



An Ohio Woodland Stewards Program Publication

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Kudzu...In Ohio?

Stephanie Downs, Invasive Species Forester, ODNR, Division of Forestry

When most people think about kudzu, Georgia comes to mind...or Alabama...or some other southern state...not Ohio. We can't have kudzu this far north, right? Unfortunately, kudzu is already here, we're just not sure how much. While known locations of kudzu throughout the state have been documented for the past few years, we still don't know the extent of this species here in Ohio. Knowing how to identify it, and knowing how much of it we have, is the first step to figuring out how to keep it under control.

Kudzu is a vine that is native to Asia. It was introduced to the United States in the late 1800s for erosion control, feed for livestock, and landscaping. While it historically has been a major problem in the southern United States where the winters are warmer, kudzu is surviving in Ohio and seems to be doing quite well in some locations. This is a species that poses many threats to our Ohio woodlands. Kudzu has been shown to have very rapid growth rates, and can take over large areas relatively quickly. This vine will grow over anything it encounters, including trees, killing them over time. Once established in an area, it is very difficult

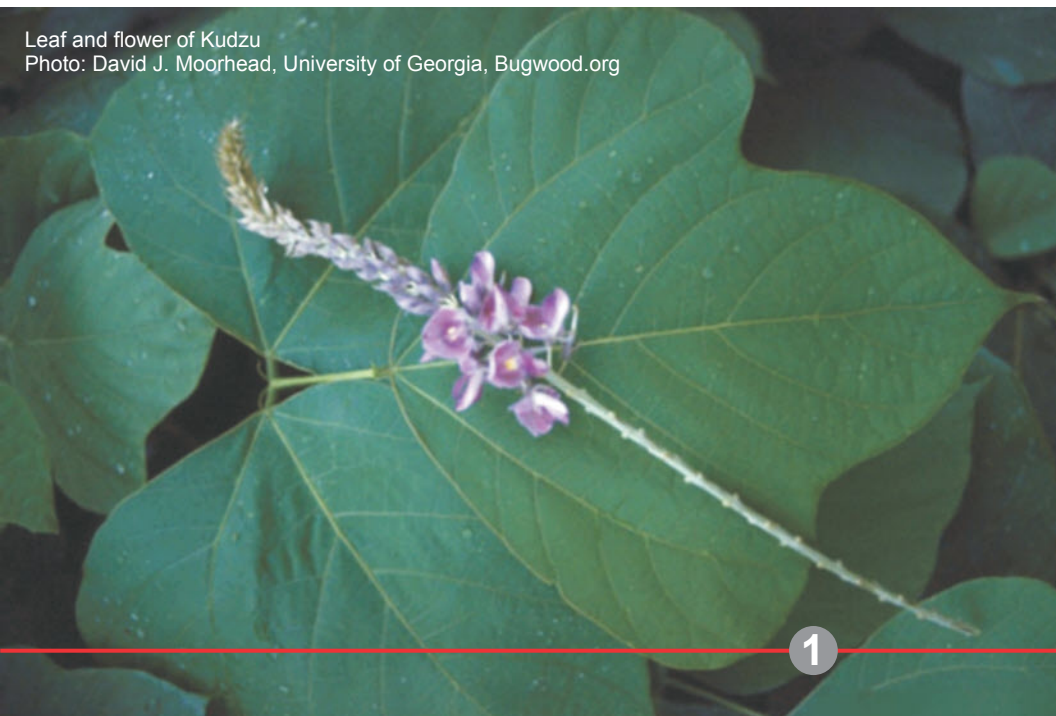
to control. Early detection and removal is the best method for getting rid of it.

This invasive plant contradicts the old saying "Leaves of three let it be". It has tri-part leaves (like poison ivy), but unlike poison ivy, leaving it be is not a good option. Each of the three leaflets is three to seven inches long and will often have lobes. Flowers generally are present from June to September, and are two to 12 inch bright purple clusters similar to pea flowers. The fruit is present from September to January, and consists of flat, tan, hairy seed pods up to three inches long.

