

University of Maryland Extension – Woodland Stewardship Education http://extension.umd.edu/woodland



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Exploring Woodland Myths!

Maryland has a strong commitment to planting trees and many citizens, organizations, and agencies have put major funding into rural land planting programs. What is not well understood is the need to harvest trees so they grow vigorously, resist insects and diseases, and provide the many resource values we want.

A common concern is, "Are we running out of trees in Maryland?" The answer is NO! Maryland forests



Photo by Howard Neurnberger, Penn State University

grow 1.8 times more wood than is harvested or dies from insect, disease and other causes! In addition, our forests have continued to mature to where 78% are large diameter and only 7% are small diameter. Young forests are critical to forest health, for many wildlife species, and for the future of our woodlands through sustainable management. A common misconception is that the government owns most of Maryland forests, but actually 76% are owned by private landowners. This means the future stewardship of Maryland forests lies not in the hands of government entities, but in the collective decisions of over 150,000 private landowners.

There are some common woodland myths held by private landowners that should be dispelled!

Leaving woodlands alone is best for wildlife & forest health. Not really! Wildlife is managed by managing habitat and forest management practices (planting, harvesting, or doing nothing at all for a time) are the most costeffective way to alter wildlife habitat. The more diverse

habitat you create on your property, the more diverse the wildlife present.

Managing woodlands takes a lot of money and time.

Not really! Maryland is fortunate to have state foresters employed by the MD DNR Forest Service in each county who will develop a forest stewardship plan for properties over 10 acres in size for a nominal fee. This will be your roadmap for action for the next 10-15 years. There are private consulting foresters and contractors that can help you accomplish sustainable harvest and planting practices. Better yet, financial assistance is available to landowners with a forest stewardship plan that will pay a significant amount of the cost of forest/wildlife practices. The University of Maryland Extension (UME) offers many educational programs to help landowners better understand and implement needed practices.

My woodlands are too small for management. Not really! The MD DNR Forest Service tends to focus on properties with 10 acres or more as mentioned above, but UME offers the Woods In Your Backyard program for

smaller acreage properties under 10 acres. A self-assessment guide and workshop are available as well as a 10-week online course. UME also offers a general forestry course online or by mail, and will soon have an online wildlife management course.

UME is actively trying to dispel myths such as those above by offering quality educational programs for private woodland owners and work closely with other partners. Check out our educational offerings on our website:

www.extension.umd.edu/ woodland

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"The Woods in Your Backyard" Online Course for Fall 2019

The Woods in Your Backyard Online Course

Registration is now open for the Fall session of "The Woods in Your Backyard" online course. Our course is designed primarily for small-acreage property owners who want to learn how to care for or expand existing woodlands, or to convert lawn space to woodlands.

The self-paced, non-credit online course runs for ten weeks, from September 4 to November 19. It is offered through the University of Maryland's Electronic Learning Management System, and is accessible from any Internet connection and Web browser. It closely follows the published guide of the same name, but includes some important extras. Quizzes reinforce the important concepts of the text. Optional activities give participants the opportunity to share one or more of their stewardship journal entries, or pho-

tos or narratives of their woodland stewardship accomplishments. In addition, many of the course's units are accompanied by short videos, created and produced by Woodland Stewardship Education staff. These 2- to 5-minute videos demonstrate essential skills and techniques (such as tree identification or chosen tree release) and share the experiences of other woodland owners.

The course costs \$95.00 and each session is limited to 25 participants. Each paid enrollment includes printed copies of "The Woods in Your Backyard" guide and workbook, plus a copy of *Common Native Trees of Virginia*. Visit our website page about the course at <a href="https://doi.org/10.1001/jhi/hittps:

Go to this Eventbrite link for participant comments, more information, and how to register.

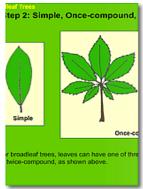
If you are a Maryland Master Naturalist or a Maryland Master Gardener, participating in this course can contribute to your annual hours commitment. See this link for more details.

