

Still, it can be good to have some gaps within an extensive forest. A small clearcut timber harvest – also called a patch cut – can help birds and other wildlife by creating a food hotspot. After trees are removed, sunlight reaches the ground and spurs the growth of low vegetation. There, adult birds can find insects to feed their nestlings. After young birds leave the nest, their parents can take the fledglings to those thick areas, where the inexperienced youngsters can learn to feed themselves and find plenty of nutritious fruits and insects while the closely spaced shoots of shrubs and small trees shield them from predators like hawks.

Other landowners may decide to aggressively harvest timber to promote edge habitats, because they want to encourage certain kinds of wildlife. A friend of mine periodically logs tracts of forest on his land, both to make money and to create large patches of young forest that attracts and supports ruffed grouse and American woodcock – game birds that my friend, using his well-trained pointing dogs, hunts in autumn. In an old orchard, my friend has “daylighted” dozens of apple trees by cutting down nearby taller trees, so that they won’t shade out the apples, whose fruits feed grouse, foxes, coyotes, deer, and black bears. Woodcock, which my friend also hunts, probe for worms in the rich soil under the revitalized apple trees.



*It can be good to have some gaps in a forest. A small clearcut timber harvest - also called a patch cut - can help birds and other wildlife by creating a food hotspot. Some landowners harvest timber to promote edge habitats because they want to encourage certain kinds of wildlife such as deer and ruffed grouse.*

*Photo by Justin Fritscher, NRCS.*

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The preceding excerpt is from *Make a Home for Wildlife*, by Charles Fergus (Stackpole Books, January 2019), and is printed here with the author’s permission.

*Make a Home for Wildlife* helps property owners see their land in new ways and gives them the tools and knowledge to effectively improve food and cover for wildlife. Whether you live on a lot in the suburbs or own a 20-acre woodland retreat or a larger working forest, you can make changes to the land that will turn your property into a better habitat for wildlife; *Make a Home for Wildlife* is a great reference helping landowners plan and carry out projects.

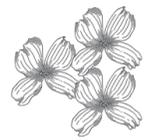
Focusing on the eastern U.S. from Canada to Florida, the book describes basic habitat types—forests, shrublands, grasslands, and wetlands—and how to create or improve them, along with specific recommendations on how to help many different kinds of wildlife. The book includes inspiring stories of landowners who are making habitat today, including one about forestland owner Bill Owen of Yale, Virginia.

*Make a Home for Wildlife* costs \$29.95 and can be ordered online or bought in your local bookstores.

**Charles Fergus is an author and an outreach and communications consultant for the Wildlife Management Institute; 802-626-4220; charlesfergus@gmail.com.**

**VIRGINIA FOREST LANDOWNER UPDATE**

SPRING 2019  
 Virginia Cooperative Extension  
 Department of Forest Resources &  
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 Blacksburg, Virginia 24061  
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**Edge and Fragmentation**  
 By Charles Fergus, from *Make a Home for Wildlife*

The area where two different stages of forest growth meet – or where two different ecological communities merge with each other – is called an “edge.” An edge can exist between a field and a stand of mature trees; where low-growing and older, taller trees merge; or where a woods road or a log landing interrupts the forest. An edge can occur between woodlands and wetlands, or woodlands and grasslands. Because two varieties of habitat intersect, a greater diversity of wildlife will often be found along an edge, compared to the two habitats by themselves.

The following is from a 1970s university Extension publication: “It is to the landowner’s advantage to maximize the amount of edge in a woodland.” That view has changed somewhat as research into the habits and populations of various animals has shown that too much edge can cause problems for some wildlife. Raccoons, skunks, foxes, and feral cats hunt along edges and may prey heavily on wildlife there, including songbirds that nest low in trees, in shrubs, or on the ground. Brown-headed cowbirds are nest parasites: the females surreptitiously lay their eggs in the nests of other birds, which then raise the baby cowbirds, with fewer (if any) of their own offspring surviving. Brown-headed cowbirds feed in open areas such as meadows, pastures, lawns, and fields, then duck into woodland edges, gaining access to the nests of birds that breed in forests.

