

You Ain't From Around Here! Exotic invasive of the Quarter: Wavyleaf Basketgrass (*Oplismenus hirtellus* subsp. *undulatifolius*).

By: Jennifer Gagnon, Virginia Tech

Regular readers of this column know how much I love the doom and gloom aspect of exotic invasive species; leaving readers with a sense of despair and sadness is my goal. This quarter, however, in anticipation of the soon-to-come warm spring days, I have decided to have a lighter and brighter attitude. In that vein, I'm featuring an exotic invasive species against which we have a chance! Wavyleaf basketgrass (WLBG) is a relatively new invader in the Mid-Atlantic, having first been found near a landfill in Maryland in the late 1990s. The actual method of introduction is a mystery – the horticulture industry does not sell WLBG in the US. Speculation is that WLBG seeds somehow ended up in a discarded hanging basket in the landfill. But no one really knows.

WLBG is a low-lying, trailing perennial grass that spreads along stolons (runners) or by seed. The leaf blades are deep green, 0.5 to 1 inch wide, and 1.5 to 4 inches long. The distinguishing characteristic, for which the species is named, is the undulating ripples across the blades. WLBG blooms from mid-August into November. The small purple flowers appear on spikelets (the flowering unit, consisting of two or more flowers) and have glumes (bracts – a specialized leaf at the base of an inflorescence) with very long awns (bristle-like appendages). (That sentence was for the vocabulary lovers out there). The awns produce a sticky substance which allows the seeds to adhere to unwary passersby.



Notice the distinctive pleated waves along the blades of wavyleaf basketgrass. Photo by: Kerrie L. Kyde, Maryland Department of Natural Resources.

From a distance, a WLBG infestation may look strikingly similar to an invasion of another forest foe, Japanese stiltgrass (featured in the 2007 Spring Virginia Forest Landowner Update V. 21 No. 2). Upon closer examination, however, they are fairly easy to tell apart.



And, although they do comingle, more often than not, the two species grow in distinct patches, with clear boundaries between the two. The table below highlights the key differences among WLBG, Japanese stiltgrass, and two other look-alikes.

Wavyleaf basketgrass covers the floor of this intact forest. Photo by: Kerrie L. Kyde, Maryland Department of Natural Resources.

Wavyleaf basketgrass	Japanese stiltgrass	Small carpgrass	Deertongue
Blades are wavy	Blades are not wavy	Blades have irregular waves	Blades are not wavy
No hairs	Row of silver hairs along or next to midrib	Bristles along blade edge	Hairy sheath
Blades end in elongated, sharp tips; base of blade does not surround stem	Blades end in blunt, gradual points; base of blade does not surround stem	Base of blades surrounds stem	Base of blades surrounds stem
Fuzzy/hairy stems	Smooth stems	Smooth stems	Hairy stems

WLBG has the same ecological impacts as Japanese stiltgrass. They both form dense carpets of vegetation. They both displace native vegetation, including tree seedlings. And neither is palatable to our native wildlife species. However, WLBG has an additional trick up its sheath – it colonizes relatively undisturbed mesic forests (in case you don’t recall, Japanese stiltgrass thrives in disturbed areas). That’s the reason behind the common distinct line of demarcation between the two species.

According to the Early Detection & Distribution Mapping System (EDDMapS, 2014) this species has been found in 9 Virginia counties (Clarke, Culpeper, Fairfax, Fauquier, Greene, Madison, Page, Rockingham and Warren). But the good news is, it’s only been found in 9 Virginia counties! And the invasion sizes range from 1 square foot to 80 acres. Which means perhaps this is something we can eradicate (although I’m glad I personally don’t have to deal with 80 acres of it).

In an effort to eradicate this species before it becomes well-established throughout Virginia, a WLBG Task Force has been formed. And they are looking for help from the commonwealth’s citizens.

The first thing you can do to help is to report new sightings of WLBG. If you have a smart phone or tablet, there’s a free App mapping available at www.towson.edu/wavyleaf. Once installed, you can record the percent of an area infested, record if you implemented any control measures, use the GPS function on your device to record the exact location of the infestation, and use the camera to submit photos. This reporting system allows the task force to monitor new infestations.

If you don’t use a smart phone or tablet, or prefer to hike in the woods without being tempted to answer e-mails or post everything you see on Facebook, then you can report a sighting by phone or e-mail when you return home. Call Kevin Heffernan at 804/786-9112 or e-mail him at kevin.heffernan@dcr.virginia.gov.

Now, if you find an infestation on your land, you can do even more than just mapping and reporting it. You can kill it. There are two effective options, hand-pulling or herbicide application. Which you use depends on the location and size of the infestation, and the time of year.

Infestations discovered April through June, when WLBG is not yet blooming, can be hand-weeded. Like all the other invasive species we've covered before, you will need to ensure you remove the entire plant, including the stolons. Pieces accidentally left behind will develop into new, unwanted plants. Pulled plants can be hung on a nearby tree to wither away and die. If you find a larger infestation at this time of year, you may want to make life easier and apply an herbicide. Clethodim, which is sold under the brand names of Envoy and Envoy Plus, is a non-residual, grass-selective herbicide which has been shown to effectively control the plants in the spring.

Infestation discovered later in the year, July through October, can be more effectively controlled using a glyphosate-based herbicide, i.e., RoundUp. You should look for a formulation which is aquatic approved, especially if your infestation is near any type of water body. You can also hand pull at this time of year, but the plants with seeds will need to be double-bagged and destroyed. Currently burning is the best means to destroy the seeds.



Sticky awns allow seeds to attach to those who pass by. Creating unknowing dispersers. Photo by: Kerrie L. Kyde, Maryland Department of Natural

To prevent new infestation, stay on trails when you are hiking (this applies to dogs as well – sorry ☹), especially during late July through September, when the sticky seeds are out hitchhiking for a ride to a new location. Always check your clothes for seeds as well – preferably before you travel into an uninfested area – you can also look for ticks, making the activity both super-fun and efficient!

Have I finally featured a species which will have a happy ending? Definitely. But whether it's a happy ending for Virginia woodland owners or for the WLBG remains to be seen. So keep your eyes open when you're out and about and try to spot this thing early. I'd much rather you all enjoy the happy ending than an exotic invasive species.

EDDMapS. 2014. Early Detection & Distribution Mapping System. The University of Georgia - Center for Invasive Species and Ecosystem Health. Available online at <http://www.eddmaps.org/>; last accessed March 6, 2014.

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