/1
- ☐ Non-members: $85 after 8/1
- ☐ Saturday Social & Dinner: $30
- ☐ Students: $15
- ☐ Saturday Social & Dinner, Student: $20

Name: _____ Sat. Field Trip: _____ Choice 2: _____

Address: _____ Sun. Field Trip: _____ Choice 2: _____

We will try to accommodate your field trip request but cannot guarantee availability. You will receive registration confirmation that indicates which trip you are registered for.

Checks payable to MNPS. Mail form and payment to: Maryland Native Plant Society, PO Box 4877, Silver Spring, Maryland 20914

Information on accommodations in the area can be found on our website.

Photo Credits L to R: Nassawango Creek, A. Eckert Photography, nature.org. Pocomoke River, shorebread.com. Assateague Is., A. Fries, Integration & Application Network, UMD Ctr for Env'l Sci. Pemberton Park, pembertonpark.org

RESPONSE FROM OUR READERS

EDITOR'S NOTE: Rod Simmons' article, Hope and Reality for Urban Ecosystems in the winter issue generated much discussion, including the three below. As the editors' note stated, we had invited Rod to share his perspective on conservation of rare and uncommon species, as a continuation of the conversation about conservation methods started by Clark DeLong's informative article on green roofs as ex situ conservation space in last summer's issue. At Clark's request, we want to clarify that we did not intend or expect Rod's article to be seen as a refutation of any aspect Clark's work. The articles we publish present the views only of their authors. We hope Marilandica can continue to serve as a forum for discussion of various ways of contributing to the conservation of our region's plants and their habitats.

It was good to read about seed stocks of native species that are still in the soil around us, even in suburban areas. I have been happily surprised by this phenomenon on my own suburban lot, which is now happily wooded with redbud and white oak, with hickory and black gum coming along. The article has me dreaming of how we might encourage more homeowners to do the same, especially on sloping lawns that must be challenging or even dangerous to mow, but would be beautiful as forested slopes.

The article refers to USDA conservation of native germplasm (seeds and plants) of native species, with a comment that USDA's funding for this work is predicated on using that germplasm to breed plants for economic purposes. Historically, this was indeed a primary use and justification for the national germplasm collections. That said, USDA takes great care to conserve germplasm in its original genetic state, i.e., true-to-type as collected or received; and available for use as needed, now and in future. Interested potential users of native germplasm in these collections for conservation projects or wild-plant nurseries may wish to explore web pages such as these: the Woody Landscape Plant Germplasm Repository, US National Arboretum, at http://www.usna.usda.gov/Research/wlpgr.html; and http://www.ars-grin.gov/ npgs/acc/acc_queries.html (enter a species name in the search box). For collections of interest, contact the curators at the indicated collection sites. In addition, USDA's Plant Materials Centers have for decades worked to preserve and increase the commercial availability of native grass, forb, and legume species. More information about Plant Materials Centers, the plant selections they have released and information about using native plants for natural resource conservation efforts can be found at http://www.nrcs.usda.gov/wps/portal/nrcs/site/plant materials/home/.

Thank you for an interesting article with relevance right in our own back yards.

Ann Marie Thro
Arlington, VA

Posted on Pennsylvania Native Plant Society and Virginia Native Plant Society Facebook pages:

I was disappointed with this editorial by Rod Simmons. It contains some interesting perspective on native plants, but also much baseless hysteria. Most disappointing was the complete absence of any insight into the question he was supposed to be writing about: what should be planted in urban ecosystems.

I don't agree with Rod that any use of modern conservation techniques (e.g. hybridization, selection for disease resistance, etc.) automatically reclassifies your activity from "restoration" to something else, especially if the implication is—as it seems to be in this article—that anything besides a purist approach to restoration is not worth doing at all. I think Rod is wise to advocate for caution, but I also think his approach to restoration would eliminate 90% of the environmental protection that actually gets done in 21st century America.

Vincent Vizachero
Baltimore, MD

Aldo Leopold said, "One of the penalties of an ecological education is that one lives alone in a world of wounds." While this remains true in large part—a third of our "advanced society" rejects evolution(!)—those who can see ecologically are less alone now than when Leopold wrote. Today a network of people can see, and an impulse among many is to lick the ecological wounds. The problem is that in the "Anthropocene Epoch," the wounds have become gangrenous. Where does one start? We live in a Frankenworld that obscures clarity of vision, and outruns any effort to keep up.