A high percentage of edge occurs where the forest has been broken up into small patches by development or farmland. Forest Management for New York Birds: A Forester’s Guide, by S.M. Treyger and M.F. Burger (Audubon New York, 2017), recommends that in areas where the landscape is less than 70 percent forested, and where forest cover is fragmented by agriculture or development, landowners who want to help forest birds should keep large, contiguous tracts of mature forest intact. Such core forest areas are important to area-sensitive species (scarlet tanagers and wood thrushes, for example) that require large patches of woodland to establish breeding territories, nest, and rear young. Area-sensitive forest birds need a minimum of 200 acres of forest.

*In areas where the landscape is less than 70 percent forested, landowners who want to help deep-forest birds, such as scarlet tanagers, should keep large, contiguous tracts of mature forest intact.*  
 Photo by Tom Berriman.



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900 Natural Resources Drive Ste. 800 Charlottesville, VA 22903 434/977-6555 www.dof.virginia.gov	228 Cheatham Hall 0324 Blacksburg, VA 24061 540/231-6391 http://forestupdate.frec.vt.edu	1400 Independence Ave. SW Washington, D.C. 20078 202/205-8333 http://www.fs.fed.us/spf/coop/programs/loa/fsp.shtml	3808 Augusta Ave Richmond, VA 23230 804/278-8733 www.vaforestry.org	3808 Augusta Ave Richmond, VA 23230 804/278-8733 www.vaforestry.org/virginia_tree_farm.html

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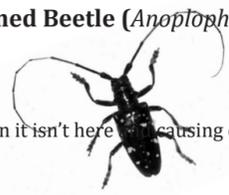
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EVENTS CALENDAR			For the most complete listing of natural resource education events, visit the on-line events calendar at <a href="https://forestupdate.frec.vt.edu">https://forestupdate.frec.vt.edu</a>		
Contact	Date	Location	Event	Time	Fee
DCR	April, May & June	Virginia's State Parks	<b>A variety of events and activities</b> For a complete list, visit: <a href="http://www.dcr.virginia.gov/parks">www.dcr.virginia.gov/parks</a>	Varies	Varies
MP	Year-round	state-wide	<b>Virginia Master Naturalist Volunteer Basic Training</b> <a href="http://www.virginiamasternaturalist.org/chapters.html">www.virginiamasternaturalist.org/chapters.html</a>	Varies	Varies
SREF	April 24	On-line	<b>Webinar: Invasive Bamboo Management in the SE U.S.</b> Bamboo is a large perennial grass that has been used as an ornamental plant in the U.S. for years. Most imported bamboos are fast-growing, highly-invasive, and difficult to contain. Learn about the biology, identification and management of common invasive bamboo species.	1:00	Free
VFA	April 30 - May 3	Norfolk	<b>Virginia Forestry Summit - From Seedling to Stump</b> This program focuses on Virginia's forest markets, economy, policy, and inter-generational growth. Sessions will be led by subject-matter experts providing information on topics, issues, and ideas affecting the forestry community.	Varies	Varies
JG	May 3	Norfolk	<b>Woodland Health Workshop: New Concerns, Old Concerns, Dying Oaks, and What We Can Do</b> Healthy woods provide a myriad of economic and environmental benefits. Unfortunately, there are lots of things lurking out there that threaten their health. This 5-hour workshop will feature emerging threats to look for, updates on existing threats, answers to the question "What's killing my oaks?", and advice for identification and control.	9 - 2:00	\$15*
AD	May 5	Madison	<b>Shiitake Mushroom Growing Demonstration</b> An open house-style demonstration on how to grow this tasty non-timber forest product.	8 - 12:00	Free
BS	May 16	Colonial Heights	<b>10th Annual Vegetation Management Workshop</b> Agenda will include: nursery applications, innovations, and seedling improvement, update on glyphosate, coyotes in Virginia, regulatory updates, and much more!	8:00	\$40*
JG	May 16-18	Galax	<b>SW Virginia Beginning Woodland Owners' Retreat</b> Is woodland management a new concept for you? If so, come spend time with fellow forest owners and natural resource professionals and learn how to get started. A combination of classroom talks, field tours, and hands-on experiences will provide you with the basics.	Friday All day; Saturday until 1.	<b>No Lodging:</b> Individual - \$55* Couple - \$90* <b>Lodging:</b> Individual - \$95** Couple - \$170**
SREF	May 28	On-line	<b>Managing Oaks for Northern Bobwhite Quail</b> Research has demonstrated that with adequate overstory thinning, and the use of frequent prescribed fire, oak-dominated forests can support populations of northern bobwhite quail.	1:00	Free
AD	July 18-19	Charlottesville	<b>Teaching Trees Workshop</b> This 2-day professional development event will introduce middle and high school science teachers to local pine and hardwood forestry, sustainable forest management, and forest products with hands-on field trips. Instruction totals 14 hours; see your school administrator for recertification credit.	All day	TBA
JF BW NC	Aug. 2-3 Sept. 27 Nov. 9	Farmville Lebanon Providence Forge	<b>Preparing for Generation NEXT Workshops</b> Are you prepared to pass the environmental and heirloom values rooted in your woods to the next generation? Join us for a 1.5-day (Farmville) or half-day (Lebanon or Providence Forge) workshop to learn how to secure your woodland legacy. Registration fees are for up to 2 family members.	Varies	\$50* \$25* \$25*
JG	Sept. 19-21	Providence Forge	<b>SE Virginia Beginning Woodland Owners' Retreat</b> See description for SW Virginia Beginning Woodland Owners' Retreat above. Registration opens in July.	Friday All day; Saturday until 1.	TBA

