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Recognize Invasive Pests to Protect Plants







By Gemma Alexander

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Even if you're not much of a gardener, you are probably aware of the harm that

invasive plant species can cause. But plants are not the only species that can wreak havoc in the landscape. The pests that prey on non-native plants can be even more devastating when they escape the garden and find defenseless native plants to feed on.

Alien Invasion

Possibly the most famous example of an invasive plant pest is Dutch elm disease, a fungus that <u>nearly wiped out</u> the once widespread native American elm. The European elm bark beetle introduced the disease after it hitched a ride on a transatlantic shipment of logs in 1930. Today few Americans have ever seen a native elm tree. The American landscape has been permanently altered by a beetle invasion.

More and more native plant species are succumbing to non-native pests and diseases. Like the European elm bark beetle, most of them have spread through human carelessness, transported on imported plants and plant products. But recently, pests have begun expanding or shifting their range as a result of climate change. Sometimes newly introduced species survive thanks to changing conditions; other cases involve so-called <u>sleeper species</u> – formerly introduced species that suddenly take off when the climate becomes more favorable. In a vicious cycle, the damage caused by invasive pests <u>can</u> <u>contribute</u> to climate change.

Beech Blight

Native <u>American beeches</u> are suffering from a new type of <u>leaf blight</u>. It was first noted in 2012 in Ohio. By 2022, the blight had been found in 12 states, Washington D.C., and Ontario. It now poses <u>a greater threat</u> to native beech forests than beech bark disease. The cause of the leaf blight is still uncertain, but researchers suspect it is the result of a <u>nematode</u> from Japan that is relatively harmless in its home environment. How the nematode arrived in the Midwestern United States is a mystery. But its ability to survive there may be related to climate change. Experiments treating the disease with phosphite have shown some promise, but for now there is not much that you can do to protect beeches in your landscape.



Invasive spotted lanternflies in their adult stage. Source: Adobe Stock



Spotted Lanternfly

The <u>spotted lanternfly</u> (Lycorma delicatula) is native to China and was first detected in Pennsylvania in 2014. Although its preferred host is the tree of heaven (Ailanthus altissima) which is <u>also invasive</u>, spotted lanternfly will also feed on a wide range of fruiting and ornamental woody plants. Damage from the sapsucking bugs rarely kills trees, but a spotted lanternfly infestation can put <u>crops at risk</u>. Grape vines seem to be <u>particularly vulnerable</u>.

The lanternfly is currently found in 14 Eastern states, with all other states at risk because both egg masses and adults can travel long distances on infested material, including vehicles. If you find this pest outside of a quarantine area, report its location to your State Department of Agriculture and kill it.

Mountain Pine Beetle

The <u>mountain pine beetle</u> is native to the Western United States. It plays an important role in forest renewal <u>through periodic outbreaks</u>. But a century of fire suppression has combined with higher temperatures and drought resulting from climate change to expand the beetle's range 450 miles further north in Canada and 2,000 feet higher in elevation in the Rocky Mountains. Warmer temperatures have also <u>changed the beetle's biology</u>, starting their flight season more than a month earlier and extending more than twice as long to allow two generations to reproduce in a single year – the amount of time it takes for pine beetles to kill a tree.

The current outbreak has killed 10 times more trees than the previous worstrecorded outbreak. The dead wood left behind by the beetles is a contributing factor to increasingly severe <u>wildfire seasons</u>. Nothing can be done to stop a beetle outbreak – prevention by <u>beetle exclusion</u>, which involves killing all infected trees before the beetles hatch, is the only way to save Western pine forests from the beetles.



Mountain pine beetle. Image credits: <u>Steve Clarkson</u> and <u>USDA Forest Service</u>, via Wikimedia Commons

Protect Your Plants

These are only three of <u>many invasive pests</u> that threaten native and horticultural plants. Learn about state-level <u>quarantines</u> to avoid spreading pests within your state. When you travel, especially if you will purchase plants or visit any gardens or natural areas, check to see if your state has a <u>federal</u> <u>quarantine</u> – or is at risk from – any of the top 20 targeted pests. Learn how to identify the pests that threaten your area.

To **avoid transporting** invasive pests, always clean and dry any aquatic equipment before moving from one body of water to another. Never transport firewood. If you keep livestock, purchase only certified weed-free hay. Before and after hiking and camping, clean your shoes, tires, and pets to remove mud and seeds. States have reporting requirements for the most pernicious invaders. And although **natural pest solutions** are almost always preferable, the potential impacts from certain invaders may justify chemical treatment. Follow the advice of your State Department of Agriculture or local extension agent if you find invasive pests in your garden.

Feature image: invasive spotted lanternfly in its second nymph stage. Source: Adobe Stock



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By <u>Gemma Alexander</u>

Gemma Alexander has an M.S. in urban horticulture and a backyard filled with native plants. After working in a genetics laboratory and at a landfill, she now writes about the environment, the arts and family. See more of her writing <u>here</u>.

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