We are reduced to licking one wound or another. Let's stitch together a new variety of Box Huckleberry. Let's out-plant hither and yon to coax genetic adaption to climate change in natives, even as genetically modified organisms are unleashed onto the world helter-skelter—pulp wood, pulp salmon, Chinese-American chestnuts, crops that survive an onslaught of herbicides, and even people!

With so many wounds to lick, we jab at each other's priorities. Should we protect the monarch butterfly, or apply our limited resources to other species? We live in a world so removed from nature that a misplaced long-leaf pine plantation is excused through the reassurance that it can't escape into a fire-suppressed landscape. And even "where it belongs" is arguable, with climate changing during a human lifetime rather than geological time.

And too few care. How could they? Less than half of Americans understand that humans are cooking the planet. They are convinced otherwise by the unlimited marketing of fossil fuel industries and the politicians in their employ. So while the human population burgeons, and the too-few who see the world's mounting wounds cannot do otherwise than act, in the end we must ask, can these acts be enough?

Jim Long
Accokeek, MD

MNPS MEMBERS
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Easy Plant ID Quiz

1 Birds love the ripe purple berries of this plant, and they spread it with abandon in gardens, lots, alleys and other disturbed habitats. (The fruit is toxic to humans.) Left alone, it can grow to ten feet with deep thick roots. With its large, entire, alternate leaves and rapid growth, this plant has a tropical look, and indeed most members of its family are from tropical and warm-temperate regions.

2 This common woodland plant is also a favorite in the shade garden. Its reddish brown, 3-lobed flower grows underneath the heart-shaped basal leaves. Pollination is assisted by crawling beetles, flies and ants, but the plant can also self-pollinate and it spreads vegetatively, forming good-size patches. Early colonists used the roots as a substitute for ginger.

3 The natural habitat of this tree is in flood-plain forests and stream banks, but it thrives when planted in a variety of landscapes where it is valued for its exfoliating bark and its graceful "weeping" branches. Simple, toothed, ovate or triangulate leaves and staminate (male) catkins are typical of the genus.

CONTEST RULES: Submit your entry to info@mdflora.org or to MNPS, PO Box 4877, Silver Spring, MD 20914. Common names are acceptable. Answers must be received by 6:00 PM August 28. Include your name, email address and/or telephone number. The winner will be selected at random from among the correct entries and will be notified by phone or email by September 5. Failure to respond within 3 days of notification results in forfeiture of ticket and another winner will be chosen. YOU MUST GET ALL THREE ANSWERS CORRECT TO WIN, AND YOU MUST BE A MEMBER OF MNPS AS OF AUGUST 28. Previous winners, board members and their immediate families are not eligible.

Deer Population Management An Ongoing Challenge

MNPS members know about the damage to our forests from overabundance of white-tailed deer. The Maryland Department of Natural Resources and the county parks departments are also acutely aware of the problem.

In March DNR published the results of the 2014-2015 deer-hunting season in Maryland. The harvest of 86,883 is 9% less than last year's total. The report explains that biologists attribute the decrease to declines in deer numbers in rural Maryland after last year's strong harvest and an abundant acorn crop that resulted in reduced deer movement for much of the season. "The decline in the harvest this year was similar to the drop two years ago and can be expected whenever there is an abundant acorn crop," said Brian Eyler, DNR deer project leader. "Most counties with extensive oak forests saw much more of a decline than other counties, such as those on the Eastern Shore where harvest levels were very similar to last year. Strong harvests over the past decade have reduced the deer population to more appropriate levels in our rural areas where hunters have better access to property for deer hunting. The challenge remains to effectively manage deer in suburban areas where hunter access is limited and populations remain high." (See http://news.maryland.gov/dnr/2015/03/02/dnr-releases-2014-15-deer-season-results/)