Becoming a Steward of the Land: UME Forestry Program Offers Certification Course

Learn to be a steward of the land this fall with the University of Maryland Extension General Forestry Course. Both paper and online versions of the course will be offered, beginning Sept.1 through Dec. 15, 2019. **Registration is now open!** Interested participants can learn more about how to register at this link.

This is a non-credit course with no formal classes – work from the comfort of your home using your own woodlot, a friend's or a public forest. The course covers how to protect your trees from insects, diseases, and fire; step-by-step procedures walk you through a forest inventory and stand analysis; and the details of the forestry business are presented, including tax nuances and the sale and harvest of forest products. Ultimately, the course exercises help you develop the framework for a stewardship plan for your forest.





Sample course pages

The cost for this forestry course is \$150. Included in the cost are copies of the supplemental readings ("A Sand County Almanac," "The Woodland Steward, American Forests: A History of Resiliency and Recovery," a small pamphlet entitled "What Tree Is That?" and "Common Native Trees of Virginia Tree Identification Guide"). The paper version text and appendices for the course are in binder form. Online users receive a flash drive of the paper version of the text and appendices. A certificate of completion is awarded when all assignments are completed.

To learn more about the course and what it entails, go to extension.umd.edu/forestry-course. There you can read a lesson from the text, view an interactive exercise, read through detailed course information and FAQs.

For more information, contact Nancy Stewart at the University of Maryland Extension, Wye Research and Education Center, P.O. Box 169, Queenstown, Md., 21658, 410-827-8056, ext. 107, or nstewar1@umd.edu. Check for details on our website register today!

Woodland Wildlife Spotlight: American Mink

The weasel or "mustelid" family has several members that live in Maryland. While a few, including the ermine and the American marten, are extinct in the state, and another, the fisher, seems to have expanded into the state from a reintroduction program in West Virginia (far south of its native range), the one that is found throughout most of the state is the mink. If you have woodlands with a permanent water source such as a lake, river, or wetland, you may have prime mink habitat. But because they are solitary and are most active at night, they are seldom seen in the wild. They live throughout Maryland, with the exception of the Eastern Shore. They will favor areas with water that include dense brush or woodlands.

The mink is likely more popular as a concept than as an actually-observed animal. The phrase "mink coat" conjures up images of wealth and prestige. Long prized for its sleek, water-resistant fur, mink were trapped throughout large sections of the continent by both indigenous and colonial Americans. Today, mink populations are considered stable, thanks in part to changing tastes in fashion and in improved water quality in the continent's rivers and streams.

Water-based habitats provide a significant portion of the mink's diet. They will hunt muskrats, waterfowl, fish, crayfish, plus waterfowl and marsh nesting birds. They can hunt on the water's surface as well as dive under water for prey, although its eyesight underwater is not as clear as on land. The species' streamlined body results in low water resistance while swimming, but unlike its cousin the otter, which uses its webbed feet for swimming, the mink swims mostly by undulating its trunk. Additionally, they are skilled climbers, ascending trees to hunt small rodents and other prey. The diet often changes with the season and the availability of prey. Summertime brings a variety of frogs, waterfowl and fish. In the winter, the mink relies more on small mammals such as mice and rabbits.

During the winter, males and females come together for breeding; they are solitary the remainder of the year. A male will defend a territory along a river bank from other males but that includes home ranges of several females.

Within that territory, the mink will create a den, but the type and location of den varies widely. It may be a hole under a log or in a tree stump, or in a hollow tree. It may be a long burrow in a river bank that they have excavated or one that was previously occupied by muskrats, badgers or skunks. An excavated burrow can be up to twelve feet in length, with twisting passages and multiple entrances.