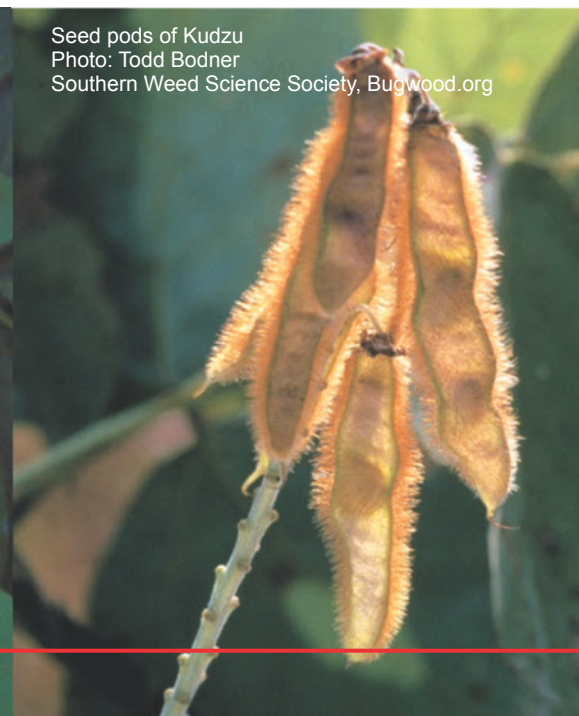
You can help us control kudzu in Ohio before it becomes as big of a problem as it is in the South! If you have seen this plant in your yard, woods, neighborhood park, local hiking trail, or anywhere else in the state, please let us know. If you know of a location with kudzu, contact Stephanie Downs, Invasive Species Forester for the Ohio Division of Forestry by email at:

stephanie.downs@dnr.state.oh.us or by phone at: (740)774-1596.

Leaf and flower of Kudzu
Photo: David J. Moorhead, University of Georgia, Bugwood.org



Seed pods of Kudzu
Photo: Todd Bodner
Southern Weed Science Society, Bugwood.org



American Elm Restoration Project

American elm (*Ulmus americana*) trees used to be dominant in many areas now dominated by ash trees before elm populations were reduced by Dutch elm disease (DED). DED-tolerant American elm trees could be a good planting option for areas where ash is currently being impacted by emerald ash borer. Jim Slavicek and Kathleen Knight are researchers with the USDA Forest Service working on restoration of American elm. They have a small plantation of elms in various stages of testing for



DED tolerance. Several genotypes have been shown to tolerate DED, and large portions of the progeny from crosses among these trees are DED-tolerant as well. They are currently testing the potential of seedlings from DED-tolerant crosses to be used for restoration plantings. It is their hope that large, stately American elm trees will someday grace our floodplain and swamp forests once again.

They are in need for more DED-tolerant genotypes of American elm to use as parent trees for their plantation in order to have enough genetic diversity to use it as a seed orchard for large-scale plantings.

They are looking for healthy American elm trees larger than 24 inches DBH (diameter at breast height) that are growing in areas that have had DED and that have not been treated with fungicides to prevent DED. If you see a survivor elm that fits this description, please enter its location and DBH at our website:

http://nrs.fs.fed.us/disturbance/invasive_species/ded/survivor_elms/

They will compile these entries into a database, prioritize the elms for sampling, contact landowners, and then collect small branches from the trees to propagate and test them for DED-tolerance. Any help that you can provide this project would be greatly appreciated, so help us get the word out!



Staying Ahead of Critter Conflict This Spring: Some Tips and Tools to Use

Marne Titchenell, Wildlife Program Specialist, OSU Extension

The time of the year is nearing when we dig out our gardening gloves, old pair of jeans, and work shirts, walk outside...and then spend the next several minutes looking out over the flowerbeds and gardens trying to decide which area to tackle first. While you are considering what you want to plant this year and where, also take some time to think about what critters might also be wondering what you are going to plant and where. There is nothing worse than spending hours working in your garden and flowerbeds, only to wake up the next day to find them eaten. So, is something eating your plants? Read on for some tips and tools to stay ahead of the critters that want to make your hard work their next meal.

Avoiding wildlife conflict is easiest when you are proactive. Now is the time of year when you should map out where you sustained damage last year, and take steps to prevent it from happening again. There are many tools available to protect your plants, such as repellents, fencing, individual plant protection, and resistant plant varieties (resistant meaning they don't taste very good). Before we get into more detail on the tools available, the first step to avoid critter conflict is to identify the critters responsible. Common critters that will stop by your landscape for a tasty meal are deer, rabbits, and groundhogs. When deer browse your plants, they tend to leave very jagged edges. Deer lack upper incisors, and when eating, grip the plant with their bottom teeth and upper gums, and then yank on

the plant until it rips. This leaves behind a jagged edge on the plant or twig (Fig. 1). Rabbits and groundhogs, on the other hand, leave very neat, clipped edges on the plants they feed on. Rabbits and groundhogs both have very sharp upper and lower incisors that clip the plant of their dining choice in a very neat fashion (Fig. 1).