Montgomery County, with over 30,000 acres of public land, has been conducting deer management for 19 years. The Montgomery County Deer Management Work Group[1] has issued a comprehensive report on the state of deer management in the county. This 18-page report is well worth reading for its detailed analysis of the past successes and failures and the future potential of the program. On the positive side, deer populations have been reduced by over 59% on average where management is occurring, with a corresponding drop in deer-vehicle collisions near parks with deer management. On the negative side, deer populations and deer-vehicle collisions have continued to increase in small parks and on private land. Only a few additional tracts, such as C&O Canal Historical Park, have the potential for deer management. Most remaining public lands are too narrow for hunting under current regulations, and some are likely to remain so even with modified regulation. Furthermore, the vast majority of land in the county is in private hands. In fact, "*access to land, especially private property, is the most limiting factor to current population management efforts.*" (Download the report at http://www.montgomeryparks.org/ PPSD/ Natural_Resources_Stewardship/Living_with_wildlife/deer/documents /2015_deer-report.pdf

At the request of the Chairmen of the Joint Budget Committee of the General Assembly, DNR issued a 2014 Deer Population Management Report that summarizes steps that could be taken by the agency and the General Assembly to improve deer management. Not surprisingly, a number of the recommendations are designed to improve hunter opportunities and incentives. (Download the report at http://www.dnr.state.md.us/wildlife/Hunt_Trap/pdfs/2014_ Deer PopulationMgtReport.pdf)

[1]The Work Group includes representatives of DNR, M-NCPPC, Montgomery Co Parks Dep't, Montgomery Soil Conservation District, Montgomery Co Police Dep't, US Nat'l Park Service, and Washington Suburban Sanitary Commission.

The Role of Local Genotypes ("Ecotypes") and Genetic Diversity

EDITOR'S NOTE: For restoration projects, how important is it to use plant material derived from local populations (sometimes called "local provenance"). Much of the debate seems heavily influenced by the ideology of the speakers. We republish here the section of the 2014 Maryland Botanical Heritage Work Group Report that discusses this issue. It illustrates the pitfalls of overly simplistic approaches. For references and to read the complete Report, see the DNR website: http://msa.maryland.gov/msa/mdmanual/26excom/defunct/html/04botanical.html

In revegetation projects, cultivated plants are purchased from growers and seeded or planted at the restoration site. Even if plant species native to Maryland are used for such projects, the plants may not be from local material. For example, seeds may have been collected from a population in Texas and grown in North Carolina before being sold to a Maryland client. Or, they may be native to one region of the state and planted in another (e.g., coastal plain vs. mountains).

It often happens that a particular plant species grows naturally over a wide geographic range, including various different climatic conditions, soil types, and other habitat characteristics. For example, red maple (*Acer rubrum*) is native in much of the eastern United States, but populations in New England may have genetic differences that enable them to survive a colder climate than those from the Carolinas. Thus, "ecotype" is a concept used to describe a sub-population of a species that has adapted to a particular set of environmental conditions, and usually is defined as having been derived from plants growing within a particular geographic area (Lubchenco and Real 1991).

There is concern about the risks of introducing non-local native plants in restoration projects and roadside plantings. The perceived risk is two-fold: the potential negative impact on local populations of the same species; and the possibility that the introduced non-local plants are not well-adapted to the climate and conditions of the restoration site. For this reason, restoration protocol often suggests using plant sources of local provenance or local ecotypes. As will become apparent in the following discussion, further research on the use of local ecotypes is needed and there may be no conclusion that is generalizable across all species and planting situations.

One of the possible threats to local plant populations from the use of non-local genotypes in restoration projects is genetic swamping of local populations (Booth and Jones 2001). If the introduced plants interbreed with local populations, this will affect the genetics of the local population and may even completely "swamp" it so that the local population is effectively converted to the introduced ecotype. If the introduced ecotype is less adapted to the local conditions—for example, if it cannot survive the occasional drought—then this characteristic will have been transferred to the local population, whose long-term survival is then at risk.[1] It should be noted, however, that in cases of species that have been widely planted over a number of years, it may no longer be possible to isolate or even to identify the original local genotype.