Mating may occur as early as February, but the reproduc-

American Mink Basics

Appearance: Long, sleek body with short legs. Long tail that can take up to 50% of the animal's length. Dark brown fur with distinctive white patch under the chin.

Size: Males: length up to 28 inches (including the tail); weight up to 3 pounds. Females: up to 25 inches, weight up to 2 pounds.

Lifespan: Up to ten years.



American mink, Howard County MD, 2018. Photo by John Harris, Maryland Biodiversity Project



American mink in Garrett County, MD, 2017. Photo by Tim Carney, Maryland Biodiversity Project

tive system of mink and other weasels feature delayed implantation, in which the fertilized egg will not implant for up to a month after breeding. During the resulting gestation, which lasts up to six weeks, the female will remain in the burrow's nesting chamber, which has been lined with straw and feathers. Here, she will give birth to a litter of two to ten kits typically in April.

During the spring, the young remain with their mother; the male does not participate in raising the kits. The young are weaned after six weeks, but stay with their mother until late summer. Consequently, the month of August is an important one for mink: the young begin to leave in search of their own territories, and the adults begin their second molt of the year after an earlier one in April.

Mink have few natural enemies. They are occasionally hunted by coyotes, bobcats, or great horned owls. They do not hesitate to take on animals larger than themselves in defense. While large-scale trapping by humans for fur has been mostly replaced by commercial breeding ranches, many states, including Maryland, have established trapping seasons to help maintain healthy populations.

Invasives in Your Woodland: Japanese Knotweed

Previous issues of *Branching Out* have highlighted invasive plant species with the name "Japanese" in them, including <u>Japanese stiltgrass</u>, <u>Japanese barberry</u>, and <u>Japanese honeysuckle</u>. In this issue, we turn the spotlight on another Asian invader, called Japanese knotweed.

What is it?

As with many other species from outside North America, Japanese knotweed was imported for use as an ornamental planting; unlike others, its exact date of arrival is not known but is estimated as occurring in the late 1800s. It was marketed under a variety of names, including Mexican bamboo, crimson beauty, Japanese fleece flower, and Reynoutria. It was also planted for erosion control. Since its introduction, it has spread to 36 of the lower 48 states and Alaska. In the mid-Atlantic, it is found in roughly half of Virginia, all of Delaware and West Virginia, and all of Pennsylvania except for eight counties in the center of the state. In Maryland, it is found in all but eight counties (Carroll, Cecil, Kent, Queen Anne's, Talbot, Worcester, Wicomico, and Somerset).

Japanese knotweed (*Polygonum cuspidatum* or *Reynoutria japonica*) is an upright, shrubby, herbaceous perennial plant that can grow to over ten feet in height. It commonly invades disturbed areas with full or mostly full sunlight, such as roadsides. However, it can tolerate shade, as well as high temperatures, high salinity, and drought. It is commonly found along streams and rivers and in low-lying areas, along utility rights-of-way, and around old home sites. It has also been known to grow through <u>cracks in cement</u>, through joints in stone walls, and between floorboards.

How does it spread?

Japanese knotweed spreads primarily by seed and by means of long, stout rhizomes. Because it can survive flooding conditions, it can spread along water courses. It has also been spread by seeds contained in fill dirt and that drop from shoes worn by individuals who visit impacted areas. It can escape from neglected gardens and can spread from cuttings that are improperly discarded. It spreads quickly to form dense thickets that crowd out native vegetation, particularly along previously-bare shorelines and islands.

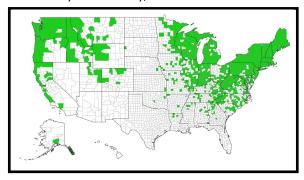
How can I identify it?

The stems of Japanese knotweed are semi-woody and hollow. Younger stems may have a deep red color; older stems are mostly green with patches of brown or red. The broad heart-shaped leaves are alternate on the stem, 6 inches long by 4 to 4 inches wide. The plant flowers in late summer, with small, greenish-white flowers developing in branched sprays. These are quickly followed by small, shiny, triangular and very small seeds (about 1/10th of an inch long). See the photo gallery on the next page.



