



Shenandoah Chapter Virginia Native Plant Society September 2016

Mission Statement:

We are a conservation organization dedicated to conserve Virginia's native plants and their ecosystems through education, advocacy and activities that promote appreciation, stewardship and appropriate use.

Upcoming Chapter Events:

- ❖ **Tuesday September 13 Wildflower Walk** Tilghman Road 3:00 pm. Contact Michael Seth sethmj@jmu.edu for details.
- ❖ **Sunday October 2 1:00 pm. Mushroom Walk.** Mushroom expert Diane Holsinger will lead this afternoon mushroom hunt. Place TBA. Contact Diane Holsinger dhworkout@hotmail.com or Michael Seth sethmj@jmu.edu for details.

Other Upcoming Events:

Friday September 9 to Sunday September 11 Annual Meeting of the VNPS Blacksburg

Friday September 9 P Pipeline Field Tour at Starr Hill Brewery

Starr Hill Brewery Crozet 3pm. Wild Virginia will lead a tour of impacted lands along the proposed Atlantic Coast Pipeline route for the VCN Environmental Assembly. The tour will end at the Starr Hill Brewery to recap what we learned between 3 and 3:30 p.m. Visit the Virginia Environmental Assembly website to sign up for the Assembly and the Pipeline Tour on September 9.

Saturday September 10 Tag & Release a Monarch at the Edith J. Carrier Arboretum with expert Gail Napora.

All are welcome, free of charge, to hear expert Gail Napora's 11:00 a.m. presentation in the Pavilion. To be able to tag then release a Monarch, online registration with a \$12 fee is required in advance. [Click here to register](#). A small quantity of Monarchs may be available to purchase for \$12, the day of for tagging and release for those who didn't have time to register in advance. Then all are invited to watch the Monarch release at noon at the butterfly garden, the Monarch Waystation of the EJC Arboretum at JMU.

Sunday September 11 Kennedy Peak Hike Shenandoah Group Sierra Club. Sierra Club contact: Ralph Grove - 540-478-3677

Friday September 23 to October, JMU Edith J. Carrier Arboretum Fall Plant and Bulb Sale, Friday September 23, and Saturday, September 24, at the Frances Plecker Education Center, 9:00 am to 3:00 pm, then, plants and bulbs continue to be sold, Sunday excepted, until closing, 3:00 pm the Saturday of JMU Family Weekend. Also, buy the JMU Purple & Gold bulb collection at the arboretum table at the Godwin Field Fair 10:00 am—2:00 pm Saturday, October 1st before kickoff!

Saturday September 24. North and South Sisters- Southern Shenandoah Mountain approximately 6 miles.

This will be an out-and-back hike starting at the intersection of the trail on Scotch Draft Rd SR 627. This is a beautiful remote hike past the biologically rich shale barrens of the two Sisters. We will do a little brush cutting on

overgrown parts of the trail so bring loppers or clippers. Meet at Churchville TasteFreez at 9:00. Call Hike leader: Michael Seth, sethmj@jmu.edu, (540) 438-1301

Wavy Leaf Basket Grass

July, 2016 www.blueridgeprism.org

All photos ©Susan A. Roth except where noted.

Wavy Leaf Basket Grass represents one of the greatest threats to our area of any invasive plant- and you thought garlic mustard or Japanese stilt grass was bad.

The first patch in our area was found near Elkton off Beldor Hollow Road probably brought in the cemetery there. It has since begun to spread to nearby areas in the Park in Elkton.

This past summer some of our members have been involved in the efforts to control the wavy-leaf basket grass in the Shenandoah National Park. This is normally done between June and early September before the plant seeds appear. A trip was scheduled on Thursday August 25 but was cancelled when it was found by SNP biologist Jake Hughes that the plants had seeds have come early. Seeds stick and we were as likely to spread as to eradicate it. The plan is get as many volunteers as possible for two trips next year: one in mid-June and the other in early August. Area of concern near Swift Run Gap.

This report is from the Blue Ridge Partnership for Regional Invasive Species Management (PRISM) see below.

REPORT ALL SIGHTINGS of this Dangerous, Dreaded Invasive Wavyleaf Grass or Wavyleaf Basketgrass Menaces Forests, Hitchhikes on Animals and People.

Wavyleaf grass aggressively colonizes shady, moist sites and can obliterate wildflowers, ferns, and tree saplings in its steadily advancing path.