Local ecotypes may be better adapted to the climate and conditions of the restoration site than non-local ecotypes (Allen and Meyer 1998). Adaptation to the restoration site is essential for the persistence of the newly planted population over time. The failure of a restoration project due to lack of adaptation by the new plant material may not directly affect nearby natural habitats. However, when restoration projects fail, the sites are likely to become infested with non-native invasive plants that will invade nearby natural areas.

The choice of appropriate plant material is, unfortunately, even more complicated because geographical distance is not always the best indicator of local adaptation. Habitat characteristics may be more important (Hufford and Mazer 2003). That is, source populations from habitats with similar characteristics may be better adapted to the restoration site than closer source populations from different habitats, even if derived from non-local sources (Ahmad and Wainwright 1976; Hufford and Mazer 2003). In addition, the majority of species used in restoration are common species whose original range was much larger than the current range. Historical gene flow of species in those populations likely covered a greater distance than in current, fragmented landscapes. Thus it can be argued that using seed from distant populations may help to restore the historical gene flow of the species, alleviating to some degree the impact of fragmentation (Sambatti and Rice 2006).

In addition to being adapted to a restoration site, plant material utilized in restoration should be genetically diverse (Society for Ecological Restoration International Science and Policy Working Group 2004). Genetic diversity ensures that plants will be able to respond to future events with a broad range of physiological adaptations (Booth and Jones 2001). These future events not only include average environmental fluctuations for the site but also periodic extreme events, like floods or fires. For this reason, some favor the use of plant material derived from wild-collected seed. However, wild-collected does not necessarily mean locally collected. Due to habitat fragmentation and isolation, many plant communities are genetically depauperate. Small, genetically isolated populations may have reduced fitness (Falk et al. 2001). In this case, introducing material from farther away could actually enhance genetic diversity and result in increased fitness.

It is beyond the scope of the Work Group to reach a conclusion on these matters. Contradictory recommendations about planting practices might be inferred from the various sources described above. We simply comment that in all likelihood, the importance of using local ecotypes for revegetation projects like restoration and roadsides depends on the location and conditions at the restoration site, as well as on the species proposed to be used.

[1]The need to develop safe "transfer zones" for some native plant material has been expressed by state and federal agencies (United States Department of Agriculture and United States Department of the Interior 2002). Transfer zones provide physical boundaries within which ecotypes of species can safely be transferred, without negatively impacting the genetics of plant metapopulations. Several state programs are already in place. For example, the Iowa Ecotype Project was developed to increase the availability of Iowa-origin seed for roadside plantings and prairie reconstructions (Houseal and Smith 2000). Missouri started a local ecotype program with 33 species from two prairie ecozones, based on climate and soil conditions (Erickson and Navarrete-Tindall 2004). Oregon Department of Forestry (2007) developed seed transfer zones for many tree species.

Do Native Vines Kill Trees?

Native trees can suffer minor harm from native vines growing on them, but not compared to the significant and often fatal damage rendered by non-native invasive vines.

Native canopy trees can generally accommodate the massive size and weight of large native vines such as this winter grape (*Vitis vulpina*) photographed at Chapman State Park in Charles County. Photo by R.H. Simmons.

Spiral-twining native vines like Canada Moonseed (*Menispermum canadense*), with their open spiral pattern, do not strangle trees and shrubs the way spiral-twining invasives such as Japanese honeysuckle and oriental bittersweet do. Photo by R.H. Simmons.

Book Announcement

American Botanical Paintings: Native Plants of the Midlantic
Bonnie S. Driggers, ed.
with botanical illustrations by members of Botanical Artists for Education and the Environment
Lydia Inglett Ltd Publishing, 2014
$39.95

This beautiful book contains 60 reproductions of original paintings and drawings of plants, many of which are accompanied by detailed illustrations of butterflies, moths, and other pollinators, emphasizing the vital interrelationships that support our region's complex ecosystem. The entertaining narratives describe the plants, their natural habitats, their relationship with animals, and their suitability for use in the garden. Also in- cluded is information about the plant families and ways in which Native Americans or early settlers used the plants. In a day when we are inundated with photographs, this book provides a welcome reminder of the unique educational and artistic value of illustration.

Proceeds from the sale of the book will be used to support the native plant education, conservation, and horticulture activities of the Washington area-based organization, Botanical Artists for Education and the Environment. Publication costs are covered by donations, including a grant from the American Society of Botanical Artists.