As mentioned earlier, there are many tools available to help you prevent wildlife damage to your plants. Repellents are chemicals designed to be applied around the plant (repellents that repel animals with a bad smell) or directly on the plant (repellents that repel animals with a bad taste). Keep in mind that the repellents applied directly to the plants will often need to be tasted by the animals before they work. When it comes to deer, repellents with egg solids as the active ingredient work well. Be sure to look for concentrations of 30-40% egg solids for the best results. You can also mix up your very own egg solid repellent – 4 parts egg to 1 part water. Egg solids also repel rabbits, but another repellent that works well against those ever-hungry cottontails, as well as squirrels and chipmunks, is capsaicin. Capsaicin is essentially what makes hot peppers hot and is used as an active ingredient in repellents. Look for capsaicin in concentrations of 5-6%, or make your own with cayenne pepper (sprinkling cayenne pepper in your flowerbeds will deter squirrels from digging). Whenever repellents are used, be sure to read and correctly follow the label to ensure the repellent works as it is designed to.

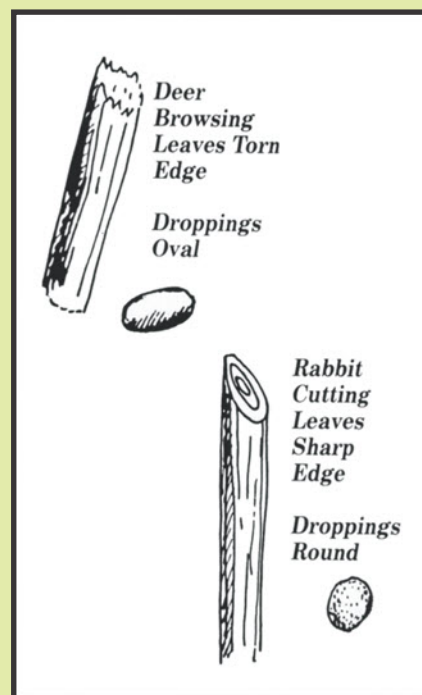
Sometimes, repellents aren't enough and it's necessary to create a physical barrier between the plant you are trying to protect and the animal that is trying to eat it. Individual plant protection is easy to install and often works well. Tree shelters will protect young trees against deer browsing and antler rubs. For rabbits and groundhogs, chicken wire (mesh Z 1") wrapped around the base of the tree or plant will keep them out. Be sure to bury it at least 6-8 inches, or securely stake the wire to the ground to prevent digging. There are a couple of low cost, electric fences that have high success rates at keeping deer and groundhogs out of specified areas. The 'peanut butter fence' consists of two stands of wire strung at 7" and 18" above the ground charged with an electric current. Fold little sections of tin foil around the wire and place a dab of peanut butter on the tin foil (Fig. 2). The peanut butter works to attract the deer's nose to the tin foil, where it receives an electric shock. The shock inflicts enough pain to cause the deer to think "well this just isn't worth it" and hopefully move on. If the shock were received anywhere else on the deer's body, it wouldn't feel a thing due to its thick coat of



fur. This fence can be modified by removing the tin foil and peanut butter and dropping the wires down to 6" and 12"

above the ground. These heights will prevent groundhogs as well as raccoons from entering an area. Be sure to check city ordinance codes, as most cities do not allow electric fences.

One last tool to consider using is resistance plants. By resistant, I mean plants that aren't as appealing taste-wise in the eyes



of deer, rabbits, and groundhogs. Keep in mind that just because you use a resistant plant, it doesn't mean that said plant won't get munched on. Nothing will stop a hungry animal (even brussels sprouts look good to me if I'm really hungry)!

However, choosing plants that aren't quite as tasty can be a good strategy to employ. Research has shown that if you also use repellents on resistant plants, it decreases the appeal even more. Lists of resistant plants for deer, rabbits, and groundhogs can be found online through a simple search (i.e. 'deer resistant plants').

Remember; try to be proactive when it comes to wildlife damage. There are more tools and strategies that I did not cover, and of course other wildlife species that can give you a headache. For more information on critter conflict, visit The Internet Center for Wildlife Damage Management (www.icwdm.org). This website is an excellent source of information on a variety of wildlife species, the damage they can cause, and how to manage it. Enjoy the spring and happy planting!