The Culprit

This fearsome, invasive grass may be the worst of the worst. And the worst is yet to come, because wavyleaf grass only recently arrived in Virginia! The only other place it has been found in the U.S. is Maryland. Because it thrives in dense shade and its seeds hitchhike for miles and miles and miles by gluing themselves to animal fur and clothing -- falling off days or months later -- the consequences of not eradicating wavyleaf ASAP are dire. Where it has been found so far, this perennial grass thickly blankets the ground and forms continuous carpets in short order. These carpets have been found only where the forest was already degraded by deer over-browsing. So the grass had little competition. Although evidence is lacking, wildlife scientists are concerned that wavyleaf's rapid growth, dense roots and foliage have the potential to smother wildflowers, ferns, and other ground-layer plants, and prevent forest tree and shrub regeneration in intact forests. This is happening with Japanese stiltgrass.

Wavyleaf could ruin our wood-lands and our wild and timber forests. When hikers, hunters, or their dogs walk in this grass anytime from mid-August through November, they emerge slathered with wavyleaf's sticky seeds. These are very difficult to remove.

Once established in huge colonies, the grass dramatically diminishes biodiversity of insects, birds, mammals and native plants. If it runs rampant in Virginia, as it has in Maryland, wavyleaf could impact our economy by imperiling timber profits, and ruining recreational, hunting, and tourist opportunities. And the monotypic stands it forms rob Nature of the variety and beauty that should be our heritage. Virginia lists wavyleaf as a noxious weed, making it illegal to knowingly grow or transport it. With enough funding and manpower, it might not be too late to contain and control this menace. Each delay in control measures, however, makes this noxious weed's exponential growth more difficult to contain.

Wavyleaf grass was first discovered in the U.S. in Maryland in 1996 in and around Patapsco State Park near Baltimore. Now, it is out of control throughout much of Maryland and has crossed into D.C. and Virginia. It was first found in Virginia in Shenandoah National Park at a site in Rockingham County in 2005. As of 2016, wavyleaf is known to be in 11 Virginia counties: Rockingham, Page, Madison, Warren, Fauquier, Clarke, Culpepper, Fairfax, Greene, Rappahannock, and Albemarle.

Wavyleaf grass (*Oplismenus undulatifolius* formerly *Oplismenus hirtellus* spp. *undulatifolius*) was once suspected of having invaded the landscape from a carelessly discarded houseplant -- one grown as a hanging-basket. However, recent genetic studies show that the invasive grass is a close match to the ecotype found in Caucasus Mountains of Russia.

The grass might have hitched a ride to the U.S. on someone's clothing or hiking boots, but the specifics are an unsolved mystery.

In 2012, the U.S. Department of Agriculture Animal and Plant Health Inspection Service assessed wavyleaf and ranked it High Risk for invasion. Scientists used a climate-matching tool based upon the plant's known worldwide distribution. They estimated that the nonnative invasive grass could overrun forests in 30% of the U.S. Wavyleaf has the potential to grow in USDA Zones 6 -13 where rainfall averages 30 to 100 inches per year. It must be stopped now, before it is too late!

Known Hangouts

Wavyleaf hangs out in the shade – sun is its enemy. It thrives in shady sites from very moist to somewhat dry. It does great in very deep shade, the kind that challenges many forest plants. Wavyleaf is found in woodlands and forest settings in low wet areas, along streams, and in bottomlands, as well as on steep wooded slopes and along trails. You might find it first at the base of a tree. It stops dead, however, at the forest edge and does not invade fields and meadows. This nasty plant chums around with Japanese stiltgrass, another invasive, in the shade, but does not follow it into the sun. You may find wavyleaf growing beneath Japanese stiltgrass, which grows much taller.

Modus Operandi

This conniving plant really knows how to travel. Wavyleaf's seeds, which form in profusion in late summer and fall, feature long, pointed tips (awns). The awns grab onto passing animals, people, and vehicle and tries to hitch a ride. The seeds hang tight because the awns exude a glue-like substance. Seeds can adhere to fur and clothes for days until they are physically rubbed or brushed off. Deer most likely are the primary culprits in spreading the seed from one location to another. Bucks, in particular, go on long excursions during rutting and hunting season, which coincides with wavyleaf seed production. Bears, whose territories encompass a radius of 2 to 15 miles, may travel up to 100 miles in search of food and may be guilty of long-distance seed dispersal. Hunters, hikers, and their dogs also probably unwittingly carry wavyleaf seed great distances – even hundreds of miles. And the seeds can be moved and carried downstream by water. Any seeds not re-moved this way fall to the ground in winter, where they may later germinate. No one knows how long seeds are viable in the soil.