(Wildflower in Focus continued from page 2)

I enjoy having Virginia creeper on a fence in my garden. It needs annual pruning, but is not invasive when compared to English ivy, porcelainberry (*Ampelopsis brevipedunculata*) or the native trumpet vine (*Campsis radicans*).

~ Kirsten Johnson

Virginia creeper and poison ivy coexist on this tree, creating a spectacular autumn display of color. Photo: Janice Browne

References

Dirr, M. A. 1998. Manual of Woody Landscape Plants, 5th ed. p. 698. Stipes Publishing LLC, Champaigne, IL.

Isnard, S. and W. K. Silk, Moving with Climbing Plants from Charles Darwin's Time into the 21st Century. American Journal of Botany 96(7): 1205–1221. 2009.

PROGRAMS

All MNPS programs are free and open to the public. For details and up to date listings, see mdflora.org.

July 28, Tuesday – 7:30 PM, doors open at 7:00
Nature Serve – A Network Approach to Conserving Plants
Silver Spring, Silver Spring Civic Center (note location for this program)
Speaker: Anne Francis, Lead Botanist, NatureServe
Anne Francis will address methods of assessing plant species' extinction risk. She will also describe Explore Natural Communities (http.//www.explorenaturalcommunities.org/), a new way to engage with nature in National Parks. Rock Creek Park is the first National Park to be featured in this program.

August 18, Tuesday – Western Mountains Chapter, 7:00
The topic to be announced
Frostburg State University, Compton Science Center, Room 327
Speaker: Sam Droege, Wildlife Biologist, USGS Patuxent Wildlife Research Center

August 25, Tuesday – 7:30 PM, doors open at 7:00
What's in a Name? Botanical Names Explored
Silver Spring, Silver Spring Civic Center (note location for this program)
Speaker: Margaret Chatham
Many botanic names are useful for identification. Margaret Chatham has a lifelong interest in words and how they came to mean what they do. We hope to increase your knowledge and your comfort level with botanic Latin (and Greek!).

September 19 and 20 – Saturday and Sunday
MNPS Annual Fall Conference, at Salisbury University, Salisbury
See pages 3 & 4 – and the MNPS website – for details, including field trips.

September 29, Tuesday – 7:30 PM, doors open at 7:00
Ecological Restoration of Invaded Urban Forests: What Is Possible?
Montgomery County, location: Wheaton Library
Speaker: Lea Johnson, Ass't Professor, UMD
Lea Johnson is a plant ecologist working on applications of ecology to land management including urban land restoration. Her work in New York City included places where oriental bittersweet and porcelain berry were major concerns. (This is an uplifting presentation!)

October 20, Tuesday – Western Mountains Chapter, 7:00 PM
An Evaluation of Pest and Disease Vulnerability of Urban Street Trees in Washington, DC
Frostburg State University, Compton Science Center, Room 327
Speaker: Laura G. Smith, Graduate Student, Department of Biology, Frostburg State University
Laura Smith's research prioritized specific neighborhoods in DC in need of monitoring to avoid pest and disease outbreaks. She will discuss her findings and management concepts for the future.

October 27, Tuesday – 7:30 PM, doors open at 7:00
Botanical Artists for Education & the Environment
Montgomery County, location: Wheaton Library
Speaker: Pamela Mason
See page 8 for a description of *American Botanical Paintings: Native Plants of the Mid Atlantic*, book of contemporary botanical paintings. Pamela Mason is one of the contributors.

FIELD TRIPS

MNPS field trips are free and open to the public. Pre-registration is required for some, and early registration may be offered to members. For up to date listings and details, and to register, see mdflora.org. Unless otherwise indicated, MNPS field trips are generally geared to adults.

July 11, Saturday, 10:00 AM – 1:00 PM
Wetland Plant ID, Jug Bay Wetlands Sanctuary, Southern Anne Arundel County
Leader: Karyn Molines
Cosponsored by Jug Bay Wetlands Sanctuary and MNPS
July is hot when the marsh is in full bloom; we'll find swamp rose, cattail, wild rice, arrowhead, pickerelweed and more!

