



Invasive Plants and Pests in Your North Carolina Woods

North Carolina, like every other state in the U.S., has been invaded by tree-killing diseases, plants and insects that threaten the health of our forests. Insect pests can hitchhike across oceans in the wood of international shipping containers or cross state lines in firewood harvested in places where a pest is already well established. The seeds of invasive plants can be spread in fill dirt, by the wind or by equipment brought onto your land. Some nurseries sell ornamental invasive plants to landscapers, or unwittingly provide landscaping trees or mulch that is affected by pests and pathogens.



As a woodland owner, your best line of defense is information. Once you've learned about the threat that invasives pose to your woods, you can take the appropriate action to eliminate or treat forest

pests and pathogens. Walk your land regularly to look for signs of these invaders. If you need help, ask! The resources listed at the end of this sheet can help you find a forester or other professional who can help you evaluate the threats to your woods and respond in the most appropriate way.

Which Plants Threaten My North Carolina Woods?

Once they become established, invasive plants have the ability to overcome native species. By doing so they threaten the insects and wildlife that depend on the native plants for survival. That's why it's so important to know the plants on your land and to take steps to eradicate those that don't belong. Here are some of the most aggressive plant invaders in North Carolina:

- **Kudzu:** Once encouraged for its ability to prevent soil erosion, this "plant that ate the South" can take over forestland and is notoriously dif-



difficult to eradicate once it is established. Your forester or North Carolina Extension agent can help you devise a plan to eradicate kudzu from your woods.

- **Cogongrass:** Considered one of the world's worst weeds, cogongrass is an extremely invasive non-native ornamental grass that has the ability to invade diverse habitats and quickly displace native vegetation. It has consumed more acres of land in the Southeast than kudzu. Learn to identify cogongrass (it's easy!), and please call or e-mail the North Carolina Department of Agriculture (1-800-206-9333, newpest@ncagr.gov) if you see it on your land.

- **Japanese knotweed:** Also known as fleecflower and Mexican bamboo, Japanese knotweed is an aggressive invader from Asia that spreads fast and grows into dense thickets, crowding out native plants and animals. It is found in nearly every state, including North Carolina, and is particularly good at invading wetlands, where it can survive floods and colonize quickly after other plants are wiped out. Eradicating Japanese knotweed requires the use of pesticides. Your forester or Cooperative Extension Service agent can help you identify the most appropriate strategy for managing this weed.



- **Garlic mustard:** This aggressive herb with small white flowers is found in almost every state and can take over, crowding out native species and the insects and wildlife that depend on them. If the area affected by garlic mustard is small, you can pull it out when the soil is moist. In larger areas, you can cut it, burn it or carefully apply a glyphosate herbicide. Burning is an effective control, but it must be done every year for three to five years because seeds can remain in the soil year after year. Again, your forester or Extension agent can help you identify the most appropriate means of control.



Which Tree-Killing Insects Threaten My North Carolina Forests?

There are many insects that can threaten your woodland, but these three are among the most dangerous.

- **European gypsy moth (EGM):** This moth's caterpillars have voracious appetites for more than 300 species of trees and shrubs, posing a danger to North Carolina's forests. The caterpillars defoliate trees, leaving them vulnerable to diseases and other pests. Gypsy moth eggs can migrate to uninfested areas on outdoor equipment and patio furniture. Certain areas of the state are under federal quarantine to limit the EGM's spread. Learn more at <http://www.hungrypests.com/the-spread/north-carolina.php>
- **Emerald ash borer (EAB):** This non-native beetle probably hitchhiked to the U.S. in wooden packing material from Asia. It has already killed tens of millions of ash trees in more than 20 states and affects a few counties in north central North Carolina. Once an ash tree is infested, it will die within three to four years and must be removed. Often this pest is spread when firewood from an infected tree is moved from one area to another, since larvae can remain alive after a tree is cut down. As a woodland owner, you can play a key role in assuring that this devastating pest does not spread further. To learn what you can do, visit the USDA's website at <http://stopthebeetle.info>
- **Southern pine beetle:** Smaller than a grain of rice, the Southern pine beetle is the most destructive insect pest in North Carolina. The beetles bore through the bark of young pine trees, feed on the inner bark tissue and eventually kill the tree. To help North Carolina's private woodland owners manage



this destructive pest, the North Carolina Forest Service administers a cost-share program to reimburse up to half the cost of thinning young pine stands to prevent beetle infestation. To learn more, visit http://ncforestservice.gov/forest_health/fh_spbpp.htm

How Can I Protect My Woods From Tree-Killing Weeds, Pests and Diseases?

The American Forest Foundation offers these tips to keep your woods free from the diseases, insects and weeds that can kill your trees.

- Create a Land Plan to establish goals and track your progress. Free step-by-step instructions to map your land and create a plan to manage it can be found at <http://MyLandPlan.org>
- Maintain diverse woods, since many pests attack a single species.
- Know your woods and watch for changes that might indicate problems. Stay informed about threats in your area.
- Monitor for pests and signs of disease every month or two during the growing season. Take a walk in the woods and check trees on the trunk, limbs, twigs, under peeling bark and leaves—the most likely places to find injuries. You don't have to check every single tree. Just keep your eye open for things that look out of the ordinary.
- Use pesticides appropriately.
- Don't move firewood.
- Talk to an expert! Your forester or North Carolina Cooperative Extension Service agent will know the best way to manage the insect and plant pests that threaten your trees.



Learn More!

National Resources:

- **MyLandPlan.org.** This American Forest Foundation website was designed by woodland owners for woodland owners, and contains extensive, easy-to-understand information and resources designed to help you be the best possible steward of your land. Information on invasive plants and insects can be found at: <http://mylandplan.org/content/pests-and-weeds-1>

- **USDA National Invasive Species Information Center.** State-specific resources for North Carolina from federal and state government agencies, academic institutions and non-government organizations are available at: <http://www.invasivespeciesinfo.gov/unitedstates/nc.shtml>
- **USDA Guide to Tree-Killing Insect Pests:** A state-by-state guide to pests that are the greatest threat to woodlands, and what to do about them can be found at: <http://www.hungrypests.com>
- **USDA Forest Service, Forest Health Protection Program.** A staff of 250 experts provides assistance with managing plant diseases, insect pests and invasive plants: <http://www.fs.fed.us/foresthealth/>

North Carolina Resources:

- **North Carolina Tree Farm Program.** The state program of the American Tree Farm System supports North Carolina's private woodland owners in the sustainable management of their woodlands. The North Carolina Tree Farm program offers field days and seminars for woodland owners on topics that include managing invasive species. <https://www.treefarmssystem.org/North-Carolina>



- **North Carolina Forest Service.** The state forestry agency can help you identify a county forester to help you with invasive plants, insects or diseases affecting your woods: http://ncforestservice.gov/contacts/contacts_main.htm. The N.C. Forest Service website also offers forest health maps that show the most up-to-date locations of invasive tree-killing pests in the state: http://www.ncforestservice.gov/forest_health/fh_maps.htm



- **North Carolina Cooperative Extension Service.** Offices in all N.C. counties are staffed by professionals who can provide advice on managing invasive plants and insect pests: <http://www.ces.ncsu.edu/local-county-center>

Information for this fact sheet was compiled from a variety of sources, including the American Forest Foundation, U.S. Forest Service, North Carolina Forest Service and North Carolina Cooperative Extension Service.