Wavyleaf grass is a perennial, which gives it a decided advantage over invasive annuals such as Japanese stilt-grass. It emerges from dormancy and starts growing rapidly in April. Because it is a perennial, it has more power than an annual to thrust through a deep leaf litter on the forest floor. This, and its extreme shade tolerance, allows it to grow under a dense tree canopy. Wavyleaf has ground-hugging, root-like stems, called stolons, which creep beneath leaf litter on the forest floor. These radiate from the main plant and send out roots and new shoots from their nodes. This way, a single plant forms a large colony of interconnected plants in a few years, having germinated from only one seed. Seeds germinate from April into June. Early seedlings may flower and seed their first year. Later seedlings don't flower until their second year.

Positive Identification

Wavyleaf grass is a graceful-looking, low-growing plant. The leaves are .5 to 1 inch wide and 2 to 4 inches long when mature. They are deep green with elongated points and are distinctly wavy from side to side, like corrugated cardboard or water ripples. The leaf bases touch the stems but do not clasp or wrap around them, an important identifying characteristic. The stems are noticeably covered with short, white hairs, another important identifying characteristic. The grass is low and spreading to 6 to 8 inches high, but long-established colonies in wet sites can be 12 inches high with flower and seed stalks rising above. Stems seem to arch outward, radiating in several directions, so individual plants and colonies have a distinctive pattern. That pattern of arching, undulating leaves is easy to recognize from a distance once you know it. Spikes of white flowers with long, dark purple, pointed awns bloom beginning sometime in August, depending upon the location, and continue into October or November. Those treacherous, sticky seeds are produced first at the bottom of the spikes while new flowers bloom near the top. After frost kills the top growth, wavyleaf foliage becomes straw-colored and easy to see.



Mistaken Identity

Two invasive grasses, Japanese stiltgrass (*Microstegium vimineum*) and joint-head grass or small carpetgrass (*Arthraxon hispidus*) are sometimes mistaken for wavyleaf. Two native grasses, deer-tongue (*Dichanthelium clandestinum*) and broad-leaf panic-grass (*Dichanthelium latifolium*) also might fool you. It is easy to tell the difference. *The only one of these four that has undulating leaves is joint-head grass.* Unlike wavyleaf, it is straight and upright, 4 inches to 2 feet tall and its leaf bases wrap all the way around the stems. It grows in sunny to partly shady moist to wet sites. Broad-leaf panic grass may look like a lone wavyleaf in size and shape, but its leaves are not wavy. It grows in forest settings. Deertongue is stiff and upright to 3 feet tall and is found in sun and part shade; it does not have wavy leaves and its stems are smooth and hairless. Japanese stiltgrass often grows side by side with wavyleaf. They may look similar, but the details are telling. Stems of stiltgrass are smooth with a few hairs at leaf bases, while wavyleaf stems are quite hairy. Stiltgrass leaves are slender, without undulations, but usually have a silvery stripe running down their midribs. Stiltgrass is more upright, and grows in sun or shade, and is usually taller.

Search and Destroy

Most known infestations of wavyleaf in Virginia are on public property. The extent of the problem on private land is unknown because the invasive may go unrecognized and unreported. Forest land anywhere in the Blue Ridge is at risk. If you think you have found wavyleaf anywhere, take a photo and a GPS location if possible. *Report findings to Kevin Heffernan at Virginia Department of Conservation & Recreation (804-786-9112) or email: kevin.heffernan@dcr.virginia.gov.*

Do not walk through wavyleaf if it is in seed. If you inadvertently collect wavyleaf seeds on yourself or your dog, use duct tape to remove seeds from clothing and comb seeds from dog fur. Burn gathered seeds. Scrape dirt from your boots on site; double-bag dirt and put in landfill.

Mechanical: Wavyleaf can be hand-pulled if populations are small, but *all bits and pieces of stolons must be removed or they will resprout*. Be sure to remove tiny seedlings, which resemble miniature, mature plants. Hand-pulling is impossible to do effectively in large areas of infestation.