Japanese knotweed plants and flowers.

Photo by Britt Slattery, US Fish & Wildlife Service



Japanese knotweed US county distribution.
Courtesy eddmaps.org.

How can I control it?

Once established, Japanese knotweed proves extremely persistent and is difficult to control. A colony of established plants may have an extensive rhizome network; one researcher in New Hampshire reported a connected underground system of one plant that extended across more than 30,000 square feet, or half a football field.

The key is to remove the weeds as soon as they are observed. Consistent and repeated removal by hand should include cutting the canes and digging up the roots. Allow the cuttings to dry out in the sun before disposal. Do not compost. Herbicide applications using glyphosate can kill Japanese knotweed, but it may take 3-5 years to eradicate it. The best time of year to do so is after the plant has flowered until the first frost.

For more information:

Learn more about Japanese knotweed:

<u>Japanese knotweed</u> (UME Home & Garden Information Center)

<u>Invasive in the Spotlight: Japanese Knotweed</u> (University of New Hampshire Extension)

<u>Japanese Knotweed</u> (USDA National Invasive Species IC) <u>Plant Invaders of Mid-Atlantic Natural Areas: Japanese</u> <u>Knotweed (invasive.org)</u>

Image Gallery: Japanese Knotweed



Japanese knotweed infestation. Photo by James H. Miller, USDA Forest Service, Bugwood.org



Japanese knotweed infestation. Photo by Randy Westbrooks, Invasive Plant Control, Inc., Bugwood.org





Japanese knotweed. Top: foliage. Above: seedlings. Photos by Leslie J. Mehrhoff, University of Connecticut, Bugwood.org



Japanese knotweed foliage. Photo by Nisa Karimi, Wisconsin Dept. of Natural Resources, Bugwood.org

News and Notes

New Recording Available from Woodland Stewardship Education



- Pollutant (TAP) emissions
- A TAP is any of the listed pollutants in COMAR 26.11.16.06 and also any air pollutant considered a health hazard by OSHA
- A TAP is different than a HAP (Federally defined)
 A TAP is different than a HAP (Federally defined)
 A TAP is different than a HAP (Federally defined)
- Typical Sources: paint spray booths and adhesive/coating equipment, chemical plants, concrete crushing, etc.
- Fuel-burning equipment, charbroilers, and gasoline stations are exempt from these regulations



The Woodland Stewardship Education program presented a new webinar in June entitled "Overview of MDE Air Permitting Requirements." Matt Hafner, Unit Lead Engineer of the Chemical Unit for the Maryland Department of Energy's Air Quality Permits Program, presented a summary of definitions, req-

ulations, and permitting processes that are important for those who use biomass for heating and for commercial applications. The 40-minute presentation can be found on our website here, and on our YouTube page here.

USDA Resumes Vital Re-forestation Program

The US Department of Agriculture has re-opened applications for the Conservation Reserve Enhancement Program (CREP). CREP is managed by the Farm Service Agency (FSA) and enables farmers to receive subsidies to remove cropland or marginal pastureland from production in favor or planting native grasses, trees, or other vegetation.

The program has been a vital tool in helping states to establish forest buffers along watersheds. It had been suspended last year when the 2014 Farm Bill expired, but was restored with the passage of the current Farm Bill in December.

Read the <u>Bay Journal's summary of CREP's benefits</u> in the <u>Chesapeake watershed</u>. To learn more about CREP, visit the USDA's page at <u>this link</u> or visit your local FSA office.

Maryland Forest Products Company Expanding

The Maryland forest products industry has had difficult times lately, with the closure of the Verso Mill last spring being just one of the downturns. On a positive note, Eastern Shore Forest Products, Inc. recently announced that it was expanding its operations., including hiring more than 20 people to fill new positions.

