

Invasion of the Monster Bugs

The bugs are coming! Some of them are already here! These aggressive killers of forests have long been held at bay by northern winters, but as our winters become shorter and less cold, the barrier to their northward migration has dissipated. They arrive by transport on plants, boats, birds and other animals, and they are destroying native trees and plants on their way.

The invaders of most concern to Maine are:

Emerald Ash Borer - One of the most destructive invasive species threatening Maine forests and capable of destroying entire ash tree stands, spreading readily via firewood. This pest is established in New Hampshire and has been found in Aroostook and York Counties. Small metallic-looking beetles lay eggs on trees which hatch larvae that tunnel under the bark killing the trees in 3-5 years.



Eastern Spruce Budworm - Actually a native moth whose caterpillars are perhaps the most damaging forest insect in Maine and North America. Cyclical outbreaks occur every 30 to 60 years when host trees mature. The last outbreak in Maine was in the late 1980s. The caterpillars feed on buds of balsam fir and on white, red, and black spruce, resulting in loss of growth and mortality. Defoliation has been noted in 2017 on the New Brunswick and Quebec sides of the Maine border.



Southern Pine Beetle - This pest is the most destructive pine insect in the southern U.S. and has been migrating north as winters become shorter and warmer. It has already reached Connecticut. This killer invades the inner bark, constructing winding serpentine galleries and causing the tree to ooze pitch through the bark that dries as white or reddish globs. The beetle also introduces blue-stain fungi that block water flow in the tree, causing mortality. Image: FDACS



Balsam Woolly Adelgid - This bug has decimated large volumes of balsam fir in Maine in the past several years. The most commonly observed forms are the "gout" and "trunk" phases. "Gout" is a heavy swelling of the twigs at the nodes. In the "trunk" phase, the tree bole is covered with white woolly spots. Effective control measures have not yet been developed. Colder interior winters generally keep this pest confined near the coast.



"Trunk" Phase

Hemlock Woolly Adelgid - Introduced from Japan, this is an invasive aphid-like insect that feeds on hemlocks resulting in damage that leads to decline and mortality. Eggs and the hatched crawlers, the only non-attached part of the lifecycle, are readily dispersed by wind, birds, deer, mammals and plant transport.



Asian Longhorned Beetle - a wood boring beetle native to China. A large insect up to 1.5 inches long with up to 4 inch long antennae, it develops and reproduces in deciduous hardwood trees such as maple, birch, poplar, horsechestnut, willow, elm and ash, eventually killing them. Established in New York and Massachusetts but not yet found in Maine. Transported mainly by firewood.



Beech Scale and Beech Bark Disease - The Beech Scale insect arrived from Europe over a 100 years ago. The insect feeds on beech bark, creating cracks through which native canker fungi can enter the tree and eventually kill it.



Winter Moth - Arrived from Europe likely in the soil of landscape trees and plants. The small, pale-green inchworm larvae defoliate deciduous trees and shrubs in early spring. An infested tree exhibits branch dieback followed by mortality in about 3 years. Preferred hosts include oak, maple, apple, elm, ash, crabapple, cherry, and blueberry.



Browntail Moth - A big problem in coastal Maine. Caterpillar feeds on hardwood trees and shrubs damaging and killing the host. Caterpillar hairs are toxic and shed into the air. Contact can raise a rash and cause an allergic reaction.



Flea Beetle - These are small leaf-feeding, jumping beetles. There are many species of flea beetles and they are common pests on many vegetable crops. Some attack shrubs and trees. These pests can rapidly defoliate and kill plants.



Corn Flea Beetle and Stewart's Wilt - Stewart's wilt is an endemic bacterial disease of corn spread by the Corn Flea Beetle. This disease is periodically a concern for corn growers and field corn seed producers.



Brown Marmorated Stink Bug - Originally from Asia, this bug has caused significant damage to fruit trees, vegetable crops and other plants in the mid-Atlantic states. It overwinters in structures and homes to emerge in the growing season. Like all stink bugs it emits a strong disagreeable odor when trampled.



European Fire Ant - A very nasty but small red ant only about 3/16 inch long and distantly related to tropical and subtropic fire ants. The sting is very painful and leaves a large inflamed area on the skin 1-4 inches in diameter. Native ant species have difficulties competing with them. They do not nest in houses or make large mounds. They are transported on potted plants, soil, wood chips and soil.



What can an individual do to help prevent the import and spread of these invasive species? The State of Maine maintains a database of sightings and takes responsibility for mitigation services. If you see signs of stress in trees or kill areas contact the Maine Department of Agriculture, Conservation and Forestry at DACF@Maine.gov, 207-287-3200. Stink bugs and fire ants can be dealt with by commercial pest control services.