Foliar Spray: Use a 1% solution of the grass-specific herbicides seth-oxydim (Poast®) or clethodim (Envoy®) from April through June. They won't harm wildflowers and are approved for wildlife management areas. Don't use these in a wetland or near a stream, because they can harm fish and aquatics. One study shows grass-specific herbicides are less effective on wavyleaf in summer. After June, use glyphosate, which may be used from April until frost. Treat foliage with 2% glyphosate (Roundup®, Accord®, or Rodeo®); add surfactant if not already in the product. In wet areas or near streams, use Rodeo® and add an aquatic-approved surfactant. Complete treatment before flowering begins. If you must spray colonies in seed, use extreme caution; wear rubber boots and nylon clothing, which seeds are less likely to cling to. *Follow all herbicide label directions.*

Thoroughly clean or bag boots and clothing on site. Treatment may be needed for several years due to missed plants and new seedlings. Be vigilant.

We plan to work on this with PRISM (see below).



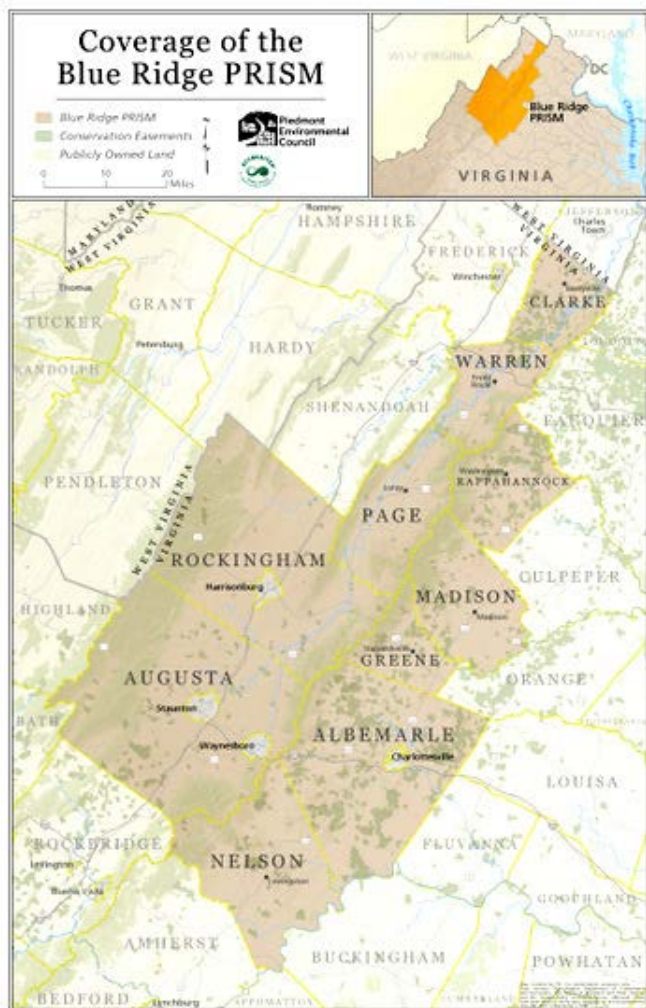
When Wavyleaf Basket Grass Takes Over

Photo from Maryland Department of Natural Resources [website](#).

PRISM

The Blue Ridge PRISM (Partnership for Regional Invasive Species Management) is a young, but fast-maturing, nonprofit organization dedicated to reducing the negative impact of nonnative invasive plants on the health of the natural and agricultural environment in the Blue Ridge Mountains of Virginia. Effective invasive plant control is a community and neighborhood issue, because these aggressive plants know no boundaries – flowing water, birds,

hikers, vehicles, and animals scatter and spread their seeds like a contagious disease. Steps can be taken to eradicate invasive plants from a park or private property only to have the area rapidly become re-infested from neighboring land. Community-wide action is needed. Through cooperative action, the PRISM aims to enable people to reclaim the Blue Ridge region's natural heritage and to become stewards of the lands that are our birthright. PRISM is the first Cooperative Weed Management Area (CWMA) headquartered in Virginia. There are approximately 100 CWMA.s in the U.S., mostly in the West. As with its western counterparts, PRISM is a collaborative partnership between individuals and various private and public agencies who work in a coordinated fashion over a wide geographical area to combat invasive species and to restore native habitats.



From [www. http://blueridgeprism.org/](http://blueridgeprism.org/)