The company, headquartered in Salisbury, MD, owns and operates seven manufacturing facilities in Maryland, Delaware, Maine and Texas, as well as affiliated mills in Virginia and Arkansas. The expansion of the Eastern Shore operations will increase production of wood shavings, which are primarily used for poultry and pet bedding, and will included a new wood yard on the Upper Shore.

Tom Johnson, president of Eastern Shore Forest Products, notes that the plant will be powered by a solar array, and "will produce, package and ship pone shavings to retailers throughout the United States for use as animal bedding."

For more information, read the <u>press release</u> on the Maryland Forests Association, Inc, website and the <u>coverage from WMDT</u>.

New Visitor App from the US Forest Service

The USDA Forest Service recently launched a mobile app simply called *Visitor Map*. The app provides a wealth of information about national forests and grasslands.

For example, users can access trail maps;



camping and cabin facilities; information about fishing, hiking, ORV and horseback riding; and much more. A search function allows you to find the forest or grassland nearest to you or your location as well as by name.

Visitor Map is available free of charge from both the <u>Apple App Store</u> and from <u>Google Play</u>.

Re-Thinking Hardwood Tree Planting

Many people may recall receiving a pine tree in second grade to take home and plant in the front yard. After being sandwiched in the lawn turf, it quickly succumbed to drought and died a quiet but sure death. Foresters implementing tree-planting programs have learned some hard lessons, especially when planting hardwood trees in old agricultural fields, lawns, and riparian areas

Tree planting programs focus on selecting the right tree for the right site. The right tree depends not only upon the type of soils and topography that exists, but also upon the stage of woodland succession. Woodland succession is the predictable change in vegetation over time after an agricultural field or lawn is abandoned or if a woodland is harvested or hit by some type of natural disturbance. For example, in central Maryland, an abandoned old pasture field will soon be inhabited by red-cedar trees and hardwoods such as locust, black cherry, walnut, and other "shade intolerant" trees that require full sunlight. (See graphic at right.) What grows depends on the fertility of the site and available seed sources.

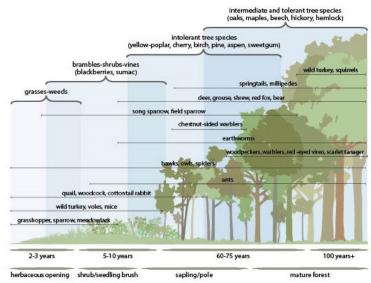
Over time, the canopy will close in as the red-cedar trees are overtopped by the shade intolerant hardwood tree species and then die. Later, more shade tolerant species such as oak and hickory will establish themselves in the understory and wait for an opening in the canopy to dominate. During these early stages of woodland succession, many changes take place in the soils that prepare the site for the more shade tolerant trees. The organic layer develops as leaves and other debris decompose and build up and fungi, bacteria, insects and ecological food webs develop, paving the way for later successional trees and shrubs.

Many people want to plant oak trees in lawns and agricultural fields, but it is an uphill battle as early successional soils are not yet suited for oaks to grow quickly and compete with the other prolific vegetation. It takes lots of resources to kill competing vegetation so the oak can survive and thrive. If landowners are not committed to providing that follow-up, or funding is not available to cover the costs, a host of both natives and invasives will take over.

Some foresters are interested in considering nontraditional approaches to hardwood tree planting since some planting sites end up being dominated by trees that seeded in naturally. They may not be oak, poplar, or walnut but still enhance water quality and have wildlife value.

A traditional planting project usually involves preparing the site by killing competing vegetation, then planting 430 trees per acre on a 10' X 10' grid. In this design, they will quickly compete with each other, shade out the ground cover, and encourage rapid height growth. Seedlings are protected from deer by tree shelters. Follow-up maintenance for two to four years or longer is usually required to control the competing vegetation but many times this does not happen. Drought conditions may required that some re-planting be done the following spring. Most project costs are paid in large part by state and federal cost-share programs and cost many thousands of dollars per acre.