\*meals included; \*\*meals and lodging included

## You Ain't From Around Here! Exotic Invasive of the Quarter: Asian Longhorned Beetle (*Anoplophora glabripennis*)

By: Jennifer Gagnon, Virginia Tech



This robust and beautiful insect has not yet been identified in Virginia, although this doesn't mean it isn't here causing damage. With this exotic invasive, early detection and eradication are KEY!

The Asian longhorned beetle, also called the starry sky beetle or ALB, is native to eastern China and the Korean Peninsula. The first breeding populations in the United States were discovered in 1996 in New York City and Chicago. More than likely, it came over in untreated solid wood packing materials (e.g., pallets). Every infestation in the United States so far has been from a single point of introduction directly from Asia. And these have been relatively small, distinct infestations that can be eradicated. Currently, there are quarantines in place across 270 square miles in New York, Massachusetts, and Ohio. Although ALBs are good fliers, they prefer to conserve energy. If the host plant is good, the females will stay and lay their eggs. If females are present, the males will stay. Which means, like so many other exotic invasives, ALB is mainly spread by humans moving infested wood.

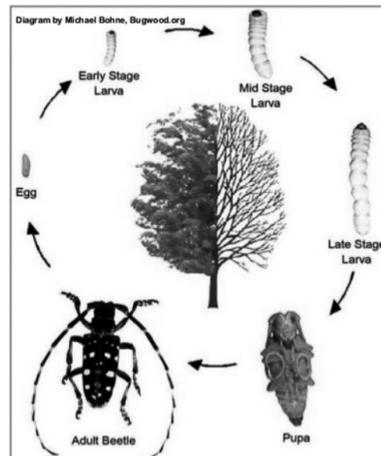
### Damage

Ultimately, ALB kills the trees it infests. Mortality is a result of multiple types of damage. The first type of damage occurs when the females bore through the bark into the cambium (living tissue) of the tree to lay their eggs where the phloem and xylem meet (the phloem draws nutrients down from the canopy into the root system; the xylem pulls water and nutrients up from the soil to the rest of the tree. When the phloem and xylem are severely damaged, the tree will die.) They lay one rice-sized egg per hole, and up to 90 eggs in their lifetime. These egg holes leave dark wounds that may ooze sap.

The second source of damage starts when the eggs hatch (in about 2 weeks) and the large larvae begin to feed. As they grow larger (getting up to 2" long), they move from the phloem/xylem boundary layer into the xylem. This weakens the tree structurally, and further disrupts the tree's ability to move water. The larvae overwinter in the trees where they continue to feed and grow, undergoing as many as 13 growth phases.

Eventually, the larvae pupate (lasting from 13-24 days) and undergo a complete metamorphosis into adults. The adults exit the tree in the spring, further damaging it by leaving very large (0.5" diameter), perfectly round exit holes in the wood and bark. These holes are visible all year and can be found on the main stem of the tree, branches, and exposed roots. These holes can produce excessive sap, attracting secondary insects and diseases to the tree. For the first 10-14 days after emerging, the adults feed on the tree's leaves and bark, before mating and laying eggs.

