

ASIAN LONGHORNED BEETLE *Anoplophora glabripennis*



The Asian longhorned beetle (ALB) is a woodboring insect from Asia and has been discovered attacking trees in some parts of the U.S. It is likely ALB arrived to the U.S. in untreated solid wood packing material. ALB has not been discovered in Maine, but is found as close as Massachusetts where it is quarantined.

The beetle prefers maple trees and other hardwoods, including birch, buckeye, elm, horsechestnut, and willow trees. Tunneling by larvae girdles tree stems and branches. Repeated attacks lead to dieback of the tree crown and, eventually, to the death of the tree. The only effective means to eliminate ALB is to remove infested trees and destroy them by chipping or burning. To prevent further spread of the insect, quarantines are established to avoid transporting infested wood from the area. Early detection and rapid treatment response are crucial to successful eradication of ALB.

The survey will involve visually inspecting host trees for characteristic signs of infestation.

For more information: <https://www.maine.gov/alb>

CITRUS LONGHORNED BEETLE *Anoplophora chinensis*



The citrus longhorned beetle (CLB) is a woodboring insect that is native to China. It was first discovered in Washington State in 2001 and was also intercepted in Georgia and Wisconsin. After eradication efforts, it's *not known* to be established in the U.S. Like ALB, citrus longhorned beetle prefers hardwoods and woody ornamentals, but appears to have a broader host range than ALB. It is known to attack and kill more than 100 species of plants.

ALB and CLB look very similar except that CLB has a light-colored spot at the base of the wing covers, which is similar to the whitespotted sawyer, a native lookalike. Signs of infestation are similar to ALB, except CLB generally attacks the lower portions of the tree; thus exit holes will be seen closer to the ground.

The survey will involve visually inspecting host trees for characteristic signs of infestation.

For more information: <https://www.maine.gov/alb>

SPOTTED LANTERNFLY *Lycorma delicatula*



The spotted lanternfly is a planthopper from Asia that was first seen in the U.S. in September of 2014. The spotted lanternfly attacks many hosts including grape, apple, pine, stone fruit and more than 70 additional species. Since its discovery in Pennsylvania, spotted lanternfly has spread to six other states. Quarantines are in place to limit its spread to other states.

In the spring, nymphs may be noticeable on smaller plants and vines, but as the insect develops through to adult, host choice changes with tree-of-heaven (*Ailanthus altissima*) being much preferred. As the insect feeds, honeydew is secreted, which will attract wasps, hornets, bees and ants. The buildup of honeydew can blacken the soil around the

base of the tree and produce large fungal mats causing weeping wounds on the trunk. Surveys for this insect involves visual inspections for nymphs and adults on a variety of woody ornamentals.

For more information: <https://pest.ceris.purdue.edu/pest.php?code=IRANADA>

EUROPEAN CHERRY FRUIT FLY *Rhagoletis cerasi*



The European cherry fruit fly is the most serious pest of cherries with damage resulting in up to 100% loss in fruit harvest. This pest was first discovered in New York in 2017 on honeysuckle and sweet cherry along Niagara River in New York and in Ontario, Canada. Movement of cherries from Canada to the United States is regulated, and quarantines are in place to prevent its spread.

The larvae of the European fruit fly burrow in fruit and leave behind visible dark spots. The fruit will become wilted and shriveled if infected. The fruit fly has a distribution from central Europe to western Asia.

The survey will involve pheromone traps to detect European cherry fruit fly presence.

For more information: <http://pest.ceris.purdue.edu/pest.php?code=IOBMCD>

PINE SAWFLY *Diprion pini*



The pine sawfly is considered one of the most serious pests of pine in Eastern Europe. Outbreaks of pine sawflies usually occur after hot and dry summers in 3-6-year intervals. The sawflies usually attack older pines with outbreaks that can lead to heavy defoliation of their hosts.

Pine sawflies are not known to carry any pathogens, but the damage they cause leaves their hosts at risk for a secondary attack. They highly prefer pine stands on infertile soils and may be able to utilize other pine species not in its native range. The pine sawfly may be moved short distances by

importation of plant material. This species has not been detected in the U.S. The survey will involve pheromone traps to detect pine sawfly presence. For more information: <https://pest.ceris.purdue.edu/pest.php?code=ISAOAUA>

PINE PROCESSIONARY MOTH *Thaumetopoea pityocampa*



The pine processionary moth is a foliage eating pest that feeds on pine and cedar species. It can be found in north eastern Africa, western Asia, and the majority of Europe. If introduced into the U.S., pine species not present in the pine processionary moths' native range may be susceptible hosts.