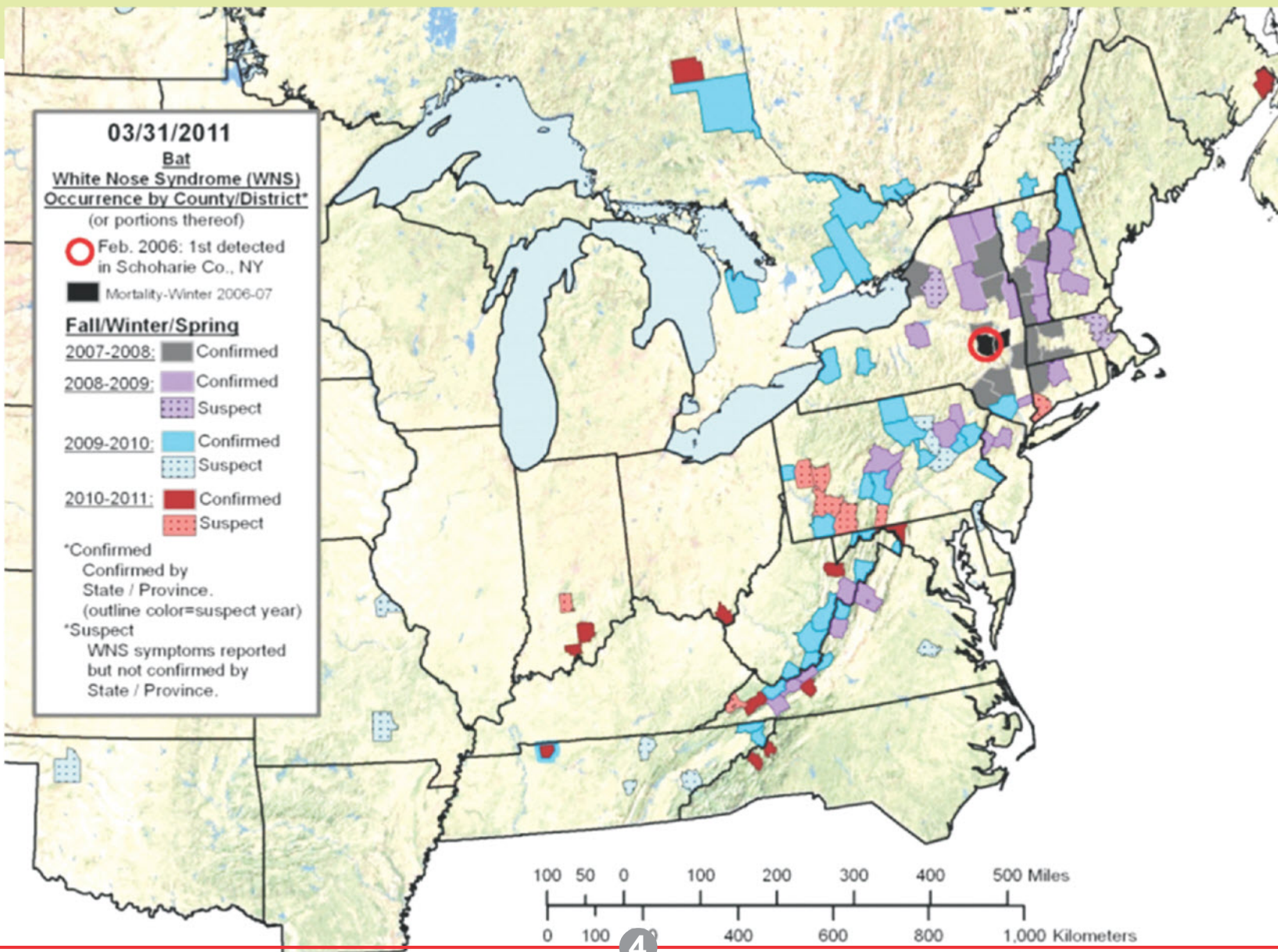
Deer and rabbit browsing (groundhog browsing looks similar to rabbit browsing). (Photo courtesy of Terry S. Price, Georgia Forestry Commission, Bugwood.org)

'Peanut butter fence' with tin foil and peanut butter in place. (Photos courtesy of Dave Apsley)

Update: White-Nose Syndrome in Ohio!