There are numerous native wood-boring beetles in the United States. However, the majority of these only attack dead and dying trees. Healthy trees have developed defenses to protect against them. But not ALB. ALB attacks both healthy and stressed trees. This means there are serious repercussions if this insect becomes widespread. In fact, some researchers say if ALB gets well-established in the United States, it could become one of the most destructive and costly species ever to enter the country. ALB kills shade and park trees, as well as economically important forest trees. Along with this mortality are the costs associated with removing dead/dying hazard trees, chipping the wood, injuries from falling limbs, replacement of dead or dying trees, and loss of recreational areas.



Annual life cycle of the Asian longhorned beetle. Created by Michael Bohne, USDA, Bugwood).

### Identify:

ALB is a large (0.75-1.5" long), 6-legged beetle. Its wings are glossy black with irregular splotches of white. The antennae are longer than the insect's body with black and white bands. The feet and legs have a slate blue fuzz.

Please be aware that there are a number of look-alike native species in the eastern United States. These include:

- Whitespotted pine sawyer
- Southern whitespotted sawyer
- Northeastern sawyer
- Cottonwood borer
- Broadnecked root borer
- Sugar maple borer

Visit <http://www.uvm.edu/albeetle/identification/index.html> to learn how to distinguish these natives from ALB.

### Host Species

ALB enjoys a wide variety of Virginia's native hardwood species. In fact, it feeds on species of ash, birch, elm, sycamore, maple, buckeye, mountain ash, poplar, and willow. All these species can support the full life cycle of ALB - from egg to adult - resulting in much damage.

ALB cont. from page 3

### Signs of Infestation

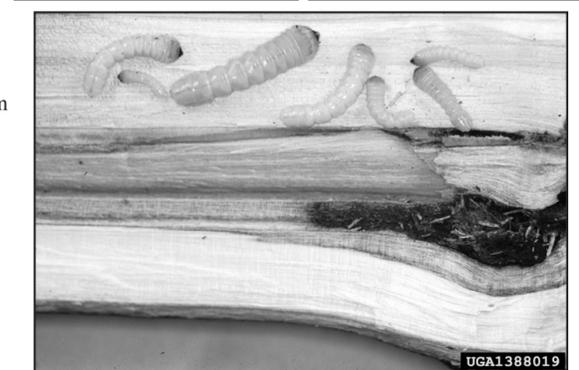
Despite the ALB being such a large beetle, the adults are relatively difficult to spot. However, there are other obvious signs of infestation you can look for:

- Exit holes: round, 0.5" holes on stem, branches, or exposed roots
- Egg sites: oval depressions that look like wounds and weep sap
- Frass: sawdust-like excretions from feeding insects
- Woodpecker damage
- Tunneling under bark

Other signs of ALB will begin to show up 3-4 years after infestation:

- Unseasonable yellowing leaves
- Branches dropping or dying

If you spot any of these signs, record the location and if possible, capture an insect and place it in a jar and freeze it. Another option is to take photos of the insects and/or tree damage. Please report potential beetle sightings and damage by calling 1-866-702-9938 or your local Extension office.



Signs you may have an ALB infestation include (clockwise, from top left): Holes in the bark where the females bore in to lay their eggs; 0.5" round holes created by adult ALB exiting the tree; and tunnels in the cambium layer of the wood created by feeding ALB larvae. Photos by: Joe Boggs, The Ohio State University; Daniel Herms, The Ohio State University; and Steven Katovich, USDA Forest Service.

To stay current on ALB happenings, sign up for the ALB newsletter: <https://public.govdelivery.com/accounts/USDAAPHIS/subscriber/new>. ALB adult image on page 3 by: Daniel Herms, The Ohio State University.

Jennifer Gagnon is an Extension Associate in the Department of Forest Resources & Environmental Conservation; 540-231-6391; [jgagnon@vt.edu](mailto:jgagnon@vt.edu).

EVENT CONTACTS			
Contact	Name/Affiliation	Phone	e-mail/website
DCR	Virginia Department of Conservation & Recreation	804/786-1712	<a href="http://www.dcr.virginia.gov">www.dcr.virginia.gov</a>
MP	Michelle Prysby	434-872-4580	<a href="http://www.virginiamasternaturalist.org">www.virginiamasternaturalist.org</a>
SREF	Southern Region Extension Forestry	<a href="http://forestrywebinars.net">http://forestrywebinars.net</a>	
VFA	Virginia Forestry Association	804/278-8733	<a href="http://www.vaforestry.org">www.vaforestry.org</a>
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