Limited movement of pine plants in summer months lowers the risk of egg transportation. Due to high visibility of nests and caterpillars, distribution spread is very preventable.

The survey will involve pheromone traps to detect pine processionary moth presence. For more information: <https://pest.ceris.purdue.edu/pest.php?code=ITBDANA>

PINE BEAUTY MOTH *Panolis flammea*



The pine beauty moth is a pest that defoliates needles of Scots pine and lodgepole pine, as well as other pine species. It is widely spread from central Europe to western Siberia. It has not been detected in the U.S. Pine beauty moth adults emerge from early spring to early summer. Larvae are well camouflaged with green coloration and longitudinal stripes that allow them to look similar to pine needles.

Populations of pine beauty moths occur in large areas of pine forests, often those that are planted in poorly drained soil. Outbreaks of the pine beauty moth seem to occur in trees older than 11 years.

The survey will involve pheromone traps to detect pine beauty moth presence.

For more information: <https://pest.ceris.purdue.edu/pest.php?code=ITBCFGA>

PINE-TREE LAPPET *Dendrolimus pini*



The pine-tree lappet causes defoliation of new and old growth conifers. It is widely spread throughout Europe and known to be in central Asia. It has not been detected in the U.S. Pine-tree lappet adults emerge in midsummer and live for an average of 10 days. Although it is rare and not well known, the pine-tree lappet can cause an allergic reaction affecting the skin and/or joints.

The pine-tree lappet is closely associated with temperate coniferous and temperate broadleaf forests. Limiting the trade of unprocessed pine logs can reduce its spread.

The survey will involve pheromone traps to detect pine-tree lappet presence. For more information: <https://pest.ceris.purdue.edu/pest.php?code=ITAUAOA>

SIBERIAN SILK MOTH *Dendrolimus sibiricus*



Siberian silk moth is a major pest of conifers. It is native to Northern Asia and not yet known to be in North America. Development varies from 1 to 3 years depending on temperature. Adults fly from mid-May to July. Females lay eggs on the needles, but also on the ground. Larvae feed until late autumn then overwinter in forest litter. In spring, caterpillars climb up to the crown and feed for the entire summer before returning to the forest litter for their second winter. Caterpillars emerge again the following spring to feed before pupating in May.

Spread of the Siberian silk moth is hard to prevent since any life stage can be found in plant material. The survey will use pheromone traps to detect adults.

For more information: <https://pest.ceris.purdue.edu/pest.php?code=ITAUAWA>

SCOTS PINE BLISTER RUST *Cronartium flaccidum*



Scots pine blister rust is a rust fungus that affects several hard or two-needle pine species in Europe and Asia. It is not known to occur in the U.S. but may pose a huge threat to pine forests and Christmas tree industry. This disease has infected trees throughout Europe and Eastern Asia as it attacks a variety of hard pine species. Symptoms are similar to white pine blister rust. Alternate hosts for the rust are varied and include milkweed, impatiens, peony, verbena, swallow wort, etc.

Scots pine blister rust could travel into the U.S. on infected plant material, seedlings, and nursery stock.

The survey will involve visually inspecting hard pine species to detect Scots pine blister rust.

For more information: <https://pest.ceris.purdue.edu/pest.php?code=FDAYCKX>

OAK WILT *Bretziellum fagacearum*



Oak wilt is a disease caused by the fungus *Bretziellum fagacearum* and is most severe in red oak tree species. The disease has infected trees in 24 states in the eastern U.S., as far northeast as New York. Symptoms of oak wilt include: rapid leaf wilting starting at the top of the tree, reddish discoloration, rapid drop off of leaves, and fungal mats under the bark, which attract sap beetles that aid in the spread.

Cutting root connections between infected and healthy trees is the best way to prevent expansion of existing oak wilt.

The survey will involve visually inspecting oak species to detect oak wilt.