Marne Titchenell, Wildlife Program Specialist, OSU Extension

I am sad to report that white-nose syndrome was confirmed in Ohio, Lawrence County, on March 2011. A hibernating bat in an abandoned mine located within the Wayne National Forest showed suspicious signs of the deadly fungus, and when sent in for testing the results returned positive for white-nose syndrome. Since its initial discovering in New York in 2006, white-nose syndrome had been confirmed in 18 states and 2 Canadian provinces. State and federal agencies have thankfully been collecting data on hibernating bats in Ohio pre-white-nose to obtain populations estimates, and will now continue monitoring the bat population post-white-nose, while conducting disease surveillance and implementing management strategies to reduce the spread of the disease.



Recently an article was published in the journal Science that details the economic importance of bats in agriculture (Boyles et al. 2011). In Ohio, bats save producers costs ranging from \$54,000 (lowest in Cuyahoga County) to \$22.8 million (highest in Darke County) by eating large amounts of the insects that destroy crops. For the United States as a whole, the value of bat's pest control services ranges from \$3.7 – \$53 billion! Check out the entire article here: <http://www.sciencemag.org/content/332/6025/41.ful>

Howdy! I am Eric McConnell



I am the new Extension Specialist in Forest Operations & Products in the School of Environment & Natural Resources. My wife, Lynn, and I are native Texans from the East Texas Pineywoods. She is a Speech Language Pathologist and is employed as a National Trainer by The Center for AAC and Autism within the

Prentke Romich Co. of Wooster, OH. We are very happy to be in Columbus, and I am looking forward to contributing to the Woodland Stewards team.

We come to OSU from Mississippi State University

where I spent the previous 5 years obtaining my graduate degrees in Forest Resources. While there, I was very fortunate to work on clientele-driven projects. My Masters thesis studied the regional lumber industry's response to Hurricane Katrina following that landscape-altering event. My doctoral research investigated adding value to under-utilized species by testing a biofuel conversion technology for the wood composites industry. I worked over 8 years in industrial Quality Assurance after obtaining my BS in Forestry from Louisiana Tech University.

My current interests are in forest products marketing, wood utilization strategies, and natural resources education. My goal is to contribute to the Woodland Stewards mission of providing you with pertinent materials and programs related to forest operations and products. Utilizing our forest resources in a sustainable manner will help to not only promote our environmental responsibility, but it will also maintain forest products manufacturing for generations to come.

I look forward to meeting and working with everyone across Ohio's diverse forest industry. You can reach me at (614) 292-9838 or mcconnell.213@osu.edu. Go Bucks!

Publications

One of our goals is to continually work on getting information out to landowners in a variety of formats. One of the items we have been working

The fact sheets currently available include control options for Ailanthus (Tree of Heaven), bush honeysuckle, garlic mustard and autumn olive.



on is a series of fact sheets designed to help landowners deal with a variety of invasive species. To date we have four posted with a list of others to come. The fact sheet for minimizing the impact of EAB on your woodland has also been updated and is now posted on our website. Check out these and many other publications at:
<http://woodlandstewards.osu.edu/publications/index.php> .

facebook

Ohio Woodland Stewards is now on Facebook.

Come find us at:

<http://www.facebook.com/pages/Ohio-Woodland-Stewards-Program/197418573782?ref=nf>

2011 Calendar

While we have dates on the calendar for a number of classes, always check out our website <http://woodlandstewards.osu.edu> for an up to date listing of class opportunities.

May 13th	Chain Saw Safety, Athens County
May 13th	Invasive Species ID & Control, Cox Arboretum, Dayton, OH
June 17th	Name That Tree, Adams County
June 24th	The Woods in Your Backyard, The Holden Arboretum, Kirtland, OH
July 15th	Name That Tree, OSU Waterman Farm, Columbus, OH
July 22nd	The Woods in Your Backyard, Lucas County
August 15th	Mind Boggling Bats, Toledo Botanical Gardens, Toledo, OH
August 19th	Grassland Management for Wildlife, Gwynne Consrva Area, London, OH

Check Us Out On The Web!

Look for newsletter articles, links to fact sheets and other publications by browsing our site. Registration for upcoming Woodland Stewards classes may also be done electronically.

Go to:

<http://woodlandstewards.osu.edu>

Kathy L. Smith

Program Director - Forestry

Ohio Woodland Stewards Program Coordinator

Contact Us!

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Keith L. Smith, Associate Vice President for Agricultural Administration and Director, OSU Extension

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