July 10 and 17, Fridays, 9:00 AM – noon
Eidolon Nature Preserve, Morgan County, WV
Leader: Liz McDowell, Western Mountains Chapter
Wildflower ID for Beginners. Preregistration required.
See MNPS website for information.

July 12, Sunday, 10:00 AM – 3:00 PM
Eidolon Nature Preserve, Morgan County, WV
Cosponsored with Potomac Valley Audubon Society
Leader: Joe Metzger
This is the second in a series of explorations to re-locate and verify the 600 species, including 30 very rare species, last documented over a decade ago.

July 25, Saturday, 9:00 AM – noon
Exploring Elk Ridge in Summer
Leaders: Liz McDowell and Ron Boyer, Western Mountains Chapter
Landowner efforts to preserve regional biodiversity have helped protect several uncommon plants and animals in this conserved land adjacent to the Savage River State Forest, which includes the largest interior hardwood forest in the world's temperate latitudes. Group size is limited. Please contact Liz (lmcnativeplants@hughes.net) to register.

August 22, Saturday, 10:00 AM – 2:00 PM
Wildflower ID for Beginners, Battle Creek Cypress Swamp, Prince Frederick
Leader: Karyn Molines
Cosponsored by Calvert Nature Society, Calvert County Natural Resources Division, and MNPS
This will be a combination indoor-outdoor class. Geared for adults and teens 16 or older.

September 13, Sunday, 10:00 AM – 2:00 PM
Tregaron Estate, Washington, DC – Wild Washington Walk #134
Leaders: Mary Pat Rowan and David Culp

September 13, Sunday, 10:00 AM – 3:00 PM
Eidolon Nature Preserve, Morgan County, WV
Cosponsored with Potomac Valley Audubon Society
Leader: Joe Metzger
The third in a series of explorations of the property to re-locate and verify the 600 species, including 30 very rare species, last documented over a decade ago.

October 4 - Sunday, 10:00 AM – 2:00 PM
Wild Washington Walk #135. Location TBA
Leaders: Mary Pat Rowan and David Culp

October 17, Saturday, 1:00 PM – approximately 4:00 PM
New Germany State Park, Ginseng talk and fall foliage walk:
Speaker and Leader: Dr. Eric Burkhart, Program Director for Plant Science, Shaver's Creek Environmental Center, Pennsylvania State University.
Dr. Burkhart will describe his decades-long studies of Pennsylvania's American ginseng (*Panax quinquefolius L.*) industry and discuss the status of one of North America's most valuable and vulnerable plants. He will lead an exploration of New Germany State Park following the talk.

November 1, Sunday, 10:00 AM – 2:00 PM
Wild Washington Walk #136. Location TBA
Leaders: Mary Pat Rowan and David Culp

November 21, Saturday, 10:00 AM – 1:00 PM
Autumn Field Trip in Rock Creek Park
Leader: Melanie Choukas-Bradley
Explore the park with the author of A Year in Rock Creek Park: the Wild, Wooded Heart of Washington DC. Starting at Boundary Ridge at the DC line, the walk will highlight the woody plants of the floodplain and upland woods, including many trees in their late autumn glory.

December 13, Sunday, 1:30 PM – 4:30 PM
Winter Tree ID, Kings Landing Park, Huntingtown
Leader: Karyn Molines
Cosponsored by Calvert Nature Society, Calvert County Natural Resources Division, and MNPS
All trees do not look alike in winter! We'll learn the basics of tree identification using winter keys and field guides, and take a hike to use our knowledge.

Become a member. Join online: www.mdflora.org.

Marilandica

A Publication of the Maryland Native Plant Society

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

Maryland Native Plant Society
Annual Conference 2015
Co-sponsored by Salisbury University, Salisbury, MD

shifting sands

COASTAL PLAIN FLORA from WETLANDS to UPLANDS

The wildly diverse ecosystems of Maryland's lower eastern shore beckon us to explore and learn.

SATURDAY & SUNDAY
September 19th and 20th

MNPS MEMBERS
WIN a FREE TRIP to the 2015 CONFERENCE
See page 6 for details.

Register by mail or on-line at www.mdflora.org