For more information: <https://pest.ceris.purdue.edu/pest.php?code=FGATCHC>

JAPANESE OAK WILT *Raffaelea quercivora*



Japanese oak wilt is a disease caused by the fungus *Raffaelea quercivora*. The disease was first discovered in 2002 in Japan and can infect a variety of oak species. It is not known to be in the U.S. Symptoms of Japanese oak wilt include: red leaves, wilted leaves, multiple small holes at the trunk of the tree, and xylem of the tree is dark brown. The disease is spread by *Platypus quercivorus*, an ambrosia beetle not known to occur in the U.S.

The survey will involve visually inspecting oak species to detect the presence of Japanese oak wilt.

For more information: <https://pest.ceris.purdue.edu/pest.php?code=FGATRQE>

ALMOND WITCHES' BROOM *Candidatus Phytoplasma phoenicium*

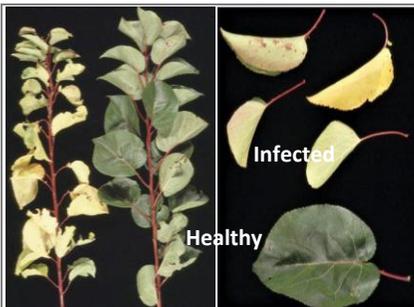


Almond witches' broom is a phytoplasma that infects stone fruits. It can be spread by grafting to almond, peach, and nectarine, and by leafhoppers, planthoppers, and psyllids. Symptoms of almond witches' broom include: early flowering, stunted growth, dieback, off season growth, proliferation of slender shoots, and witches' broom arising from the main trunk and roots. The almond witches' broom has done extensive damage to stone fruit in Lebanon.

The survey will involve visually inspecting stone fruit saplings to detect almond witches' broom.

For more information: <https://pest.ceris.purdue.edu/pest.php?code=FEALMPN>

EUROPEAN STONE FRUIT YELLOWS *Candidatus Phytoplasma prunorum*



European stone fruit yellows is a phytoplasma known to occur primarily in the Mediterranean region and is a major threat to stone fruit. The primary vector of the disease is the plum psyllid. It can be spread by infected plant material or by grafting. Symptoms of European stone fruit yellows include: yellowing and rolling of leaves, reddening of leaves, severe and progressive tissue death, and eventually death of the infected tree.

Spread is difficult to prevent since infected trees can sometimes show no symptoms of the disease.

The survey will involve visually inspecting stone fruit trees to detect European stone fruit yellows.

For more information: <https://pest.ceris.purdue.edu/pest.php?code=FEARMIY>

APPLE PROLIFERATION '*Candidatus Phytoplasma mali*'



Apple proliferation is a phytoplasma that occurs mainly in apple trees. The disease has infected trees in northern Europe and Asia, South Africa, and India. Symptoms of apple proliferation include: pale leaves with enlarged stipules, powdery mildew, serrated growth of secondary twigs, greatly enlarged flowers, and small fruit with elongated petioles alongside a large healthy fruit.

Spread of the Siberian silk moth is hard to prevent since any life stage can be found in plant material. Limitation of softwood fire work

The survey will involve visually inspecting apple trees to detect apple proliferation.

For more information: <https://pest.ceris.purdue.edu/pest.php?code=FEARMGA>

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Citrus longhorned beetle: Washington State Department of Agriculture Archives, forestryimages.org.

Spotted Lanternfly: Lawrence Barringer, Pennsylvania Department of Agriculture, Bugwood.org

European Cherry Fruit Fly: National Invasive Species Information Center, invasivespeciesinfo.gov

Pine Sawfly: Gyorgy Csoka, Hungary Forest Research Institute, Bugwood.org

Pine Processionary Moth: John H. Ghent, USDA/FS, Bugwood.org

Pine Beauty Moth: Butterfly conservation, butterfly-conservation.org

Pine Tree Lappet Moth: Andreas Manz, iNaturalist

Siberian silk moth: Andreas Manz, iNaturalist

Scots Pine Blister Rust: American Public Gardens, publicgardens.org

Oak Wilt: Allegan Conservation District, <https://allegancd.org/>

Japanese Oak Wilt: Pest Tracker, <http://pest.ceris.purdue.edu/>

Almond Witches Broom: Semantic Scholar, semanticscholars.org

European Stone Fruit Yellows: PaDIL, <http://www.padil.gov.au/>

Apple Proliferation: Invasive Species Compendium, <https://www.cabi.org/>