

# UNWANTED

## Invasive Plant Pests and Diseases



Spotted Lanternfly

Photo credit: Lawrence Barringer, Pennsylvania Department of Agriculture, Bugwood.org



Asian Longhorned Beetle

Photo credit: Joe Boggs, Ohio State University, Bugwood.org



Red Imported Fire Ant

Photo credit: April Nobis, Antweb.org, Bugwood.org



Asian Gypsy Moth

Photo credit: John Ghent, John Ghent, Bugwood.org



Box Tree Moth

Photo credit: Ferenc Lakatos, University of Sopron, Bugwood.org



Mountain Pine Beetle

Photo credit: USDA Forest Service - Region 2 - Rocky Mountain Region, USDA Forest Service, Bugwood.org



Elongate Hemlock Scale

Photo credit: Lorraine Gransy, Bartlett Tree Experts, Bugwood.org



Hemlock Woolly Adelgid

Photo credit: Chris Evans, University of Illinois, Bugwood.org



Balsam Woolly Adelgid

Photo credit: Dave Powell, USDA Forest Service (retired), Bugwood.org



Boxwood Blight

Photo credit: Mary Ann Hansen, Virginia Polytechnic Institute and State University, Bugwood.org



Ramorum Blight

Photo credit: Joseph O'Brien, USDA Forest Service, Bugwood.org



Thousand Cankers Disease

Photo credit: Karen Stover-Cift, Cornell University, Bugwood.org



Wisconsin continually faces the threat of the arrival of unwanted, invasive plant pests. Each invasive species has the potential to impact urban and natural landscapes. Preventing the arrival of these pests is the best and most economical form of protection against invasive species. If they do arrive, early detection is key to protecting our natural resources and industries. The sections below list how to identify the pest and why it is important to prevent its arrival or spread.

#### Spotted Lanternfly (*Lycorma delicatula*)

**Identification:** Nymphs are black with white spots, and develop red spots on their wing pads and thorax as they grow. Adults are 1" long and ½" wide. Forewings are light brown with black spots, scarlet hind wings with black spots, and have bright yellow abdomen with black stripe.

**Importance:** Serious economic losses of grape, orchard, and logging industries as nymphs are known to feed upon and damage more than 70 native plant species including willow, oak, walnut, and maple. *Currently not found in Wisconsin.*

#### Asian Gypsy Moth (*Lymantria dispar asiatica*)

**Identification:** Visually identical to the European gypsy moth (found in Wisconsin). The only observable difference is the female can fly. Male moths have grayish-brown wings with a wing-span of about 1 ½". Adult females are white and much larger, with wingspans of about 3 ½". The only way to differentiate between the two species is with DNA tests.

**Importance:** Has the potential to cause serious damage to the landscape and natural resources. Caterpillars feed on more than 600 species of trees and shrubs. Repeated defoliation severely weakens trees and can result in death as well as predispose them to other pathogens and pests. *Currently not found in Wisconsin.*

#### Elongate Hemlock Scale (*Fiorinia externa*)

**Identification:** Elongate Hemlock Scale (EHS) is a sap-sucking armored scale insect with oval brown or white scale coverings, typically found on the underside of needles.

**Importance:** EHS feeds on the undersides of hemlock, spruce and fir needles, causing needle loss and yellowing. EHS has been introduced into 16 states and has been intercepted several times in Wisconsin. If it becomes established, it could pose a threat to our native conifer species. *Currently not found in Wisconsin.*

#### Boxwood Blight (*Calonectria*

*pseudonaviculata*)

**Symptoms:** Initial symptoms appear as dark or light brown spots on leaves, often with dark borders. Spots enlarge, often with a concentric pattern. Infected leaves turn brown and drop. Distinct black lesions may also appear on stems.

**Importance:** Boxwood Blight is not a threat to natural and environmental plant resources. It is a threat to boxwood in the urban landscape setting, since boxwood is a popular ornamental plant. Though the disease only affects boxwood, it can rapidly spread through the nursery system and residential landscape. It can also move on the herbaceous perennial pachysandra. *Found in Wisconsin's Dane and Kenosha counties.*

#### Asian Longhorned Beetle (*Anoplophora glabripennis*)

**Identification:** 1-1 ½" long, black with white specks on their wing covers, long white and black banded antennae, and slightly bluish legs. Females tend to be a bit larger than the males.