Below are few ideas to consider as you explore hardwood tree planting options. Every site must be assessed on its own merits.



Woodland succession, in its simplest form, is a progression of plant communities that begins with the shade-intolerant plants occupying an area and ends with the most shade-tolerant plants occupying it. It is important to recognize that different wildlife populations rely on certain successional stages.

Manage natural succession – An old field or lawn will regrow when it is abandoned. The key is to control the invasive species for about 3-5 years and clear around native intolerant species that grow to assure their success. The use of herbicides and mowing to control unwanted vegetation will be essential. Installing tree shelters on some desirable seedling species is an option.

Manage natural succession with some planting – Planting and protecting 10-20 trees or more per acre from deer can assure there will be a seed source of desirable species for the future woodland. Natural regeneration would be managed as noted above on the rest of the site. For example, assuring there are some oak trees that will provide seed for the future forest can be done economically without the effort and cost to establish an entire oak forest. The use of herbicides/mowing to control unwanted vegetation will be essential.

Use 8-ft. deer fencing instead of tree shelters – Tree shelters are problematic but essential to protect young seedlings from deer. Using 8 to 9-ft. black plastic around the perimeter of a planting area will exclude most deer, eliminate the need for individual tree shelters, and allow natural vegetation to take over the site. Competing vegetation, including invasive species, will need to be controlled, especially around the seedlings, but a more natural landscape will result. Fencing will be most costeffective on sites that are square to rectangular where perimeter is minimized.

Manage natural succession with deer fencing - Research finds that native species can compete more effectively with invasive species if deer browsing is eliminated. Using option #1 above would enhance growth of native species that seed in.

Events Calendar

For more events and information, go to http://extension.umd.edu/woodland/events

September 14, 2019, 1:00 pm—5:00 pm Invasive Plant ID for Homeowners

Community Resources Building, Prince Frederick MD Learn to identify invasive plant species commonly found growing in landscaped and natural areas by examining cut samples from live plants. *Suggested Audience:* Homeowners, private woodland owners, owners of conservation easements, HOA members responsible for maintaining community grounds, etc. For more information and how to register, go <a href="https://example.com/here/beauty-sep-audience-based-english-sep-audience-based-en

September 21, 2019. 8:30 am—4:30 pm

The Woods and Wild Lands: Delmarva Forestry Seminar

Wor-Wic Community College, Salisbury MD If you are a private landowner or a forestry professional, this seminar is for you. Topics include chainsaw maintenance, forest stewardship practices, tree care, and much more. Morning sessions at the college; afternoon bus tour of Great Cypress Swamp. For more information, contact https://2019delmarvaforestryseminar.eventbrite.com.

October & November, 2019

Maryland Forests Association/Maryland Tree Farm Regional Meetings

This Issue's Brain Tickler ...



Last issue, we featured this photo and asked readers to identify this tree that many find invasive. The correct answer is the Bradford Pear. Congratulations to Suzanne Hill for her correct response.



For this issue, identify the important agency within the US Department of Agriculture that uses this logo. The agency provides technical assistance to woodland owners, farmers and more.

Email Andrew Kling at akling1@umd.edu with your answer.

Three regional meetings will be held across the state on the topic, "Why Markets Matter:" October 3 in western Maryland, October 10 in southern Maryland, and November 7 on the Eastern Shore. Speakers from sponsoring organizations, Maryland DNR, Forests for the Bay, University of Maryland Extension and landowners will speak about the benefits the sustainable forest products industry have to offer.

For more information, visit the MFA website at https://www.mdforests.org/





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This and back issues can be downloaded for free at www.extension.umd.edu/news/newsletters/branching-out .

All information, including links to external sources, was accurate and current at the time of publication. Please send any corrections, including updated links to Andrew A. Kling at akling1@umd.edu.

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