**Importance:** Kills healthy trees and has a long list of acceptable host species with maples, birch buckeyes, willows, and elms being the most preferred. The U.S. Department of Agriculture (USDA) has quarantined parts of New York, Ohio, and Massachusetts to prevent spread of known infestations. *Currently not found in Wisconsin.*

#### Box Tree Moth (*Cydalima perspectalis*)

**Identification:** Box Tree Moth (BTM) caterpillars are greenish-yellow, with black heads, reaching up to 4 cm in length and developing thick black and thin white stripes along the body as they age. Cocoons have white webbing and are concealed among leaves and twigs. There are two adult moth color variants; the more common has white wings with thick dark brown borders while the less common form has brown wings with a small white streak on the forewing. BTM can have 1-5 generations a year depending on geographic location and temperature.

**Importance:** BTM is a serious pest of boxwood. Damage occurs when caterpillars feed on the boxwood, skeletonizing the leaves, causing defoliation and dieback. They will also attack the bark of the tree, which causes it to dry out and die. BTM is native to East Asia and was found in Ontario, Canada in Sept. 2018. *Currently not found in the U.S.*

#### Hemlock Woolly Adelgid (*Adelges tsugae*)

**Identification:** Hemlock Woolly Adelgid (HWA) is a small aphid-like insect native to Asia. Females lay white, waxy egg sacs that look like the tips of cotton swabs on the undersides of branches.

**Importance:** HWA has killed hemlock in over 20 eastern states. Wisconsin restricts hemlock nursery stock from infested areas, including Western states. Contact DATCP to see if you need a compliance agreement to import hemlock from other states. *Currently not found in Wisconsin.*

#### Ramorum Blight (*Phytophthora ramorum*)

**Symptoms:** Rhododendrons may show brown leaf spots with dark margins and shoot dieback called Ramorum blight. Rhododendrons can spread the disease to other susceptible shrubs and trees like oak trees nearby.

**Importance:** This pathogen has a wide host range and the potential to move to forests causing sudden oak death. Concerns lie with the potential of this pathogen to move through the U.S. nursery system and into natural environment from there. *Not known to occur in Wisconsin.*

#### Red Imported Fire Ant (*Solenopsis invicta*)

**Identification:** Vary in size (1/16-1/5") with a dark reddish brown color. Characteristics help separate them from native ants, but they are most readily recognized by their aggressive behavior. Most often associated with their painful sting.

**Importance:** In areas where they have become established, they are major agricultural and urban pests and cause considerable environmental harm. They are also a public health concern. *Currently not found in Wisconsin.*

#### Mountain Pine Beetle (*Dendroctonus ponderosae* Hopkins)

**Identification:** The Mountain Pine Beetle (MPB) is about the size of a grain of rice and lives under the bark of pine trees. Damage caused by MPB is more readily observable than the insect itself. When attacked by MPB, a pine tree often responds by producing a "pitch tube" in an effort to push the beetle out.

**Importance:** This insect has killed entire mountainsides of trees in the West. It carries a tree-killing fungus and gathers huge numbers of beetles to overwhelm tree defenses, enabling it to kill healthy pine trees. It could kill white, red, and jack pine in Wisconsin. *Currently not found in Wisconsin.*

#### Balsam Woolly Adelgid (*Adelges piceae*)

**Identification:** Balsam Woolly Adelgid (BWA) adults are tiny, soft-bodied insects which appear as white, woolly tufts on true firs. A purple stain is produced when crushed and rubbed between fingers.

**Importance:** BWA attacks true fir trees, including balsam fir and Fraser fir. Repeated attacks weaken trees, cause twig gouting, kill branches, and over the course of several years causes trees to die. There are 2-3 generations produced each year depending on temperature. BWA is established in the Northwestern U.S. and several Eastern states. *Currently not found in Wisconsin.*

#### Thousand Cankers Disease (*Pityophthorus juglandis* and fungus *Geosmithia morbida*)

**Symptoms:** Thousand Cankers Disease (TCD) infects walnut trees. Initial symptoms appear as a thinning canopy and yellowing foliage on a branch, which rapidly progresses to brown wilted foliage. The branch dies with the wilted leaves still attached. The cankers form where the insect enters and exits the bark. TCD is caused by the fungus *Geosmithia morbida*, carried by the walnut twig beetle which has not been found in Wisconsin.

**Importance:** TCD has caused widespread mortality in black walnut since 2001 in some Western states. Wisconsin restricts walnut nursery stock from states where TCD has been found. Contact DATCP to see if you need a compliance agreement to import walnut from other states. *Not known to occur in Wisconsin.*

## FIND AND REPORT

You can help find and report invasive pests to protect our state and economy.

**Pest Hotline: (866) 440-7523 • Email: [datcppesthotline@wi.gov](mailto:datcppesthotline@wi.gov)**